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## International news

### REMPEC ORGANISES AERIAL SURVEILLANCE OPERATION FOR ILLICIT SHIP POLLUTION



Photo: REMPEC's Director Frédéric Hébert (sixth from right, standing) with the joined forces monitoring marine pollution from ships in Western Mediterranean

Some 700 vessels were monitored by five aircraft from Algeria, France, Italy, Morocco and Spain taking part in a Coordinated Aerial Surveillance Operation for illicit ship pollution discharges in the Western Mediterranean.

Called OSCAR-MED 2013, the operation was organised by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), with the financial support of the Government of France and the RAMOGE Agreement (Saint-Raphael-MONaco-GENoa pollution agreement). It was coordinated by the Spanish Maritime Safety Agency (SASEMAR) through its Maritime Rescue Coordination Centre in Palma de Mallorca.

The air patrol aircraft from the five countries monitored marine pollution from ships in a designated area of the Western Mediterranean, where three oil slicks were detected. The European Maritime Safety Agency (EMSA) supported the

## International news (continued)

operation by providing satellite images from the CleanSeaNet service.

This was the second OSCAR-MED operation organised by REMPEC. The first one, in which three aircraft from France, Italy and Spain had participated, was held in Toulon, France in 2009. The main objective of these operations is to enhance operational cooperation in the Mediterranean to combat illicit ship pollution in the region.

During OSCAR-MED 2013, REMPEC and Blue Plan, the UNEP/MAP's Regional Activity Centre on environment and sustainable development, also convened a meeting on the establishment of a network of law enforcement officials relating to MARPOL in the Mediterranean Sea (MENELAS). The meeting, which was also organised with the financial support of the Government of France, was also financed by the Global Environment Facility (GEF) "Regional Governance and Knowledge Generation Project" (ReGoKo Project) being implemented by Blue Plan.

Operational and judicial officials from 14 countries and territories in the Mediterranean responsible for investigating and sanctioning marine pollution offences participated in the meeting aimed at facilitating the exchange of information and experience amongst these officials. Participants hailed from Albania, Bosnia & Herzegovina, Cyprus, France, Israel, Italy, Lebanon, Montenegro, Morocco, Slovenia, Spain, Palestine, Tunisia and Turkey. The meeting discussed and endorsed the terms of reference of the proposed network and recommended the establishment of the network and the adoption of its terms of reference to the Contracting Parties to the Barcelona Convention for the Protection of the Marine Environment and the Coastal Region of the Mediterranean Sea scheduled to meet in December 2013 in Istanbul, Turkey. [Thanks to Benjamin Frendo, REMPEC] [REMPEC](#)

## Incident reports

### CANADA: EVACUATION ORDER REDUCED WHILE HAZMAT CREWS CLEAN UP TANKER SPILL



July 27 - Regional District of Central Kootenay Emergency Operations Centre spokesman Bill Macpherson has confirmed the evacuation order for the geographic area surrounding the truck tanker spill in Lemon Creek Friday has been reduced.

Friday, at around 5:15 p.m. a tanker truck carrying 35,000 litres of jet fuel on the Lemon Creek Forestry Service crashed into the creek.

A Vancouver HAZMAT team, which arrived early Saturday morning, is currently working with other agencies and crews at containing the spill, which is moving downstream from Lemon Creek into Slocan River and on into Kootenay River.

"A two to three kilometre plume 30 to 50 metres wide is above the Brilliant Dam and crews are using a back eddy to contain it," Macpherson said. *The Boundary Sentinel* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

### USA: TUG AND BARGE RUN AGROUND IN GULF OF ALASKA

July 26 - Coast Guard Marine Safety Unit personnel responded Wednesday afternoon to a 77-foot integrated tug and barge grounded on the Gulf of Alaska coast, 60 miles southeast of Cordova, Alaska.

The owner of the 77-foot integrated tug and barge Hook Point-Alaganik, contracted Alaska Marine Response, LLC, to place boom, remove fuel from the vessel and prepare salvage plans. Heavy fog and the remote location of the grounding present challenges with access to the site. Alaska Marine Response, LLC, responders are awaiting a favorable weather window to deliver fuel removal and salvage equipment from Cordova. Coast Guard Marine Safety Unit Valdez personnel, in close coordination with the Alaska Department of Environmental Conservation, continues to monitor the response. *The Maritime Executive* [Read more](#)

### CANADA: 5.6 MILLION LITRES OF OIL SPILLED IN LAC-MÉGANTIC



*Photo: Trucks carrying oil-contaminated water line up on July 20, 2013, outside a treatment plant in Lac-Mégantic, where an MMA train exploded two weeks ago.*

July 24 - It might take weeks before the extent of the damage from the July 6 train derailment in Lac-Mégantic is known, but 16 days after a train carrying crude oil crashed into the heart of Lac-Mégantic, the provincial government has revealed just how much oil appears to have been spilled.

