



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

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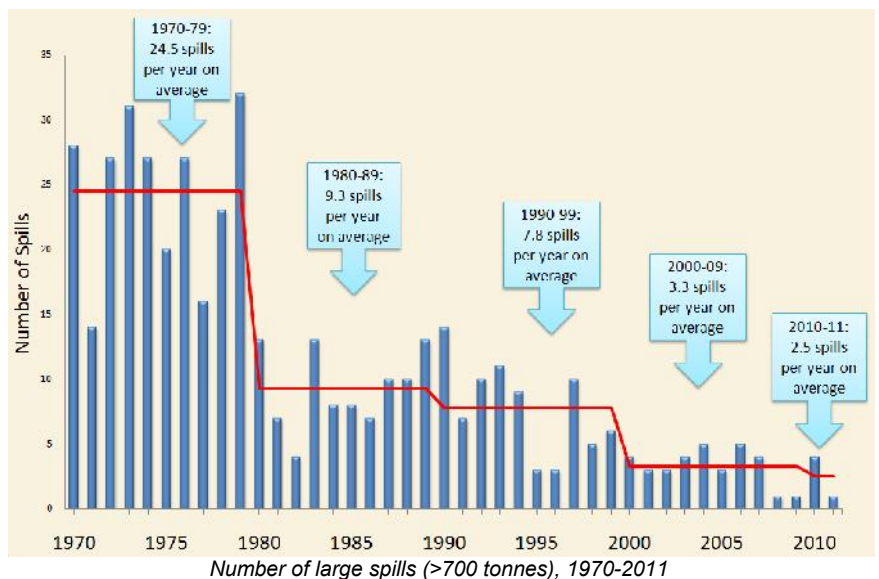
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News

ITOPF: OIL TANKER SPILLS HIT A RECORD LOW



February 15 - ITOPF's annual tanker spills analysis released today shows that the trend towards fewer spills from tankers and less oil spilt is being maintained. Only one large spill from a tanker occurred in 2011; the same as for 2008 and 2009. With only four medium sized spills recorded for the second year in a row, this means that 2011 saw just five spills of greater than 7 tonnes (50 bbls) from tankers, the lowest on record. Hand in hand with this, the total volume of oil spilt in 2011 was also the lowest on record and, at approximately 1,000 tonnes, represents an infinitesimally small percentage of the volume of oil moved by sea. This combination of record lows is especially encouraging given the ever increasing quantities of oil transported by sea.

ITOPF maintains a database of oil spills from tankers, combined carriers and barges. This contains information on accidental spillages since 1970, except those resulting from acts of war. The data held includes the type of oil spilt, the spill amount, the cause and location of the incident and the vessel involved. For historical reasons, spills are generally categorised by size, small (<7 tonnes or

<50 bbls), medium (7-700 tonnes or 50-5,000 bbls) and large (>700 tonnes or >5,000 bbls), although the actual amount spilt is also recorded. Information is now held on nearly 10,000 incidents, the vast majority of which (81%) fall into the smallest category i.e. <7 tonnes.

This year, analysis of the causes of large spills since 1970 has allowed a more detailed breakdown of vessel operations taking place at the time of the incident. This analysis has revealed that 50% of large spills occurred while the vessel was underway in open water with allisions, collisions and groundings accounting for just over half of these. These same causes accounted for some 95% of incidents when the vessel was underway in inland or restricted waters.

Further details on the number and quantity of spills from tanker accidents since 1970, together with figures and tables, are available on the [statistics](#) page of ITOPF's website and in ITOPF's annual [statistics package](#).

PREVENTING A BLOWOUT IN THE ARCTIC

February 15 - In September 2011, Vladimir Putin announced a program to begin offshore oil and gas exploration and drilling in the Russian Arctic. Putin is also interested in creating new sea terminals, which he said would rival the Suez and Panama Canals. In 2008, the U.S. Geological Survey (USGS) [estimated](#) that 13 percent of the world's undiscovered oil and 30 percent of the world's undiscovered gas lay beneath the Arctic Seas. The United States, Canada, Norway, Greenland, and Russia, which make up the [Arctic 5](#), are each interested in tapping these Arctic energy reserves.

