



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
Issue 377, 25 March 2013

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International news

IMO AND IPIECA LAUNCH GLOBAL INITIATIVE FOR SOUTH EAST ASIA (GI-SEA) TO IMPROVE OIL SPILL PREPAREDNESS AND RESPONSE CAPABILITIES



Above: Launch of Gi-SEA Programme on Oil Spill Preparedness and Response. Left to right: Jose Matheickal, Marine Environment Division, IMO; Captain Yan Risuandi, Director for Marine Safety and Acting Director for Sea and Coastguard of the Directorate General of Sea Transportation, Ministry of Transport, Indonesia; Brian Sullivan, Executive Director, IPIECA

International news (continued)

March 21 - IMO and IPIECA, the global oil and gas industry association for environmental and social issues, have jointly launched a new Global Initiative (GI) programme aimed at improving the oil spill preparedness and response capabilities in south east Asia, at a regional workshop that took place from 20 to 21 March 2013 in Jakarta, Indonesia. The workshop and launch event was attended by more than 70 high-level representatives from Government and the maritime, oil and gas industry from countries across the south east Asia region.

The Statement of Intent on Establishing the GI-SEA Programme on Oil Spill Preparedness and Response was signed by Mr. Jose Matheickal, Marine Environment Division, IMO and Mr. Brian Sullivan, Executive Director, IPIECA, and witnessed by Captain Yan Risuandi, Director for Marine Safety and Acting Director for Sea and Coastguard of the Directorate General of Sea Transportation, Ministry of Transport, Indonesia, representing the host Government for the GI-SEA workshop.

[Click here for photos.](#)

IMO and IPIECA have, for a number of years, been working with their international and regional partners to establish this new regional programme, which demonstrates a major commitment from both Government and industry to improve oil spill preparedness and response in the region. This new joint-initiative will build collaboration and create a forum for joint action, focusing on practical activities such as training, workshops and joint exercises in the field of oil spill preparedness and response. More importantly GI-SEA will also support the objectives of the ASEAN Oil Spill Response Action Plan (ASEAN-OSRAP) being developed by the ASEAN members with the support of the IMO Integrated Technical Co-operation Programme (ITCP).

The GI South East Asia programme was initiated to address an increased level of oil spill risk due to higher levels of shipping traffic, and increased exploration and production activities across the region. A full-time Project Manager based in Singapore, employed by IPIECA, will oversee the GI-SEA programme activities.

The Global Initiative

The GI, established in 1996 by IPIECA and IMO, continues to expand its work to reduce the level of global oil spill risk in priority locations around the world. The programme provides a body for co-operation between governments and the oil and gas industry, and through it, IPIECA and IMO work together to help countries develop national structures and capability for oil spill preparedness and response.

The Global Initiative for West, Central and Southern Africa (GI WACAF) was launched in 2006.

Websites:

IPIECA: <http://www.ipieca.org/topic/oil-spill-preparedness/global-initiative>

ASEAN: <http://www.asean.org/>

GI-WACAF <http://www.imo.org/OurWork/Environment/SpecialProgrammesAndInitiatives/Pages/The-GI-WACAF-Project.aspx>

Source: [IMO Press Briefing](#)

INTERNATIONAL SALVAGE UNION ANNUAL POLLUTION SURVEY - 2012 RESULTS

March 20 - The International Salvage Union (ISU) today announced the results of its annual Pollution Prevention Survey for 2012.

The quantity of pollutants salvaged overall was significantly up on the 2011 numbers. The increase is explained by the inclusion of a small number of substantial coal cargoes this year. There was a decrease in the number of services performed by ISU members compared with the previous year.

