



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
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News

REPORT: IRAN MULLS PLANS FOR DELIBERATE GULF OIL SPILL

October 14 - Iran's Revolutionary Guards have developed plans to damage an oil tanker in the [Persian Gulf](#) to create an [environmental disaster](#), German magazine Spiegel reported on Sunday. Citing Western intelligence sources, the weekly said the top-secret plan, codenamed "Dirty Water", is aimed at blocking the oil-rich Gulf to shipping and forcing Western countries to become involved in a huge cleanup operation.

The plan, developed by the head of the Guards, General [Mohammad Ali Jafari](#), and Admiral [Ali Fadavi](#), head of the force's navy division, would also "punish" Arab states around the Gulf for their support of the West and [Israel](#), the report said. [YNetNews.com](#) [Read more](#)

Fears grow Iran will block Hormuz Strait

October 18 - Iran has denied a report it plans to block the strategic Strait of Hormuz with a giant oil spill.

But as Iran's oil exports steadily fall because of U.S.-led sanctions, there is concern that Tehran, its economy crippled, may seek to block the gateway to the Persian Gulf one way or another. [UPI.com](#) [Read more](#)

Iran denies oil spill plan to block vital Strait of Hormuz

October 17 - [Iran](#) has denied accusations that its revolutionary armed forces (IRGC) are planning an environmental disaster in the Strait of Hormuz and use it to have international sanctions against it lifted, local media reported on Wednesday

"These words show that Western nations have been brought low and have resorted to making any allegation against us," Mohammed Reza Naqdi, head of Iran's Basij militia, was quoted by local media website Raad News.

Naqdi's comments also appeared on the official website of the Basij, Iran's civil defence militia which takes its orders from the Iranian Revolutionary Guard Corps.

Around 40 percent of the world's seaborne oil exports pass out of the Gulf via the Strait of Hormuz. Iran has previously threatened to disrupt or close the waterway if its nuclear sites are subjected to military attack by Israel or the United States. [Reuters](#) [Read more](#)

ACTION NEEDED ON PLACES OF REFUGE AND CASUALTY INVESTIGATIONS



IMO rules should be subject to impact and sustainability assessment says ICS

There are some clearly identifiable steps which need to be taken to enhance shipping's already very impressive record of maritime safety, according to International Chamber of Shipping (ICS) Secretary General, Peter Hinchliffe.

Speaking at the IMO Alternative World Maritime Day Event in Bahrain this week, Mr Hinchliffe stressed the need for mandatory provisions to provide a place of refuge for ships in need of assistance, plus timely and obligatory reporting of casualty investigations by Flag States to the International Maritime Organization (IMO). This would replicate the handling of aviation incidents.

Environmental protection and crew and passenger safety can be addressed better by raising the current level of guidance on providing a place of refuge to a new level of obligation, he said. *The Maritime Executive* [Read more](#)

SEVESO III PUTS MORE PRESSURE ON EUROPEAN HIGH RISK INDUSTRIES

Extracts from article by Jeanne van Burren and Russel Swart that appears in the latest issue of the JOIFF Journal "The Catalyst"

Recent changes in the SEVESO Directive, particularly with regard to incidents at SEVESO sites and ageing installations, will put more pressure on the operators of and authorities responsible for high risk industrial sites in Europe. This article discusses the potential implications this may have for high risk industries in Europe.

High Risk industries in all member states of the European Union have to meet with the requirements of the SEVESO Directive. SEVESO I was set up after the disaster in 1976 in village called Seveso near Milan. SEVESO II was written after several other incidents in high risk industries and consequences to the environment and treats to the supply of drinking water after the fire a chemical warehouse of Sandoz in the city of Basel in Switzerland in 1986.

The European Commission and Parliament adopted a new Seveso III Directive on 26 June 2012 and it has now been published in the Official Journal of the European Union on 24 July.

The main areas of change are:

- Alignment of the list of applicable dangerous substances with the European Union (EU) regulation on classification, labelling and packaging of substances and mixtures (CLP);
- strengthening the provision of information to and consultation with the public, and
- more attention is given to the actual risks of products under process conditions.

The Catalyst [Read more](#)

OIL POLLUTION ACCORD AN EXPANSION OF ARCTIC COUNCIL POWERS

If you are interested in oil pollution control in the Arctic, this article by Mia Bennett is recommended reading

October 16 - At the last Arctic Council meeting in Nuuk, Greenland in May 2011, the eight member states decided to form a task force to write an agreement on Arctic marine oil pollution preparedness and response. This past week in Reykjavik, Iceland, delegates from the eight Arctic Council member states met again for a fifth round of talks about the legal instrument.

More progress was made in drafting the legal document, but more still has to be done with regard to technical specifications. The delegates hope to have finished the agreement by May 2013, when the next Arctic Council will convene.

