



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

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info@spillcontrol.org <http://www.spillcontrol.org>

ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO, Observer Status at IOPC Funds and 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.

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International news

UPDATE - INTERNATIONAL FORUM ON GROUP V (NON-BUOYANT) OILS

In the interests of better international understanding we are adding the words “non-buoyant” to the title of the International Forum that will take place in Detroit, USA on 9-10 September, 2014.

The US Coast Guard defines Group V oil as “oil with a specific gravity equal to or greater than 1.0” and the term “Group V oils” is well understood and in common use in the USA. However, in other parts of the world the term “Group V Oils” is not well known and the respected independent consultant Alun Lewis has confirmed that there is in fact no international standard (such as ISO) for classifying oils by their density.

Non-buoyant oils or negative buoyancy oils are oils that sink in water and include types of residual fuel oils, bitumen, and orimulsion. Because these oils sink, response to spills presents very significant challenges and clean-up costs are many times greater than those for normal oils. There is also a pressing need to develop new and more cost-effective technologies for addressing the problem.

The rapidly increasing volumes of “Dilbit” (Diluted Bitumen) and oil sands crude oil being transported gives the matter of improving response preparedness a very high priority. This is the reason for convening the International Forum.

“Dilbit”, as such, is not a non-buoyant hydrocarbon – but will most certainly be addressed by the Forum. The problem is that when “Dilbit” is spilt at sea, in lakes or rivers, there is only a short time window during which conventional containment-recovery operations can be effective.

“Dilbit” is bitumen diluted with gas condensate or other light fractions to make it pumpable. As soon as it is spilt the diluent begins to evaporate and the material becomes progressively heavier. Ambient temperatures and other weather conditions will influence this process but experience has shown that the sinking will take place within a short period of time.

In event of a spill, oil sands crude (bitumen) carried in heated cargo tanks will sink immediately.

The purpose of the Forum is to focus attention and accelerate efforts to develop more effective capabilities for dealing with these spills. ISCO is currently compiling a mailing list for people who wish to register their interest in the Forum and would like to be kept informed on the event. To register your interest, please send an email to info@spillcontrol.org

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International news (continued)

OIL SPILL TECHNOLOGY RESEARCH CONTINUES FOR ARCTIC EXPLORATION

February 17- The Arctic Oil Spill Response Joint Industry Programme (JIP) last week released the findings of its research efforts into in-situ burning (ISB) in ice-affected waters and the fate of dispersed oil under ice.

Over the past several decades, a significant body of scientific research and testing has been carried out of techniques and technologies available for oil spill response in icy conditions, including the Arctic. The Arctic Oil Spill Response JIP was launched in January 2012 to further build on existing research, increase understanding of potential impacts of oil on the Arctic marine environment, and improve the technologies and methodologies for oil spill response.

The JIP includes six technical working groups focused on dispersants, environmental effects, trajectory modelling, remote sensing, mechanical recovery and in-situ burning. Each group is headed by a subject matter expert experienced in oil spill response research and development. The JIP also has a field research group to examine opportunities for the JIP to participate in field releases or research to gather scientific and engineering data needed to validate certain response technologies and strategies.

The recent JIP state of knowledge report found that ISB offers the greatest potential for oil spill removal in Arctic conditions.

"Technology exists today to conduct controlled ISB of oil spilled in a wide variety of ice conditions and most of the perceived risks associated with burning oil are able to be mitigated," according to the JIP findings.

Through its research, the JIP has found that a range of viable technologies are available for oil spill response in the presence of open water. In its recent findings, the JIP reported that dispersants can work in the Arctic and will, under certain conditions, be more effective in the presence of ice than in open water.

The JIP also concluded that the oil and gas industry has a role in helping countries with Arctic jurisdictions understand the benefits of having a regulatory process in place to approve the use of dispersants and ISB for oil spill response. *Rigzone* [Read more](#)

International news (continued)

MARITIME MAISIE CHEMICAL TANKER IN DANGER OF BREAKING UP

A screenshot of the Maritime Maisie following the December 29 collision and fire off Busan.



February 17 - Classification society Lloyd's Register has warned that the fire-scorched chemical tanker Maritime Maisie is in danger of breaking up more than 50 days after a collision with a car carrier off Busan, South Korea.