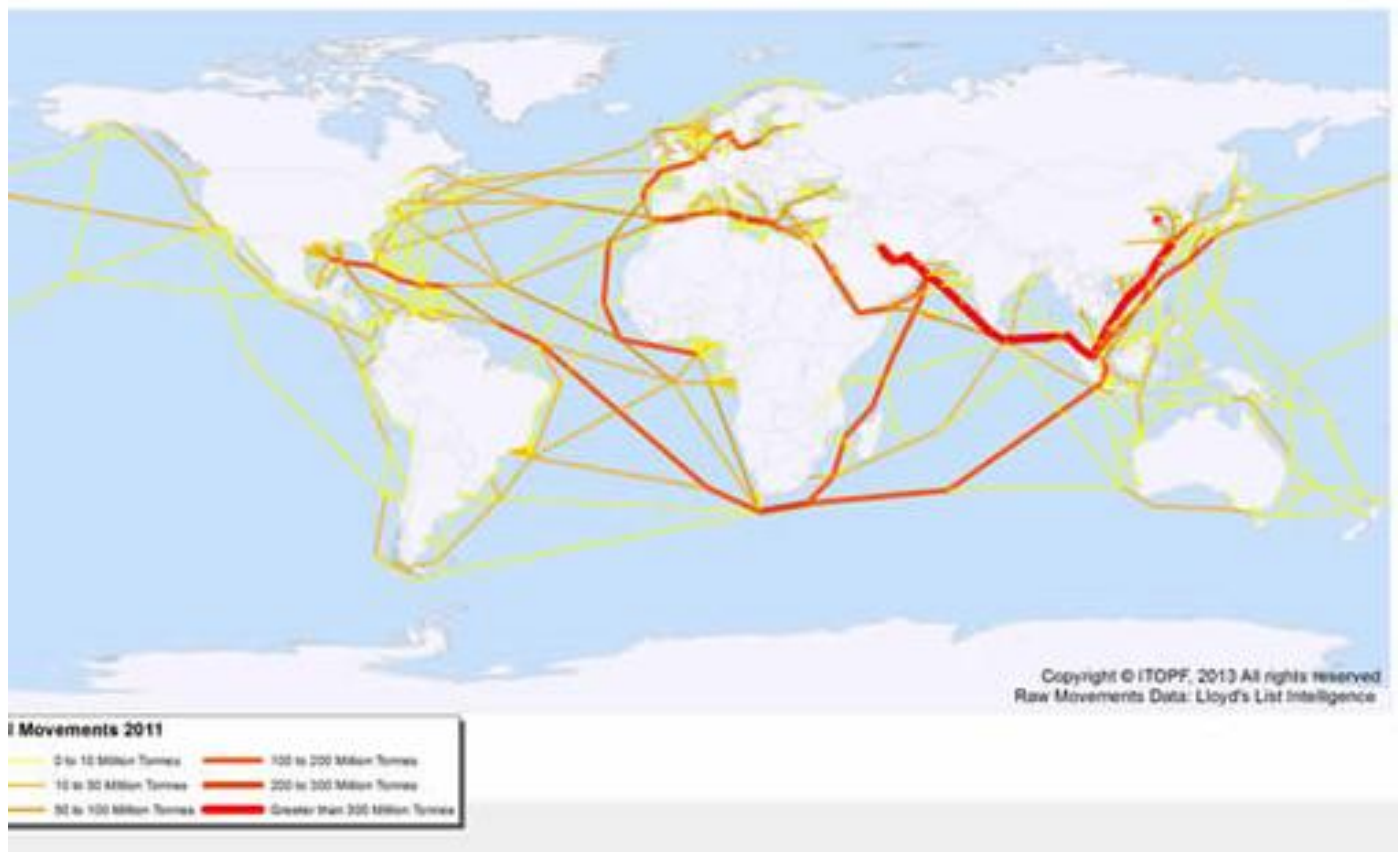
The total of all pollutants salvaged in 2012 was 810,068 tonnes compared with 496,331 tonnes in 2011. It is a rise of 63%. The average annual figure for the 18 years for which data is available has dipped to just below one million tonnes of potential pollutants salvaged per year. It mirrors the trend of a decreasing number of casualties which chiefly reflects improvements to ship and operational safety over the past two decades.

In 2012 the major change was a significant increase in the quantity of "other pollutants" salvaged – up 691% from 63,338 tonnes in 2011 to 501,348 tonnes this time. However, the 2011 figure was historically low and the 2012 includes some large, bulk cargoes, notably of coal. The quantity of oil cargoes salvaged went down by 59% from 258,647 tonnes in 2011 to 104,665 tonnes in 2012. This category is subject to dramatic change due to the potentially large volumes of oil cargo carried by a single vessel. The 2012 number represents, for example, only one major cargo.

There were 188 services carried out by ISU members. The Lloyd's Open Form salvage contract continued to be the most widely used contract with 52 services (55 in 2011). 32 services were carried out under towage contracts; 31 services were carried out under the Japanese form. Wreck contracts accounted for 42 of the services and other types of contract were used in 36 services.

International Salvage Union [Read more](#)

UPDATED OIL MOVEMENTS DATA ON ITOPF'S WEBGIS



Oil Movements 2011 from ITOPF's WebGIS

Data on oil movements for 2011 is now available on ITOPF's WebGIS site. Raw data on laden oil tanker shipments was obtained from Lloyds List Intelligence and digitalised into individual GIS journeys, based on an established route network. The result is a schematic showing major tanker routes, traffic density and an approximation of the total volume of cargo carried within any specific region. Datasets for 2001 and 2005 data are also available, which enables an assessment of the changing patterns in transportation of oil by sea and, consequently, the changing risk. ITOPF's GIS platform has proved a powerful tool for visualising tanker voyages and can be integrated with datasets such as location of historical spills and environmentally sensitive areas, in order to assist with planning and preparedness for oil spill events.

The GIS maps can be accessed at <http://www.itopf.co.uk/information-services/data-and-statistics/gis-map/>. ITOPF

OCIMF GUIDELINES ON CAPABILITIES OF EMERGENCY RESPONSE SERVICES

March 4 - Emergency Response Services (ERS) are rarely used, and as such may not attract appropriate priority of emphasis in vessel management. Merely having a service agreement in place does not ensure that, when needed, the quality of service provided meets the need. Recognising the potential hazards associated with the lack of consistency in the provision and utilisation of ERS, the OCIMF Marine Technical Sub-committee was tasked to form a Working Group to review current systems and practices in the industry, and to make any necessary recommendations for improvement. The objective of these Guidelines is to clarify and recommend the minimum scope of ERS provision, and to give advice on suggested minimum requirements of competency and capability of ERS service providers. OCIMF [Download the OCIMF Guidelines](#)

Incident reports

USA: HYDROCARBON SPILL CONFIRMED NORTH OF PARACHUTE

March 18 - Oil-and-gas industry officials Saturday confirmed that state and federal regulators and a consortium of consultants have been at the scene of an underground plume of more than 1,500 gallons of hydrocarbons in western Colorado for more than a week.

The source of the plume — discovered 4 miles north of Parachute along Parachute Creek next to Williams Midstream's Parachute Creek Gas Plant — has not been identified. *The Denver Post* [Read more](#)

Incident reports (continued)

Parachute Creek spill continues uncontained; cause, source unknown



Picture: Crews work at the site of a natural gas seep four miles north of Parachute, Colo., at the Parachute Creek Gas Plant on Monday, Mar. 18, 2013. (The Grand Junction Daily Sentinel | Dean Humphrey)

March 19 - An underground plume of toxic hydrocarbons from an oil spill north of the Colorado River near Parachute has been spreading for 10 days, threatening to contaminate spring runoff.