The Arctic Council is increasing its scope of authority by creating new, legally binding instruments that mandate how countries will respond to emergencies in the Arctic, whether it is a sinking ship or an oil spill. Whereas in the 1990s and early 2000s, the Arctic Council focused primarily on environmental issues, it has now increased its mandate to deal with preparedness and response capabilities.

On the disaster-mitigation side, all eight Arctic states are working together to figure out how to pool their resources and respond to oil spills. Hence, in this regard, the Arctic really is becoming a zone of cooperation. In an ironic way, the very race for resources is driving countries and companies to work together more closely. *Alaska Dispatch* [Read the complete article](#)

USA: REPORTS ON OIL SHEEN AT SITE OF THE DWH SPILL

Press Release from DWH Joint Information Centre

October 18 - Remote operated vehicles deployed from the offshore construction vessel Skandi Neptune collected oil samples on Wednesday from the underwater site of the Deepwater Horizon incident to determine the source of a surface sheen discovered last month.

The samples were taken after the ROV video showed apparent oil globules leaking from the containment dome at approximately 15 globules per minute, which is estimated to be less than 100 gallons per day. In 2010, the 40 - foot - tall containment dome was used as part of an attempt to capture oil and allow it to flow through a pipe to a barge on the surface. This technique was not successful and the equipment was moved away from the well head and riser pipe, and set in its current position approximately 500 meters from the original Macondo well head. It is entirely separate from the well head and any riser piping. Out of an abundance of caution, the ROV also inspected the original Macondo well area including the wreckage, debris, relief wells, and the riser on the sea floor and observed no oil leakage from that area.

The two collected oil samples will be used for lab analysis. One sample will be shared by BP and Transocean, and the second sample will be used by the Coast Guard. The lab analysis will help determine if the containment dome is the likely source of the recent sheening.

"The Coast Guard is further evaluating what is believed to be seepage from the containment dome to determine how best to respond," said Capt. Duke Walker, Federal On - Scene Coordinator for the Deepwater Horizon response.

The ROV operations were observed by the Coast Guard, Bureau of Ocean Energy Management, Bureau of Safety and Environmental Enforcement, the Department of Interior's Trustee, BP, Transocean and state on - scene coordinators from Louisiana, Mississippi and Florida.

The Skandi Neptune departed for the vicinity of the Deepwater Horizon incident Sunday to identify the origin of an oil sheen first reported to the National Response Center Sept. 16. The Coast Guard issued a Notice of Federal Interest to BP and Transocean after the reported sheen was correlated to the oil that originated from BP's Macondo well.

The video of ROV inspections will be available in full at www.RestoreTheGulf.gov

Coast Guard: Abandoned Containment Dome ID'd As Source of Sheen



Remember this? On May 5, 2010, the containment dome, or cofferdam, [left Port Fourchon on Chouest's Joe Griffin](#) for the Deepwater Horizon site. Image (c) BP PLC

October 18 - A thin slick of oil in the Gulf of Mexico appears to be coming from a containment dome that was abandoned on the sea floor during efforts to stop the 2010 Deepwater Horizon oil spill, not from the plugged well, according to the U.S. Coast Guard and BP PLC.

Remote-controlled submarines that were sent down to search for the source of the light slick earlier this week found a small amount of oil leaking from two places on the dome, a four-story- tall steel box that in May 2010 was lowered onto the oil leaking from BP's well some 5,000 feet below the ocean surface.

The device was meant to collect the oil and allow it to flow to a ship, but got clogged with ice crystals. It was left on the sea floor about 500 yards from the well. The flow was finally stopped on July 15, 2010, by a series of valves that were attached to the top of the well and the well was permanently sealed in September. [gCaptain](#) [Read more](#)

SPAIN: PRESTIGE OIL DISASTER TRIAL STARTS IN SPAIN

October 15 - Authorities have set up a court in an exhibition centre for the huge trial in the northern city of A Coruna, which environmentalists say does not go far enough in seeking justice for Spain's worst oil slick and preventing such a disaster occurring again.

"The total demand for damages is more than 2.2 billion euros," a court official said, adding that there are 55 separate cases being brought by some 1,500 plaintiffs. The total cost of the environmental damage wrought by the oil slick has been calculated at more than four billion euros, most of it for the Spanish state. [Expatica.com](#) [Read more](#)

USA: BP PRODUCTS AGREES TO PAY \$210,000 FOR OIL SPILL RESPONSE VIOLATION

September 27 - BP PLC has agreed to pay \$210,000 to settle alleged violations of oil spill response violations at a Maryland facility, the Department of Justice and the Environmental Protection Agency said.

The EPA alleged that BP Products North America violated federal regulations requiring oil storage facilities to conduct drills and exercises to respond to oil spills at its Curtis Bay Terminal in Maryland.

