



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
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News

IMO OPRC-HNS TECHNICAL GROUP MEETING IN LONDON



In the picture: The ISCO Delegation to the IMO OPRC-HNS TG13 meeting. From left to right, standing – Dr Wierd Koops, Honorary Member, (Netherlands); Dr Merv Fingas, Member of ISCO Council for Canada; seated – John McMurtrie, ISCO Secretary (UK); David Usher, ISCO President (USA); Dr Douglas Cormack, Honorary Member (UK). Photo: Courtesy of Josée Lamoureux.

Last week delegations from 27 governments, REMPEC, EEC, IOPC Funds, MOWCA, and 7 NGOs participated in the 13th Session of the IMO OPRC-HNS Technical Group on the Implementation of the OPRC Convention and the OPRC-HNS Protocol and relevant Conference Resolutions.

Over 5 days the TG addressed a full agenda covering the development of Manuals and Guidance Documents, Training, Information Services and

News (continued)

Exchange, and Technical Co-operation Implementation on OPRC and HNS. The meeting was chaired by Alexander von Buxhoeveden (Sweden).

Work on the various agenda items was complemented by a number of special presentations given by members of the attending delegations –

- Dr Rebecca Coward of ITOPF gave a presentation on the clean-up operations on the west coast of Sweden following a collision involving the bulk carrier Golden Trader.
- Luigi Alcaro of ISPRA, Italy, gave a summary of events and operations following the Costa Concordia cruise liner accident in Italy.
- Dr Wierd Koops of ISCO and the University of Applied Sciences in the Netherlands described the scope of the new on-line chemical spill response manual and interactive HNS database and gave a demonstration of the system
- Carlos Ormaechea of IMO MSD gave a presentation on the IMO Global Integrated Shipping Information System (GISIS).
- Alexander von Buxhoeveden (Swedish Coast Guard) gave a presentation on oil spills that occurred in Swedish waters during 2011, including a spill of Crude Tall Oil (by-product of wood processing).
- Marisa Fernandez (Spain) gave an update on the activities of the ARCOPOL Project (a project framed in the Atlantic Area Transnational Programme focused on the preparedness, response to and mitigation of accidental marine pollution impacting on the shoreline).
- Marek Reszko from Gdynia, Poland briefed the meeting on the activities of the BRISK project which is concerned with the risk of spills of oil and HNS in the Baltic Sea.
- Annabelle Nicholas of ITOPF gave a presentation on the December 2011 oil spill following the grounding of the vessel in Brittany, France.
- Christophe Rousseau of CEDRE, France presented on the new Flume Tank and Ecotoxicology Test Bench created by CEDRE, describing the new developments at CEDRE and their functions.
- Burak Aykan from Turkey described Turkey's oil and HNS response plan, the new bases and other facilities being developed in Turkey.
- Andrew Berry of Maritime New Zealand described the events and operations following the Container Vessel Rena impacting a reef offshore Tauranga, New Zealand.
- David Usher of ISCO gave a presentation on submerged oil recovery, including new concepts and prototype testing at the OHMSETT facility in the USA.

NOTE: Readers wishing to access more information on topics described can use the following links - [Chemical Spill Response Manual](#) [GISIS](#) [BRISK](#) [ARCOPOL](#) [Maritime New Zealand](#) or drop a line to the Editor at info@spillcontrol.org

MAJOR INCIDENTS (ONGOING)

New Zealand – Rena: [Latest update](#)

Italy – Costa Concordia: [Latest news](#)

MALAYSIA: OIL SPILL DISRUPTS WATER SUPPLY

March 5 - A massive oil spill forced a major water treatment plant near Miri to shut down yesterday, interrupting the supply of 125 million litres of water daily to a population of 300,000 people in the city.

The Lambir Water Treatment Plant, located about 16km from the city centre, had to close when the raw water intake section was affected after Sungai Liku, the main river supplying water to the plant, became contaminated with oil coming from a leaking diesel-bitumen pipeline.