Russia, the largest oil producer of the five, gets nearly half of its Gross Domestic Product (GDP) from oil exports, a level comparable to Saudi Arabia. As a result, Putin [perceives](#) fossil fuels as vital to Russia's economy and political stability. However, the extreme Arctic climate, characterized by unpredictable weather patterns, heaving sea ice, sub-zero temperatures, dense fog, and darkness half the year, requires specialized equipment. Russia [holds](#) a technological advantage over the other Arctic countries because it has already invested in 20 icebreakers, while Canada has 12 and the United States only one. Russia [signed](#) a deal with British Petroleum last month to explore the Arctic. Therefore, Russia is currently leading the extractive assault. *EurAsia Review* [Read more](#)

ITALY: PUMPING OUT OIL FROM COSTA CONCORDIA MOVING QUICKLY

February 15 - After waiting for the search for survivors to end, then being forced to wait 2 more weeks during bad weather, the company hired to empty the fuel tanks of the Costa Concordia, has emptied two tanks in just two days.

[Smit Salvage](#), a Dutch company hired to pump out the oil, had prepared six forward tanks of the ship with valves during the wait and are now pumping out oil at a fast rate. The Italian news agency, Agenzia Giornalistica Italia, which also publishes in English, quotes the head of the Livorno port authority, Ilarione Dell'Anna, who says the work is progressing well.

"The second tank containing 410 cubic metres of fuel was emptied at a speed of 8 cubic metres per hour. The third tank containing another 410 cubic metres of fuel is now being emptied," Dell'Anna said. "If the weather and sea conditions remain as good as in recent days the emptying of the first six tanks of the Costa Concordia will be completed in about three to four days."

AGI then went on to say that after that "operations will stop to allow the flanging of the remaining nine tanks." There is no timetable set as to how long all of that will take but Smit Salvage has gone on record as saying that the entire operation should take 3 to 4 [weeks](#). The work has gone quickly but there's been no word on whether that means, weather permitting, the operation may take less time than expected. *Digital Journal* [Read more](#) Related articles: [Latest update from Smit Salvage](#) [BBC News](#) (includes video and comment from the Salvage Master)

SYRIA : REPORTS OF BLAST HITTING HOMS OIL PIPELINE

February 15 : An explosion has reportedly hit a crude oil pipeline feeding the embattled Syrian city of Homs, eyewitnesses have told the Reuters news agency. *BBC News* [Read more](#) (includes video)

AUSTRALIA: MORE OIL SPILLS FROM CHRISTMAS ISLAND SHIP WRECK

January 31 - Heavy seas off Christmas Island have broken the wreck of a cargo ship into three pieces and there are growing concerns about the environment, as more oil leaks from the ship.

The MV Tycoon broke its moorings and smashed up against a sea wall three weeks ago. (See report in ISCO Newsletter 317 Of January 16, 2012.

ABC Rural [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for passing on this report]

UAE: MORE FUEL LEAK FROM SUNKEN VESSEL REPORTED

February 6 - The White Whale, an oil tanker that sank in late October, poses a serious risk to coastal marine life in the UAE if the ship cannot be salvaged before 1,000 tonnes of diesel escape into the environment, an official has warned.

Lying on the seabed 35 kilometres off the coast, the shipwreck is leaking fuel, according to reports, despite efforts to patch holes in the hull late last year.

"It will be catastrophic if any of the diesel tanks burst as it would likely pollute the shoreline and cause contamination and endanger marine life," an official with Khalid Port told Gulf News. (See reports in the ISCO Newsletters 309 of 14 November 2011 and 308 of 7 November 2011). *Gulf News* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for passing on this report]

VENEZUELA SAYS GUARAPICHE OIL SPILL UNDER CONTROL

February 12 - [Venezuela](#) will put 1,500 people to work clearing up an oil spill at a river in the east of the country that has forced the authorities to close a water purification plant, the environment minister said on Sunday.

Officials say an accident on February 4 ruptured a pipeline carrying crude near the city of Maturin in the latest of many mishaps to afflict state oil company PDVSA.