Under the settlement, the oil company will implement an enhanced oil spill response program at its 33 nonrefinery petroleum products terminals nationwide. The company also agreed to an independence compliance audit of 12 of its marine and high-risk petroleum product terminals to evaluate if the facilities have the resources to respond to major spills. *Fox News* [Read more](#)

USA: ABOUT 565,000 POUNDS OF OILED MATERIAL FROM DEEPWATER HORIZON STIRRED UP BY HURRICANE ISAAC

October 18 - About 565,000 pounds of oiled material from the [Deepwater Horizon spill](#) was brought to the surface by [Hurricane Isaac](#), more than had been collected in eight months before the storm, the state's coastal protection agency said Wednesday. The post-storm figures were announced as members of the state's [Coastal Protection and Restoration Authority](#) sharply criticized continuing clean-up efforts by [BP](#) and the U.S. Coast Guard and called for more resources to deal with oil that is still below the surface of the gulf, an amount believed to be equal to about 1 million barrels. *The Times Picayune* [Read more](#)

CANADA: OIL SPILL RESPONSE QUESTIONED AT NORTHERN GATEWAY HEARINGS



Douglas Channel, the proposed termination point for an oil pipeline in the Enbridge Northern Gateway Project, is pictured in an aerial view in Kitimat, B.C. (Darryl Dyck/Canadian Press)

October 16 - The B.C. government is pressing Enbridge on how the company plans to respond to an oil spill on the proposed Northern Gateway pipeline.

The province [resumed its questioning](#) at the Joint Review Panel hearings in Prince George Tuesday afternoon.

Among the government's concerns is how accessible the pipeline would be in the event of a spill.

"Northern Gateway has, in many cases, not yet determined access areas or places in which it could access where a spill could travel," Christopher Jones, a lawyer representing the province, said Tuesday. *CBC News* [Read more](#)

USA: ABS APPROVES SHELL'S OIL SPILL BARGE FOR ARCTIC DRILLING

October 12 - Even though Royal Dutch Shell had to abandon its Arctic drilling plans this year, an oil-spill barge that the company needed to support those activities has received regulatory approval.

The Arctic Challenger got its approval from the American Bureau of Shipping, as well as winning its certification for seaworthiness from the U.S. Coast Guard. Shell is now preparing to launch full operations next year, despite opposition from environmental groups.

Without the Arctic Challenger oil-containment vessel on site, Shell has only been allowed to drill to shallow depths - into areas that stop before oil-bearing zones. With one exploratory well in the Chukchi Sea, and another in the Beaufort Sea, the program has still fell short on its original plans for the year - which included at least three other completed wells. Company officials still feel that this is significant progress, however. *The Maritime Executive* [Read more](#)

UK: MARITIME AND COASTGUARD AGENCY UPDATES MARINE POLLUTION NATIONAL CONTINGENCY PLAN

October 18 - The Maritime and Coastguard Agency (MCA) is seeking views on its new [draft NCP](#) (162-page / 988KB PDF), which sets out arrangements to ensure a timely, measured and effective response to marine pollution incidents or to situations where there is a risk of significant pollution from ships and offshore installations. The previous NCP was published in 2006.

News (continued)

The NCP relates to all incidents within UK Pollution Control Zone (UKPCZ) and is one of the measures designed to meet the UK's international and domestic obligations. The plan provides a practical framework to inform those dealing with marine pollution incidents. It sets out information requirements, advice on dealing with the media, information on waste management, enforcement and prosecution, monitoring and international co-operation arrangements. *Out-Law.com* [Read more](#)

USA: 2013 NATIONAL PREPAREDNESS REPORT

The Environmental Protection Agency (EPA), in support of Presidential Policy Directive-8, is submitting preparedness data sources to the Federal Emergency Management Agency (FEMA) for the development of the 2013 National Preparedness Report (NPR). The report is submitted to the President annually and it summarizes how prepared we are as a nation. The next NPR is due to the President on March 30, 2013.

FEMA is conducting outreach early in the development cycle of the NPR to ensure preparedness data sources are identified and included in the 2013 report. The first step in this process is to solicit data sources from federal agencies, state, local and tribal governments on preparedness activities and to follow up on key findings from the 2012 report (e.g., planning, threats and hazard identification, etc...) Additionally, key indicators from the National Preparedness System, such as the Threat, Hazard Identification and Risk Assessment (THIRA), will be included in the report.