Environment Department's chief for northern Sarawak, Siva Nathiran, said more than 14,000 litres of diesel and bitumen had seeped into the river yesterday. *The Star* [Read more](#)

FINLAND: NUMBER OF SPILLS IN BALTIC SEA CONTINUES TO FALL

The number of oil spills detected by Finnish authorities has continued to decrease. In 2011, the authorities observed 57 oil spills compared with closer to 70 in the previous two years. The authorities were informed of a total of 83 potential oil spills last year.

A larger number of surveillance flight hours than in previous years - Aircraft operated by the Finnish Border Guard observed a total of 21 verified oil spills in the Finnish sea area. Helicopters observed eight oil spills and airplanes equipped with oil spill surveillance equipment observed 13 spills. In addition, surveillance airplanes observed three oil spills in the Swedish and two in the Estonian exclusive economic zones. The Estonian surveillance airplane verified three oil spills in the Finnish Exclusive Economic Zone, and one spill was observed by German surveillance airplane. *Press Release from SYKE and the Finnish Border Guard* [Read more](#)

USA: SENATE APPROVES STATES RECEIVING GULF SPILL FINES

March 8 - The Senate approved Thursday using the bulk of water pollution fines stemming from the 2010 Gulf oil spill to pay for restoration in five Gulf states, a move hailed by environmental groups and state officials.

The money is tied to a transportation bill that the Senate still must pass.

BP PLC could be fined between \$5.4 billion to \$21.1 billion under the Clean Water Act, depending on whether the company is found grossly negligent.

Clean Water Act fines typically go into a fund to pay for oil spill cleanup costs and damages, but under the Senate provision 80 percent of the fines would be divided among Louisiana, Mississippi, Alabama, Florida and Texas. *KOB.com* [Read more](#)

USA: SENATE NARROWLY REJECTS GO-AHEAD FOR KEYSTONE XL PIPELINE

March 8 - The Senate narrowly rejected a GOP-sponsored measure that would have bypassed the Obama administration's objections to the Keystone XL pipeline and allowed construction on the controversial project to begin.

Fifty-six senators voted in favor of the amendment -- four short of the 60 required for approval.

The proposed 1,700-mile long pipeline expansion, intended to carry crude oil from Canada's oil sands to the U.S. Gulf Coast, has become a political lightning rod. Supporters, including the oil industry, say it's a vital job creator that will lessen the country's dependence on oil imported from volatile regions.

Opponents say the pipeline may leak, and that it will lock the United States into a particularly dirty form of crude that might ultimately end up being exported anyway.

President Barack Obama rejected a bid in January to expedite the pipeline, arguing that a decision deadline imposed by Congress did not leave sufficient time to conduct necessary reviews. Administration officials have said the president may still eventually give the project a green light, though critics accuse him of trying to delay a final decision until after the November election.

Obama personally lobbied wavering Democrats to block passage of the amendment. *CNN News*

EUROPE: ENVIRONMENT AND WATER: PROPOSAL TO REDUCE WATER POLLUTION RISKS

Improvements in water quality in the EU could be at risk from new forms of chemical pollution. The Commission is proposing to add 15 chemicals to the list of 33 pollutants that are monitored and controlled in EU surface waters. This is another step towards improving the quality of our river, lake and coastal waters. The 15 substances include industrial chemicals as well as substances used in biocides, pharmaceuticals and plant protection products. They have been selected on the basis of scientific evidence that they may pose a significant risk to health.

Environment Commissioner Janez Potočnik said: *"Water pollution is one of the environmental worries most frequently cited by EU citizens. I welcome this advance as it is clearly answering people's expectations. These 15 additional chemicals need to be monitored and controlled to ensure they don't pose a risk to the environment or human health."*

The update will be achieved through a revision of the [Directive on priority substances in the field of water quality](#). The newly proposed substances are the outcome of a review that considered the risks posed by some 2000 substances according to their levels in surface waters, and their hazardousness, production and use. For six of the 15 new priority substances the classification proposed would require their emissions to water to be phased out within 20 years. The proposal also includes stricter standards for four currently controlled substances, and a requirement to phase out the emissions of two others already on the list. *Europa Press Release* [Read more](#)