There were 7.2 million litres of light crude oil aboard the ill-fated Montreal Main & Atlantic Railway train, but Quebec's Department of Sustainable Development, Environment and Parks says about 5.63 million litres were released into the air, water and soil during the derailment. *Montreal Gazette* [Read more](#)

## Incident reports (continued)

### IRAQ: PIPELINE BLAST IN NORTHWEST IRAQ HALTS OIL FLOW TO TURKEY



July 28 - A bomb attack on an oil pipeline near the northwestern Iraqi city of Mosul has halted the oil flow to Turkey, as violence continues to surge across the country.

The pipeline that was blown up at midnight on Saturday was used to transfer crude from Iraq's Kirkuk oilfields to the Mediterranean port of Ceyhan in Turkey, officials of Iraq's North Oil Company (NOC) said.

According to the NOC officials, repair work will be completed within the next 72 hours if no security issue arises. *PressTV.ir* [Read more](#)

### USA: RIG BLOWOUT LEADS TO EVACUATION OF 47 WORKERS

July 23 - As of late, the gulf coast has become more well-known for oil spills and natural disasters than its natural beauty and once bountiful fishing and shrimping. A major oil spill in 2010 caused major damage to the area, damage that is still being dealt with.

The latest event is this line of tragedy occurred today as a blowout on a natural gas rig off of the Louisiana coast lead to an unexpected leak. The blowout occurred 40 miles south and 15 west of Grand Isle at about 9:50 a.m. *WebProNews* [Read more](#)

#### Hercules 265 Jackup Beams Collapse Over Rig Structure

July 24 - A portion of the Hercules 265 (250' MC) jackup has collapsed after catching fire Tuesday night, the Bureau of Safety and Environmental Enforcement (BSEE) said Wednesday. "Two firefighting vessels were in the area and re-located a safe distance from the fire. A third vessel equipped with fire-fighting capability and improved monitoring system is enroute and expected to arrive late morning. *Rigzone* [Read more](#)

#### Hercules Jack-Up Rig Fire is Out

July 25 - The Bureau of Safety and Environmental Enforcement (BSEE) and the U.S. Coast Guard confirmed this morning that the leaking natural gas well 55 miles offshore Louisiana has bridged over and the gas flow stopped. *The Maritime Executive* [Read more](#)



### CHINA: OIL SPILL POLLUTES RIVER IN NW CHINA



*Picture: Oil spilled from a cracked underground oil pipeline has polluted a section of a river in Northwest China's Shaanxi province, local authorities said Tuesday. [Photo / Xinhua]*

July 17 - Oil spilled from a cracked underground oil pipeline has polluted a section of a river in Northwest China's Shaanxi province, local authorities said Tuesday.

The severe impact of a rain-triggered landslide cracked the pipeline, located in Zichang county, Yan'an city, at 4:58 am Monday, causing nearly a ton of crude oil to flow into the Haojiachuan River, a seasonal river, according to the city's publicity department.

Yanchang Petroleum Group's Pipeline Transportation Company, the operator of the pipeline, immediately turned off the oil valve after the leakage was detected.

More than 3,000 people have joined clean-up efforts, and 18 floating dams have been built to curb the spread of oil and remove it from the river. *ChinaDaily.com.cn* [Read more](#)

## Incident reports (continued)

### USA: TRAIN WRECK, FIRE UNDER INVESTIGATION

July 21 - In the chaotic first minutes after a Union Pacific freight train derailed early Tuesday morning, the first order of business for the Hays Fire Department was to determine what was contained in the 18 cars that were derailed.

A train bound for Denver from Salina with three locomotives and 79 cars was diverted off the main track and collided into the rear of a stationary train on a side track at approximately 1:25 a.m. at the rail yard near the railroad crossing at Eighth and Vine. The train contained 20 cars carrying ethanol -- a volatile, flammable liquid. None of those cars derailed, but the fire department wanted to contain the fire so it didn't spread to those cars. *The Hays Daily News* [Read more](#)

### USA: TRAIN DERAILS AT PORT OF TAMPA, SPILLING ETHANOL



July 25 - The Port of Tampa is open again, but hazmat crews are still cleaning up an ethanol spill after a train derailed at the port early this morning.

According to CSX, several cars in an 81-car train overturned around 1 a.m., and three began leaking ethanol. CSX estimates 4,500 gallons of ethanol spilled.

Tampa police say a total of 14 cars were involved in the incident: 11 are on their sides, one is off the tracks and slightly tilted, and two cars on the tracks bookend the other cars. Captain Lonnie Benniefield of Tampa Fire and Rescue said rain and lightning dampened their initial efforts to contain the leaked ethanol with foam, and it will likely take all day to clean up the mess. *Fox News* [Read more](#)

### YEMEN: MUKALLA RESIDENTS CONDEMN OIL SPILL, REPORT HEALTH EFFECTS

July 22 - Hundreds of protestors in Mukalla on Thursday condemned a tanker's oil spill that took place in coastal waters on July 11. Residents gathered on the coast in front of the wrecked ship, which is marooned nearby to demand officials take a more proactive role in stopping the tanker's ongoing leakage of oil.