An update from Lloyd's Register said that the maximum bending moment for the ship currently exceeds estimated damage strength limits, adding that the vessel is in serious danger of breaking up if subjected to either worsening weather or a long ocean tow.

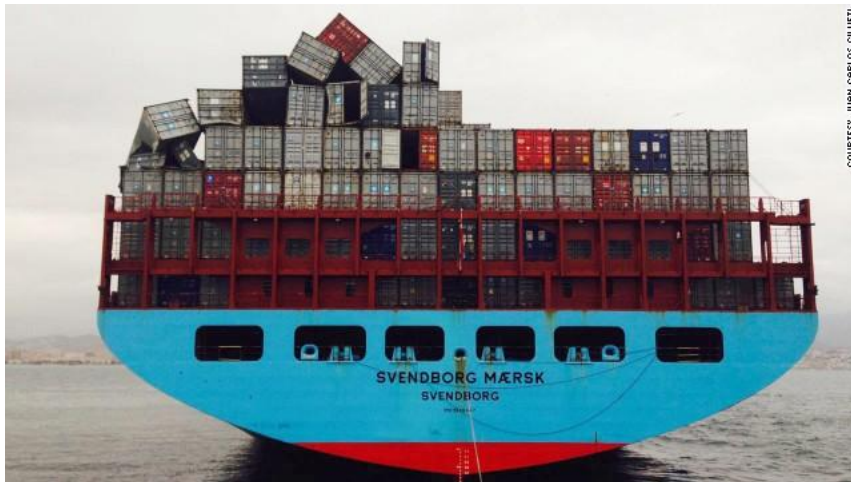
The Hong Kong-flagged Maritime Maisie was carrying an estimated 30,000 tons of the highly flammable chemical acrylonitrile when it was

International news (continued)

involved in a collision with the car carrier Gravity Highway near the port of Busan on December 29, causing the Maritime Maisie to catch fire.

The Maritime Maisie incident was noted as one of the catalysts for a recent call to action from shipowners, salvors and insurers for the implementation of international measures to provide a Place of Refuge for stricken vessels where casualty vessels have been delayed or denied in accessing a safe harbor. [See report in last week's ISCO Newsletter] [gCaptain](#) [Read more](#)

SHIP LOSES MORE THAN 500 CONTAINERS IN HEAVY SEAS



February 22 - On any day, between 5 million and 6 million containers are on the high seas, carrying everything from potato chips to refrigerators. But not all of them make it to their destination, as the crew of the Svendborg Maersk have just found out.

Their Danish-flagged ship was in the Bay of Biscay last week as hurricane-force winds battered the Atlantic coast of Europe. Amid waves of 30 feet and winds of 60 knots, the Svendborg began losing containers off northern France. After the ship arrived in the Spanish port of Malaga this week, Maersk discovered that about 520 containers were unaccounted for. Stacks of others had collapsed.

overboard in a single incident. [CNN News](#) [Read more](#) See also reports in [gCaptain](#) Also look at [U.K. Warns of Shipping Containers Lurking in English Channel](#)

Incident reports

SOUTH KOREA: TANKER INVOLVED IN OIL SPILL OFFLOADS OIL

February 17 - A tanker operated by Singapore's Ocean Tankers completed offloading 278,000 tons of crude oil in South Korea over 15 days because the vessel hit a pipeline as it was docking, which caused an oil spill.

The pipeline, which is managed by GS Caltex Corp, spilled oil at a quay off Yeosu, more than 300 km (185 miles) south of Seoul. The spill was estimated about 1,000 barrels from the pipeline was spilled. The oil tanker did not spill oil.

South Korea's Ministry of Oceans and Fisheries said on Monday, the Wu Yi San, a 318,445 dwt VLCC, discharged its cargo of about 140,000 tons on Thursday and Sunday. The tanker was chartered to Shell, and it will be repaired and the remaining cargo of crude was transferred to another ship. [The Maritime Executive](#) [Read more](#)

USA: NAVY OFFLOADS OIL FROM GROUNDED FISHING VESSEL



February 17 - The U.S. Navy, in partnership with other federal and local agencies, removed heavy oil, diesel fuel, and batteries from the grounded Japanese commercial fishing vessel Daiki Maru 7 in outer Apra Harbor on February 16.

