



# ISCO NEWSLETTER

*The Newsletter of the International Spill Response Community*

Issue 291, 11 July 2011

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## News

### MR. KOJI SEKIMIZU ELECTED AS IMO SECRETARY-GENERAL

Mr. Koji Sekimizu of Japan has been elected as the Secretary-General of the International Maritime Organization (IMO), with effect from 1 January 2012, for an initial term of four years.

The vote took place during the 106<sup>th</sup> session of the 40-Member strong IMO Council, which is meeting from 27 June to 1 July 2011. The decision of the Council will be submitted to the IMO Assembly, which meets for its 27<sup>th</sup> session from 21 to 30 November 2011, for approval.

Mr. Sekimizu, 58, is currently Director of IMO's Maritime Safety Division. Mr. Sekimizu studied marine engineering and naval architecture and joined the Ministry of Transport of Japan in 1977, working initially as a ship inspector and moving on to senior positions in both maritime safety and environment related positions within the Ministry. He began attending IMO meetings as part of the Japanese delegation in 1980 and joined the IMO Secretariat in 1989, initially as Technical Officer, Sub-Division for Technology, Maritime Safety Division, becoming Head, Technology Section in 1992, then moving to become Senior Deputy Director, Marine Environment Division in 1997 and Director of that Division in 2000, before moving to his current position in 2004.



### ISCO: AWARD OF FULL CONSULTATIVE STATUS APPROVED BY IMO COUNCIL

At the 106<sup>th</sup> session (27 June to 1 July 2011) the IMO Council approved ISCO's request to convert its provisional consultative status with the Organization to full consultative status.

In acknowledging the decision, ISCO Secretary John McMurtrie thanked IMO for the privilege accorded to ISCO by the granting of provisional status over the last four years.

"The International Spill Control Organization (ISCO) is a truly international group with members in 37 countries and all the main regions of the world.

ISCO's key objectives are well aligned with IMO's aim to protect the marine environment and ISCO is firmly committed to supporting IMO and disseminating information on IMO's work and achievements".

## News (continued)

"Members of ISCO are the International Spill Response Community – the organizations and people on which you depend on for response to pollution events, the manufacturers who make the equipment, consultants who develop response plans, training organizations, people involved in R&D – in short, all involved in providing the response infrastructure on which we all depend.

ISCO is the only organization that collectively represents this community at IMO.

Over the last four years ISCO delegations, which have included some of the world's most respected experts in oil and HNS have contributed to MEPC and especially to the OPRC-HNS Technical Group through papers, positive inputs to discussions and working groups. I believe we have acquitted ourselves well and will continue to provide our direct inputs to encourage adoption of the highest practicable standards for prevention and control of marine pollution".

*Note from Editor – We will report on the 12<sup>th</sup> Session of the OPRC-HNS Technical Group in next week's Newsletter.*

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### USA: OIL SPILL PREVENTION TECHNOLOGY CENTER PLANNED FOR UAF

The University of Alaska Fairbanks is planning the formation of a science and technology center for oil spill prevention and preparedness in the Arctic, Mark Myers, vice chancellor for research at UAF, told Petroleum News June 15.

While the various challenges associated with oil spill risks present the biggest single hurdle to moving forward with oil and gas development in the Arctic offshore, UAF is in a unique position to research, develop and coordinate a wide range of state-of-the-art technologies for addressing the particular challenges that the Arctic presents, Myers said.

"This is something where the university can really contribute," Myers said.

With challenges that include severe winter weather, sea ice, a scarcity of ice-capable ships, the lack of a deepwater port, a lack of a logistical support infrastructure and a shortage of environmental information, the Arctic offshore would present a very different oil spill response situation from a region such as the Gulf of Mexico, Myers said.

There is also a need to understand how the impacts of climate change on the Arctic environment affect oil spill response strategies, he said.

Myers was the director of Alaska's Division of Oil and Gas under governors Tony Knowles and Frank Murkowski, and he led the U.S. Geological Survey between mid-2006 and early 2009. [Read more](#)

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### JAPAN: CHEMICAL AFTERMATH: CONTAMINATION AND CLEANUP FOLLOWING THE TOHOKU EARTHQUAKE AND TSUNAMI



Writers Winifred A. Bird and Elizabeth Grossman followed the unfolding Tohoku disaster from their respective offices in Nagano, Japan, and Portland, Oregon. To form a picture of the damage and begin to understand how chemical contaminants and their potential health hazards are being handled after the tsunami, Bird visited the hard-hit prefectures of Ibaraki, Iwate, and Miyagi, while Grossman researched company and chemical information and how such issues are handled in the United States.

