



# ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

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## SPECIAL REPORT: OIL AND ICE: WORSE THAN THE GULF SPILL?



*Russia's President Dmitry Medvedev (R) shakes hands with Norway's Prime Minister Jens Stoltenberg as they meet in the city of Murmansk, September 15, 2010. Russia and Norway ended a 40-year dispute in signing an Arctic border treaty which opens the door to offshore oil and gas exploration. Credit: Reuters/Ria Novosti/Kremlin/Mikhail Klimentyev.*

In September, Russia and Norway put an end to a 40-year dispute over maritime boundaries in the Barents Sea, freeing Russia to push for increased exploration under its portion of the waters just three years after the country spelled out its Arctic claim by planting a rust-proof flag on the sea bed more than four km (14,000 ft) under the North Pole.

The rewards could be huge. Russia, the world's top oil producer with output of more than 10 million barrels of oil per day (bpd), estimates that its Arctic zone holds around 51 billion tonnes of oil, or enough to fully meet global oil

demand for more than four years, as well as 87 trillion cubic meters of natural gas. Unlike Norway, Russia is not currently producing in its Arctic offshore, but the country's Natural Resource Ministry says it wants to invest at least \$312.8 billion by 2039 to explore the shelf. Most of this money will go to the Arctic.

But even as Russia opens its northern waters to exploration, there's reason to pause. In the wake of BP's catastrophic leak in the Gulf of Mexico this spring, Russian officials and experts warn an oil spill under the ice could turn out far worse than one in warmer deepwater climates. Arctic conditions -- remoteness, fragile ecosystems, darkness, sub-zero temperatures, ice, high winds -- make dealing with an oil spill a massive task. Read more: <http://www.reuters.com/article/idUSTRE6A71IL20101108>

## TOP TOXIC THREATS REVEALED IN NEW REPORT

November 3 - A new report released today by two international environmental groups—New York-based Blacksmith Institute and Green Cross Switzerland—highlights the top six toxic threats to global health. The organizations estimate that these pollutants impact the health of tens of millions of people, primarily children, and that toxic pollution as a whole could cause health risks for more than one hundred million people globally.

The 2010 report follows a series of annual reports released by Blacksmith Institute and Green Cross Switzerland. In 2006 and 2007, the organizations released reports highlighting the world's worst polluted places. A report from 2008 described the top ten worst pollution problems, and in 2009, the organizations released a report highlighting case studies of successful cleanup projects. The 2010 report revisits the subject of pollution problems, but draws upon the substantial volume of research the organizations have conducted on polluted sites over the last two years to identify the specific pollutants that are causing the most harm. Find out more and download the report at: <http://www.worstpolluted.org/press-release-2010-green-cross-switzerland-blacksmith-institute.html>

## USA: SPILL PANEL: NO EVIDENCE OF SAVING \$ OVER SAFETY

November 8 - The BP oil rig explosion and spill wasn't about anyone purposely trading money for safety, investigators on a special presidential commission said Monday. Instead it was more about seemingly acceptable risks adding up to disaster. Investigators at the commission's hearing outlined more than a dozen decisions that at the time seemed questionable but also explainable. It was how those cascaded and crashed together that fueled catastrophe. Read more: <http://www.chron.com/disp/story.mpl/ap/top/all/7285701.html>

## USA: BP AND CONTRACTORS PRONE TO SAFETY 'COMPLACENCY' OVER OIL SPILL



November 9 - A culture of "complacency" dogged BP and its two main contractors working on its exploded Gulf of Mexico oil well, according to the commission investigating the spill.

William Reilly, the committee's co-chair, said BP, the owner of the well, Halliburton, the contractor responsible for cementing, and Transocean, the operator of the Deepwater Horizon rig, were in need of a complete overhaul following the explosion that killed 11 men on April 20.