Approximately 100 gallons of lubrication oil, 50 gallons of diesel fuel, 20 gallons of hydraulic oil and multiple marine batteries were safely removed significantly lowering the amount of major hazardous materials on board the grounded vessel. [The Maritime Executive](#) [Read more](#)

HONG KONG, CHINA : 17 RESCUED FROM GROUNDED SHIP

February 21 - Seventeen Vietnamese crewmen have been rescued after their cargo ship began listing badly off Hong Kong, China on Friday morning. The vessel, the Sunrise Orient, drifted briefly after the rescue before running aground at a rocky beach to the east of the Cheung Chau Island.

Hong Kong's Marine Department said oil had reportedly spilled from the grounded vessel. Officers from the department's pollution control unit were setting up floating barriers in an effort to control the oil before cleaning it up. [The Maritime Executive](#) [Read more](#)

NEWS REPORTS FROM USA

February 16 – Toxins from oil spills are putting fish into cardiac arrest, study finds.

Scientists from both Stanford University and the National Oceanic and Atmospheric Administration (NOAA) released a study on Friday showing that oil spills are causing death-by-cardiac arrest in tunas and other types of fish.

Attempting to draw attention to marine animals exposed to the tragic Deepwater Horizon oil spill in 2010, scientists from both Stanford University and the National Oceanic and Atmospheric Administration (NOAA) released a study on Friday showing that oil spills are causing death-by-cardiac arrest in tunas and other types of fish.

The study, published in Science Magazine, says chemicals in crude oil — such as polyaromatic hydrocarbons (PAHs) — can be harmful to the hearts of embryonic and developing fish. PAHs are created when products like coal, oil, gas, and garbage are burned but the burning process is not complete, according to the EPA. Even after an oil spill occurs and is cleaned up, PAHs can remain marine habitats for many years, according to the study. [Read more](#) [Thanks to SAC News and ISCO Member of Council for Canada, Dr Merv Fingas]

February 20 – Disaster Response

As Gov. Earl Ray Tomblin weighs a decision on whether to completely lift the state of emergency declared after the Jan. 9 chemical spill that so deeply disrupted the lives of West Virginians, other state leaders are looking ahead to the next disaster.

The governor has requested more toxicology studies on the effects of crude MCHM and PPH. He has requested the CDC analyze health charts of people admitted to emergency rooms to see if there are links to the chemicals that leaked into the water system.

Senate Majority Leader John Unger, D-Berkeley, also is on the right path. Unger says his hope is that the Legislature's response to the spill will be to determine how it happened, what went wrong in dealing with it and how to prevent or minimize a similar disaster. He has introduced a set of bills that he says amount to a step-by-step "playbook" to deal with any future crisis down the road — or down the river. *The Register Herald* [Read more](#)

February 21 - US in push to increase oil-spill liability cap

The US Bureau of Ocean Energy Management is proposing to nearly double the country's oil pollution liability cap from \$75 million to about \$134 million in keeping with recommendations made by panels investigating the 2010 Macondo disaster.

The BOEM's proposal would administratively increase the obligation for oil-spill removal and related costs to the maximum allowed by law under the Oil Pollution Act of 1990, established in the wake of the catastrophic 1989 Exxon Valdez tanker spill in Alaska.

"This proposed change is the first administrative increase to the liability cap since the Oil Pollution Act came into effect twenty-four years ago and is necessary to keep pace with the 78% increase in inflation since 1990," BOEM director Tommy Beaudreau said. *The Maritime Executive* [Read more](#)

February 21 - To Make Shipping Oil Safer, Railroads Agree to 8 Measures



Photo: An oil train rolling through Casselton, N.D., site of an explosive derailment in December. Jim Wilson/The New York Times

Responding to concerns about the safety of trains carrying oil around the country, federal regulators on Friday outlined steps to reduce the risk of rail shipments and bolster confidence in the fast-growing industry.

The Department of Transportation said the major railroads had agreed to eight voluntary measures one month after the secretary of transportation, Anthony R. Foxx, met with railroad executives in response to a series of derailments and explosions involving trains carrying crude oil.

The measures, which did not involve public comments, include lowering speed limits for oil trains in some cities, increasing the frequency of track

inspections, adding more brakes on trains and improving the training of emergency medical workers. The Department of Transportation said these steps would be taken quickly and that it was still considering other longer-term measures. *International New York Times* [Read more](#)

NEWS REPORTS FROM CANADA

February 18 - Transport Canada may lack resources, funding to keep up rail emergency plans: Report

It is not clear that Transport Canada has the resources to approve, inspect and maintain current emergency response plans, let alone enough funding for a recommended expansion of the program, says a government-commissioned rail safety report.