As cleanup continues in the disaster area, questions remain about the fate of chemical contaminants released by these damaged industrial facilities and other sources, and the environmental health hazards they might pose to the hundreds of thousands of people living and working in this area. Similar

questions have arisen in the wake of hurricanes Katrina and Rita in 2005, the BP *Deepwater Horizon* disaster in the Gulf of Mexico in 2010, and the World Trade Center attacks on 11 September 2001. But in Japan, the vast human catastrophe and deepening Fukushima nuclear disaster have tended to eclipse these issues of chemical contamination. [Read more](#)

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## DEBRIS FROM JAPANESE TSUNAMI HEADED FOR PACIFIC 'GARBAGE PATCH'

Millions of tons of debris washed out to sea from north-east Japan by the March 11 tsunami has embarked on a 10-year circuit of the Pacific, endangering shipping and wildlife.

The French environmental group Robin des Bois estimates that a large percentage of the 25 million tons of debris created by the magnitude 9 earthquake and the tsunami that it triggered has been sucked out to sea.

After being caught in the swirling currents for a number of years, it will congregate into two floating "garbage patches," one in the east and the other in the west of the Pacific.

The debris includes damaged fishing boats, cars, shipping containers and the contents of thousands of houses, including refrigerators, along with plastics, wood, rubber and items made of PVC.

Many of the vehicles will discharge their oil and fuel, creating numerous spills, while containers from industrial facilities will leak pesticides, chemicals and a wide range of other pollutants, the organisation said.

The waste will move at a speed of between 5 and 10 miles a day, catching the North Pacific Current and crossing the ocean in as little as 12 months. [Read more](#)

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## GHANA: IGCC MEMBER STATES AGREE TO HARMONIZE USE OF OIL SPILL DISPERSANTS USE IN THE GCLME



ACCRA, 27 June – West and Central African members of the Interim Guinea Current Commission (IGCC) /Guinea Current Large Marine Ecosystem (GCLME) project agreed on ways to start developing a regional policy on the use of chemical dispersants to tackle oil spills in the Guinea Current region last Friday.

"For those who don't have a national policy, this meeting will help them craft a policy. We will also provide them useful background documents," Dr Thomas Coolbaugh, chairman for the Global Initiative for West and Central Africa (GI WACAF) said at the end of the three-day workshop.

The meeting's 49 delegates recommended that all countries should have a clear national policy describing the conditions of utilization of dispersants and draw up a pre-determined list of approved dispersants. [Read more](#)

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## ISRAEL: LEAK CAUSES NEGEV'S WORST EVER ENVIRONMENTAL DISASTER

The Environmental Protection Ministry estimated Wednesday that no less than one million liters of jet fuel leaked out of the Eilat-Ashkelon pipeline at the Nahal Zin nature reserve in the south causing the worst damage ever witnessed at an Israeli nature reserve.

The ministry's southern region manager Guy Samet took out a work cessation order against the Eilat-Ashkelon Pipeline Company demanding that the company put together a revised emergency plan which would need to receive regional approval.

"The work that the Eilat-Askelon Pipeline Company is carrying out along the pipeline is restoration and maintenance work of the old pipeline and of course it is our wish that this work continue," Samet said.

"That said, a ministry inspection found that they didn't do everything that needed to be done according to their emergency plan which was the cause of the magnitude of the damages," he added.



The Environmental Protection Ministry and the Nature and Parks Authority estimate that the leak reached a depth of up to 5 meters in some places. As for the restoration process, current estimations see the need for the removal of tens of thousands of cubic meters of contaminated soil from the area. [Read more](#)

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### USA: EPA OPENS ACCESS TO CHEMICAL INFORMATION/SEARCHABLE DATABASE ON CHEMICAL HAZARD, EXPOSURE AND TOXICITY DATA NOW AVAILABLE

The U.S. Environmental Protection Agency (EPA) is making it easier to find chemical information online. EPA is releasing a database, called [ToxRefDB](#), which allows scientists and the interested public to search and download thousands of toxicity testing results on hundreds of chemicals. ToxRefDB captures 30 years and \$2 billion of testing results.

"Tens of thousands of chemicals are in commerce and current chemical testing is expensive and time consuming. Results from chemical testing are scattered throughout different sources," said Dr. Robert Kavlock, director of EPA's [National Center for Computational Toxicology](#). "ToxRefDB allows the public to search, find and compare available studies about chemical toxicity and potential health effects."