The 2012 National Preparedness Report can be found on the FEMA website: <https://www.fema.gov/library/viewRecord.do?id=5914> EPA is interesting in ensuring that LEPCs, TERCs and SERCs are aware of this effort and have the opportunity to contribute preparedness data sources for inclusion in the report. For those interested in providing data sources for the 2013 NPR, please contact the FEMA National Preparedness Assessment Division: npad@fema.dhs.gov [Thanks to Margaret Gerardin, US EPA]

USA: NOAA CENTRALIZES DISASTER PLANNING, RESPONSE EXPERTISE IN GULF REGION AT NEW FACILITY

U.S. Senator Richard B. Shelby joins NOAA Fisheries Assistant Administrator Eric Schwaab (left) and NOAA National Ocean Service Assistant Administrator David Kennedy (right) in cutting the ribbon formally opening the new \$11 million LEED silver standard Gulf of Mexico Disaster Response Center.

October 15 - NOAA leaders joined members of Congress, as well as federal, state, and local emergency responders today at the grand opening of the [Gulf of Mexico Disaster Response Center](#) in Mobile, Ala.

The new 15,200-square foot facility will serve as a central coordination point for federal, state and local emergency managers, and partners who rely on NOAA's scientific support to make decisions to protect and restore the Gulf Coast's communities, economies, and valuable natural resources. *NOAA* [Read more](#)



NIGERIA: ILLEGAL REFINERIES - FEAR RULES BAYELSA COMMUNITY OVER JTF INVASION



Illegal refineries destroyed in Nigeria

October 2 - "We thought we were under military siege and some of our people fled their homes when they saw the armada of boats and armed soldiers heading towards our community," said John Oweikorogha (not real name) an indigene of the oil-rich Igbomatoru community in the Southern Ijaw Local Government Area of Bayelsa State.

This was the stark reality in the troubled enclave when heavily armed operatives of the Joint Task Force in the Niger Delta codenamed Operation Pulo Shield were deployed to the area.

The country, according to an oil industry source, is losing about N15.8billion daily to oil thieves operating in the mangrove creeks of the Niger Delta who are not only bleeding the economy but also compounding the woes of the already fragile environment. *Vanguard* [Read more](#)

USA & CANADA: GREAT LAKES AT RISK OF MAJOR OIL SPILL, REPORT WARNS

October 18 - This story was updated at 7 p.m. EDT to include comments from Enbridge.

Two aging oil and natural gas pipelines running under the sparkling waters of the Straits of Mackinac in northern Michigan are time bombs that could devastate the upper Great Lakes if they rupture, according to a report issued today by the [National Wildlife Federation](#).

The pipelines are owned by [Enbridge Inc.](#) and carry an estimated 20 million gallons of oil and natural gas every day under the pristine water from Superior, Wisconsin to Sarnia, Ontario. The company [announced in May](#) that it plans to increase the volume of oil it pumps through the lines, a proposal the federation says could strain the 59-year-old pipes to the breaking point.

The federation worries that Enbridge, the company responsible for the largest inland oil spill in U.S. history that fouled the Kalamazoo River two years ago, has not properly maintained the pipelines and is not prepared to respond quickly in case of a leak.

Enbridge spokesman Larry Springer said the report is rife with misconceptions about the company's emergency response plans and safety measures. He said the pipelines, known as Line 5, meet all federal standards and are inspected every couple of years using internal sensors and remote controlled submersibles equipped with cameras. Both types of inspections have been performed this year, Springer said. *Inside Climate News* [Read more](#)

CANADA: PLAINS MIDSTREAM SAYS CLEANUP OF CRUDE OIL LEAK ALONG RED DEER RIVER COMPLETE

October 12 - The company that owns a pipeline that leaked nearly 3,000 barrels of crude oil into a central Alberta river, fouling shorelines, says its cleanup is complete.

Plains Midstream Canada said in a news release Friday that it will return to the site of leak in the Red Deer River near Sundre next spring or early summer to inspect the sites again.

The Calgary-based company says Alberta Environment and Sustainable Resource Development has approved its restoration efforts and closure of the sites. *Calgary Herald* [Read more](#)

USA: DEEPWATER PERMITS IN U.S. GULF EXCEED PRE-BP SPILL LEVEL

October 17 - The Obama administration has issued this year the most deep-water oil-drilling permits for the Gulf of Mexico since 2007 as high crude prices revive exploration slowed by the 2010 [BP Plc \(BP\)](#) spill.

The pace of issuing permits under President [Barack Obama](#) drew criticism from his Republican rival [Mitt Romney](#) last night and from energy lobbyists during the campaign who say the policies slowed oil and gas production on federal land. Obama had suspended drilling after BP's Macondo well exploded 40 miles off [Louisiana](#)'s coast, killing 11 workers and sending an estimated 4.9 million barrels of oil into the Gulf. *Bayou Buzz.com* [Read more](#)

CANADA: HUNDREDS OF LITRES OF TOXIC OIL SPILLED IN WEST VANCOUVER WATERWAY



Oil containment booms and caution tape line a contaminated creek near Ambleside Park Monday.