A working group made up of first responders, shippers of hazardous goods, oil and gas companies and municipal leaders says "there is an urgent need to identify and implement an effective response to the dangers presented by large spills of flammable liquids such as the highly volatile Bakken crude oil, ethanol and other products."

The study is one of three that were commissioned by Transport Minister Lisa Raitt in the wake of last summer's deadly derailment in Lac-Mégantic, Que., which claimed 47 lives.

The working group found that emergency response plans — required on some dangerous goods since the 1979 derailment of a train carrying deadly chlorine gas in Mississauga, Ont. — have not kept pace with the huge expansion of flammable goods transport, including ethanol and crude oil. *The Star.com* [Read more](#)

February 19 - Ottawa to double spending on flights to check for oil spills off Canadian coasts

The federal government has announced a funding boost for marine pollution surveillance as it attempts to shore up environmental protections in British Columbia and water down opposition to oil export plans.

Transport Minister Lisa Raitt said on Wednesday that funding for the aerial surveillance program will increase from \$5 million to roughly \$10 million a year over the next five years, allowing the country's three surveillance aircraft to increase the number of flights to spot oil spills off Canadian coasts.

The fleet currently spends 2,080 hours a year in the air, and Raitt said that time will increase to 3,750 with the new money.

"On the West Coast, what it means is that surveillance hours increase from 500 to 700 hours until 2017-2018, and at that time, it's going to increase to 1,200 hours," she said at a media event in Richmond. *The Province* [Read more](#)

February 22 - Enbridge Line 9: W5 uncovers unreported spills, alarming communities along 830-km pipe



An aging Enbridge pipeline that runs across Ontario has had at least 35 spills — far more than reported to federal regulators — but many municipalities along its route have never been informed of the incidents, a CTV W5 investigation reveals.

The National Energy Board, which regulates pipelines in Canada, has records of seven spills, while Enbridge told the investigative program there had been 13.

But W5's analysis of information from the energy board, the company and Ontario's Ministry of the Environment showed 35 spills associated with the 830-kilometre Line 9. (The Quebec government refused to provide W5 with any information).

The company is seeking federal approval to increase and reverse flow on the 38-year-old pipeline and use it to transport, in part, diluted bitumen from Alberta's oilsands.

Companies are required only to report hydrocarbon spills to the National Energy Board that are larger than 1,500 litres — equivalent to about 25 tanks of gas in an average car — or could have a "significant adverse effect" on the environment.

Enbridge spokesperson Graham White wrote in an email to the Star that the 13 leaks and ruptures noted in pipeline engineering assessments refer to mainline spills. The remainder were spills at facilities, he wrote. *TheStar.com* [Read more](#)

UK: NORTH SEA OFFSHORE AUTHORITIES FORUM (NSOAF) MULTI-NATIONAL AUDIT PROJECT - 'HUMAN AND ORGANISATIONAL FACTORS IN WELL CONTROL'

February 23 - The audit report provides a snapshot of well control standards across the North Sea, with clear identification of good and poor practices. NSOAF therefore commends this report to the North Sea offshore industry, and asks that operators, their drilling contractors and their trade organisations take time to consider the various findings and to seek ways to implement the various good practices wider.

NSOAF national regulators will be seeking opportunities to discuss the findings with their own national industry forums to ensure that the lessons learned about these crucial aspects of well control can be taken forward.

Read more at <http://www.hse.gov.uk/offshore/auditreport-nsoaf.htm?ebul=gas&cr=4/18-Feb-14> [Thanks to JOIFF]

INDIA: GUJARAT STATE ACTS TO FORESTALL TERRORIST OIL SPILLS

February 19 - The government of Gujarat, a state on India's northwest coast, has decided to create a special 690-man force to secure its key non-major ports against terrorist oil spills.

The move, announced February 12, is based on the Gujarat government's fear that terrorist groups could deliberately spill oil into state waters to create hazards for ships and ports.