USA: WHY OPEN SCIENCE FAILED AFTER THE GULF OIL SPILL

March 9 - At last month's meeting of the American Association for the Advancement of science, there was an [inspiring talk](#) about how the open sharing of scientific data could provide new avenues for research. But the same session also provided a cautionary tale of all the factors that can get in the way of effective sharing of data. That talk came courtesy of Vernon Asper, a researcher at the [University of Southern Mississippi](#). Asper normally studies natural hydrocarbon seeps on the floor of the Gulf of Mexico, and found himself dragged into the media spotlight amidst a swirl of competing interests as he tried to study the oil spill.

Asper said that there was a clear "truth" about the spill that everybody was interested in: how much oil was spilling into the Gulf, and at what rate. But, in the absence of any way of directly measuring it, everybody was forced into relying on indirect ways of estimating the flow. If the gulf oil spill were a situation where nobody had money riding on the final outcome, these estimates might be combined to provide a rough final number along with a sense of the uncertainty associated with that number. Unfortunately, this wasn't a case where nobody cared.

News (continued)

According to Asper, there were three groups that had a vested interest in the final value of the amount of oil spilling out into the gulf. The companies (like BP and Halliburton) that had been drilling the well wanted the number to be small. The media, which can attract eyeballs through drama, wanted the number to be large. Scientists, in general, just wanted the actual number.

Here, the scientists shared an ally in the government, which also wanted the most accurate number possible. Unfortunately, the government and scientists had different ideas about what to do with the numbers they were generating. Researchers, as is their tendency, wanted to share it through collaborations and publications. The government, however, was preparing for the inevitable court case against the companies involved, and wanted to keep the numbers it generated private until they could be used in the legal arena.

The end result of all these competing interests was a complete absence of coordination. Research ships (including one used by Asper) gravitated to the site, but nobody knew who was doing what. He described how they'd identify a research vessel using radar, then call them on the radio to informally ask what sorts of samples the ship was there to obtain. This ad-hoc system helped, but there were still a lot of cases where the same work was done by multiple vessels. At the same time, if one ship's experiments failed due to technical reasons, there was no mechanism for them to let anyone else know, which might have allowed another ship to make up for the loss. *Ars Technica* [Read more](#)

NIGERIA: NIGER DELTA: OVER 100 ILLEGAL REFINERIES RESURFACE >> REPLACE THOSE BOMBED BY JTF >> LOCAL, TRANSNATIONAL GANGS RULE CREEKS

March 11 - The Nigerian state may be in for a tough time as a very large part of the Niger Delta region is now ruled by operators of illegal refineries. The Niger Delta environment is being destroyed daily through spillage and disposal of waste from the crude refining across the creeks and waterways. Pictures and videos of many parts of the creeks and waterways of the Niger Delta on Friday revealed increasingly sophisticated operations of hundreds of illegal refineries and bunkering sites along the over 5,000 kilometres oil pipelines in the region.

Sunday Tribune's exclusive access to the dangerous creeks and waterways' covered such areas as Imo River, Awoba area, Krakana, Bodo West, Bonny River, Cawthorne and Nembe of Rivers State with investigators confirming that worst cases were replete in Bayelsa and many parts of Delta State.

A noticeable trend throughout the flight was that illegal refiners were clearly at work conducting their operations in broad day light. At a point in Bodo West when Sunday Tribune flew low, gun wielding operators of one of the refineries warned us to back off by waving their deadly weapons at us.

In Krakana, many acres of lands were dotted with active illegal refineries with many boats loaded with drums on the creek side. *Sunday Tribune* [Read More](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group for providing this link]

ITALY: ITALIAN TANKER RUNS AGROUND OFF SICILY IN STORMY WEATHER



March 11 - Empty Italian tanker Gelso M that ran aground on rocks in bad weather is seen on the Sicilian coast, near Siracusa March 10, 2012. The 127-metre-long (415-feet-long) Gelso M was heading for the Sicilian port of Augusta, home of an oil refinery and chemical complex, to take on fuel.