"There was not a culture of safety on that rig. BP, Halliburton and Transocean are in need of top-to-bottom reform," Mr Reilly said. "I'm conscious of the fact that what we heard about were apparently a lot of decisions that were difficult to explain or look like they were just plain wrong." Read more <http://www.telegraph.co.uk/finance/newsbysector/energy/8121081/BP-and-contractors-prone-to-safety-complacency-over-oil-spill.html>

## U.S. WANTS OIL FIRMS TO PROVE CONTROL OF SPILLS

Oil and gas companies that want to drill offshore will have to prove they have the equipment in place to immediately contain any spills, the U.S. Interior Department said on Monday as it seeks to improve safety following the massive BP oil spill this summer.

The new requirements, which were spelled out in a notice to companies leasing federal offshore tracts, must be met before new drilling permits are issued. The move is the latest in a series of rules that companies must meet to explore for oil and gas, which companies complain has created a slow, if not an unofficial moratorium, on new drilling permits. Read the complete article at: <http://af.reuters.com/article/energyOilNews/idAFN0824111420101108>

## USA: SALAZAR PROPOSES OCEAN ENERGY SAFETY INSTITUTE

November 9 - Institute would advance lessons learned in wake of oil spill; coordinate research and development activities - In response to the Deepwater Horizon oil spill, Secretary of the Interior Ken Salazar today proposed the concept of establishing an "Ocean Energy Safety Institute" designed to facilitate research and development, training, and implementation in the areas of offshore drilling safety, blowout containment and oil spill response.

"The Deepwater Horizon tragedy highlighted the importance of raising the bar on offshore drilling safety, practices and technology," Secretary Salazar said. "The Institute would serve to coordinate and institutionalize the lessons and strategies learned from the oil spill so that the United States can stay at the forefront of drilling safety, containment and spill response."

The Institute would be a collaborative initiative involving government - in particular, the Department of Energy and the United States Coast Guard - industry, academia and scientific experts. Because of the Department's regulatory responsibilities in this area, the Institute would be housed at Interior, but would seek to coordinate and prioritize research dollars from a variety of governmental and non-governmental sources to create a center of excellence that would ensure that the United States remains on the cutting-edge of offshore energy safety.

Specifically, the objectives of the Ocean Energy Safety Institute would include • Advancing safe and environmentally responsible offshore drilling through collaborative research and development in the areas of drilling safety, containment and spill response • Developing advanced drilling technology testing and implementation protocols • Understanding full-system risk and reliability for the offshore environment • Developing an enduring R&D capability and an expertise base useful both for preventing and responding to accidents • Developing training and emergency response exercises • Increasing opportunities for communication and coordination among industry, government, academia and the scientific community • Developing a larger cadre of technical experts who can

oversee or otherwise participate in deepwater drilling-related activities • Establishing cost-effective advances in technology for industry • Creating a framework for regulatory predictability in a global market. Read more: <http://www.maritime-executive.com/article/salazar-proposes-ocean-energy-safety-institute/>

## ISCO PRESENTATION AT INTERNATIONAL BLACK SEA EVENT IN TURKEY

On behalf of ISCO, Executive Committee Member, M. Kerem Kemerli gave an excellent presentation at the recent Black Sea Environment Protection event held in Turkey. The title of the presentation was "Integrated and Co-ordinated Response to a Prospective Disaster in the Black Sea. A short Power Point version of the presentation can be viewed by clicking [HERE](#)

## IRAN: SCADA-ATTACKING WORM INFECTS COMPUTERS AT IRAN NUCLEAR REACTOR

September 29 - Computers at Iran's Bushehr nuclear reactor and around the country have reportedly been infected by the Stuxnet worm, a sophisticated malware that attacks supervisory control and data acquisition (SCADA) systems at power plants, factories, and military installations.

Iranian officials admitted on Saturday that the worm had infected at least 30,000 computers in the country but said on Sunday that none of the nuclear reactor's crucial control systems were affected, *Computerworld* reported on Monday.