Gujarat's ports are located on the Arabian Sea, and Pakistan borders the state to the north. *Environment News Service* [Read more](#)

AUSTRALIA: AIMS PARTNERS WITH SHELL AND INPEX TO HELP PROTECT AGAINST OIL SPILLS

February 17 - The Australian Institute of Marine Science (AIMS), Shell Development (Australia) and INPEX Operations Australia Pty Ltd (INPEX), subsidiary of INPEX CORPORATION, are delighted to announce a unique partnership to develop comprehensive environmental baselines to monitor the health of waters off North Western Australia.

This partnership also incorporates comprehensive plans for monitoring the marine environment in the unlikely event of loss of containment from either Shell's Prelude or INPEX's Ichthys Project wells. AIMS is the lead Operational and Scientific Monitoring Program (OSMP) contractor in a partnership bringing together AIMS, the University of Western Australia, Curtin University, ChemCentre and Monash University. *Press Release from Australian Government* [Read more](#)

AUSTRALIA: NATIONAL PLAN OIL SPILL RESPONSE TEAM LEADERS PUT THROUGH THEIR PACES

National Response Team leaders from across Australia have gathered in Devonport, Tasmania to undertake annual training as part of the Australian Maritime Safety Authority's preparedness for oil spill response under the National Plan for Maritime Environmental Emergencies.

AMSA Chief Executive Officer Graham Peachey said the training was vital in maintaining the skills of the NRT leaders in accordance with the National Plan to Combat Pollution of the Sea by Oil and Other Noxious and Hazardous Substances. *AMSA* [Read more](#)

GREECE: YET ANOTHER INTERNATIONAL HONOR FOR HELMEPA

February 18 - The Hellenic Marine Environment Protection Association-HELMEPA is delighted to announce that the Association has been nominated to receive the prestigious Thor Heyerdahl International Maritime Environment Award 2014. The prize recognizes candidates from within the shipping industry that have made an outstanding contribution towards the environment.

The Award has been named for the late Norwegian adventurer and explorer, Thor Heyerdahl (1914-2002), who made first-hand observations of marine pollution during various expeditions. His reports to the United Nations about the state of the marine environment raised the awareness of the issue of pollution throughout the International maritime community and clearly focused a spotlight onto it. Indeed among his work, is included an Academy-Award-nominated documentary, Kon-Tiki, that he compiled telling of his journey across the Pacific aboard a papyrus raft. *HELMEPA* [Read more](#)

JAPAN: PAJ OIL SPILL SYMPOSIUM 2014 - ORGANIZATIONAL AND TECHNICAL DEVELOPMENTS FOLLOWING RECENT OIL SPILL INCIDENTS

February 17 - The annual PAJ Symposium took place over 6-7 February 2014. *PAJ Website* [Read more](#)

GUIDELINES FOR PREPARING YOUR COMPANY PROFILE

Corporate Members of ISCO are now able to have a one page company profile published in the ISCO Newsletter. It's a great way to introduce your company to the international spill control community.

The rules are very simple – One page – A readable informative interesting article – Factual, no sales hype or exaggerated claims – Logo, photos, etc. can be included – Just send text as a word document and attach photos, logo, etc. as jpg files.

The editor will take care of the lay-out design of the page.

The opportunity to feature your company profile in the ISCO Newsletter is only available to Corporate Members of the organization and each member is permitted to submit one profile per calendar year.

Profiles should be sent to the editor at info@spillcontrol.org and will be published as soon as possible after receipt. Only one Corporate Profile will be published in any issue of the ISCO Newsletter.

A contribution of £150 to ISCO funds is payable for insertion of a Company Profile.

REQUEST TO BE PUT ON MAILING LIST FOR PRESS RELEASES AND OTHER NEWS

The time available for trawling through websites to find news that is of interest to the International Spill Control Community is limited. The Editor would very much appreciate receiving news for publication in the ISCO Newsletter. info@spillcontrol.org

Obituary

REMEMBERING JIM O'BRIEN: ICON IN THE OIL SPILL RESPONSE INDUSTRY



Witt O'Brien's mourns the loss of one of its founders as the oil spill response industry remembers an icon in the field of emergency response planning and management. As Senior Vice President of Response Services at Witt O'Brien's, Jim O'Brien passed away on Friday, February 14 after a courageous battle with cancer.