Vacuum trucks have sucked up more than 60,000 gallons, but an unknown amount remains in the ground by Parachute Creek.

The U.S. Environmental Protection Agency on Monday was in the process of formally ordering the Williams energy company — which runs a gas-processing plant on the creek — to do all in its power to protect surface water. *The Denver Post* [Read more](#)

USA: CLEAN-UP CONTINUES AFTER TUG GROUNDS IN BUZZARDS BAY

March 22 - Federal, state and local agencies continue to monitor clean up and recovery efforts today after a tugboat grounded at the southern end of Cape Cod Canal early March 21, closing the canal for several hours.

An incident command post was established at the Massachusetts Maritime Academy to assess pollution, coordinate clean-up efforts and the removal of debris left from the tug Justice that ran aground, damaging its propulsion system and discharging approximately 330 gallons of gear oil into the waters of Buzzards Bay.

The Maritime Executive [Read more](#)



UK: DANIO CARGO VESSEL RUNS AGROUND ON FARNE ISLANDS



It was hoped the Danio would be removed at high tide but this was not possible
A 262ft (80m) cargo vessel has run aground off the Northumberland coast.

March 16 - The Seahouses Lifeboat Station received a distress call from the cargo vessel Danio in the early hours of Saturday.

The ship got caught on rocks on the Farne Islands, a sanctuary to seals and seabirds, about 3 miles (5km) from the mainland.

Salvage teams are at the scene but there are no reports of any fuel leak or injuries. *BBC News* [Read more](#)

USA: DIESEL SPILL CLOSES PORTIONS OF WILLARD BAY STATE PARK

March 23 - Emergency responders on Tuesday flocked to Chevron's third petroleum pipeline spill in Utah in less than three years. Willard Bay State Park officials closed down the facility on the northeastern edge of the Great Salt Lake and evacuated two campers and the park manager's family after around 4,200 to 6,300 gallons of diesel fuel leaked from the pipeline just north of the park. They also rescued two beavers from the contaminated area and sent one off-site for cleaning.

Chevron has 30 days to provide federal pipeline regulators with a report on what happened. Meanwhile, a variety of local, state and federal agencies will be monitoring the cleanup, any effects on water and wildlife and possible enforcement action, including fines that take into account the two 2010 spills. In light of the north marina's closure, Utah State Parks hopes to open the south marina by Wednesday. Meanwhile, investigators descended upon the scene to probe what happened and why as responders scrambled to find the leak's source. And Chevron dispatched dozens of clean-up workers to the scene. *The Salt Lake Tribune* [Read more](#)

Incident reports (continued)

CHINA: SHIP COLLISION RESULTS IN OIL SPILL ON YANGTZE RIVER



March 20 - Two cargo ships collided, spilling oil at the mouth of China's Yangtze River.

According to Shanghai Daily, about 674 cubic meters (178,000 gallons) of fuel from the CMA CGM FLORIDA, spilled into the waters stretching 124 nautical miles.

Rescue vessels were on scene evaluating the leaks and possible pollution caused by the incident.

Reports state that the CMA CGM FLORIDA collided with the Panamanian-registered ZHOUSHAN early Tuesday morning.

The Maritime Executive [Read more](#)

CANADA: OIL RECOVERY VESSEL RAN AGROUND EN ROUTE TO FEDERAL TANKER ANNOUNCEMENT

Picture: The Burrard Clean No. 9 is one of several vessels operated by Western Canada Marine Response Corporation to clean up oil spills on the West Coast. (WCMRC)

March 21 - An oil spill recovery vessel ran aground en route to a federal announcement on oil tanker safety in Vancouver on Monday, officials have confirmed.

The vessel was making a 12-hour trip from its base in Esquimalt to Vancouver for a tanker safety announcement [by Federal Transport Minister Denis Lebel and Natural Resources Minister Joe Oliver](#) when it struck an uncharted sandbar near Sandheads at the mouth of the Fraser River near Steveston. *CBC News* [Read more](#) [Thanks to Gerald Graham, World Ocean Consulting]



Other news

CANADA: HARPER GOVERNMENT ANNOUNCES FIRST STEPS TOWARDS WORLD-CLASS TANKER SAFETY SYSTEM

March 18 - The Harper government today announced a number of measures toward the creation of a World-Class Tanker Safety System. The implementation of eight tanker safety measures was announced along with the introduction of the *Safeguarding Canada's Seas and Skies Act*, and the creation of a Tanker Safety Expert Panel to review Canada's current tanker safety system and propose further measures to strengthen it. The announcement was made by the Honourable Denis Lebel, Minister of Transport, Infrastructure and Communities and the Honourable Joe Oliver, Minister of Natural Resources.

"Our government is working to strengthen the safety of Canadians and better protect the environment," said Minister Lebel. "I am pleased to announce the first steps towards the development of a World-Class Tanker Safety System off the West and East coasts of Canada."

"While our current tanker safety system has served us well for many years, it is essential that we strengthen it to meet future needs, as the transportation of Canadian exports is expected to grow and create many high-quality jobs in Canada."

"As a trading nation, Canada depends on marine shipping for economic growth, jobs and long-term prosperity," said Minister Oliver. "There will be no pipeline development without rigorous environmental protection measures and the tanker safety initiatives we are announcing today are an important aspect of our plan for Responsible Resource Development."

As part of its plan to create a World-Class Tanker Safety System, the government will, in the weeks and months ahead, work and engage with Aboriginal communities.

The Tanker Safety Expert Panel will review Canada's current system and propose further measures to strengthen it. In the coming months, the panel will consult with key stakeholders to enhance the government's knowledge and understanding of how well the current system is working, review our current preparedness and response capacity, and propose new ways to bring Canada's tanker safety system to a world-class status.