October 15 - Hundreds of litres of industrial oil containing toxic PCBs spilled into a West Vancouver waterway Sunday, polluting a salmon creek and duck pond, after a BC Hydro utility pole was toppled in the wind.

The import, manufacture and sale of PCBs has been illegal in Canada since 1977 and the release of environmental PCBs has been illegal since 1985. However, federal law allows PCB

equipment owners, such as electrical power companies, to continue using the equipment until the end of its service life. *Northshore Outlook.com* [Read more](#)

News (continued)

UK: 'OIL SPILL' WILL BE AN EMERGENCY EXERCISE

October 20 - The emergency services will be dealing with a simulated oil spill next week to prepare them for a potential disaster. Residents in Torpoint are being advised of the exercise, which will begin from the Thanckes oil fuel depot on Wednesday.

The scenario involves a simulated fuel release at the depot which refuels Royal Navy, Royal Fleet Auxiliary and other vessels.

For the simulation there is likely to be an increase in both land and water traffic from the emergency services, the Royal Navy and MoD. It is being run with Oil Pipelines Agency and their partners, including Cornwall County Council and Plymouth City Council. *Plymouth Herald* [Read more](#)

People in the news

GLOBAL DIVING & SALVAGE, INC. WELCOMES NEW ADDITION TO THE HEALTH, SAFETY, AND ENVIRONMENTAL COMPLIANCE GROUP



Global Diving & Salvage, Inc. announces the hiring of Stephanie Guerzon as the Senior Safety Specialist, based out of the corporate headquarters in Seattle, Washington. As part of the Health, Safety, and Environmental (HSE) Compliance Group, Mrs. Guerzon will assist project managers with safety planning for projects company-wide, manage, develop, and maintain training schedules to ensure consistency with internal and external regulations and policies. *The Maritime Executive* [Read more](#)

ISCO news

ISCO AT ARCTIC OIL SPILL CONFERENCE IN LONDON

Next week ISCO Secretary, John McMurtrie, will be attending the Arctic Oil Spill Conference on Monday and Tuesday, 29-30 October at the Le Meridean Hotel, Piccadilly. ISCO will have a stand at this event and you are cordially invited to visit.

ISCO is supporting the Arctic Oil Spill Conference and recommends that you attend this very worthwhile event at which several of our members will be speaking.

The focus of the conference is on developing strategies to mitigate the environmental effects of operations in the Arctic, reviewing what is being done to prevent oil spills on ice and in ice-covered waters and finding out about new methods for containing and cleaning up oil spills in the Arctic environment. [More information](#)

Science and technology

NORTEK LAUNCHES OIL SPILL DETECTION SYSTEM SEADARQ

Using high quality marine X-band radar, the Nortek oil spill detection system can detect and monitor oil slicks, highlight the affected area and predict the trajectory of spill movement. The key feature of SeaDarQ is a unique filtering technique sensitive to small signal differences allowing detection of small- sized spills. As a result, the SeaDarQ system with radar and vertically polarized antenna delivers accurate and real time data of oil spill position and movement.

For the majority of maritime applications, the primary or secondary navigation radar can be used. The specification of the radar influences the performance of the system - better results can be achieved with the SeaDarQ system when using more accurate radar. The SeaDarQ requires X-band radar, with an 8 feet or longer vertically polarised antenna on short pulse.

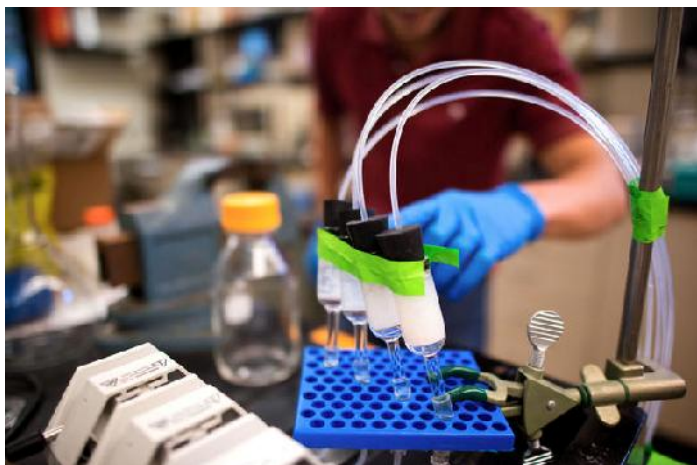
The oil spill detection system is capable of continuously monitoring oil spills during day and night, and can be used to determine the spill area and to predict drift around the spill. The SeaDarQ software measures surface currents with unlimited number of points, 360 degrees around the antenna.

To determine the area of the spill, SeaDarQ has developed a polygon, which can be drawn around the slick and detail affected surface in square kilometers.