It was not clear how much crude had been spilled in the Guarapiche River.

An opposition lawmaker has told local media as many as 60,000 barrels of crude were spilled in the Guarapiche, but there was no confirmation of that from PDVSA or the government. *Reuters* [Read more](#)

NEW ZEALAND: 40% OF RENA CONTAINERS HAVE BEEN RECOVERED. ISCO CORPORATE MEMBER, BRAEMAR HOWELLS HAS NOW PROCESSED 514 CONTAINERS.

In total, 514 containers have been recovered from *Rena* by salvors and processed ashore by Braemar Howells. A further 70 containers have been recovered from land and sea by Braemar Howells teams, making the total ashore now 584. *Maritime New Zealand* [Read more](#)

US COAST GUARD COLLABORATES TO EXPAND MARITIME POLLUTION OUTREACH



February 13 - The U.S. Coast Guard and the North American Marine Environment Protection Association announced an agreement to co-develop and implement outreach, training and educational materials aimed at reducing maritime pollution.

Under the memorandum of understanding, signed during a ceremony at Coast Guard Headquarters last month, the Coast Guard will expand its marine environmental protection education and outreach program within NAMEPA's strategic alliances. Furthermore, the Coast Guard will collaborate with NAMEPA to develop an elementary school curriculum that will focus on reducing marine debris.

gCaptain [Read more](#)

AUSTRALIA: POLLUTION REPORTING LAWS BEGIN

February 13 - New laws that require communities to be immediately notified of incidents such as last year's hexavalent chromium leak at Orica's Kooragang Island plant have come into effect.

Companies that do not immediately report significant pollution incidents to relevant authorities face fines of \$2 million. The law, which came into effect this week, was one of the recommendations of Brendan O'Reilly's report into last year's leak. *Newcastle Herald* [Read more](#)

USA: BP OIL SPILL LITIGATION COMES TO COURT

February 17: BP and its Gulf of Mexico Macondo well partners and contractors face tens of billions of dollars of possible damages and liabilities from the historic oil spill, in a major legal battle due to kick off in New Orleans on February 27.

This *Reuters* article expands on different possible outcomes from the litigation. [Read more](#)

USA: JUDGE IN GULF OIL SPILL TRIAL CAN HANDLE THE NUMBINGLY COMPLEX TRIAL AHEAD, COLLEAGUES SAY



February 12 - On the day in August 2010 that an Idaho gathering of judges tapped U.S. District Judge Carl Barbier of New Orleans to oversee 535 consolidated lawsuits in the BP Deepwater Horizon disaster and **Gulf oil spill**, Barbier was already warning the attorneys who would appear in his court that the complex litigation was to be dispatched with courtesy and professionalism.

"It is likely that during the course of this litigation your working relationship will occasionally be strained, communication derailed, and mutual trust questioned," Barbier wrote in his first, 31-page order outlining the scope of the case. "The Court expects, indeed insists, that professionalism and courteous cooperation permeate this proceeding from now until this litigation is concluded."

For those who had already appeared before the 13-year veteran of the federal bench or against him during his career as a trial lawyer in New Orleans, Barbier was simply describing the standards he has always insisted upon.

"He brings both intelligence and a good personality to dealing with one of the most complex cases in history," said Tulane Law School professor and former dean Edward Sherman, an expert on complicated litigation. *Nola.com* [Read more](#)

USA: SHELL CLEARS MAJOR HURDLE IN ITS BID FOR NEW ARCTIC DRILLING

February 17 - In a crucial step toward the ultimate approval of new [oil](#) drilling off the North Slope of Alaska, the Interior Department on Friday [tentatively approved Shell's plans](#) for responding to a potential spill in the frigid Arctic waters.

Shell still needs to cross several more regulatory barriers before it will be permitted to begin drilling as many as six exploratory wells in the Chukchi Sea in July. But the green light from the Interior Department on the company's oil spill response plan is a clear sign that the Obama administration is disposed toward allowing the drilling despite the dogged opposition of many environmentalists. *The New York Times* [Read more](#)

MEXICO OIL WATCHDOG SOUNDS ALARM

February 15 - Mexico's oil regulator is sounding an alarm over plans by the country's state oil monopoly to drill two ultra-deep-water wells near U.S. waters this year, saying neither the company nor his commission is prepared to handle a serious accident or oil spill there.