Mukalla resident Abdulkadir Al-Habashi called the spill a catastrophe and criticized officials for their slow response to clean it up. Last week officials tried to move the ship but were unable to stop the seeping oil. The ship is believed to have lost control after hitting some rocks near the coast and spilling over. *The Yemen Times* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]



### IRELAND: NAVAL DIVERS TO CONDUCT EXAMINATION OF ASTRID WRECK TO PREVENT OIL SPILL



July 25 - Naval Service divers will conduct a careful examination of the hull of the wrecked Tall Ship 'Astrid' today in a bid to prevent an oil pollution spill.

Hugh Barry Pollution and Salvage Operations Officer of the Irish Coast Guard said that there was no sign of any pollution this morning from the 3.5 tonnes of diesel on board but assessments will be carried out over the course of the day

The 42m Dutch-owned brig sank after being driven onto rocks between Oysterhaven and Kinsale off the Cork coast at 12 noon yesterday (Wednesday) when her engine failed. *The Independent* [Read more](#)

## USA: ENBRIDGE OIL SPILL CLEANUP TO TAKE YEARS

[Note from editor: In last week a report was printed under the heading "Clean-up of Kalamazoo River Oil Spill nearing end". Not everyone would agree with this statement and Jeff Taylor, Executive Vice-President of ISCO Corporate Member, Marine Pollution Control Inc. has forward a link to the article below]

It has been three years since 800,000 gallons of oil spilled from an Enbridge pipeline into the Kalamazoo river. Though the booms might not be up everywhere, it doesn't mean there isn't work left to be done.

"Now we're doing soil samples, sediment collection and ground water sample collection to be able to evaluate what impacts remain," said DEQ Project Manager Mark DuCharme.

Mark DuCharme with the DEQ says a massive clean up has been a difficult process over the last three years, because the water levels were at flood stage when that pipeline erupted.

"The river flooded up out of the banks, into the flood plain and extended out into people's properties," DuCharme said.

"It's a very lengthy process to collect these soil samples and get them analyzed and sit down and interpret the data."

DuCharme says new technology has helped, but the cleanup is far from over and he estimates that it will take years before the project is completed. *WLNS.com* [Read more and watch video](#) Related article in [Inside Climate News](#)

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## HOW A JACK-UP RIG BLOWOUT OCCURS

An interesting article in *gCaptain*



Picture: *KS Endeavor* jack-up on fire in 2012. Photo: Chevron

July 24 - From a drilling safety standpoint, jack-up rigs are inherently more dangerous than floating rigs for two main reasons.

First, if the well blows out and catches fire, there's no way to unlatch the rig from the wellhead and move off station, thus removing the fuel source. Either the blowout preventer will close and the fire is extinguished, or the rig is going to burn to the waterline. There's very little in-between.

Secondly, because the blowout preventer is located roughly 60 feet below the rig floor, and not hundreds (if not thousands) of feet below on the sea floor, if the rig crew is unable to detect a "kick," or influx of gas into the wellbore, before it reaches the blowout preventer (BOP), then it's pretty much guaranteed that there will be a flammable geyser of mud, gas, and possibly oil, over the rig.

On a deepwater rig, such as the *Deepwater Horizon*, a huge steel pipe called a riser connects the floating rig to the blowout preventer on the sea floor. There are added dangers in this situation as well, however there are effective means of mitigating these risks. *gCaptain* [Read the complete article](#)

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## TRANSPORT CANADA INTRODUCES EMERGENCY RULES FOR TRAIN SAFETY

Transport Canada announced six emergency rail safety rules Tuesday in response to the Lac-Mégantic runaway train disaster, but its senior officials declined to answer direct questions about whether it had failed in previous years to respond to weaknesses highlighted both in internal and external audits.

In a news conference responding to recommendations from Transportation Safety Board of Canada investigators last Friday, the department said the new rules would be effective immediately and in place for about six months, leading to permanent rule changes for the industry.

The new measures ban one-person crews for locomotives carrying train cars with dangerous goods. They also place new restrictions on unattended trains on main tracks, as well as defining minimum requirements for their braking systems.

The disaster, which claimed dozens of lives and destroyed multiple buildings, also resulted in the release of about 5.7 million litres of oil into the air, water and soil around the small Quebec town, provincial officials estimated this week, making it one of the largest environmental disasters in North American history. *Edmonton Journal* [Read more](#)

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## USA: COLUMBIA SHIPMANAGEMENT FINED \$10.4 MILLION FOR OIL POLLUTION AT SEA VIOLATIONS [UDPATE]

July 24 - Shipping firms Columbia Shipmanagement GmbH (CSM-D) and Columbia Shipmanagement Ltd. (CSM-CY), based in Germany and Cyprus respectively, have been sentenced to pay a \$10.4 million penalty and be placed on probation for four years after pleading guilty to felony obstruction of justice charges and violations of the Act to Prevent Pollution from Ships.