The coastguard said the tanker, listed as an oil/chemical tanker, was not carrying cargo at the time of the accident. The ship had taken on water in its engine room and plans were being made to move it from the rocks, the coastguard said. *SRN News* [Read more](#)

People in the news

IMarEST APPOINTS ITS 110th PRESIDENT

March 8 - Malcolm Vincent BSc (Hons), MSc, CEng, FIMarEST, FIMechE, FIOD has been appointed the 110th President of the Institute of Marine Engineering, Science and Technology (IMarEST) at its AGM today (8 March). Andreas Chrysostomou has been appointed President Elect.

Malcolm Vincent takes over the reins of office from Professor John Carlton FEng DSc BA CEng CMarEng FIMarEST FIMechE MRINA. Mr Vincent's first task as President will be his speech tomorrow (9 March) at the IMarEST 109th Annual Dinner with IMarEST members and their guests representing the global engineering, science and technology sectors of the maritime industry in London for the occasion. Guest speaker is Steve Clinch, Head of the Marine Accident Investigation Branch. He and Malcolm Vincent share a common heritage having both worked at P&O. There are P&O links too to the reply speaker, Chris Walters of Lloyd's Register, with whom Malcolm Vincent worked at P&O Three Quays. [Read more](#)





In this issue of the ISCO Newsletter we are printing No. 67 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](#)

CHAPTER 67: KNOWLEDGE OF REMOTE SENSING AND IDENTIFICATION SAMPLING

By the late 1970s it had been recognised that Low Light Level Television (LLLTV) had potential as a remote detector of oil slicks, its spectral response in the 250-1200nm band depending on the characteristics of the tube used and with oil having a greater surface reflectance than water in this band. Thus, with this start and in keeping with the theory reviewed in article 63, the spectral ranges were restricted to those providing the greatest contrast. Thus, the 450-650nm band with the volume-reflected radiance for water filtered out, the UV band at 320-420nm and the IR band at 650-850 were selected using a Corning type 7-51 filter.

Selection of the UV band is based on refractive index calculations even though this benefit is somewhat reduced by the decline in visual sensitivity with decrease in wavelength. However, for clear skies the skylight to sunlight ratio is highest at the blue end of the spectrum and since skylight gives rise to the desirable surface radiance component, it could be anticipated that the 320-420nm band would give the best results under clear skies, while for overcast skies the global (sky plus Sun) radiance is reduced and the skylight to global radiance is increased, thus enhancing contrast because the surface-reflected component is enhanced over the background volume and atmospheric components. However, on the debit side, the spectrum is shifted away from the optimal blue to the less favourable red end. Nonetheless, the increased absorption of the red end by water suggests a reduction in the volume-reflected and atmospheric-scatter components, these considerations indicating possible advantages from the 650-850 band for overcast skies.

In addition, contrast can be maximised by using a polariser as mentioned in article 63, though a further factor has to be considered here. Because the skylight is reflected from the oil or water surface, its degree of polarisation is important in itself. Fortunately, the skylight polarisation depends on the angle between the Sun's position and the direction of observation, so that when one directs the sensor away from the Sun to avoid glitter, one automatically chooses the correct viewing direction to maximise contrast at the Brewster angle. The final consideration is that the attenuation attendant on the use of filters makes it essential to benefit from the greater sensitivity of low light TV over the lower sensitivity of standard TV for maritime remote surveillance work calling for maximum contrast between floating oil and surrounding water.

Early trials of LLLTV over a natural oil seep off Baffin Island and over trial slicks in the Atlantic Ocean, provided contrast enhancement over that produced by the naked eye, thus justifying the theoretical and practical work reviewed above. However, in rough seas, foam has been shown to be indistinguishable from oil, though the simultaneous presence of both may be considered unusual, oil slicks tending to suppress the breaking of waves, while the similar inability to distinguish oil from slush and broken ice would be more of a problem in cold climes. In this connection, Canadian workers have confirmed their suggestion that switching from horizontal to vertical polarisation synchronously with image repetition would produce a flashing oil signal while that from foam, slush and pieces of ice would remain constant. However, a further problem has been noted in that any lights in the field of view cause gain-control/iris-closure to reduce sensitivity drastically.