Other news (continued)

"Our panel will work on recommendations to make a strong tanker safety system world-class," said Captain Gordon Houston, Chair of the Tanker Safety Expert Panel. "Together, our panel members have 120 years of maritime experience and a deep commitment to the environment."

Today, the government has also tabled the *Safeguarding Canada's Seas and Skies Act*, which is amending the *Canada Shipping Act, 2001*. The proposed amendments will:

- strengthen the current requirements for pollution prevention and response at oil handling facilities;
- increase Transport Canada's oversight and enforcement capacity by equipping marine safety inspectors with the tools to enforce compliance;
- introduce new offences for contraventions of the Act and extend penalties relating to pollution; and
- enhance response to oil spill incidents by removing legal barriers that could otherwise block agents of Canadian response organizations from participating in clean-up operations.

In addition, the Ministers announced eight measures to strengthen Canada's tanker safety system:

- Tanker inspections: The number of inspections will increase to ensure that all foreign tankers are inspected on their first visit to Canada, and annually thereafter, to ensure they comply with rules and regulations, especially with respect to double hulls.
- Systematic surveillance and monitoring of ships: The government will expand the National Aerial Surveillance Program.
- Incident Command System: The government will establish a Canadian Coast Guard (CCG) Incident Command System, which will allow it to respond more effectively to an incident and integrate its operations with key partners.
- Pilotage programs: We will review existing pilotage and tug escort requirements to see what more will be needed in the future.
- Public port designations: More ports will be designated for traffic control measures, starting with Kitimat.
- Scientific research: The government will conduct scientific research on non-conventional petroleum products, such as diluted bitumen, to enhance understanding of these substances and how they behave when spilled in the marine environment.
- New and modified aids to navigation: The CCG will ensure that a system of aids to navigation comprised of buoys, lights and other devices to warn of obstructions and to mark the location of preferred shipping routes is installed and maintained.
- Modern navigation system: The CCG will develop options for enhancing Canada's current navigation system (e.g. aids to navigation, hydrographic charts, etc) by fall 2013 for government consideration.

Additional information on the tanker safety panel and other initiatives to strengthen Canada's Tanker Safety System for Tanker Ships can be found in the attached backgrounders or at <http://www.tc.gc.ca/eng/mediaroom/backgrounders-menu.htm>, or on the [Transport Canada website](#). *Transport Canada* [Thanks to Gerald Graham, World Ocean Consulting] [See also related article with comment in gCaptain](#)

USA: NOAA PROPOSES PLAN TO ADDRESS ENVIRONMENTAL INJURIES FROM 2005 GULF OIL SPILL



March 18 - NOAA released a draft damage assessment and restoration plan addressing environmental injuries from the 2005 Tank Barge DBL 152 oil spill in federal waters in the Gulf of Mexico.

The draft plan describes the steps NOAA has taken to see if natural resources, such as marine habitats, were injured by the nearly two million gallon spill, as well as the extent of those injuries. The spill began on November 11, 2005 when the Tank Barge DBL 152 struck submerged remains of a pipeline service platform that collapsed during Hurricane Rita approximately 50 miles southeast of Sabine Pass, Texas.

The Maritime Executive [Read more](#)

Other news (continued)

USA: COAST GUARD, OREGON FIRST RESPONDERS, OIL COMPANY PRACTICE LARGE OIL SPILL RESPONSE

March 19 - A gathering of Oregon first responders, the Coast Guard and an oil company conducted a major tabletop drill on oil spill response in the lower Columbia River on March 14. A real oil spill disaster in the Columbia River could be devastating. By volume, the Columbia is the fourth-largest river in the U.S. and has the greatest flow of any North American river that drains into the Pacific.

The Coast Guard, Oregon Department of Environmental Quality (DEQ), state and local agencies, along with Chevron Shipping and numerous pollution response and salvage companies and organizations participated in the drill in Astoria, OR, designed to prepare personnel for a coordinated response in the event of a large vessel collision, fire and oil spill in the river region.

Government Security News [Read more](#)

BAHAMAS HOSTS OIL SPILL RESPONSE WORKSHOP OPENED BY MINISTER OF TRANSPORT



Picture: Lead delegates in attendance are from left: Cheri Hunter, USA; Anne Reglain, RAC/REMPEITC; Lorraine Armbrister, Permanent Secretary in the Ministry of Transport and Aviation; Hon. Glenys Hanna-Martin, Minister of Transport and Aviation and Hon. Hope Strachan, Minister of State in the Ministry of Transport and Aviation. Standing from left are Robert Pond, USA; Ricardo Gonzalez Carillo, Mexico; Gerson Obed Vega Ibarra, Mexico; Captain Gaspar Escobedo, Mexico and Ernesto Soberon Guzman, Embassy of Cuba in The Bahamas.

March 19 - In an effort to enhance the state of readiness for the wider Caribbean and the Gulf of Mexico for oil spill response, planning and cooperation, the Regional Marine Pollution Emergency Information and Training Center for the Wider Caribbean (REMPEITC-Caribe) and the Ministry of Transport and Aviation are hosting a regional Oil spill Planning, Response and Cooperation (OPRC) meeting in Nassau on 19-20 March, 2013, at SuperClubs Breezes.

This meeting marks the fifth meeting of the regional group dating back to December 2011. The first meeting was held in The Bahamas. *The Bahamas Weekly* [Read more](#)

CANADA: BUOYANCY OF OIL SANDS BITUMEN RAISES SPILL CONCERNS

March 20 - Natural Resources Minister Joe Oliver this week told a Vancouver audience that British Columbians have nothing to fear from Pacific exports of Canadian oil sands crude. "We have taken significant measures to protect against a spill," the minister said.