The sentences were handed down in a Newark, New Jersey federal court room yesterday.

The shipping firms admitted that during visits to ports in New Jersey, Delaware, and Northern California, four of their ships (three oil tankers and one container ship) had intentionally bypassed required pollution prevention equipment and falsified the oil record book, a required log regularly inspected by the U.S. Coast Guard.

The case is the largest vessel pollution settlement in either New Jersey and Delaware. *gCaptain* [Read more](#)

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## USA: HALLIBURTON TO PLEAD GUILTY TO DESTROYING EVIDENCE IN BP SPILL

July 25 - The oil services giant Halliburton agreed Thursday to plead guilty to destroying evidence during the Deepwater Horizon oil spill disaster in 2010, admitting to one count of criminal conduct and agreeing to pay the \$200,000 maximum statutory fine, according to the Justice Department.

In a startling turn in the three-year-old criminal investigation, Halliburton said that on two occasions during the oil spill, it directed employees to destroy or "get rid of" simulations that would have helped clarify how to assign blame for the blowout — and possibly focused more attention on Halliburton's role. *The Washington Post* [Read more](#)

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## USA: OIL COMPANY SEEKS SUPPORT AGAINST LAWSUIT GOUGING

July 25 - BP took its oil-spill legal battle to investors and the public this week with a full-page ad in The Wall Street Journal and other newspapers titled "Business Leaders Agree: What's Happening to BP is Bad for American Business."

In the full-page ad (see File Attachments, below), BP reprinted comments from two major U.S. business leaders who echo the oil company's recent courtroom declarations that the company is being gouged by unscrupulous lawyers and small-business owners looking for a financial windfall in the wake of the 2010 oil-rig explosion.

According to BP, many businesses are securing settlements for exaggerated or even fictitious losses.

"Irreparable injustices are taking place," Theodore B. Olson, the former solicitor general, who is representing BP, told the appeals earlier this month, according to a New York Times report. He warned of a "hemorrhaging of possibly billions of dollars" because of the administrator's miscalculation of business losses following the spill. *CSPnet.com* [Read more](#)

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## JAPAN: CLEANUP FROM FUKUSHIMA DAIICHI: TECHNOLOGICAL DISASTER OR CRISIS IN GOVERNANCE?

*This is a sharply critical article, published by Fairewinds Energy Education on 13 June 2013 and forwarded by ISCO Corporate Member, Power Plus DCU. In conformance with editorial policy, the ISCO Newsletter will, if received, print a response to this article.*

More than 19,000 Japanese drowned, their bodies scattered on Japan's eastern shores when a tsunami struck Japan on March 11, 2011. Kevin Wang wanted to help, and his Anaheim, California-based company, PowerPlus, had the cleaning know-how to handle almost anything. Wang has spent decades developing equipment to clean up almost every sort of nasty gunk in existence, from massive oil spills, to radiological contamination, to dead bodies in quantity.

Immediately after the tsunami, Wang visited the Japanese consul general in Los Angeles to offer his company's assistance in dealing the huge threat to public health posed by this mass casualty event. The response by Japan's consul-general made Wang's jaw drop. "Absolutely not," the consul replied, continuing on with rejection language so brusque, Wang had no doubt his offer was taken as an insult.

Far from being an isolated incident, the encounter that Wang had now seems to be a harbinger of the systemic denial that has crippled the Japanese government's response to the Fukushima Daiichi disaster. First-hand witnesses have described a deeply flawed reaction to the nuclear meltdown that has been marked by an underestimation of the extent of the contamination, insufficient radiological testing, and a glacially-slow response making clean-up harder as time passes. Most damning of all has been a stubborn unwillingness to use desperately needed clean-up assistance by ignoring technical competence in favor of political influence. *Fairewinds Energy Education* [Read the complete article](#) [Fairewinds Energy Education](#)

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## IMO SECRETARY-GENERAL EMERITUS DR. C.P. SRIVASTAVA, KCMG, REMEMBERED



IMO Secretary-General Emeritus Dr. C.P. Srivastava, KCMG, Secretary-General Emeritus of the International Maritime Organization (IMO), has died in Italy, aged 93.

IMO Secretary-General Koji Sekimizu expressed his sincere condolences to the Indian Government and Dr. C.P. Srivastava's remaining family, and also the condolences of the entire IMO membership and staff.

"It is with great sadness that we have learned of the passing of Dr. C.P. Srivastava, the longest-serving Secretary-General of the Organization," Mr. Sekimizu said. "Dr. C.P. Srivastava was a truly great Secretary-General who established the World Maritime University and placed IMO's work on technical co-operation in a central position in the work of the Organization, in order to promote the implementation of IMO conventions on a truly global scale."