The regulator's chief, Juan Carlos Zepeda, said *Petróleos Mexicanos* has relatively little experience with deep-water drilling, much less with the ultra-deep wells—those at depths exceeding 6,000 feet—that it could tackle as soon as next month. Pemex plans to drill as many as six deep-water wells this year, including the two ultra-deep wells, more than at any time in its history.

Mr. Zepeda said his fledgling National Hydrocarbons Commission also is out of its depth, with a staff of just 60 and a budget of \$7.3 million, about 2% of what its Washington counterpart spent last year. *The Wall Street Journal* [Read more](#)

NIGERIA: BONGA OIL SPILL: NOSDRA ASSESSES IMPACT ON COASTLINE

National Oil Spills Detection and Response Agency (NOSDRA), has commenced assessment of the impact of the Dec. 20, 2011, Bonga oil spill on Akwa Ibom coastline and communities. The officials of the agency had already visited coastal communities in Ibeno area to verify claims made by their fishermen.

NOSDRA's Zonal Director in the state, Mr Irvin Obot, confirmed the exercise and said that he was the leader of the investigating team. Obot said the team inspected sites and shoreline, which the fishermen claimed had been polluted by the spill, adding that the fishermen showed the team fishing nets and accessories allegedly destroyed by crude oil. *Leadership Newspaper* [Read more](#)



In this issue of the ISCO Newsletter we are printing No. 64 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 64: KNOWLEDGE OF REMOTE SENSING AND IDENTIFICATION SAMPLING

Having reviewed the theory underlying remote sensing in article 63, the following articles on this subject will review our knowledge-acquisition on the performance of remote sensing equipment in respect of its ability to increase the efficiency of response to well blow-out oil and shipping casualty oil releases and to increase the efficiency of detection and attribution of operational oil releases from wells and ships of all types.

Thermal (IR) radiance sensors detect apparent temperature from the physical or 'real' temperature and the thermal emissivity. Thus, the presence of an oil slick can change both of these parameters with respect to those for water by:

- the oil layer absorbing solar radiation to become warmer than the underlying/surrounding sea;
- oil close to the source retaining heat and thus being warmer than the sea;
- evaporation of volatile components having a cooling effect on the oil relative to the sea;
- oil reducing the evaporation of water to produce a warming relative to the evaporating sea;
- oil restricting heat transfer between atmosphere and sea to make the sea under the oil cooler in warm weather and warmer in cooler weather than it would otherwise be;
- oil becoming warmer by wind-induced viscous drag relative to the sea.

From the above listing of possibilities, we see that oil slicks could be warmer or cooler than the sea depending on a variety of individual processes having conflicting consequences. However, on the basis of comparative emissivity (efficiency as a thermal radiator) we know that oil should appear cooler than water when both are at the same temperature, the emissivity of oil being 0.02-0.05 less than water which corresponds to an apparent temperature difference of 1-3°K

Accordingly some tank tests were conducted under contract to WSL at the University of Lancaster to investigate possible mechanisms to explain observed differences in physical temperature between oil slicks and the underlying and surrounding water, thermocouples having been located in the oil and in the water immediately below its surface at 1mm depth and in the bulk water at 3cm depth, while control tanks containing only water were thus equipped with thermocouples. In all cases with oil layers from 1 mm - 6mm the oil attained a temperature higher than the water. However, when the atmospheric relative humidity RH was changed from 10% to 65%, the temperature difference ΔT_1 between oil and water decreased as did the temperature ΔT_2 between the bulk and surface water, these results suggesting that the temperature difference of interest ΔT_1 was caused by termination of evaporation of the water under the oil layer.