But one of the country's top oil spill experts says exports of heavy crude pose added risks to the West Coast, since some oil sands blends are likely to sink in the case of a spill, complicating potential cleanup efforts.

Years of research make clear that some kinds of diluted bitumen will not float in an accident, says Merv Fingas, the former chief of research and development for a group at Environment Canada that specialized in oil spills. Instead, the oil-thinning diluent in the crude will evaporate. The remaining bitumen, if it is heavy enough, will drop through the water, where the highly sticky substance can adhere to rocks and other sediments, making cleanup difficult. *The Globe & Mail* [Read more](#) [Thanks to Gerald Graham]

USA: ENBRIDGE CLEANUP MAY COST \$1-BILLION, COMPANY WARNS

March 20 - Increasing dredging requirements resulting from Enbridge's massive oil spill into Michigan's Kalamazoo River in 2010 could push the cleanup bill to almost \$1-billion, above and beyond what is covered by the insurance of the company's U.S. affiliate, that unit reported on Wednesday.

Earlier this month, the U.S. Environmental Protection Agency ordered Enbridge to perform additional dredging to remove submerged oil and to maintain sediment traps throughout the river as a result of the Line 6B rupture. On Wednesday, Enbridge Energy Partners L.P. estimated it will incur approximately \$175-million more in costs to pay for the additional work. "This estimate is an increase to the total estimated costs of \$820-million related to the Line 6B crude oil release that was previously disclosed and excludes any additional fines and penalties," it said in a filing with the U.S. Securities and Exchange Commission. *The Globe & Mail* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Other news (continued)

COLUMBIA SHIPMANAGEMENT FINED \$10.4 MILLION FOR OIL POLLUTION AT SEA VIOLATIONS

March 22- Shipping firms Columbia Shipmanagement GmbH (CSM-D) and Columbia Shipmanagement Ltd. (CSM-CY), based in Germany and Cyprus respectively, have agreed to pay a \$10.4 million penalty and be placed on probation for four years after pleading guilty yesterday to felony obstruction of justice charges and violations of the Act to Prevent Pollution from Ships. *gCaptain* [Read more](#)

USA: SENATE BUDGET PLAN EMBRACES KEYSTONE XL APPROVAL



The Keystone Oil Pipeline is pictured under construction in North Dakota in this undated photograph released on January 18, 2012. Credit: Reuters/TransCanada Corporation/Handout

March 22 - The Senate easily passed on Friday a symbolic measure approving the Canada to Texas Keystone XL oil pipeline, a move backers said showed strong support for a bill that would give Congress power to green light the project later in the year.

The amendment to the budget plan, sponsored by Senator John Hoeven, a Republican from North Dakota, passed 62 to 37.

It was symbolic because the budget is a blueprint that will not become law. But the measure was selected out of hundreds of others for a vote and was approved by a strong majority in the 100-seat chamber led by Democrats. *Reuters* [Read more](#)

People in the news

GUY DOWNIE APPOINTED AS VIKOMA SALES AND MARKETING DIRECTOR

Vikoma International Limited, has strengthened its senior management team with the appointment of Guy Downie as Sales and Marketing Director.

Vikoma, which is part of Aberdeen head-quartered Energy Environmental Group, leads the world in the design manufacture and installation of oil spill containment and recovery equipment. The business has a global reputation for the development of innovative, high performance products to deal with the full range of oil spill scenarios.

The company says Mr Downie will bring a valuable mixture of leadership, experience and professionalism in driving future growth.

Mr Downie joins the company from Freudenberg Oil & Gas where he was European Sales Director. Prior to this he worked for six years at Trelleborg Offshore, most recently in the role of Vice President for the Offshore Construction Group. <http://www.vikoma.com>



ISCO news

ISCO AGM AT SPILLCON CONFERENCE & EXHIBITION IN CAIRNS, QUEENSLAND, AUSTRALIA

Further to the earlier announcement in Issue 374 of this Newsletter, it can now be reconfirmed that the 2013 AGM will take place during Spillcon at Cairns in Queensland. Your Secretary encountered some problems that delayed finalisation of the meeting arrangements and, because of this, the meeting room location, time and date cannot yet be confirmed.

ISCO's President, David Usher Hon. FISCO, will be chairing the meeting. Membership Secretary, Mary Ann Dalgleish will be attending, also John Wardrop, Member of ISCO Council for Australia and Dr Merv Fingas, Member of ISCO Council for Canada.

They look forward to meeting members in Australia and others who will be at the Spillcon 2013 Conference and Exhibition.

Non-members will be welcome to join the meeting, so please feel free to bring friends and colleagues along.

Members will receive advice on this, together with the Agenda and other meeting papers by email within the next few days. More detailed information will also be given in the next issue of the ISCO Newsletter.



In this issue of the ISCO Newsletter we are printing No. 119 in a series of articles contributed by Dr Douglas Cormack.

Dr Douglas Cormack is an Honorary Fellow 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](#)

CHAPTER 119: KNOWLEDGE THWARTED BY BELIEF-ONLY REGULATION

Having shown that cargo/bunker transfer is the sole means of avoiding releases beyond those of initial tank-damage, that even these can be beyond the practicable stranding-avoidance capacity of dispersant-spraying and mechanical-recovery, and that beliefs and belief-based regulations thwart all three, I now show the disadvantageous extent to which emergency-generated wastes from sea and shore have fallen within regulations governing routine transport, treatment and disposal of wastes in general. Thus, prior to the *Sea Empress Incident*, this regulatory framework had been developing through the Environmental Protection Act of 1990, the Waste Management Licensing Regulations, and the National Waste Strategy of January 1996 without forethought as to its impact on marine emergency-generated wastes, as was somewhat belatedly revealed by representatives of the Environment Agency at an Institute of Petroleum Seminar on the *Sea Empress* in September 1996.