Mr. Sekimizu added: "I met C.P. in Tokyo in 1981 and I was inspired by him to explore my career in the Japanese Government in the field of international co-operation dealing with shipping and I was really fortunate to have been recruited by him as an officer of IMO in 1989. I have been contacting him this year and I was pleased to deliver his congratulatory messages on his behalf at the Commemorative Event, held at IMO headquarters to celebrate 30 years of the World Maritime University, on 10th July. The last time I spoke to him was when I telephoned him just after the WMU 30th celebration reception, to immediately report to him about the successful holding of the event. He was delighted with the information that the event was successful and he was pleased with the current state of developments at the University, strengthening its activities with the vision established by him 30 years' ago."

During Dr. Srivastava's tenure as Secretary-General, from 1974 until his retirement on 31 December 1989, IMO increased its membership considerably. Dr. Srivastava was well known for his relentless efforts to make IMO known to the developing world and for encouraging developing countries to join the "rich men's club", as IMO was often referred to at the time. This shaped the structure of the Organization's membership to its present status, whereby two-thirds of the 170-strong membership (and three Associate Members) is represented by developing countries, making a significant contribution to IMO.

Dr. Srivastava's leadership of IMO is associated with the success of the 1978 Tanker Safety and Pollution Prevention (TSPP) Conference, and the development and adoption of the International Convention on Standards of Training, Certification and Watchkeeping for Seafarers (STCW), 1978, the International Convention on Maritime Search and Rescue (SAR), 1979, the Convention for the Suppression of Unlawful Acts Against the Safety of Maritime Navigation (SUA), 1988, and related Protocol for the Suppression of Unlawful Acts Against the Safety of Fixed Platforms located on the Continental Shelf, and many other treaties and Codes.

During his tenure, a comprehensive, pragmatic and co-ordinated programme of technical co-operation was conceived and developed and effective steps were taken to promote its continuing implementation.

Dr. Srivastava will be remembered for his visionary and pioneering role and his ceaseless efforts in the establishment of IMO's global educational institutions, including the World Maritime University (WMU), in Malmö, Sweden, and the International Maritime Law Institute (IMLI), in Malta.

Earlier this month, Dr. Srivastava had sent a message of support to be read out during celebrations marking the 30th anniversary of the founding of WMU, which were held at IMO Headquarters in London. Reading out his message, IMO Secretary-General Koji Sekimizu described him as the "founding father" of WMU, which has become IMO's centre of excellence for postgraduate maritime education.

As Secretary-General of IMO, Dr. C.P. Srivastava recognized the crucial importance of the human element in ensuring safety and efficiency in international shipping and played a pioneering role in the establishment of the International Maritime Academy in Italy, and the International Maritime Law Institute in Malta. He was the founding father and also the first Chancellor of World Maritime University which was founded in 1983 to address a pressing need for trained maritime professionals in the developing world. He was the inspired prime mover in the development of the concept of World Maritime University and IMLI, and in the immense job of planning, negotiating, fundraising, organizing and implementation that was required to take a vision and turn it into a reality.

Just before his retirement from his post as IMO Secretary-General in 1989, the IMO Assembly, meeting for its 16th session, unanimously adopted a resolution (A.679(16)), noting his retirement with regret and recording his services to IMO Member States. The resolution noted that, throughout his tenure, which comprised four successive terms and lasted 16 years, Dr. Srivastava rendered exceptionally meritorious services to the Organization with total commitment to its ideals and objectives. As a result of his leadership, integrity, dedicated endeavour and initiative, it said, the membership of the Organization stood greatly enhanced and its universality well established; many conventions and protocols had received wide acceptance and were now in force, promoting the objectives for the Organization of safer shipping and cleaner oceans and the IMO spirit of goodwill and co-operation has been sustained and enhanced ceaseless efforts in the establishment of IMO's educational institutions, including the World Maritime University and the International Maritime Law Institute



In this issue of the ISCO Newsletter we are printing No. 137 in a series of articles contributed by Dr Douglas Cormack.

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

### CHAPTER 137: THE GENERAL CONTINGENCY PLAN

This new contingency plan is based on knowledge largely acquired by the R&D programme of Warren Spring Laboratory (WSL) serially reported thereby and subsequently compiled in book form<sup>1</sup> as early as 1983. However, despite this programme having been funded by the UK government in response to the Torrey Canyon Incident of 1967 and despite its recommendations having been implemented in the form of equipment stockpiles and service contracts by the consequent UK Marine Pollution Control Unit (MPCU), its associated knowledge of the fate and effects of released oil/HNS has never been fully applied by the UK or any other coastal state, all having instead allied themselves with the knowledge-averse environmentalist lobby which believes incidents to be environmental-disasters despite their merely being commerce-interruptions, while nonetheless making contingency plans little more than calls to debate opinions/counter-opinions to one or other per diem belief-consensus. Thus, while such plans sustain the environmentalist lobby and produce excessive compensation claims, they do little or nothing to apply the knowledge which long since could have curtailed releases and returned local environments their pre-incident states more quickly and cost-effectively than they ever have been, such return being in any case inevitable as confirmed by the biodegradation of natural seepage.