According to antivirus company Symantec Corp., Stuxnet looks for industrial control systems and then changes the code in them to allow the attackers to usurp controls of industrial equipment such as sensors, actuators, pumps, and valves without the operators knowing. "In other words, this threat is designed to allow hackers to manipulate real-world equipment, which makes it very dangerous," the company said on its [website](#). This article is about a threat that has international implications for causing pollution events. More at: [http://www.powermag.com/POWERnews/3047.html?hq\\_e=el&hq\\_m=2083209&hq\\_l=9&hq\\_v=34fd131064](http://www.powermag.com/POWERnews/3047.html?hq_e=el&hq_m=2083209&hq_l=9&hq_v=34fd131064)

### PEOPLE IN THE NEWS

## DR. PETER SWIFT RECEIVES LIFETIME ACHIEVEMENT AWARD FROM IMO SECRETARY GENERAL



Dr Peter Swift has been presented, by the Secretary General of the IMO, Efthimios Mitropoulos, with a special *Tanker Shipping & Trade* Lifetime Achievement Award.

Mitropoulos spoke of "*the tremendous contribution made to shipping by Peter throughout an illustrious career in the service of shipping.*" He went on to say that Peter's name is synonymous with so many worthy causes, with which he has engaged energetically, dynamically and with such success. "*Few have earned the recognition of their peers more than he has. He has served with great distinction.*"

Swift commented later: "*It is a great honour to receive this award after nearly 50 years in the shipping business, almost entirely built around oil, chemical and gas tankers. It is also pleasing to note that the tanker industry over the last decade has been able to restore its credibility and reputation that were seriously dented following the high profile Erika and Prestige, and that this sector routinely champions best practice and respect for our seafarers.*" Read more: <http://www.intertanko.com/>

### PRODUCTS & SERVICES

## USA: HAZMAT FUSION CENTER

The National Hazardous Materials Fusion Center (NHMFC) provides responders, throughout the U.S., an information sharing capability previously not available to first responders.

The International Association of Fire Chiefs (IAFC) and the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration (PHMSA) have teamed to bring hazardous material (HazMat) first responders a new tool. Known as the National Hazardous Materials Fusion Center (NHMFC); this new web-based tool provides responders, throughout the U.S., an information sharing capability previously not available to first responders.

The NHMFC Website ([www.hazmatfc.com](http://www.hazmatfc.com)) was demonstrated during the EPA, Region 6, HotZone Conference in Houston, Texas. The internet portal not only provides responders an opportunity to report information on HazMat incidents, but also provides a number of easy to use resources.

The fusion center provides one-stop shopping for hazmat-response information; including, training packages, reports, incident-based case studies, statistics, trends, alerts, recommendations, and peer-to-peer networking. The NHMFC serves as a repository of hazardous material incidents reports collected from actual incidents. Regional incident survey teams (RIST) established in each of the five PHMSA regions will collect incident information on response techniques, lessons learned, and best practices. Members of these teams are local first responders who have been trained to collect lessons learned and provide an analysis of the incident. Teams are only dispatched at the request of the jurisdiction responding to the incident. Read more: <http://sciencercay.com/physics/hazmat-fusion-center/#ixzz154vwb1Zo> [Thanks to Homer of Hazmat 101 Group for relaying this article]

#### EVENTS

For more comprehensive information on upcoming events & training courses click [HERE](#) and select "Events"

### MEDITERRANEAN OIL INDUSTRY GROUP TECHNICAL SEMINAR

MOIG is holding a Technical Session in Malta on Sunday 21 November 2010. Speakers include MOIG Director, Ridha Dhaoui; Hon. Minister George Pullicino, Minister of Resources and Rural Affairs; Paul Pisani, Director of ISCO Corporate Member Alpha Briggs (Mediterranean) Ltd; Capt R Gabriele CMILT, FNI, Head, Pollution and Incident Response, Transport Malta; and Christophe Rousseau CEDRE. More: [http://www.moig.org/Staff%20pour%20page%20web/MOIG\\_Agenda\\_Malta\\_Nov2010.doc](http://www.moig.org/Staff%20pour%20page%20web/MOIG_Agenda_Malta_Nov2010.doc)