Screen images can be saved or recorded within chosen time intervals in geotiff format. Raw radar lines are stored on a discs and available for later use to reproduce circumstances during an incident and cleanup operation.

Current SeaDarQ users include 8 standby vessels from the European Marine Safety Agency and customers in Brazil, China, Italy and Dubai, as well as the well-known Dutch oil response vessel ARCA. The most recent reference is monitoring salvage operation of Costa Concordia. *Oil & Gas Eurasia* [want to know more?](#) [Nortek BV is a Corporate Member of ISCO]

UNIVERSITY OF MINNESOTA RESEARCHERS FIND WAY OF CLEANING FRACKING WASTEWATER



Bacteria react to degrade Atrazine at Professor Larry Wackett's lab in Gortner Laboratory on Monday. Originally developed for Atrazine, the bacteria-filled beads are now being used to clean fracking wastewater.

When fracking is complete, the water used can be so contaminated with oil, gas and sediment that it turns black. But University of Minnesota researchers have found a way to clean this water with bacteria, earning funding to continue their research and apply it industrially.

The solution comes in the form of centimeter-sized silicon beads that have chemical-degrading bacteria trapped inside of them.

They are extremely porous, so the holes are big enough for the chemicals to come in but not big enough for the bacteria to leave.

Researchers make the beads by mixing liquid silicon and water with the bacteria and dispensing the solution into a column with mineral oil. Once it hits the oil, the solution rounds into balls. Finally, they take the oil out of the column and let the beads harden.

Wackett explained the bacteria are naturally found in soil and water, so they are safe to use for water treatment. The goal is to eventually use the beads in the filtration systems of water treatment plants.

Wackett said the research team still needs to figure out how long the beads can degrade the chemicals before they need to be replaced, what to do with them once they've been used and what bacteria to use to degrade all of the different chemicals.

The team has enlisted the help of the DNA Sequencing and Analysis Facility to find more bacteria to use in the beads. Wackett said the group tested the fracking wastewater to see if there were any useful bacteria in it already, and there were 3,500 different bacteria species. *Minnesota Today* [Read more](#)

POWER PLUS CLEANING SOLUTIONS ANNOUNCES IMPROVED RADIOACTIVE SOIL DECONTAMINATION RATES

An independent laboratory, American Radiation Services LLC, has carried out analysis of samples from Japan that were submitted to ARS for radiological and metals testing. The radiological testing was performed by Gamma Spectrometry and the metals analysis was conducted using EPA SW-846 method 6020 by ICPMS. The radiological testing was performed on both wet and dry material. The ICPMS testing was performed on dry material only.

Cesium 137 - Japan soils pCi/g

Sample ID	Wet	Dry	% Reduction (based on dry sample)
Grass Predecon	968.79	6771.00	
Grass Post Decon	31.92	223.4	96%
Rice Paddy Predecon	56.02	108.51	
Rice Paddy Post-Decon	52.21	84.39	22%
Orchard Downspout Predecon	291.93	434.2	
Orchard Downspout Post-Decon	84.37	132.74	70%
Orchard Test Predecon #3	87.26	140.37	
Orchard Test decon #1	54.27	51.88	63%
Orchard Post-Decon	34.23	42.51	70%

Kevin Wang of Power Plus Cleaning Solutions Inc. advises "We are seeing consistently about 10% increases in overall removal after we perform each JP. Tour and apply machine, chemical and methodical improvements. We also know we can now achieve about 10-20 % higher removal rates now than these results".

"We have also very successfully developed our ride on (drivable) tool attachment that was very fast and effective, decontaminating about 1.75 Sq. M. per Second. More information from KevinW@powerplusDCU.com

NEW PIPING TECHNOLOGY CAN REDUCE RISK OF OIL SPILLS

Absolute Completion Technologies, an Edmonton-based company that manufactures piping used in oil mining, unveiled a new product that looks to make the process of drilling more efficient.

"What we're looking to do is increase the efficiency of operators wells," said the company's vice-president of business development, Thane Russell. "The new technologies we are launching today are advances in flow control and sand control employing our new Tri-D weave technology."

The Tri-D weave technology allows ACT pipes to perform better by reducing the risk of failures that allow sand to contaminate active wells.

One of the major developments of the Tri-D weave technology is that it does not require welding, which Russell said keeps the pipes stronger and less susceptible to damage. *Sun News* [More info](#)

VIDEO: MIT MAGNETS TO CLEAN OFFSHORE OIL SPILLS



MIT's new [technique](#) would mix water-repellent ferrous nanoparticles into the oil plume, then utilize a magnet to simply lift the oil out of the water. According to a recent release, the researchers envision that the process could take place aboard an oil-recovery vessel, to prevent the nanoparticles from contaminating the environment.