Following a recognized career as an officer in the United States Coast Guard, where he responded to his first oil spill in 1969, Jim built his own company that over the decades would be recognized as the leading emergency planning, management and response company. His work with clients in the oil and gas, marine transportation and other industries took him and his experienced colleagues around the world responding to some of the most difficult and challenging spills in history. Jim's experience, reputation and dedication has positively shaped the response industry and the professionals who worked alongside him.

Jim O'Brien was the founder of O'Brien Oil Pollution Service in Slidell, Louisiana in 1983 where he brought spill training, management and response services to a variety of clients and locations around the world. His work included developing advanced spill cleanup equipment and techniques that are in use today.

Whether Jim's experience and wisdom was employed as an advisor to clients who needed to monitor spills to keep the public informed, or if he was directly on-site as the incident commander, Jim and his company were engaged in responding at many of the most recognized incidents in the world, such as the Exxon Valdez oil spill, the Gulf War related spills and the Deepwater Horizon oil spill – Macondo blowout.

As Jim and his company grew and gained in reputation for marine and waterway spill management and response, the company expanded its services and name to reflect the full on-shore and off-shore incident planning, training, management, and response capabilities to man-made and natural disasters.

Today, Jim O'Brien's legacy of dedicated service and excellence in the emergency response industry is carried forward by the countless colleagues and hundreds of employees who were fortunate to have worked along his side.

ISCO President, David Usher, writes – "I had the pleasure and honour of first working with Jim in the 1970s when he was in charge of the USCG's Pacific Strike Team and I was the President of the Spill Control Association of America. We were asked to mentor the first set of oil spill response training classes in Corpus Christie, TX, as it was felt that there was a good opportunity to include the views of both government agencies and the oil spill response contractors. Jim's contribution, along with others, to opening up positive dialogue between government and response industry made a far-reaching change that created an enduring practice of constructive co-operation. The good work performed there when spill response in the US was in its infancy has guided and influenced us up to today, and we have pioneers like Jim to thank for that."

CRUDE OIL INTERRUPTS HEARTBEAT



Picture: A study of the impact of crude oil from the 2010 Deepwater Horizon spill on tuna discovered that it interrupts the ability of fish heart cells to beat effectively. Image: Gilbert Van Ryckevorsel

While studying the impact of the 2010 Deepwater Horizon oil spill on tuna, a research team led by Barbara Block, a Stanford professor of marine sciences, discovered that crude oil interrupts a cellular pathway that allows fish heart cells to beat effectively. The components of the pathway are present in the hearts of many animals, including humans.

Scientists from Stanford Univ. and the National Oceanic and Atmospheric Administration (NOAA) have discovered that crude oil interferes with fish heart cells. The toxic consequence is a slowed heart rate, reduced cardiac contractility and irregular heartbeats that can lead to cardiac arrest and sudden cardiac death.

The research, published in the Feb. 14 issue of *Science*, is part of the ongoing Natural Resource Damage Assessment of the April 2010 Deepwater Horizon oil spill.

While crude oil is known to be cardiotoxic to developing fish, the physiological mechanisms underlying its harmful effects were unclear. Stanford and NOAA scientists studying the impact of crude oil from the Deepwater Horizon spill on tuna discovered that it interrupts the ability of fish heart cells to beat effectively.

Crude oil is a complex mixture of chemicals, some of which are known to be toxic to marine animals. Past research has focused in particular on "polycyclic aromatic hydrocarbons" (PAHs), which can also be found in coal tar, creosote, air pollution and stormwater runoff from land. In the aftermath of an oil spill, PAHs can persist for many years in marine habitats and cause a variety of adverse environmental effects.

The researchers report that oil interferes with cardiac cell excitability, contraction and relaxation — vital processes for normal beat-to-beat contraction and pacing of the heart.

Their tests revealed that very low concentrations of crude oil disrupt the specialized ion channel pores — where molecules flow in and out of the heart cells — that control heart rate and contraction in the cardiac muscle cell.

This cyclical signaling pathway in cells throughout the heart is what propels blood out of the pump on every beat. The protein components of the signaling pathway are highly conserved in the hearts of most animals, including humans.

The researchers found that oil blocks the potassium channels distributed in heart cell membranes, increasing the time to restart the heart on every beat. This prolongs the normal cardiac action potential, and ultimately slows the heartbeat. The potassium ion channel impacted in the tuna is responsible for restarting the heart muscle cell contraction cycle after every beat, and is highly conserved throughout vertebrates, raising the possibility that animals as diverse as tuna, turtles and dolphins might be affected similarly by crude oil exposure. Oil also resulted in arrhythmias in some ventricular cells.