Wind tunnel experiments were carried out at wind speeds across the tank surfaces of 1 - 10 ms^{-1} and it was observed with air temperatures above those of the tank contents that ΔT_1 increased with increase in wind speed and that this effect increased sharply at the transition from laminar to turbulent flow which occurred from 4 ms^{-1} upwards, this situation simulating warm summer conditions with respect to the differential air and sea temperatures. However, even in simulated winter conditions in which the air temperatures were lower than those of the tank contents, the ΔT_1 results were qualitatively the same. This simulated winter regime was achieved by heating the tank contents above the air temperature, switching off the heaters and allowing convection stabilisation before measuring ΔT_1 . These results suggest that oil slicks can be heated by viscous dissipation of wind energy; and that this is most effective at speeds above those of laminar flow.

Thus, termination of seawater evaporation and viscous dissipation of wind energy may be expected to result in oil slicks having higher physical temperature than those of the surrounding and underlying water both in winter and summer which despite the emissivity of oil being less than that of water should ensure an observable contrast when attempting to detect oil spills by thermal (IR) means. However, these results do not permit us to conclude that the effect of oil's lower emissive can always be overridden by the above or other warming mechanisms. Again, though the Lancaster workers claimed to have confirmed their experimental results by replicating them with a mathematical model, readers will recall (article 45) that experimentation confirms mathematical models, while mathematical models do not confirm the experiments on which they are based, and do nothing when not based on experimentation.

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.

OIL SPILL REMOTE SENSING: CHAPTER 5



Continuing 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.

This is the 6th of a series of articles which will go into the remote sensing of oil spills. This series will cover oil spill remote sensing step by step and will present the latest in knowledge on the topic.

Optical Methods - Near-Infrared

Clark et al. proposed that color composite images assembled from both visible and near-IR wavelengths, could be used to make images of thick oil, but such images also show strong reflections from clouds and the glint from the ocean surface.^{3,14} Clark et al. proposed that spectroscopic analysis of the reflectance spectra within remote-sensing imagery could resolve the absorptions due to the organic compounds in oil and can better discriminate the spectral shape of oil.¹⁴ A method to analyse absorptions due to specific materials is called absorption-band depth mapping. Clark and others showed that simple three-point-band depth mapping could show the location of absorption features but can not identify specific compositions of compounds causing these features when compound mixtures have absorptions near the same wavelength. In the case of open ocean images, comprised of pixels containing water, oil/water mixtures, and clouds, the organic compounds in the oil and oil/water mixtures have absorption features that are distinct from those from water and clouds. These spectral differences, it was proposed, allows one to map qualitative variations in oil abundance. Other than in the Gulf oil spill, this system has not been tested.

The researchers used the NASA Airborne Visible/Infrared Imaging Spectrometer (AVIRIS). AVIRIS provides data on the spectrum of the surface at each pixel from 0.35 to 2.5 microns (the visible spectrum is: blue: 0.4 micron, green 0.53 micron, deep red 0.7 micron) in 224 channels. AVIRIS data from oil overflights were used to produce a three-point band depth map, indicating potential locations of thick oil is, by the following methods: 1 Radiance data are converted to surface reflectance using a two step process.¹⁴ 2 Three-point-band depth images are computed using continuum-removed reflectance spectra. The band-depth images produced from these calculations are combined into a color composite image as follows: the 2.3-micron feature in the red channel, the 1.73-micron feature in the green channel, and the 1.2-micron feature in the blue channel. The thicker oil then theoretically shows up in the green-blue regions of the image.

The Gulf oil spill was mapped using the AVIRIS sensor in the ER aircraft and thickness maps were plotted.¹⁴ This method appeared to work for the Gulf oil spill, however, confirmation on other spills awaits.

Ultraviolet



Fig 8 The use of ultraviolet to map thin sheens is shown. The thicker oil is shown in the orange coloration from the infrared. The sheen is in various shades of blue. The outer pale blue fringes are from the ultraviolet which highlights very thin sheen. As there is very little oil in the thin sheens, the UV contribution is not useful operationally.