Afterward, the nanoparticles could be magnetically removed from the oil and reused. It's believed that this ability to recover and reuse the oil would offset much of the cost of cleanup, making companies like BP more willing to foot the bill for their mistakes.

"This oil-spill problem has not really been worked on intensively that I know of, and of course it's a big problem," [said Ronald Rosensweig](#), a former Exxon researcher and a pioneer in the study of ferrofluids who wrote the field's first textbook.

"You could think of separating oil from water by centrifuging or something like that, but in a lot of cases, the fluids are pretty

much equal in density: Some of the oil sinks, some of it floats, and a lot of it is in between. The magnetic hook could, hopefully, make separation faster and better." *TG Daily* [Read more and watch the video](#)

BANANA FIBRE CAN FIX MARINE OIL SPILLS, SAYS STUDY

Banana fibre, when treated with certain chemicals, can absorb up to 18 times their weight of oil, according to the study published last month (16 September) in the online journal, *Carbohydrate Polymers*.

Scientists at the Institute of Chemical Technology (ICT), Mumbai, who carried out the study, said the absorptive properties of banana fibre were known. The problem was that it absorbed both oil and water, reducing effectiveness.

Led by Mangesh D. Teli, professor of fibre and textile processing at the ICT, the [researchers](#) developed a means to treat banana fibres chemically so that they repel water while absorbing oil, a [fossil fuel](#).

Their experiments showed that when banana fibres were 'acetylated' with acetic anhydride, their oil absorption capacity improved dramatically. The acetylation process was catalysed using N-Bromosuccinimide.

"Banana fibre's water absorbing property is because of the hydroxyl groups in the chemical structure of cellulose. When treated with acetic anhydride, the hydroxyl groups get converted into acetates, which do not attract water," Teli told *SciDev.Net*

The authors claimed that acetylated banana fibre being biodegradable it will have no adverse environmental impact.

Bhaskar Rao, a natural fibre scientist at Indian Institute of Chemical Technology, Hyderabad, told *SciDev.net* that chemical treatment not only improved the oil absorption capacity of banana fibre but also increased its durability.

Rao added, however, that banana fibres may not be effective in dealing with oil spills that contain certain chemical pollutants. "Banana fibres will not be able to withstand the corrosive effect of some chemicals," Rao explained. *SciDev.net* [Read more](#)



In this issue of the ISCO Newsletter we are printing No. 99 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 99: KNOWLEDGE OF SHORELINE CLEANING

Having recalled in earlier articles that the biological food chain continuously recycles carbon dioxide from the arc of floral photosynthesis through the arc of faunal synthesis to the arc of degradation of both,; having recalled that the fossilisation of some of the degradation products to natural gas oil and coal is but an inadvertent interruption of this recycling; and having recalled that this knowledge is disputed by environmentalist belief; it is pleasantly surprising to note the enthusiasm with which these same environmentalists embrace what they refer to as bioremediation. Thus, despite their failure to acknowledge that the micro-organisms at the bottom of the food-chain/ecosystem actually proliferate in seawater in proportion to the concentration of the petroleum components present, environmentalists advocate the introduction of these organisms to biodegrade stranded oil components.

However, being free from the confusions of environmentalist belief, we know that the heterotrophic organisms which feed indiscriminately on petroleum components and on biological degradation products, increase their population densities with the increased post-release concentrations of the former; that while such population increase may preclude the need to add more heterotrophic organisms, it may be limited by its depletion of other growth factors such as inorganic nitrogen, phosphorus and possibly iron; that while the addition of these could be beneficial it would be difficult to significantly increase their natural seawater concentrations; that such chemical additions should be to pollutants on beaches if at all; that regardless of any such additions, bacterial degradation being a surface phenomenon, will be more rapid at the surface to volume ratios presented by dispersed droplets in the sea than at those of un-dispersed slicks onshore; and that, consequently, we could increase the rate of natural bacterial degradation by pushing stranded pollution into the surf line to disperse it, with or without the addition of dispersants, though the latter would further increase the surface : volume ratio of the droplets.

Nonetheless, laboratory studies have suggested optimal nutrient concentrations as high as 1.5-2.5% nitrogen, and 0.2% phosphorus on the basis of the weight of oil present, though seemingly without reference to surface : volume ratios. However, in recognition of the likelihood of natural inorganic growth factors being diluted away by rain, let alone sea water, enthusiasts for assisted bioremediation have suggested addition of oleophilic organic molecules containing nitrogen or phosphorus as alternate growth factors. As to field trials of bioremediation, those conducted in relation to the *Exxon Valdez Incident* were reported to show rate dependence on the bioremediation agent, the associated nutrients, pollutant penetration of the nutrient, amount of pollutant, beach type, temperature and available oxygen; and that despite the number and variable interaction of these identified parameters, natural rates were reported as having been enhanced by factors of 2-7, with visible changes having been reported for some beaches within 15 days. Yet again, with one area of beach as a control and two others treated once a week with sodium nitrate and potassium dihydrogen phosphate at Bullwell Bay following the *Sea Empress Incident*, it was reported by total hydrocarbon measurement that the bioremediation rate was greater than the natural rate for the heavy fuel and Forties crude oil of the incident, with both additives being reported as equally effective.