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.

Special series

OIL SPILL REMOTE SENSING



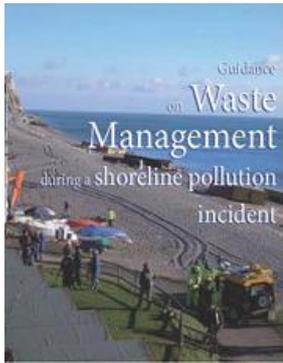
A short series of articles on Oil Spill Remote Sensing contributed by Dr Merv Fingas of Spill Science, Edmonton, Alberta, Canada T6W 1J6 fingasmerv@shaw.ca

Merv Fingas MSc PhD worked for more than 35 years in the field of oil spill technology at Environment Canada's Environmental Technology Center in Ottawa, Ontario. As head of the Emergencies Science Division at the Centre, he conducted and managed research and development projects. He is currently working independently in Alberta. Dr Fingas is the Member of ISCO Council for Canada.

Your editor regrets to advise that due to a technical problem Chapter 9 of this series will be held over until next week.

Publications

CEDRE: GUIDANCE ON WASTE MANAGEMENT DURING A SHORELINE POLLUTION INCIDENT



Operational guide. Cedre: 2011, 81p. - In the event of an accidental shoreline pollution incident, clean-up operations inevitably generate a variety of waste materials, sometimes in great quantities. The management of waste, up to and including its final disposal, and the complete restoration of all sites can cause major problems for responders.

The aim of this guide is to assist decision makers and operational responders in the initial stages of the emergency response by providing them with concise information on all aspects and phases of waste management following a maritime pollution incident.

This guide was produced, within the framework of the Arcopol project, with the advice and funding of Pembrokeshire County Council. It draws in part upon the more general [Oil Spill Waste Management Operational Guide](#) published by Cedre in 2007, while being more specifically geared towards a UK context. [More info](#)

ARCOPOL: TOOLS FOR SPILL RESPONSE

These tools, intended for local authorities, comprise the guides "[What to do in the event of a spill](#)", "[Involvement of Sea Professionals in Spill Response](#)" and "[Management of Volunteers](#)", a [video](#) presenting the main principles of shoreline clean-up following an oil spill and a [training CD-Rom](#). [Unfortunately the titles printed in red do not function as links, but more information can be found on the [ARCOPOL Website](#)] Info source [CEDRE Newsletter](#)

ITOPF: NEW HANDBOOK PUBLISHED

The 2012/2013 edition of the ITOFF Handbook has just been published. The Handbook contains a wealth of valuable information and guidance for those likely to be involved in spills of oil and chemicals from ships.

This year's edition contains updated information on oil spill statistics, compensation and ITOFF staff. Information is also provided on ITOFF's technical and information services, the fate and effects of marine oil spills, clean-up techniques, the organisation of spill response and planning, the status of international conventions and ITOFF publications.

Download the [full version](#) in PDF format (3.13Mb)

Hard copies of the Handbook are also available. They are free to ITOFF Members and Associates, as well as to closely related groups. Single copies are also available to others on request - contact [Terry Goodchild](#). [ITOPF News](#)



CONCAWE: ASSESSMENT OF REFINERY EFFLUENTS AND RECEIVING WATERS USING BIOLOGICALLY-BASED EFFECT METHODS

Within the EU it is apparent that the regulatory focus on the use of biologically-based effects methods in the assessment of refinery effluents and receiving waters has increased in the past decade. This has been reflected in a recent refinery survey which revealed an increased use of such methods for assessing the quality of refinery effluents and their receiving waters. This report provides an overview of recent techniques used for this purpose. Several case studies provided by CONCAWE member companies describe the application of biological methods to effluent discharge assessment and surface water monitoring. [Download the report](#)

Events

CHINA: BIT'S 1ST ANNUAL WORLD CONGRESS OF OCEAN-2012 (WCO-2012)