Oil shows a high reflectance of sunlight in the ultraviolet range. Ultraviolet sensors can be used to map sheens of oil as oil slicks display high reflectivity of ultraviolet (UV) radiation even at thin layers (<0.1 μm). Overlaid ultraviolet and infrared images are often used to produce a relative thickness map of oil spills. This is illustrated in Figure 8. Ultraviolet cameras, although inexpensive, are not often used in this process, however, as it is difficult to overlay camera images.³ Data from infrared scanners and that derived from push-broom scanners can be easily superimposed to produce these IR/UV overlay maps. Ultraviolet data are also subject to many interferences or false images such as wind slicks, sun glints, and biogenic material. Since these interferences are often different than those for infrared sensing, combining IR and UV can provide a more positive indication of oil than using either technique alone.

In recent years UV has not been used much in oil spill remote sensing as the sheen information by itself is not useful to countermeasures as thin sheens contain very little oil.

References

- 3 Fingas, M. and C.E. Brown, Oil Spill Remote Sensing: A Review, Chapter 6, in *Oil Spill Sci. Techn.*, M. Fingas, Editor, Gulf Publishing Company, NY, NY, 111, 2011
- 14 Clark, R.N., G.A. Swayze, I. Leifer, K.E. Livo, S. Lundeem, et al, *A Method for Qualitative Mapping of Thick Oil Using Imaging Spectroscopy*, United States Geological Survey, <http://pubs.usgs.gov/of/2010/1101/>, 2010

Science and Technology

EUROPE: EU HOVERSPILL PROJECT

HoverSpill driving force is based on the concept that the greatest part of oil spills has a strong impact on coasts, beaches and shoals. Even if the pollution takes place at open sea, vessels usually don't reach the location in short time to contain the spot, which rapidly expands. Moreover the oil hits those areas which can not be easily reached by traditional vehicles/vessels, nor by land nor by sea, for the lack of water depth or for the muddy land.

HoverSpill project is mainly focused to operate on the transitional areas between land and sea, where shoals, difficult access areas, long distance from ports, make difficulties more relevant.



Photo: HoverSpill Scenario - A typical situation in marshy zone (Louisiana 2010)

The main objective of HoverSpill system is the development of an **innovative procedure for oil spill emergencies, with the greatest immediacy and efficiency possible during the intervention and effectiveness** during the following remediation activities.

New operational procedures and protocols will be defined in order to match the new technological approach and the vehicle characteristics. Ultimately, the project finally aims at acting as, or fully support, a future European technology platform for new hovercraft assisting the policy objectives of the ERA.



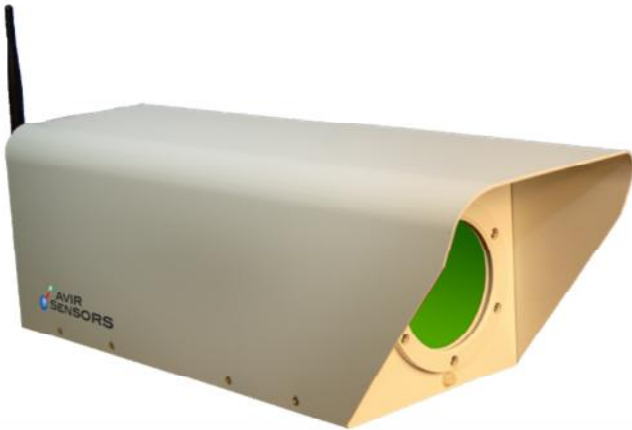
Above: HoverSpill Scenario – A typical operational intervention (Venice Lagoon)

[More info](#) Thanks to the January issue of the [CEDRE Newsletter](#) for the link to this item

MULTI-CHEMICAL LINE OF SIGHT DETECTION / MONITORING SYSTEM

The ChemSight™ detector is an infrared (IR), line of sight, sensing system for point of entry, fixed security, fence line and perimeter protection that utilizes a simple, non-contact, spectral analysis of the atmosphere. The use of optical line-of-sight detection and avoidance of direct contact with chemicals provides the following advantages unmatched by alternative, in-situ (or point) sensor technologies:

Science and Technology



- Continuous, uninterrupted (24/7, 365 days/year), monitoring
Immediate response (1 sec followed by 15 sec confirmation measurement)
 - Long line monitoring (over 100m by a single detector) for the protection of large spaces, entry points, fence lines, perimeters of sporting events, etc.
 - Multi-chemical detection (most chemical warfare agents, most important toxic industrial chemicals, and common interferant)
 - Excellent background rejection capabilities (exhaust fumes, cleaning agents, fire extinguishing agents, water vapor, etc.)
- Digital chemical library updateable via internet.
 - Long life, low maintenance (no contamination of sensing elements, filters, concentrators, etc.) and no consumables
 - Built in proprietary confidence tester for remotely testing the detector to confirm operation, sensitivity and response time.