As to the knowledge not yet utilised in response, it is that which harmonises technology with the marine environment as set out in articles 1 - 15, which provides understanding of water-immiscible systems as reviewed in articles 16-30 and which explains the natural fate of accidentally released and operationally discharged oils and HNS as described in articles 31-46. Again, it is that knowledge of actual response which provides understanding of dispersant-use as set out in articles 47-61; of remote sensing, sampling and identification of oils/HNS as reviewed in articles 62-69; of mechanical recovery from water surfaces as described in articles 70-91; and of shoreline-cleaning by chemical and physical means as described in articles 92-102. Yet again, it is that knowledge which provides understanding of the deficiencies of current contingency plans as in articles 103-106, of these deficiencies in practice as exemplified by the Sea Empress Incident in articles 107-115, and of the ways in which effective response techniques are thwarted in their application by belief-based regulation as noted in articles 116-120. Furthermore, it is that knowledge which identifies the beliefs which ISCO has invited the environmentalist lobby to reality-validate where possible or denounce as in articles 121-129 prior to ISCO reporting to IMO on completion of its knowledge-only contingency and incident-specific response plans, these being the culmination of the preceding articles as reviewed in articles 130-136.

However, with current contingency plans being those for debating belief/counter-belief in avoidance of the above knowledge, there should be no surprise in finding that apart from listing the contact details of all so-called interested parties, these plans mainly describe arrangements for communication between incident site and HQ, and for public dissemination of incident news as controlled by HQ public relations managers. Thus, these plans confirm that the politics of belief-based incident management is more important to those in charge than is the knowledge of how to manage it. As with everything else in the higher administration, knowledge is too constricting and/or involves too much responsibility to be comfortable. Thus, we see that current response plans have little concern for science and technology, having much more concern for handling belief/counter-belief and opinion/counter-opinion from a public relations point of view, and having no regard for knowledge which can speak for itself when permitted to do so. Of course, with such officials having read of or been present only at politically handled incidents at home and/or abroad, they are unlikely to have searched for implemented knowledge. Indeed, administrative generalists of my acquaintance were wont to claim in the presence of scientists and engineers that they could take decisions without personally knowing any science or engineering to which I was wont to reply that they got away with it only with the similarly ignorant.

Thus, we see that official avoidance of knowledge in incident response has offered no opposition to the beliefs of the environmentalist lobby; that ineffective response is excused by claiming every incident to be different, which in turn excuses the absence of incident specifics in contingency plans; that the general absence of knowledge is welcome to both officialdom and to the environmentalist lobby; and that belief-consensus can be adjusted from day to day with publicly unsatisfactory outcomes being excused by claiming novelty of incident and by placing all responsibility on the causative industry. In contrast, however, we see that the differentiation of knowledge from belief as set out in articles 1-136 provides a clear knowledge-base for the creation of a universal contingency plan and a clear identification of the beliefs which thwart application of this knowledge; and that rejection of belief and acceptance of knowledge will enable future incidents to be dealt with effectively, the roles of lobbyists and public relations managers having been thus rendered obsolete.

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.

## IN SITU BURNING: CHAPTER 29



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

### Summary of the Serial

This is the 29th of a series of articles on in-situ burning of oil spills. This series will cover in-situ burning step-by-step and will present the latest in knowledge on the topic.

### 29. Monitoring, Sampling, and Particulate Matter

Monitoring the emissions during an in-situ burn operation can provide continuous feedback as to whether the burn is progressing properly and safely. A well planned monitoring program, in which data are recorded before, during, and after a burn, will also help answer any questions that come up after a burn operation is completed. Monitoring of PM-2.5 particulate matter in the smoke at ground level is a very necessary part of in-situ burning.

The following sampling and monitoring should be performed for any in-situ burn operation as an optional task:

- real-time monitoring of volatile organic compound (VOCs) in the smoke again at ground level
- soot sampling for analysis for organic compounds and polyaromatic hydrocarbons (PAHs); and
- residue sampling for analysis for organic compounds and PAHs.

If it is determined that burning can be done safely and will likely result in the least overall environmental impact, operations should not be delayed because of monitoring and sampling activities.

### Real-time Monitoring of PM 2.5 at Ground Level

In general, real-time monitoring of emissions should be performed downwind of the fire and at a point closest to populated areas. Studies of the emissions from in-situ oil burns indicate that the main public health concern is particulate matter in the smoke plume as this is the first emission that normally exceeds recommended health concern levels.

For monitoring of particulate matter, it is generally accepted that the concentration of small respirable particles having a diameter of 2.5  $\mu\text{m}$  or less (PM-2.5) should be less than 35  $\mu\text{g}/\text{m}^3$ . This is the standard set out by several national authorities including the National Institute of Occupational Health and Safety (NIOSH) and described in the U.S. Code of Federal Regulations. Similar regulations exist in other countries.