Thus, the 1990 Act embodied more stringent standards for landfill by requiring containment for groundwater protection to replace earlier reliance on dilution/dispersal, while the National Waste Strategy incorporated a hierarchy of waste-specific disposal options deemed to be most environmentally friendly on a case-by-case basis, thus eliminating landfill as a disposal option for hydrocarbon wastes, its anaerobic decrease in rates of degradation being deemed to increase leachate escape to groundwater and methane escape to atmosphere. However, while emergency-generated oily wastes may be exempt, potential receivers are nonetheless unwilling to accept them for fear of creating subsequent problems for themselves however undefined, or they arbitrarily limit the degree to which the exemptions may be invoked.

Yet again, the removal of pollutant from a beach is more readily seen as an emergency-operation than the temporary/intermediate storage of the wastes thus removed. Again, were such storage deemed to be outside the emergency-provision, a licence would be required which might not be forthcoming and which, in any case, would amount to a request for planning permission which itself is a lengthy procedure requiring consultation with other bodies unless the waste is to be recycled or put to direct use, in which case it can be provisionally exempted as provided within the Act and the EC Directives from which it derives. Taken together, however, these regulations are obstructive rather than facilitating in their leaving too much to arbitrary interpretations of environmentalist belief by those having no acceptance of responsibility for returning the marine environment to its pre-incident condition as quickly and as cost-effectively as possible.

Further to belief-based regulation and the absence of its knowledge-based alternative, reports of the Marine Accident Investigation Branch (MAIB) into causes of accidents are intended to avoid repetitions by determining whether the accident under review occurred because of non-compliance with existing regulations or because of compliance with a defective regulation which in light of the investigation needs positive amendment. Thus, in considering the cause(s) of the *Sea Empress* grounding, the MAIB report followed standard practice. However, as to incident-response, the assumption must be that accidents will occur; that contingency planning would be redundant were this not so; and that while the MAIB report on the *Sea Empress* describes in detail the efforts made to hold the ship in the Haven entrance ostensibly to conduct a cargo/bunker transfer, it fails to consider the option of discharging to shore at the destination-refinery or elsewhere in the Haven, these options being no part of any then existing regulation.

Thus, in this latter phase of the report, the authors were bereft of any prescriptive regime or general guidance within the National Contingency Plan as to the role of officials or salvors in respect of ship-to-ship or ship-to-shore transfer of cargo/bunkers from casualties. Thus, they had to fall back on references to commonsense and the general concept of good seamanship against which they could conveniently discuss the handling of the ship *in situ* in the absence of any regulatory framework against which compliance/non-compliance could be assessed or which itself could be assessed as needing amendment towards improving future incident response. Indeed, the extent to which the operations under discussion appeared to unfold rather than to be directed were a pointer in themselves to the absence/ inadequacy of documented guidance for those involved, though the most glaring deficiency was the absence of any justification for attempting ship-to-ship transfer in the mouth of the Haven despite the destination-refinery being only a few miles further in, and despite the authors of the report already knowing that the ship, in a then greatly deteriorated condition, had ultimately been towed to the said refinery for discharge, and thence to Belfast for dry-docking.

1 The *Rational Trinity: Imagination, Belief and Knowledge*, D.Cormack, Bright Pen 2010 available at 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.

RESPONSE TO INLAND OIL SPILLS – PART 14



A short series of articles contributed by Mark Francis of Oil Spill Solutions.

Mark Francis has been involved with the oil industry since 1975. He attended his first oil spill in 1976, the Tanker Elaine V incident. He became head of response for inland spills within the UK for British Petroleum E & P in 1980 for 10 years responding to well, storage tank and pipeline spills throughout the UK. Over the next 20 years he continued to build his international operations experience and has also specialised in spill response training, delivering IMO and other courses in more than 20 countries. Mark's website is at <http://www.oilspillsolutions.org>

Pneumatic Barriers

These can only be used in very calm conditions with very weak currents. They create a current on the water surface which prevents floating liquids or debris from passing and therefore spreading. The current is generated by compressed air flowing through a thick walled pipe placed on the bed of the water body. The air rises through special nozzles incorporated in the pipe to the surface, forming a vertical bubble curtain in the water column. When it reaches the surface the vertical current is transformed into a horizontal current which acts as barrier.



Basic components of a bubble barrier

1. Compressed air from a compressor.
2. Pipes with incorporated special nozzles and anchor blocks
3. Surface current generated by bubble curtain
4. Drain valves at the end of the nozzle pipes

Main advantages of Pneumatic oil barriers

1. Very fast deployment with little manpower requirement.
2. 200 m can be blocked in 60 seconds by just starting the compressor.
3. The barrier is no hindrance to vessel movements.
4. Minimal maintenance costs with a long operational life.
5. Maintenance is necessary for the compressor only.
6. Air exiting the nozzles in the distribution pipe stops mud or silt from entering the pipe.

Points to be considered

1. This technique requires continuous bubble production.
2. Water jets can also inhibit oil spreading.
3. Turbulence can favour the emulsifying process.
4. Limitations are found in large areas or if the wind increases.
5. Water depth can influence formation of marine growth and how regularly growth removal cleaning has to be done.

To be continued

IN SITU BURNING: CHAPTER 11



A short series of articles on In Situ Burning contributed by Dr Merv Fingas of Spill Science, Edmonton, Alberta, Canada T6W 1J6 fingasmerv@shaw.ca

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Summary of the Serial

This is the eleventh of a series of articles on in-situ burning of oil spills. This series will cover in-situ burning step-by-step and will present the latest in knowledge on the topic.