[More info](#)

Publications

LATEST ISSUE OF THE IMO NEWS MAGAZINE

Issue 4, 2011 of the Magazine of the International Maritime Organization [Download](#)

Training

UK: HUMAN FACTORS - INCIDENT AND ACCIDENT INVESTIGATION AND ANALYSIS

Provided by the Energy Institute, this two day training workshop will focus on the analysis of incidents and accidents and will clarify the process of identifying root causes using practical examples.

The workshop will provide an overview of available analysis methods and the application of these to identify the underlying management and organisational deficiencies responsible.

[More info](#) [Additional Info & Dates](#)

USA: NEW GRADUATE PROGRAM IN DISASTER RESPONSE

After experiencing a tornado, an earthquake, a hurricane, a blizzard, and a freak snowstorm in the last two years, experts predict Connecticut should expect more of the same.

It was not entirely a coincidence that the University of New Haven has begun offering a new master's degree program in emergency management.

The new post-graduate program is an extension of a certificate program that UNH started last year, according to Wayne Sandford, formerly the fire chief and emergency management director in East Haven for 14 years, who heads up the university's new offering.

[More info](#)

Events

IMO OPRC-HNS TECHNICAL GROUP MEETING

The OPRC-HNS TG13 meeting takes place at IMO in London over 5-9 March, 2012

ISAA ALL-IRELAND ACCREDITATION SCHEME STEERING GROUP MEETING

The next meeting will be at 10.30 am on Wednesday 29th February 2012 in the Grand Jury Room, Old Courthouse, Hillsborough, Northern Ireland. All stakeholders are invited. Attendees should advise the Administrator of their intention to come to the meeting. [More info](#)

ISCO 2012 AGM

The 2012 ISCO AGM will take place during Interspill in London. The Agenda and Meeting Papers (including Form of Proxy) have been sent out. Members should contact the Secretary if not received.

Guests are welcome to attend. Details of the Meeting Room, day and time of Meeting will be advised ASAP.

DUBAI: OFFSHORE ARABIA - 27-29 FEBRUARY 2012

[Conference Programme](#) [Registration Form](#)

FRANCE: LA DETECTION DES POLLUTIONS ACCIDENTELLES ET DES REJETS ILLICITES

Mardi 20 mars 2012 17e journée d'information du Cedre à l'INHESJ [More info](#)

BRAZIL: PETROBRAS KEYNOTE SPEAKER AT IMCA'S ANNUAL SAFETY & ENVIRONMENT SEMINAR

Delegates from around the world are registering for next month's International Marine Contractors Association's (IMCA) Safety and Environment Seminar, with its theme 'Risk and impact in marine operations' (Rio de Janeiro, 21-22 March) which will focus to a large extent on process safety/asset integrity challenges in marine construction. The seminar is endorsed by IBP (Instituto Brasileiro de Petróleo). Read more - [Announcement in OceanBuzz Newsletter](#) [More info on the Seminar](#)

ISCO ANNOUNCEMENTS

KEYSTONE PIPELINE – ISCO NEWSLETTER READER POLL

The result was a 100% vote in favour of a go-ahead for the construction of the pipeline. However, only 7 readers actually registered their votes. Your Editor was surprised that so few readers voted on something that appeared to be a highly controversial issue.

INCOMMUNICADO ISCO MEMBERS

Your editor has been experiencing difficulty with “bouncing” of email communications addressed to Chief Kola Agboke (Nigeria) and Anton Moldan (South Africa). If you can assist with info about these members please get in touch with the Secretary at john.mcmurtrie@spillcontrol.org

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