ToxRefDB provides detailed chemical toxicity data in an accessible format. It is a part of [ACToR](#) (Aggregated Computational Toxicology Resource), an online data warehouse that collects data from about 500 public sources on tens of thousands of environmentally relevant chemicals, including several hundred in ToxRefDB. Those interested in chemical toxicity can query a specific chemical and find all available public hazard, exposure, and risk-assessment data, as well as previously unpublished studies related to cancer, reproductive, and developmental toxicity. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this report]

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### FRANCE: NEW MODELLING SYSTEM FOR UNDERWATER OIL/GAS BLOW-OUTS AND LNG LEAKS

Since the [Deepwater Horizon](#) disaster in 2010, the gas and oil industry has been expressing its needs in terms of leak modelling tools for offshore wells. The project METANE "Modeling under-water gas/oil blowout and LNG leak" consists of developing such a decision support system on the industrial risks related to an underwater leak of oil, natural gas or LNG at sea. The development of this software will involve an experimental phase to validate the equations used. *Cedre* will be in charge of conducting experiments in the laboratory and in the open environment in order to calculate the trajectory, dissolution and speed at which gas bubbles or oil droplets rise through the water column. The METANE project, led by Alyotech Technologies, will be run by a consortium comprising industry partners (GDF Suez and Nymphéa Environnement SA) and research centres (École des Mines d'Alès, *Cedre*).

Source: [CEDRE Newsletter](#)

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### USA: NEW RECOMMENDATIONS ISSUED IN HYDRAULIC FRACTURING REVIEW

Albany, NY, June 30 - The Department of Environmental Conservation (DEC) tomorrow will release its revised recommendations on mitigating the environmental impacts of high-volume hydraulic fracturing (high-volume fracturing). The recommendations contain these major revisions:

- High-volume fracturing would be prohibited in the New York City and Syracuse watersheds, including a buffer zone;
- Drilling would be prohibited within primary aquifers and within 500 feet of their boundaries;
- Surface drilling would be prohibited on state-owned land including parks, forest areas and wildlife management areas;
- High-volume fracturing will be permitted on privately held lands under rigorous and effective controls; and
- DEC will issue regulations to codify these recommendations into state law.

These recommendations, if adopted in final form, would protect the state's environmentally sensitive areas while realizing the economic development and energy benefits of the state's natural gas resources. Approximately 85 percent of the Marcellus Shale would be accessible to natural gas extraction under these recommendations.

DEC Commissioner Joseph Martens said, "This report strikes the right balance between protecting our environment, watersheds, and drinking water and promoting economic development." [Read more](#)

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## MILLION-BARREL OIL TANKER ON FIRE OFF YEMENI COAST AFTER ATTACK BY PIRATES

July 6 - A tanker carrying about 1 million barrels of [fuel oil](#) is on fire off the Yemeni coast after pirates used a rocket-propelled grenade to attack the ship in a maritime corridor handling about 20 percent of world trade.

The 274-meter (900-foot) Brillante Virtuoso was going to [China](#) from Ukraine, said Andreas Louka, legal adviser to Suez Fortune Investment Ltd., the owner. A rocket-propelled grenade probably caused a fire in the ship's accommodation block, Central Mare Inc., the vessel's manager, said in a later statement distributed by MTI Network.

"Pirates go for targets of opportunity, and if they see a ship and it's clear they have a chance, they will go for it regardless of size," said Jakob Larsen, a maritime security officer at the Bagsvaerd, Denmark-based Baltic and International Maritime Council, which represents the owners of about two-thirds of the global fleet. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this report]

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## USA: EXXONMOBIL PIPELINE COMPANY CONTINUES CLEANUP OPERATIONS IN MONTANA

July 4 - ExxonMobil Pipeline Company provided the following update as cleanup operations continued Monday following a release of oil into the Yellowstone River.

More than 280 people are now involved in the response and cleanup effort including ExxonMobil's North America Regional Response Team, the Clean Harbors and ER oil spill response organizations and additional contractors. More than 150 people cleaned up oil along the river banks today.

A unified command has been established to manage response activities, including recovering oil, monitoring air and water quality, and addressing questions from local residents. ExxonMobil is coordinating the response with the Environmental Protection Agency; the Montana Department of Environmental Quality; U.S. Department of Transportation Pipeline and Hazardous Materials Safety Administration; Montana Fish, Wildlife and Parks; Yellowstone County Disaster and Emergency Services; and Yellowstone County commissioners. [Read more](#)

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## UK: OIL AND GAS SPILLS IN NORTH SEA EVERY WEEK, PAPERS REVEAL



*More than 100 potentially lethal oil and gas spills took place on rigs in the North Sea in 2009 and 2010. Photograph: Alamy*

Serious spills of [oil](#) and [gas](#) from North Sea platforms are occurring at the rate of one a week, undermining oil companies' claims to be doing everything possible to improve the safety of rigs.

Shell has emerged as one of the top offenders despite promising to clean up its act five years ago after a large accident [in which two oil workers died](#).