Dalian, September 20-23, 2012 - WCO-2012 aims to be a major international congress for ocean leaders from governments, international agencies, non-governmental organizations, scientific institutions, and the private sector to present the latest research results, ideas, developments and applications in Maritime Law, Marine Ship Economy, Finance, Ocean Resources, Marine Sciences and Oceanic Engineering. Emerging topics like Free Trade Zone, Renewable Ocean Energy, Marine Intelligence, Marine Environment Protection and High Performance Materials for Marine Industry will be featured, among other important topics. It is also to be an excellent occasion to visit and enjoy one of the most rapidly developing nations in the world, China. [More info](#)

Training

SINGAPORE: NNSA TRAINS EMERGENCY RESPONDERS IN SINGAPORE ON RADIOLOGICAL CONTAMINATION RESPONSE

March 2 - The National Nuclear Security Administration (NNSA) recently trained emergency responders in Singapore on radiological contamination and accident casualties.

The agency, which is tasked with securing the U.S. nuclear weapons stockpile, also works internationally to reduce the dangers of weapons of mass destruction. The training program in Singapore, it said on March 1, was aimed at further developing that southeast Asian city-state's strategic crisis-response capabilities. *Government Security News* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for passing on this news item]

USA: EMERGENCY FILM GROUP: FACILITY EMERGENCY MANAGEMENT

FEMA's PS-Prep initiative promotes private sector preparedness, including disaster management, emergency management and business continuity programs. Its purpose is to enhance the nation's resilience in an all-hazards environment by encouraging private sector preparedness.

Facility Emergency Management from EFG is a DVD-based training program that helps small and medium size organizations create facility action plans, institute emergency procedures in the event of a natural or manmade disaster, and become accredited under PS-Prep. The film examines the role of the emergency management team; the Emergency Operations Center; the Incident Command System; mitigation and prevention; and recovery. [Read more](#)

Company news

NEW RANGE OF CHEMICAL NEUTRALISERS



"Fosse Liquitrol will be launching their new range of chemical neutralisers at Interspill 2012. Covering everything from Acids through to Alkali's, Formaldehyde, Bleach and Mercury, these products, these products can be used to massively reduce the risk to responders for small scale spills, primarily in industrial situations, by quickly neutralising the harmful chemicals, demonstrated by a colour change. This then allows for safe recovery using chemical absorbents without risk to the responder. These products are used to supplement and compliment chemical spill kits which can also be supplied.

To explain the properties and uses of these, our Managing Director, Miles Hillmann, will be giving a talk about these on the first day of the exhibition. Come visit us on stand T255 to find out more about these products and presentation being given."

Chemical spills are not oil spills. Spill control should not be the same for both. The Health and Safety Executive highlight the importance of operator safety in dealing with chemical spills by adopting neutralisation as a first step. Many businesses not in the mainstream chemical industry handle aggressive chemicals whether in forklift batteries, bleaches, cleaning products or minor process chemicals. The current spill response practice in the UK is to provide chemical spill kits including absorbent materials only. In a presentation to Interspill, Miles Hillmann of Fosse Liquitrol argues that it is in the interests of their operator safety and indeed disposal cost saving to always neutralise chemical spills as a first step. The practical and easy to use range of Chemical Neutraliser Spill kits from Fosse Liquitrol is on exhibit on stand T255 at Interspill. More info on [Fosse Liquitrol Website](#)



CHELSEA ANNOUNCES UNPRECEDENTED RESPONSE TO RELEASE OF NEW SUB-SEA PIPELINE LEAK DETECTION SYSTEM

Chelsea Technologies Group announced this week a significant increase in both sale and rental contracts for the 2011 Model Sub-Sea Pipeline Leak Detection System. The PLD system now includes the provision of digital output on all fluorimeters that operate these systems, and alignment of power requirements allowing easy integration to common ROV platforms. Systems are now on offer for both shallow (ROV mounted and diver held) and full ocean depth operations.

The new software package, UNiplot, has been developed to allow real-time graphical display and robust recording of data on supplied laptop PCs. For more information please contact [Ellen Keegan](#), Tel +44 (0)20 8481 9019 [More info](#)

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