11. Comparison of Burning to Other Response Measures

In-situ burning is most often compared with the use of dispersants as a countermeasure. Dispersants are chemical spill-treating agents that promote the formation of small droplets of oil that 'disperse' throughout the water column. Dispersants contain surfactants, chemicals like those in soaps and detergents, that have both a water-soluble and an oil-soluble component. Surfactants or surfactant mixtures used in dispersants have approximately the same solubility in oil and water, which stabilizes oil droplets in water so that the oil will disperse into the water column. This could be helpful when an oil slick is threatening a bird colony or a particularly sensitive shoreline.

Two major issues associated with the use of dispersants - the toxicity of the resulting oil dispersion in the water column and their effectiveness - have generated controversy in the last 40 years. The toxicity associated with dispersant use relates to the toxicity of the dispersed oil as well as the additional toxicity caused by the dispersion. In shallow or confined waters, dispersed oil could be toxic to aquatic life. For this reason, dispersants are not used close to shore. Special permission is necessary in most countries to use dispersants.

Effectiveness is influenced by many factors, including the composition and degree of weathering of the oil, the amount and type of dispersant applied, sea energy, salinity of the water, and water temperature. The composition of the oil is the most important of these factors, followed closely by sea energy and the amount of dispersant applied. Dispersion is not likely to occur when oil has spread into thin sheens so that the oil in thinner portions of the spill will not disperse when dispersants are applied. Further chemical dispersions do not last long. Significant amounts of oil resurface with time. A chemical dispersion half-life may be as short as 12 hours.

A significant disadvantage of dispersants is that either they do not work at all or they do not work well on weathered oil, emulsified oils, heavy oils, and thin sheens. Dispersants work best on light crude oils and not at all on residual oils. There is a narrow window of opportunity after a spill during which dispersants can be applied, which can be as short as a few hours or a day. After a period of time, the oil becomes too weathered or emulsified with water.

In-situ burning is also compared to mechanical recovery of oil spills. In open waters, burning has advantages over mechanical recovery. Mechanical recovery includes the use of booms and skimmers to physically contain the oil and remove it from the water. Booms are limited to waters where the currents, relative to the boom, are less than 0.4 m/s or they must be used in diversionary mode. On the other hand, while recovery using booms and skimmers is slower than removal by in-situ burning or dispersants, the oil is recovered without the potential for air and water pollution. Mechanical recovery works well in sheltered waters such as harbors and marinas where burning should not be conducted, but is impossible in high currents and waves over 2 m.

On land burning has significant advantages over most techniques. Unless the oil is very thick, pumping is very limited. Any process that takes a lot of time will allow oil to penetrate the soil.

In some marine spill situations, the best cleanup strategy involves a combination of mechanical recovery techniques and burning for various portions of a spill. For example, burning can be applied in open water and oil that has already moved closer to shore can be recovered with booms and skimmers. Burning could also be used on open water after the window of opportunity closes for effective use of dispersants. Burning does not preclude the use of other countermeasures on other parts of the slick. When combining different cleanup techniques, the objective should be to find the optimal mix of equipment, personnel, and techniques that results in the least environmental impact of the spill.

An approximate comparison is shown in Table 4. This table is based on a number of assumptions including that skimmer rates and dispersant effectiveness rates are average.³⁸

The table shows that burning has distinct advantages in terms of burn rate over other methods, especially for heavier oils. This is because heavier oils burn well and just as effectively as do light oils. Other methods are handicapped by increasing oil viscosity, particularly dispersants.

Special feature – In situ burning (continued)

Table 4 Approximate Comparison of Countermeasures*

	Light crude			Heavy Crude			Bunker C		
	Presumed Effectiveness	Hours to clean	tons/hour	Presumed Effectiveness	Hours to clean	tons/hour	Presumed Effectiveness	Hours to clean	tons/hour
Brush Drum Skimmer	80	7.5	8	85	30	2	90	75	1
Large Weir Skimmer	80	1.5	40	85	0.9	71	90	18	4
Dispersants - first day	40	0.2	150	25	0.2	94	5	0.2	19
Disperants - second day	20	0.2	75	13	0.2	47	3	0.2	10
In-situ Burning	95	0.2	356	95	0.3	238	95	0.3	238

*there are many assumptions in the table including capacities of two average skimmers, dispersant effectiveness, but the burn rate is actual. This comparison is for a 150 m boom filled over time with 75 tons of oil and removed at the operating rates

References

38 Fingas, M.F., *The Basics of Oil Spill Cleanup*, Taylor and Francis, 245 pp., 2012.

To be continued

Publications

FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	March 18 issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	March 18 issue
EMSA Newsletter	European Maritime Safety Agency	March issue
Cedre Newsletter	News from CEDRE in Brest, France	February issue
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	March 4 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	March 1 issue
Intertanko Weekly News	International news for the oil tanker community	No 12, 2013
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	March 2013 issue
Soil & Groundwater Product Alert	From Environmental Expert	March 18 issue
Soil & Groundwater Ezine	Articles, papers and reports	March 2013 issue
Soil & Groundwater Newsletter	From Environmental Expert	March 21 issue
Soil & Groundwater Events	Upcoming events compiled by Environmental Expert	March 2013 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	Jan 16-31 issue

USA: PHMSA PUBLICATIONS AND TRAINING MODULES

The Division of Outreach, Training, and Grants develops materials that make it easier to use the Hazardous Materials Regulations (HMR). Some publications enhance general understanding of the regulations, while others focus on specific training niches. [See list of publications and training modules](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

USA: INTRODUCING WISER FOR IOS 3.0

WISER for iOS 3.0, a universal app for Apple iOS devices, is [now available](#). This new release adds native support for the iPad in addition to support for the iPhone and iPod touch. See below for a look at WISER as an app for the iPad.