Documents obtained by the Guardian record leaks voluntarily declared by the oil companies to the safety regulator, the [Health and Safety Executive\(HSE\)](#), in a database set up after the [Piper Alpha disaster of 6 July 1988](#) which killed 167 workers. They reveal for the first

time the names of companies that have caused more than 100 potentially lethal and largely unpublicised oil and gas spills in the North Sea in 2009 and 2010.

They also deal a significant blow to the government's credibility in supporting the oil industry's fervent desire to drill in the Arctic. Charles Hendry, the [energy](#) minister, has said operations to drill in deep Arctic waters by companies such as [Cairn Energy](#) off Greenland are "entirely legitimate" as long as they adhere to Britain's "robust" safety regulation.

Shell has been at the forefront of plans to drill in the Arctic waters of the Beaufort and Chukchi seas.

The documents, released under freedom of information legislation, record leaks classed by the regulator as "major" or "significant", which, if ignited, could cause many deaths. [Read more](#)

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## AUSTRALIA: GOVERNMENT ANNOUNCES MEASURES TO STRENGTHEN THE PROTECTION OF THE GREAT BARRIER REEF

The Australian Government has introduced a number of measures to strengthen the protection of the Great Barrier Reef.

Following advice from the Australian Maritime Safety Authority (AMSA), these measures will improve maritime safety and protect the marine environment for one of Australia's most precious environmental assets.

These measures include:

- The extension of the coverage of the Great Barrier Reef and Torres Strait Vessel Traffic Service (REEFVTS). In a joint initiative with the Queensland Government, the mandatory ship reporting system (REEFREP), requiring transiting ships to provide a position report, has been extended to the southern boundary of the Great Barrier Reef Marine Park from 1 July 2011 (see following article). This extension resulted from the Australian Government's successful proposal to the International Maritime Organization in 2010.
- A revision of the regulation for coastal pilotage, Marine Orders Part 54, came into force on 1 July 2011. This strengthens measures to enhance safety, including an increased emphasis on safety management plans and fatigue management.
- The enhancement of aids to navigation in the Great Barrier Reef with a major refurbishment of North Reef Lighthouse including the installation of vessel tracking and voice communications equipment, completed in June 2011. The refurbishment is detailed later on in this edition.
- The implementation of an under keel clearance management system for the restricted waters of the Torres Strait. This AMSA-managed system identifies and monitors safe times and speeds for transit through Torres Strait to ensure a sufficient amount of water remains under the ship's keel at all times.
- A review of the offences under the *Protection of the Sea (Prevention of Pollution from Ships) Act 1983* and the *Navigation Act 1912* is currently underway, with a view to toughening the penalties for breaches.
- The establishment of a Great Barrier Reef Shipping Management Group, with membership from AMSA, Maritime Safety Queensland, the Great Barrier Reef Marine Park Authority and the Federal Department of Infrastructure and Transport. This group, established in late 2010, is tasked with monitoring effectiveness of current measures to enhance maritime safety and protection of the Great Barrier Reef and assessing risks posed by future traffic growth and recommending mitigation measures to deal with those risks.

Source and complete article: [AMSA Aboard Newsletter](#)

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## USA: WWII SHIPWRECKS COULD THREATEN U.S. COAST



*Standard Oil Tanker W.L. Steed was torpedoed in 1942. (Associated Press file, Baltimore Sun)*

On the evening of Feb. 2, 1942, an unarmed tanker with 66,000 barrels of crude oil on board was steaming in the Atlantic, about 90 miles off Ocean City. Without warning, it was struck by German torpedoes. The attack set the W.L. Steed ablaze, and sank it; only a handful of the crew of 38 survived.

As World War II unfolded, the Germans had moved part of their sub pack west to attack shipping along the coast. By the time the Nazis withdrew the subs in July to focus on convoys crossing the North Atlantic, they had sunk

397 ships in U.S. coastal waters.

That wartime legacy has become a new environmental problem, raising concern about leaks from the W.L. Steed's sunken fuel bunkers and cargo — and from many others like it.

The National Oceanic and Atmospheric Administration is taking an inventory of more than 30,000 coastal shipwrecks — some of them casualties of the 1942 Battle of the Atlantic — and identifying those that pose the most significant threat. [Read more](#)

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## News (continued)

### USA: NEW METHOD IN KZOO RIVER OIL CLEANUP - CREWS STIRRING UP OIL FROM BOTTOM OF RIVER

They stood on fanboats, wearing white protective suits and using "stingers" to spray water along the bottom of the Kalamazoo River northeast of Augusta.

The goal: to stir up submerged oil from last year's massive Enbridge spill near Marshall and send it to the surface.