### FRANCE: PARIS TO HOST SOIL CONTAMINATION WORKSHOP

An international conference to be held in Paris later this month will examine different approaches to tackling the problem of soil and groundwater contamination by chlorinated solvents. The CityChlor workshop will examine the size of the problem and the measures taken to deal with it both across Europe and the USA. CityChlor is a transnational co-operation project, co-funded by the EU, with partners from Belgium, France, Germany and the Netherlands. Its aim is to develop an integrated approach to tackle the threat caused by contamination by chlorinated solvents in urban areas. Chlorinated solvents are said to produce large plumes of pollution in groundwater, a type of pollution that is attributed to small-scale activities such as drycleaning. The workshop takes place on Tuesday 16 November at Les Salons du Relais, Hôtel Paris Est. Presentations will include reports on projects in Belgium, France, Germany and the Netherlands, Project ChloroNet in Switzerland and innovative techniques used in the USA. The day is rounded off by a keynote address on the soil and groundwater directive by Luca Marmo of the European Commission. Read more at: <http://www.laundryandcleaningnews.com/story.asp?sectionCode=138&storyCode=2057965> and at: the workshop organiser's site: <http://citychlor.eu/compilation-european-know-how-transnational-workshop.htm> [Thanks to Don Johnston of ISCO Associate Member, DG & Hazmat Group, for relaying this information]

### MALAYSIA: HSE IN OIL AND GAS EXPLORATION & PRODUCTION

6 – 8 December 2010, Kuala Lumpur, Malaysia - Conference Main Highlights: ■ Key Lessons From Recent Offshore Disasters – A Close Look at the: Macondo and Montara Blowout ■ The Role of Regulators in Driving Continual Improvements in Oil & Gas HSE ■ Best Practice HSE Management Strategies and Best Practices from Regional and International Oil & Gas Companies ■ Leading HSE Models: A Close Look at HAZOP, Process Safety Management and Behaviour-Based Safety Management ■ Recent Updates on Indonesia's Environmental Law and the Impact this has on the Oil and Gas Industry ■ Implementing Advanced Technology to Improve HSE Management Outcomes. More info: <http://ibc-asia.msgfocus.com/q/1Mx8amET5Jcl39/vw>

### IRELAND: OIL SPILL EXERCISE AT BANGOR, NORTHERN IRELAND

Last week ISCO Corporate Member, Braemar Howells Ltd., successfully carried out a training exercise at Bangor Marina in response to a simulated oil spill. Booms and a skimmer were deployed from a workboat to contain and recover the spill. Braemar Howells is an International Spill Accreditation Association (ISAA) accredited Spill Response Organisation (SRO)

The exercise was overseen by ISAA's "All-Ireland" Accreditation Scheme Assessor, Ray Bennett, in accordance with ISAA requirements for SRO maintenance of Accredited Status.



**Introducing “Cormack’s Column”** – In this issue of the ISCO Newsletter we are printing the first of four articles contributed by Dr Douglas Cormack.

*Dr Douglas Cormack is an Honorary Member of ISCO. As the former Chief Scientist at the British Government’s Marine Pollution Control Unit and head of the UK’s first government agency, the Warren Spring Laboratory, Douglas is a well known and highly respected figure in the spill response community. He is the Chairman and a founder member of the International Spill Accreditation Association.*

## HARMONISATION OF TECHNOLOGY AND MARINE ENVIRONMENT

In this paper, I contrast belief in species-extinction/ecological-disaster with knowledge of the oil-properties which cause organism-damage/commercial-loss and which determine the parameters of prevention/ response, to show that the *Deepwater Horizon Incident* provides a significant opportunity to harmonise technology and the marine environment by rejecting belief and accepting knowledge. Prior to wider dissemination, this paper is now serialised as the first four articles of this Column.

As to defining the difference between belief and knowledge, my recent book<sup>1</sup> shows that while rationality links imagination, belief and knowledge, belief becomes knowledge only when evaluated for compatibility/incompatibility with reality; that without this reality-evaluation belief remains belief; and that while knowledge speaks for itself, belief is debated without lasting consensus, the knowledge-content of opinions being always insufficient to resolve their differing belief-contents.