- [Search WISER's full set of known substances](#) on the iPad.
- Employ WISER's popular [Help Identify Chemical](#) capability on the iPad.
- Use WISER's [protective distance mapping](#) feature on your iPad.
- Various updates for iPhone/iPod touch devices

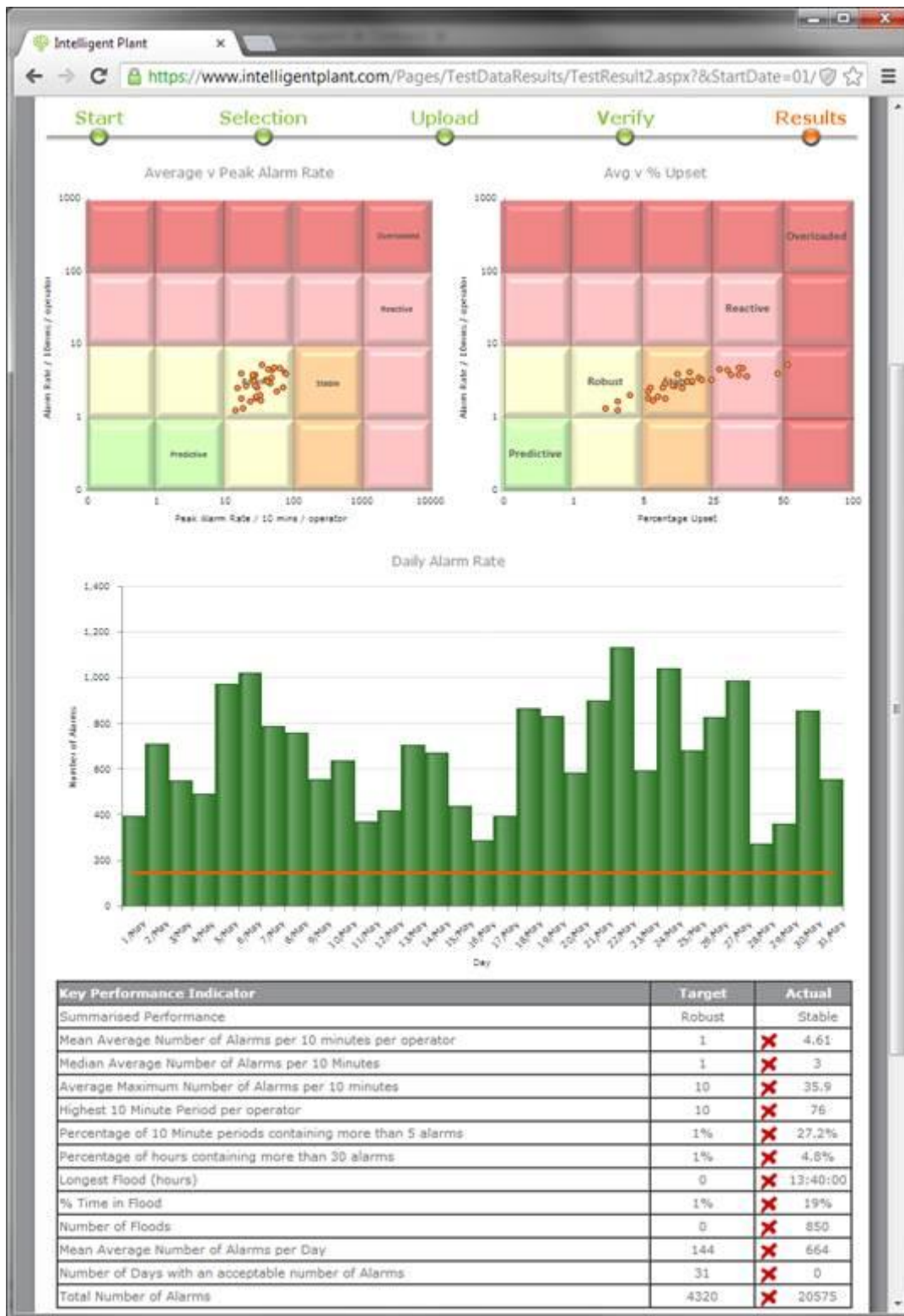
Don't forget that all these features remain for iPhone and iPod touch. See the features for these devices introduced in our [1.0](#) and [2.0](#) releases. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Events

CANADA: OIL SPILL RESPONSE SYMPOSIUM TAKING PLACE IN VANCOUVER THIS WEEK

Representatives from local governments across B.C. as well as non-governmental environmental organizations, industry and First Nations are set to take part in a symposium to address the province's ability to respond to and contain any potential land-based oil spills. The oil spill response symposium will take place in Vancouver from March 25 – 27. [More info](#)

UK: NEW TOOL FOR ANALYSING ALARM STATISTICS



Intelligent Plant, an independent Control Systems and Software consultancy based in Aberdeen, has released a simple tool for analysing alarm statistics against EEMUA 191 requirements.

With oil companies looking to enhance the safety of their operations, ensuring alarm rates are within guidelines is essential to running a safe plant.

For the first time, an online tool is available that will easily allow an Operator to measure how well they perform against EEMUA 191 targets.

The tool can be found by searching online for "Intelligent Plant" or by visiting –

www.intelligentplant.com.

By analysing data generated from DCS/SCADA printer output, the tool will:

- (1) Create scatter charts showing daily categorisation.
- (2) Display trends of daily alarm rates.
- (3) Provide a summary of Key Performance Indicators.

[More info](#)

[Thanks to Gregor S. McMurtrie, Intelligent Plant]

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