Crews have been using the technique for about a week now, according to an Enbridge spokeswoman.

The oil gets collected in absorbent boom, pads, skimmers or other tools.

"We actually empower the crews to decide what the best technique is," Enbridge spokeswoman Becky Haase told 24 Hour News 8

About 250 people are working on the submerged oil recovery process now, she said, and that number will grow. The effort is set to happen at about 200 sites where crews have identified signs .

The chosen sites are places where stirring up the oil won't cause more problems than it solves, said U.S. Environmental Protection Agency incident commander Ralph Dollhopf. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this story]



## Technology

### TOXIC COMPOUNDS IN GROUNDWATER

*Research is being conducted on degrading a toxic compound found in groundwater systems around the world*

Vinyl chloride is a cancer-causing compound formed from solvents in groundwater systems under anaerobic conditions. These solvents are used in many industrial applications around the world and often belong to the most encountered groundwater pollutants in industrialized countries. Groundwater is a major drinking water resource, and it is vital to determine if vinyl chloride can be further degraded into harmless compounds.

A group of scientists at Ecole Polytechnique Federale de Lausanne (EPFL) and the University of Neuchatel, Switzerland, has studied the degradation of the toxic compound in a laboratory setting mimicking a natural groundwater system. This work has been funded by the Swiss Federal Office for Education and Science within the framework of the EC Environment/Water Program.

In this experiment, solutions containing vinyl chloride, as well as some mineral salts, were pumped through laboratory columns. The toxic compound was regularly analyzed in inlet and outlet samples. After several weeks of cycling, vinyl chloride concentrations began to decrease, reaching zero after about four months. Ethene, an organic compound often used as a plant hormone, is one of the possible degradation products.

Christof Holliger, Director of the EPFL laboratory, explained that ethene's outlet concentration was always lower than the inlet vinyl chloride concentration.

The complete results from this study were published in the May-June 2011 issue of *Journal of Environmental Quality*. [Read more](#)

## Publications

### NASFM: PIPELINE EMERGENCIES TEXTBOOK NOW AVAILABLE ONLINE

[NASFM](#), working with a cooperative agreement from the [Department of Transportation's Pipeline and Hazardous Materials Safety Administration \(PHMSA\)](#), recently unveiled the new, second edition *Pipeline Emergencies* textbook. Attending the IAFC Hazardous Materials Response Conference in Baltimore, MD, PE 2 was introduced to more than 1,000 first responders.

Once again, [NASFM](#) partnered with HazMat training specialists Mike Hildebrand and Greg Noll to develop this state-of-the-art curriculum. Mike Callan is currently updating the trainer's Facilitator Guide to make it fully compatible with the new text. Emergency Film Group worked with Red Hat Publishing to embed video into the chapters and enhance the interactive training scenarios.

The completely updated text is now online in an e-book. Soon the trainer's Facilitator Guide, full-length video, and all other program enhancements will be available. [Read more](#)

## JUST PUBLISHED: MARITIME ACCIDENT REVIEW FOR 2010



The fourth in a series begun in 2007, the Maritime Accident Reviews provide an overview of commercial shipping accidents occurring in and around Europe. The photo shows the sinking of the North Spirit off NW Spain in December 2010; (source: SASEMAR).

The latest issue of the most popular document on the EMSA website is now online. [The Maritime Accident Review 2010](#), the fourth in the Agency's series of statistical and analytical reports on commercial shipping accidents in and around EU waters, has just been released.

This year's review reports a small increase in the number of accidents in Europe – 559 accidents and 61 lives lost – up from the 540 accidents and 52 lives lost reported for 2009. However, these figures are considerably below the figures reported for 2007 (715 accidents, 76 lives lost) and 2008 (670 accidents, 82 lives lost). The mild increase of 3.5% in accidents reported for 2010 possibly reflects the recovery in shipping traffic and volume during the year. Indeed, the marked decline in accidents reported for 2009, in comparison to the economic boom years of 2007 and 2008, suggests that there is a link between maritime accident numbers and economic activity.

This year's Review includes full maps of accidents reported during the year, plotted against their geographical locations, enabling readers to see accident trouble spots and patterns.

The document can be downloaded from EMSA's website.

[Read more](#)

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## THE FACTS ABOUT FRACKING: THE REAL RISKS OF THE SHALE GAS REVOLUTION, AND HOW TO MANAGE THEM

An interesting article, written to counter some of the claims made by the anti-fracking lobby. [Read the article](#)

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## US EPA: TECHDIRECT July 1, 2011

New technical, policy and guidance resources related to the assessment and remediation of contaminated soil, sediments and ground water. [Download](#)

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## US EPA: TECHNOLOGY INNOVATION NEWS SURVEY

Production of the Technology Innovation News Survey has resumed after a 3-month hiatus.