Thus, on my differentiation of belief/knowledge, we see that belief in oil-related species-extinction/ecological-disaster remains belief, no such extinction/disaster having been observed in reality thus far. Thus, while we know that individuals in certain species are killed by oil, belief in lasting-damage to species, let alone the ecosystem, remains belief. However, were the numbers of individuals killed per species per incident to be compared with those born/dying annually in the maintenance of current populations, knowledge would replace belief as to the significance/insignificance of species-specific effects. Again, the risk to species could be evaluated with reference to their known habits. Thus, moulting auks confined to the sea-surface, waders and species which dive from the surface to feed, are at greater risk than those which dive from the air only where fish are not hidden by floating-oil. Indeed, no dead birds were seen at the *Ekofisk Blow-out* of 1976, and no birds were seen in the air while the slick persisted. Again, while one might look upwards in the food chain for ecological damage, we see no ill-effects from dispersed oil droplets being degraded by micro-organisms whose standing populations increase with proximity to chronic oil-sources. Yet again, while ecological damage might be expected where shore-located organisms have been covered by oil, even such shores are re-colonised as effectively as scrubbed boat-slipways or weeded gardens.

Further to bio-oxidative decay by micro-organisms at the bottom of the food chain, we know that all vegetable-matter is photo-synthesised from atmospheric carbon dioxide and returns to carbon dioxide and water on such decay; that all animals and humans respire food-matter to carbon dioxide and water while alive and decay to these molecules when dead; and that oxygen-deprivation can interrupt decay to form natural gas, oil and coal. Thus, we know that biodegradation of oil droplets in the sea, consumption of food, and combustion of fossil fuels, return to the atmosphere the carbon dioxide which would otherwise have returned through decay. Indeed, we also know that tectonic-movement raises mountain ranges and sub-ducts seafloors beneath continental margins with abstraction of atmospheric carbon dioxide in the former and its re-emission through the volcanic-activity of the latter, while rivers return the carbon-content of sediments from mountain-weathering to sub-ducting seafloors.

Thus, while beliefs in oil-related species-extinctions and ecological-disasters can be reality-validated or reality-refuted by direct observation, belief in the significance/insignificance of anthropogenic global warming could be reality-evaluated by comparing the net atmospheric increase in biologically recycling carbon dioxide since the industrial revolution, with net increases/decreases in biologically/tectonically recycling carbon dioxide over geological time as indicated by temperature-related isotope ratios. *To be continued next week*

1 The *Rational Trinity: Imagination, Belief and Knowledge*, D.Cormack, Bright Pen 2010 available at [www.authorsonline.co.uk](http://www.authorsonline.co.uk)

2 *Response to Oil and Chemical Marine Pollution*, D. Cormack, Applied Science Publishers, 1983.

3 *Response to Marine Oil Pollution - Review and Assessment*, Douglas Cormack, Kluwer Academic Publishers, 1999.

## NEW BOOK ON OIL SPILLS RELEASED

OIL SPILL  
SCIENCE *and*  
TECHNOLOGY

Edited by  
Mervin Fingas



Elsevier has just released a new book entitled "Oil Spill Science and Technology". The volume has been edited and produced by ISCO Member of Council for Canada, Dr Mervin Fingas.

Contributors to the book include: Carl Brown, Greg Challenger, Ben Fieldhouse, Merv Fingas, Bruce Hollebhone, Mike Kirby, Alain Lamarche, Robin Law, Greg Mauseth, Jacqui Michel, Paula Neall, William Nichols, Ed Owens, Hugh Parker, Karen Purnell, Quek Qihui, Jennifer Rooke, Dagmar Schmidt-Etkin, Gary Shigenaka, Debra Simecek-Beatty, Kathy Stanzel Heather Yardley and Ruth Yender.