**Figure 36** A photograph of a cluster of real-time particulate measuring devices at a burn test site.

The devices currently used to carry out real-time monitoring of particulates are the DustTrak, and DataRAM aerosol monitors, which are capable of detecting the PM-2.5 particulates emitted by a burn. Figure 36 shows a cluster of particle-measuring instruments, these are mostly DataRAMs. It is important to note that the concentrations of particles downwind are very variable over time. A reading can be over the recommended maximum value one instant and then at baseline values the next. Furthermore, the background values must be measured and subtracted from the current value. As some instruments measure humidity as particulate (which it is), the instructions state that these instruments should not be used in locations where there is high humidity. This certainly applies to locations on boats and near the sea. Experimentation has

shown that high humidity can lead to readings as much as five times the maximum exposure value, although the data can be corrected for this. In both cases, the real-time value on the instrument is noted only for interest. Newer models can correct for humidity. The instrument readings should be electronically recorded and averages calculated from the recorded and corrected data..

## Special feature – In situ burning (continued)

### Visual monitoring

Visual monitoring is certainly not as effective as monitoring using instruments. Obviously, gases and light concentrations of particulate matter cannot be seen. The trajectory of the smoke plume can be observed, however, and its passage over land, population centers, and other points of concern can be noted, timed, and recorded. This information is necessary if there is ever a question of exposure to emissions after an in-situ burn incident. The prime areas of deposition should be surveyed after a burn to check for soot deposits. If soot is found, it should be sampled for possible analysis.

*To be continued*

## Science & technology

### VIDEO: TREATING OIL CONTAMINATION IN LAC-MÉGANTIC

July 28 - A waste water treatment specialist gives a tour of a specialized temporary facility to treat oil contaminated water in Lac-Mégantic, Wednesday July 17, 2013. So far they have treated between 4 and 5 million litres of oil contaminated water from the train derailment site. (Phil Carpenter / THE GAZETTE)

*The Windsor Star* [Watch the video](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

## Publications

### FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

<a href="#">ASME EED EHS Newsletter</a>	News and commentary on HSE issues from George Holliday	Most recent issue
<a href="#">Bow Wave</a>	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
<a href="#">Cedre Newsletter</a>	News from Cedre in Brittany, France	June 2013 issue
<a href="#">The Essential Hazmat News</a>	Alliance of Hazardous Materials Professionals	July 22 issue
<a href="#">USA EPA Tech Direct</a>	Remediation of contaminated soil and groundwater	July 1 issue
<a href="#">USA EPA Tech News &amp; Trends</a>	Contaminated site clean-up information	May 2013 issue
<a href="#">Technology Innovation News Survey</a>	From US EPA - Contaminated site decontamination	June 1 - 15 issue
<a href="#">Intertanko Weekly News</a>	International news for the oil tanker community	No. 30 2013
<a href="#">CROIERG Enews</a>	Canberra & Regions Oil Industry Emergency Response Group	July 2013 issue
<a href="#">Soil &amp; Groundwater Product Alert</a>	From Environmental Expert	July 22 issue
<a href="#">Soil &amp; Groundwater Ezine</a>	Articles, papers and reports	May 2013 issue
<a href="#">Soil &amp; Groundwater Newsletter</a>	From Environmental Expert	July 25 issue
<a href="#">Soil &amp; Groundwater Events</a>	Upcoming events compiled by Environmental Expert	July 2013 issue
<a href="#">IMO Publishing News</a>	New and forthcoming IMO publications	July 2013
<a href="#">IMO News Magazine</a>	News from the International Maritime Organization	No 1, 2013
<a href="#">Pollution Online Newsletter</a>	News for prevention & control professionals	July 10 issue
<a href="#">EMSA Newsletter</a>	News from the European Maritime Safety Agency	July 2013 issue
<a href="#">JOIFF "The Catalyst"</a>	Int'l Organisation for Industrial Hazard Management	July 2013 issue
<a href="#">Int'l Environmental Technology</a>	Environmental Monitoring, Testing and Analysis	April 2013 issue
<a href="#">HELCOM Newsletter</a>	Baltic Marine Environment Protection Commission	May 2013 issue

## Events

### UK: MEETINGS OF THE IOPC FUNDS

21-25 October 2013 at the HQ of the IMO, 4 Albert Embankment, London SE1 7SR [More info](#)

### NORWAY : NOSCA SEMINAR 2013 – 9-13 SEPTEMBER AT LOFOTEN

NOSCA organizes an annual international "elite" seminar where international as well as national speakers are invited to present recent oil spills and experiences gained from such spills. Usually the seminar is topped by observing an on-water large scale oil spill exercise. These exercises engage vessels, equipment and personnel from all key players such as the Norwegian Coastal Administration, the Norwegian Coast Guard, the oil companies (represented by both NOFO and the individual oil companies' terminals and refineries), and the local intermunicipal organizations. – The seminar is normally joined by approximately 60 international guests and gives the participants an excellent opportunity to exchange experiences and establish personal relationships. [Registration form](#)