The March 1-31, 2011 *Technology Innovation News Survey* has been posted to the CLU-IN web site. The *Survey* contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development.

The latest survey is available at: <http://www.clu-in.org/products/tins/>

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## US EPA: TECHNOLOGY NEWS AND TRENDS

The July 2011 issue of *Technology News and Trends* has been posted to the CLU-IN web site.

This issue is available at: <http://www.clu-in.org/products/newsletters/tnandt/>

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In this issue of the ISCO Newsletter we are printing No. 33 in a series of 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](#)*

**KNOWLEDGE OF THE FATE OF RELEASED OIL / HNS (CHAPTER 33)**

The rate and extent of evaporative loss from the surface of oil slicks is dependent on the vapour pressures of volatile components and the concentrations to which they are present in the oil, while for individual HNS, the rate of total evaporative loss depends on their individual vapour pressures, such physicochemical data being essential to the oil and chemical industries and therefore readily available. Thus, while wind speed and ambient temperature might have been expected to affect evaporative loss, this expectation is not realised in practice. Again, high winds might have been expected to create airborne droplets and while such aerosols were observed in the extremely high winds and breaking surf of the Braer incident, these are less likely than sea-spray because viscosity is higher for oils than for water. However, as to the possibility of vapour encapsulation in solid oils and those of high viscosity, WSL compared the evaporative-loss/distillation-characteristics of Beatrix and Ekofisk crude oils, checked for the temperature/wind influence on evaporation from Beatrix and Ekofisk oil, and compared the physicochemical properties of both which might influence vapour encapsulation.

The comparative distillation characteristics are as tabulated.

Boiling Range °C	% Weight	
	Beatrix	Ekofisk
5-100	7.8	7.0
100-160	4.4	11.1
160-250	13.5	15.1
250-300	25.0	19.0
350	49.3	46.5

The weather conditions for summer and winter trials at sea with released Ekofisk oil are as tabulated

Date	Tonnage	Wind Speed knots	Air temperature °C	Sea Temperature, °C
July 1975	0.5	12	18.4	11.6
June 1976	10.0	2-3•	17-20	11.0
Jan 1977	10.0	15	3-4	7.0

•8-10 knots for first two hours

The percentage evaporative weight loss for the above conditions for July were about 25% after 6 hours with no further change in the next 2 hours while for the June and January conditions a loss of 25% occurred in the first 2 hours. However, for the July trial, the 25% lost was in the first 2 hours increased to 30% in 6 hours. Nonetheless, it may be concluded that all components with boiling points between 5 and 250°C evaporated within 6 hours regardless of variations in ambient temperature and wind speed.

Again, temperature variation for sea trials with Beatrix oil was as tabulated

Date	Litres	Wind Speed knots	Air Temperature °C	Sea Temperature °C
May 1977	200	10	13	11
March 1978	200	12	7	6

Over both of these trials the percentage weight loss increased from 3% after 0.4 hours to 13.2 -15.5% from 2.3 to 7.8 hours, though results were variable in the early stages with 3% and 6% at 1.2 hours, 5% and 6.8% at 1.5 hours and 6.8% and 12% at 1.8 hours having been recorded. It was concluded that while the distillation characteristics of both oils are similar, the 25.7% of Beatrix oil components with boiling points between 5 and 250°C evaporate more slowly than the 33.2% of Ekofisk components in this boiling range; and that this difference in rate is due to encapsulation of volatiles in the former, the properties possibly relevant to encapsulation being as tabulated.

Property	Beatrix	Ekofisk
Viscosity (cSt) at 20°C	80	9.3
Pour-point ( °C)	20	-12.0
Wax Content (% weight)	18	6.5
Asphaltenes (% weight)	0.06	0.03

## Cormack's Column (continued)

Thus, we see that Beatrix crude oil is solid at ambient temperatures below 20°C while Ekofisk crude remains liquid to - 20°C; that the encapsulation of volatiles is due to solidification most probably caused by the high wax-content of Beatrix oil; and that the slow release of volatile components would need to be allowed for were such oils as Beatrix to be recovered after release. For liquid oils however, it may be concluded that components boiling below 160°C will be lost from slicks in 1-2 hours while those boiling below 250°C will be lost in 6 -8 hours.

- 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.