"The ability of a heart cell to beat," explains Block, "depends on its capacity to move essential ions like potassium and calcium into and out of the cells quickly. This dynamic process, which is common to all vertebrates, is called 'excitation-contraction coupling.' We have discovered that crude oil interferes with this vital signaling process essential for our heart cells to function properly."

"We've known from NOAA research over the past two decades that crude oil is toxic to the developing hearts of fish embryos and larvae, but haven't understood precisely why," says coauthor Nat Scholz, leader of the Ecotoxicology Program at NOAA's Northwest Fisheries Science Center in Seattle. "These new findings more clearly define petroleum-derived chemical threats to fish and other species in coastal and ocean habitats, with implications that extend beyond oil spills to other sources of pollution such as land-based urban stormwater runoff."

The new study also calls attention to a previously underappreciated risk to wildlife and humans, particularly from exposure to cardioactive PAHs that also exist at relatively enriched levels in air pollution.

"When we see these kinds of acute effects at the cardiac cell level," Block says, "it is not surprising that chronic exposure to oil from spills such as the Deepwater Horizon can lead to long-term problems in fish hearts, as our NOAA colleagues have observed in studies of larval fish development."

"The protein ion channels we observe in the tuna heart cells are similar to what we would find in any vertebrate heart and provide evidence as to how petroleum products may be negatively impacting cardiac function in a wide variety of animals. This raises the possibility that exposure to environmental PAHs in many animals — including humans — could lead to cardiac arrhythmias and bradycardia, or slowing of the heart."

Read the complete text of this article in the current issue of [Laboratory Equipment](#)



In this issue of the ISCO Newsletter we are printing No. 164 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 164: THE NEW RESPONSE PLANS AND THEIR USES

Article 163 recalled, with respect to the foregoing articles, that knowledge is essential to progress; that the knowledge acquired by the WSL R&D programme was in harmony with the environment (articles 1-15); that this knowledge ought to have been the basis of the contingency plan for which it had been ostensibly acquired by government funding; but that its full application was defeated by beliefs of political correctness and was subsequently lost in staff changes and departmental reorganisations, while the said political correctness prevented any other country from acquiring such knowledge for itself.

Accordingly, this article recalls that this lost knowledge has been retrieved (articles 16-102) and will henceforth be maintained as the basis of this first-ever knowledge-only contingency plan; that the deficiencies of all current contingency plans (articles 103-106) are caused by anti-knowledge beliefs as is amply exemplified by the response to the *Sea Empress Incident* (articles 107-115) in which already available knowledge was thwarted by belief-only regulation (articles 116-130); that these deficiencies can be corrected only by knowledge-accepting/belief-rejecting contingency and incident-specific planning (articles 131- 140); that the benefits to be derived from this planning approach have never yet been fully recognised (articles 141- 147); that the need to recognise them still has to be emphasised (147-154); and that initiatives towards this recognition have already been taken (articles 155 -162).

Thus, this and subsequent articles describe how this new knowledge-only contingency plan will give rise to incident-specific responses which will predict quantitatively the fate and effects of any release and the comparative appropriateness of response options thereto; and will enable quantified results to be reported in the preparation of compensation claims readily assessable by the IOPCF and P&I secretariats.

Again, this new contingency plan will be a repository of knowledge continually enhanced with knowledge acquired at individual incidents by reality-validating observation, thus to be shared through the auspices of IMO, and thus to be secured against staff changes in IMO member states.

However, for the foregoing to be possible, this new contingency plan recognises that its intention is to return the environment to its pre-incident state as quickly and as cost-effectively as possible in respect of preventing or removing the physical coating which negatively affects commercial activities; that prevention of the physical coating of shorelines, man-made structures and sedentary shellfish is best achieved by assisting natural dispersion, dilution and biodegradation of floating slicks by dispersant-use and by mechanical recovery at sea and within inshore waters when viscosity precludes dispersant-use; and that removal from shorelines is best achieved *mutatis mutandis* by combination of these viscosity-dependent means.