## Events (continued)

### USA: CLEAN GULF 2013

12-14 November 2013 in Tampa, Florida

Over 2,600 emergency responders are set to converge from November 12-14, 2013 in Tampa, Florida, for the CLEAN GULF Conference & Exhibition. Key professionals and decision makers from throughout the Gulf Coast and beyond will come together to discuss the latest trends and best practices in response operations. Attendees will walk away with viable solutions they can incorporate to safely produce and transport petroleum products and effectively respond when a spill occurs. In addition to the conference sessions, the exhibit floor features more than 200 companies ready to assist you with finding new solutions and technologies that will work best for your organization. [More info](#)

### KUWAIT: KUWAIT OIL & GAS SHOW AND CONFERENCE

7-10 October 2013 [More info](#)

### INDIA: AIR DISPERSION MODELING WORKSHOP

6-7 September 2013 in New Delhi [More info](#)

## Company news

### INDIA: ALPHAMERS WINS ONSHORE PIPELINE CONTRACT

ISCO Member, Capt. Sekhar, MD of the Bangalore based AlphaMERS writes to advise that the company has won a contract to set up an OSR base for onshore pipeline in Rajasthan for M/s Cairn Energy Ltd. This base has been set up and is operational.

The company has also announced it is starting training on H2S gas safety for the oil and gas industry. Capt. Sekhar is a qualified H2S trainer himself and has extensive experience handling high H2S crudes. The company is also active in offshore renewable energy sector. [AlphaMERS](#)

### ISCO CORPORATE MEMBER, CHUKAR WATERJET WILL BE AT OFFSHORE EUROPE 3-6 SEPTEMBER IN ABERDEEN, UK

Operable at depths up to 3000 meters, Chukar's deepwater subsea waterjet system has numerous applications for deepwater emergency response operations, salvage operations, and rapid de-mobilization operations. It can cut steel up to 250 mm thick and quickly blast away concrete weight coatings, corrosion and marine growth at pressures up to 3800 bar. Waterjetting equipment also may be used to provide turbulence in a stream of methanol for hydrate remediation, an application Chukar developed in emergency response to the Gulf oil spill, when the company was asked to rapidly manufacture a system to clear a clogged containment system 1500 meters underwater.

Chukar's subsea waterjet technology improves the safety and effectiveness of subsea operations, allowing operators to access new types of work and larger projects. Unlike conventional tools, waterjet cuts without heat, reducing the hazard of igniting trapped pockets of gas during cutting. Waterjet system tools cannot bind in the cut, jeopardizing asset integrity. Chukar's subsea waterjet system can be operated by a diver or ROV, and its remote-controlled operational capabilities make it suitable for projects requiring diverless operations.

For more information about Chukar Waterjet, visit [www.chukarwaterjet.com](http://www.chukarwaterjet.com) or e-mail [subsea@chukarwaterjet.com](mailto:subsea@chukarwaterjet.com) or call +1-763-497-8749.

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisations. ISCO is managed by an elected executive committee members of which are **Mr David Usher** (President, USA), **Mr John McMurtrie** (Secretary, UK), **Mr Marc Shaye** (USA), **Mr Dan Sheehan** (USA), **Rear Admiral M. L. Stacey**, CB (UK), **M. Jean Claude Sainlos** (France), **Mr Kerem Kemerli** (Turkey), **Mr Paul Pisani** (Malta), **Mr Simon Rickaby** (UK), **Mr Li Guobin** (China), and **Captain Bill Boyle** (UK). The Executive Committee is assisted by the non-executive ISCO Council composed of the following national representatives – **Mr John Wardrop** (Australia), **Mr Namig Gandilov** (Azerbaijan), **Mr John Cantlie** (Brazil), **Dr Merv Fingas** (Canada), **Captain Davy T. S. Lau** (China, Hong Kong), **Mr Li Guobin** (China, Mainland), **Mr Darko Domovic** (Croatia), **Eng. Ashraf Sabet** (Egypt), **Mr Torbjorn Hedrenius** (Estonia), **Mr Pauli Einarsson** (Faroe Islands), **Prof. Harilaous Psarftis** (Greece), **Captain D. C. Sekhar** (India), **Mr Dan Arbel** (Israel), **Mr Sanjay Gandhi** (Kenya), **Mr Joe Braun** (Luxembourg), **Chief Kola Agboke** (Nigeria), **Mr Jan Allers** (Norway), **Capt. Chris Richards** (Singapore), **Mr Anton Moldan** (South Africa), **Dr Ali Saeed Al Ameri** (UAE), **Mr Kevin Miller** (UK), and **Dr Manik Sardesai** (USA). More info on Executive Committee and Council Members can be found on the ISCO website at [www.spillcontrol.org](http://www.spillcontrol.org)

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