However, it has been reported by the Netherlands that beach sand and fine clay particles appeared to have a role in breaking emulsions in the surf line and that the very high surface :volume ratio of the latter and its associated thin layer of pollutant promoted natural and assisted bioremediation. This process now known as clay flocculation was investigated in respect of the *Exxon Valdez* and *Sea Empress Incidents*. At the latter the polluted cobbles of the Amroth and Marros Beaches were moved into the surf line where, in the absence of a control, it was believed that what would have been the natural rate of wave-agitated surf cleaning was increased by associated sand-abrasion and clay- flocculation. In any case it was reported that the degree of oiling decreased with successive tides until by the fifth day there was no significant oiling of the cobble zone. However, while this was reported in the context of clay flocculation which itself was being considered in the context of assistance to bioremediation, we know that surf agitation could be a valid technique for shoreline cleaning were it not for environmentalist belief-based opposition. I myself noted at the *Amoco Cadiz Incident* that polluted shores had non-polluted gaps inside offshore rocky reefs the surf on which had apparently dispersed the incoming slicks before they could reach these inner unpolluted shore-lengths.

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

INTERNATIONAL SALVAGE UNION'S ENVIRONMENTAL SALVAGE WEB PAGES

Concern for the environment is rightly at the heart of all modern salvage operations. Almost all marine casualties, regardless of their cargo, represent a potential threat to the environment. Time and again the skill, commitment and equipment of the members of the ISU have prevented disaster and minimised environmental damage. In most cases there is no state provision of salvage and

Publications (continued)

environmental protection services. It is only commercial salvors who stand between a shipping casualty and an environmental catastrophe.

You can access a number of articles on aspects of environmental salvage on the [ISU Environmental Salvage web site](#).

AUSTRALIA: OCTOBER ISSUE OF THE CROIERG NEWSLETTER

A round-up of news from the Canberra & Regions Oil Industry Emergency Response Group. [CROIERG Newsletter](#)

Training

UPDATED HAZCOM TRAINING VIDEO: GLOBAL HARMONIZATION & THE HAZARD COMMUNICATION STANDARD

Training on the changes to the Hazcom Standard based on Global Harmonization – a new updated training video is now available from the Emergency Film Group at a pre-publication discounted price. [More info](#)

UK & IRELAND: SUCCESSFUL TRAINING EVENT COMPLETED AT CASTLE ARCHDALE

Last week spill responders in Northern Ireland and the Republic of Ireland completed an intensive two day training event organised by the International Spill Accreditation Association at Castle Archdale, Enniskillen, Co. Fermanagh. The programme (classroom and practical hands-on training) addressed inland surface water spill response and clean-up, oiled beach clean-up techniques, an introduction to shoreline assessment, regulatory updates on hazardous waste disposal and oil storage, oil storage tank assessment and drain tracing using a smoke generator.

Readers who would like to be notified of future courses should get in touch with john.mcmurtrie@balbithan.com

Events

USA: NGWA'S 64TH ANNUAL GROUNDWATER EXPO

Held annually by the National Ground Water Association, this year's Groundwater Expo is slated to take place December 4-7 in Las Vegas, Nevada.

Attracting thousands of professionals from around the world, the NGWA Groundwater Expo and Annual Meeting has come to be the best-attended [groundwater industry](#) event.

"From quality educational offerings to the latest in technological innovations and services, the Groundwater Expo is recognized as the one event where professionals from all sectors of the [groundwater industry](#) come together to discover, connect, and grow around current issues and discuss potential solutions to keep the industry moving forward so the resource is wisely used, managed, and protected," said NGWA CEO Kevin McCray, CAE. [More info](#)

IRAN: INTERNATIONAL CONFERENCE ON ENVIRONMENTAL CHALLENGES IN THE ROPME SEA AREA

Tehran, 3-6 March, 2013 - It is well known that the ROPME Sea Area is in the cross-roads of environmental transition due to natural and man-made factors. It is an area of high stakes for humanity, with immense resources of strategic importance. ROPME holds the collective trust of its Member States to protect this environment from pollution, abuse, degradation and damage. In discharging these historic duties, it is felt essential that scientific, technical, policy making and strategical experiences of the world on the Region are exchanged and reflections on future are made. With this background, the International Conference will be a forum for exchange of scientific results, development strategies, master plans and judicious management of the ROPME Sea Area. [More info](#)

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