In support of the foregoing, the new plan recognises that dispersant-use at sea, in inshore waters and on shorelines, disperses no more oil into seawater than would have dispersed into it naturally had the release been far enough from shore; and that no species-extinction/ecological-disaster has yet arisen from ship release or well blow-out however large or prolonged (c.f. articles 31-46).

Thus, having recognised the effect of oil releases to be their physical coating of commercial resources, the new knowledge-only contingency plan rejects the belief in species-extinction/ecological-disaster which hitherto has prevented access to safe havens for cargo/bunker transfer; prevented dispersant-use onshore and within arbitrary distances/water-depths from shore; and prevented *in situ* decanting of co-collected and demulsified water in the downstream processing of recovered emulsions.

Again, the new knowledge-only contingency plan recognises that this belief-rejection would avoid the costs arising from prevention of safe haven entry for cargo/bunker transfer, the costs associated with shoreline clearance by failure to permit dispersant-use pre- and post-stranding, and the costs arising from prevention of *in situ* water decanting and insistence on all such downstream processing being conducted at approved sites such as oil refineries, none of which have capacities beyond their own internal requirements. Thus, given that the *Sea Empress* released only 3000-5000 tonnes of oil on initial impact and 67,000 tonnes thereafter by failure to discharge it as the remaining 58,000 tonnes were later discharged (articles 107-115), we see that the negotiation of compensation for response costs might well have opened with an offer of 3/69^{ths} and closed at 5/67^{ths} of the actual claim

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.

Publications

FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	January 2014
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	February 5 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	February 1 issue
USA EPA Tech News & Trends	Contaminated site clean-up information	May 2013 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	Jan 1-15 2014 issue
Intertanko Weekly News	International news for the oil tanker community	No 8 2014
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	February 2014 issue
IMO Publishing News	New and forthcoming IMO publications	January 2014
IMO News Magazine	News from the International Maritime Organization	No 4, 2013
Pollution Online Newsletter	News for prevention & control professionals	February 19 issue
EMSA Newsletter	News from the European Maritime Safety Agency	February 2014 issue
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	January 2014 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	February 2014 issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	January 2014 issue
IPIECA eNews	Int'l Petroleum Industry Environmental Conservation Assoc'n	February 2014 issue
WMU Newsletter	From the World Maritime University in Malmo, Sweden	February 2014 issue

Events

IMO MARINE ENVIRONMENT PROTECTION COMMITTEE (MEPC) MEETING

This meeting will take place over 31/03/2014 - 04/04/2014 at the IMO HQ building in London

REGIONAL MEETING ON OIL SPILL PREPAREDNESS AND RESPONSE - COLOMBO, SRI LANKA, 26/02/2014

The First Regional Meeting of the National Authorities responsible for Oil Spill Preparedness and Response will take place in Colombo, Sri Lanka. The meeting has been jointly organised by the South Asia Co-operative Environment Programme (SACEP) and IMO.

LIVE VIDEO FROM 40-YEAR HELCOM JUBILEE SESSION NEXT MONTH

HELCOM invites all interested to join [Jubilee festivities](#) by watching live video stream on HELCOM website next month, when the main event of the 40th anniversary year of the Helsinki Convention culminates the proud celebrations on the four decades of extraordinary marine protection work.

On 5 March 2014, at 10–12:30 o'clock, high level speakers from the host country Finland, United Nations Environment Programme ([UNEP](#)) and HELCOM will start the session in front of the invited guests, followed by expert presentations under the topic 'Baltic Sea: ecosystem and prosperity'. Thirdly, a future-orientated dialogue panel gets all the major macro-regional chiefs-of-office and the European Commission representative to the stage.

USA: SCAA 2014 ANNUAL MEETING AND CAPITOL HILL VISIT DAY

When you attend the SCAA Annual Meeting and Capitol Hill Visit day — March 19-21 at the Hilton Crystal City Hotel in Arlington, Virginia — you are not only gathering with the leaders in the spill control industry but you are also exposing yourself to cutting edge business information specifically targeting spill control professionals. Nowhere else will you learn from and exchange information with the very best that the spill control industry has to offer than at the SCAA Annual Meeting and Capitol Hill visit day.

Designed with your business needs in mind, the SCAA Annual Meeting will provide you with winning ideas, revenue producing tips and tactics, plus a powerful networking opportunity with the industry's key players.

Click here for the most recent Annual Meeting program: [CURRENT PROGRAM](#)

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