## Wendy Schmdt Oil Clean-Up X Challenge Finalists

### THE FOURTH IN A SERIES OF ARTICLES FEATURING THE FINALISTS IN THE COMPETITION

CRUCIAL Inc., located in Gretna, Louisiana, is a 20-year old private corporation which was created to manufacture, market, and service the growing demand for oil spill control equipment worldwide. Founded in 1991 by Wally Landry, CRUCIAL is a full-line supplier of oil spill abatement products. CRUCIAL's varied product line consists of different skimmers (rope mop, sorbent belt, brush, weir, vacuum), boom reels, spill trailers, sorbent material and more. Over the past years, our products have been delivered to oil spill cooperatives, major oil companies, service companies or foreign governments on all seven continents.



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Gretna, LA 70056 Fax: 504-347-8900



*In the picture: C-disc skimmer during testing at OHMSETT*

Three years ago, CRUCIAL was approached by the Prince William Sound Shippers to develop an oil skimming system to replace the aging equipment that protects Prince William Sound in Alaska. The previous equipment was purchased in the early 1990's after the 1989 Exxon Valdez environmental disaster, and the shippers were looking to upgrade their response capabilities. To meet this requirement, CRUCIAL designed its new line of disc skimmers which incorporate a "fuzzy" coating<sup>patent pending</sup> on their disc surfaces. This coating utilizes thousands of tiny oil attracting hair like strands to increase the surface area to which the floating oil adheres. Recovery rates have been tested at ten-fold over conventional smooth disc or drum skimmers. Over the past 3 years, CRUCIAL's designs have been tested, refined and re-tested in order to satisfy the specific requirements of Alaska's rough environment and soon, the first of the Prince William Sound

barges will be outfitted with these state-of-the-art skimmers. Today, CRUCIAL's design is the highest-rated oleophilic skimmer ever tested in the history of the Ohmsett testing facility, and is the prototype for CRUCIAL's entry in the X CHALLENGE. (For more information on CRUCIAL's testing at Ohmsett, visit their website and view Ohmsett Gazette Newsletter of Spring/Summer 2008, Fall/Winter 2008, Spring/Summer 2009, Fall/Winter 2009, Spring/Summer 2010)

*In the picture: C-disk skimmer deployed during the Deepwater Horizon spill*

This coated<sup>patent pending</sup> technology is now available from CRUCIAL in both inshore disc and drum skimmers up to large offshore skimming systems. The new skimmer can be integrated with existing stockpiles of umbilical cord deployment systems or V-sweep booms or ocean buster type concentrating systems. In fact, during last year's Deepwater Horizon oil spill in the Gulf of Mexico, CRUCIAL's skimmers were utilized for offshore oil recovery near the well site. Because of their performance in this incident, CRUCIAL received a large order for its offshore model oil skimmer. The units have already been delivered and are presently on standby should they be required for emergency response.



CRUCIAL is excited about having been chosen in the 10 finalist of the Wendy Schmidt Oil Clean-Up X CHALLENGE. This competition encourages industry participation to create improved oil skimming techniques for more efficient oil spill response, containment and recovery. [Website of Crucial Inc.](http://www.crucialinc.com)

### **CLEAN GULF 2011 OFFERS CONFERENCE TRAINING FOR THE OIL SPILL RESPONSE INDUSTRY**

Companies from throughout the oil and chemical spill, maritime security industry and the marine salvage industry will be in attendance at the 21st Annual CLEAN GULF Training & Exhibition, November 30 - December 1, 2011.

Key professionals and decision makers from throughout the Gulf Coast and beyond will come together to view the latest products, services and technologies, as well as hear about the latest trends and developments in the oil spill response industry. [More information](#)

This year's conference training will focus on -

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| <ul style="list-style-type: none"><li>• NRDA</li><li>• Aging Pipelines</li><li>• Inland Spill Response</li><li>• NIMS ICS</li><li>• Response Plans</li><li>• Emerging Technology</li><li>• Vessel Control and Tracking</li></ul> | <ul style="list-style-type: none"><li>• In-Situ Burns</li><li>• Dispersants</li><li>• Subsea Containment</li><li>• New Regulations</li><li>• Media and Information Management</li><li>• Unified Command</li><li>• And much more!</li></ul> |
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### **INTERSPILL 2012 - WORKING TOGETHER, IN LONDON**

Interspill 2012, the European oil spill conference and exhibition, is just over 8 months away, opening on 13 March 2012. Well over 80% of exhibition space has already been sold, heralding another successful event to be held in conjunction with Oceanology International, at ExCel, in London's Docklands.

Chris Morris, the Chairman of the Interspill Steering Committee, said that repeating and building on the success of previous Interspill events was a priority for the Committee. Last year's spill in the Gulf of Mexico reinforces the need to look to the future, whilst reflecting on the lessons of recent spills. The underlying conference theme of Working Together aims to look towards the next generation, to those that will be dealing with future spills, and to deliver that essential element in this industry by networking.