The book is available for sale at: [http://www.elsevier.com/wps/find/bookdescription.cws\\_home/724026/description#description](http://www.elsevier.com/wps/find/bookdescription.cws_home/724026/description#description). It has more than 1150 pages in 13 parts and 38 chapters, which are listed as:

**Part I Introduction and the Oil Spill Problem**

1. Introduction

2. Spill Occurrences: A World Overview

**Part II Types of Oils and Their Properties**

3. Introduction to Oil Chemistry and Properties

**Part III Oil Analysis and Remote Sensing**

4. Measurement of Oil Physical Properties

5. Introduction to Oil Chemical Analysis

6. Oil Spill Remote Sensing: A Review

7. Laser Fluorosensors

**Part IV Behaviour of Oil in the Environment and Spill Modeling**

8. Introduction to Spill Modeling

9. Evaporation Modeling

10. Models for Water-in-Oil Emulsion Formation

11. Oil Spill Trajectory Forecasting Uncertainty and Emergency Response

**Part V Physical Countermeasures on Water**

12. Physical Spill Countermeasures

13. Weather Effects on Oil Spill Countermeasures

**Part VI Treating Agents**

14. Spill-treating Agents

15. Oil Spill Dispersants: A Technical Summary

16. A Practical Guide to Chemical Dispersion for Oil Spills

17. Procedures for the Testing and Approval of Oil Spill Treatment Products in the United Kingdom - What they are and Considerations for Development

18. Formulation Changes in Oil Spill Dispersants: Are They Toxicologically Significant?

19. Environment Canada's Methods for Assessing Oil Spill Treating Agents

20. The United States Environmental Protection Agency: National Oil and Hazardous Substances Pollution Contingency Plan, Subpart J Product Schedule (40 Code of Federal Regulations 300.900)

21. Surface-Washing Agents or Beach Cleaners

22. Review of Solidifiers

**Part VII In-situ Burning**

23. An Overview of In-situ Burning

**Part VIII Shoreline Countermeasures**

24. Shoreline countermeasures

25. Automated Assessment and Data Management

**Part IX Submerged Oil**

26. Submerged Oil

**Part X Effects of Oil in the Environment**

27. Effects of Oil in the Environment

**Part XI Contingency Planning and Comment**

28. Introduction to Oil Spill Contingency Planning and Response Initiation

29. The Role of ITOPF

30. Safety Issues at Spills

**Part XII Post-assessment and Restoration**

31. Natural Resource Damage Assessment

32. Seafood Safety and Oil Spills

**Part XIII Specific Case Studies**

33. The Torrey Canyon Oil Spill, 1967

34. The Ekofisk Bravo Blowout, 1977

35. The Sea Empress Oil Spill, 1996

36. The Braer Oil Spill, 1993

37. 1991 Gulf War Oil Spill

38. Tank SOLAR 1 Oil Spill, Guimaras, Philippines: Impacts and Response Challenges

## ESSENTIAL ELEMENTS OF RESPIRATORY PROTECTION

"Essential Elements of Respiratory Protection", a short guidebook listing 19 essential elements of respiratory protection for workers potentially exposed to deleterious agents, such as hazardous wastes or agents of mass destruction. Learning objectives include: Articulate the essential elements of an effective respiratory program; identify and comprehend the basic personal respirators functional categories; apply the essential elements to develop, implement or evaluate a respiratory protection program; and recognize critical administrative, medical, environmental, technical and regulatory requirements. The guidebook presents the information in a graphical format which makes presentation and absorption of material quicker and easier. We are pleased to provide a complimentary copy of the booklet upon request (or use the order form on the website.) "Essential Elements of Respiratory Protection" The New Jersey Center for Public Health Preparedness. UMDNJ School of Public Health. <http://www.njcphp.org/legacy/drupal/index.php?q=node/34> [Thanks to Gregory T. Banner of Hazmat 101 Group for relaying this news item]

Legal disclaimer: Whilst ISCO takes every care to ensure that information published in this Newsletter is accurate unintentional mistakes can occur. If an error is brought to our attention, a correction will be printed in the next issue of this Newsletter.