Interspill 2012 will open on Tuesday 13 March, with an opening plenary session on What the world thinks about Oil Spills, introduced by BBC Science correspondent David Shukman, to launch the theme of Working Together in a networked world. The exhibition and conference will continue until Thursday 15 March.

Interspill 2012 will feature innovations including lunch time debates on the exhibition floor, on water demonstrations, science and technology workshops, and a seminar devoted to the offshore spill risk. The traditional oil spill conference streams will be underpinned by the strength and breadth of the Organising Committee, which includes the European Spill industry trade organisations, the European Maritime Safety Agency, (EMSA), the International Petroleum Industry Environment & Conservation Association, (IPIECA), with support from the International Maritime Organization, (IMO), International Oil Pollution Convention Funds, (IOPC), the International Tanker Owners Federation (ITOPF) and France's Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE). Interspill 2012 is controlled by the European spill industry associations, NOSCA, SYCOPOL, Eurospill and UKSpill, together with EMSA and IPIECA. Oil Spill Response Ltd. is the permanent sponsor of the event. [More information](#)

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### **INTERNATIONAL OIL & GAS CONGRESS ON QUALITY, HEALTH, SAFETY & ENVIRONMENT**

Beijing, China. 6-7 September, 2011. The International Congress on Quality, Health, Safety and Environment in Oil and Gas (QHSE 2011) is designed for oil and gas QHSE professionals, employers and managers, insurers, manufacturers and importers to meet their paramount need to ensure the personal, operational and environmental safety. The conference provides brainstorming sessions to bring the participants the latest trend in oil and gas QHSE management and practices. [More information](#)

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## Events (continued)

### **INTERNATIONAL CONFERENCE ON ENVIRONMENTAL POLLUTION AND REMEDIATION (ICEPR 2011)**

Ottawa, Canada. 17-19 August, 2011 - ICEPR is an annual series of international conferences that gathers scholars from all over the world to present advances in environmental pollution remediation and to foster an environment conducive to exchanging ideas and information. This conference provides a golden opportunity for professionals working in the Environmental Science, Engineering, and Technology sectors to develop new collaborations and meet world environmental experts. International ASET and the University of Ottawa will be hosting this conference. [More information](#)

## Company News

### **USA: APPLIED MINERALS, INC. ENTERS INTO A COLLABORATIVE RESEARCH & DEVELOPMENT AGREEMENT WITH THE UNITED STATES ENVIRONMENTAL PROTECTION AGENCY**

Applied Minerals, Inc. has announced that it has entered into a Cooperative Research and Development Agreement (the "CRADA") with the U.S. Environmental Protection Agency's National Risk Management Research Laboratory (the "EPA") to pursue the development of its Dragonite(TM) Halloysite Clay sorbent technology used for the bio-remediation of oil from contaminated salt marsh and wetland environments. [Read more](#)

### **USA: POWERPLUS SOLUTIONS FOR FUKUSHIMA JAPAN**

ISCO Member, PowerPlus Cleaning Solutions Inc., has produced a video illustrating its equipment and techniques for decontamination of a wide range of radioactive contaminated surfaces. [View the video presentation](#)

### **CANADA: NL COMPANY ACHIEVES FIRST RESPONDER CAPACITY FOR OIL SPILLS AND WELL BLOWOUTS**

Waterford Energy Services Inc. (WESI) and Trendsetter Engineering Inc (TEI) announce that they have entered into an agreement to form a joint venture company to leverage the strengths of both companies in the areas of subsea solutions, drilling, completions and well control.

"We are well positioned to provide expertise and solutions to Canadian clients in areas such as capping stacks and containment, secondary blow out preventer (BOP) controls, subsea trees, manifolds, and related equipment. Our primary goal is to provide the Canadian offshore market with a capping stack and containment service," says Ian O'Leary, Project Manager at Waterford Energy NL Inc. [Read more](#)

### **NETHERLANDS: NORTEC BV ACQUIRES COMPANY SPECIALISED IN OIL SPILL DETECTION**

Nortek b.v. in the Netherlands has acquired SeaDarq b.v., a Dutch company that specializes in software enhanced radar systems with special focus on oil spill detection, small object detection, and upper layer current measurements. The advanced software system can be interfaced to most commercial marine radars and is currently in use both on ships and as part of land-based radars like those used in heavily trafficked ports like Rotterdam. The product is used 24/7 and has greatly benefited from a long-term technology cooperation with TNO (Netherlands Organization for Applied Scientific Research) to ensure the best possible performance. Nortek b.v. will continue to supply Seadarq products and aims to provide combined technology solutions to the benefit of its worldwide customer base. [Read more](#)

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