



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 307, 31 October 2011

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News

NEW ZEALAND: MORE THAN 1,000 TONNES OF OIL HAVE NOW BEEN REMOVED FROM THE RENA.



October 30 - More than 1000 tonnes of heavy fuel oil (HFO) has now been pumped from the stricken container vessel **Rena**, leaving about 360 tonnes left to be removed from the starboard 5 tank. Maritime New Zealand Salvage Unit Manager Kenny Crawford said while the exact amount of oil pumped off the **Rena** was still to be confirmed,

1000 tonnes was a conservative estimate and a "significant milestone" in the operation.

Salvors were also now in the final stages of blocking off the flooded access way to the manhole that will allow them pump the water out and lower pumps into the starboard 5 tank, but had hit a snag with weather and tidal conditions this afternoon causing some more movement on the ship. This made it unsafe for divers to continue working. [Read more](#)

Recovery of containers

Navigation warnings remain in place in the Bay of Plenty, as 58 containers from **Rena** remain unaccounted for. Of the 88 containers lost overboard on 11 October, 15 have been recovered, with recovery under way for another seven that have washed ashore. Eight others have been identified as sunk in waters up to 60m deep within a kilometre of the vessel. [Read more](#)

International praise for oil spill wildlife response

The Massey University-led wildlife response to the Rena oil spill has been praised as one of the quickest in the world, thanks to excellent foresight and planning systems. There are 385 animals in the wildlife centre set up in Tauranga, with three more little blue penguins arriving yesterday. Long-term penguin enclosures are being built to house the birds until it is safe to release them into the wild.

Seven international experts are working at the wildlife centre. Alternate Wildlife Centre Manager Curt Clumpner, who has worked on numerous oil spills since the Exxon Valdez Alaska disaster, says New Zealand's response is one of the quickest he has seen.

"The speed of response in New Zealand is among the top two or three countries in the world," says Mr Clumpner, an American from International Bird Rescue. "The wildlife response centre was set up and ready to clean birds within a day of the grounding. That's incredibly quick compared to other spills I've been involved in. [Read more](#)

CANADA SIGNS 2010 HNS PROTOCOL

On October 25, 2011, Canada took part in a ceremony to sign a protocol that will establish a global liability regime and further protect our environment from the risks of marine transport. The Protocol of 2010 to the International Convention on Liability and Compensation for Damage in Connection with the Carriage of Hazardous and Noxious Substances by Sea, 1996 was signed at the International Maritime Organization (IMO) in London, United Kingdom. Canada was one of the states that led the development of this important protocol at the IMO. [Read more](#)

EU SEEKS STRICTER OFFSHORE OIL RULES AND EXTENSION OF ZONE TO 230 MILES

October 27 - Draft regulation presented today by the European Commission, the EU's regulatory arm in Brussels, sets risk-assessment rules for offshore platforms and gives national regulators more powers to inspect their operations. It also extends 16-fold the zone in which companies will be held liable for environmental damage.

"Securing best industry practices in all our offshore operations is an indisputable must," EU Energy Commissioner Guenther Oettinger said in a statement.

Europe is considering ways to improve safety and bolster the "polluter pays" principle in the energy industry following the Gulf of Mexico spill last year. There are almost 1,000 offshore oil installations in the EU, including 486 in the U.K., 181 in the Netherlands and 61 in Denmark, according to the commission. [Read more](#)

U.S. SHORES BRACE THEMSELVES FOR UP TO 20 MILLION TONS OF TSUNAMI DEBRIS

October 25 - Hawaii is bracing themselves for 20 million tons of debris floating to hit their shores this winter, according to a University of Hawaii research team who says the remains are traveling faster than originally anticipated.

Although the huge garbage mass is not set to hit mainland U.S. west coasts of Oregon and Washington until 2014, researchers think trash can be seen washing up on the Midway Islands of HI (located halfway in between HI and Japan) early as this winter. The debris will most likely hit mainland HI shores by spring 2013.

The floating tsunami wreckage was spotted by a Russian crew last month on the STS Pallada as it was floating around 2,000 miles from Japan. The Pallada crew reported the finding to AFP, citing that among the floating masses was a fishing vessel with "Fukushima" painted across the side, TVs, refrigerators, drums, boots, and many home appliances. The discovery debunked original computer models of the driftage that projected it not reaching the Midway Islands until spring 2012. [Read more](#)

US EMBARGO ON CUBA HINDERS RESPONSE TO GULF SPILL

The U.S. economic embargo on Cuba has had many unintended consequences in the half-century since it was imposed, but since the end of the Cold War most have gone largely unremarked due to the small economic impact of the island nation.

But the scenes last year of the oil gushing into the Gulf of Mexico in the wake of the Deepwater Horizon accident, that took months to shut down, have pulled the curtain back on an unexpected danger: an oil spill in Cuban waters within sight of Florida.

The danger is acute: the first deepwater rig is steaming its way to the Caribbean to begin drilling northwest of Cuba early next year.

Energy and environmental experts have been sounding the warning, stressing that the embargo, which prohibits U.S. firms or American citizens from doing any business in Cuba, would prevent U.S. participation in the cleanup efforts for a large oil spill. [Read more](#)

EU CHEMICALS AGENCY PUBLISHES FIRST LIST OF SUBSTANCES TO BE EVALUATED FOR RISKS

The European Chemicals Agency (ECHA) Oct. 21 published a preliminary list of 91 hazardous substances for priority risk evaluation under the European Union's REACH law.

ECHA said the substances have been prioritized because they are suspected of being persistent, bioaccumulative, and toxic, or of having endocrine disrupting or carcinogenic properties. The substances are also likely to have "wide dispersive or consumer uses," ECHA said.

The substances were selected from dossiers submitted to ECHA by Nov. 30, 2010, the first registration deadline under REACH (Regulation No. 1907/2006 on the registration, evaluation, and authorization of chemicals). The November 2010 deadline applied to chemicals manufactured in, or imported into, the European Union in annual volumes of 1,000 metric tons or more, and to some hazardous substances at lower volumes. [Read more](#)

AUSTRALIAN DANGEROUS GOODS CODE

The Australian Dangerous Goods Code sets out the requirements for transporting dangerous goods by road or rail. The current version of the Code is the 7th edition, which the NTC published in 2007. This version of the Code is known as ADG7. The Code has no force by itself, but it is given force in each Australian State and Territory by laws that incorporate the Code as law by stating that it applies as law.

In October 2011 the NTC published on this site (available below) a revised version of the Code that corrects various printing errors that occurred in the initial production of the Code. In conjunction with the publication of that revised version of the Code the NTC also published a document entitled *Corrigendum 1*, which sets out the corrections that need to be made to the printed version of the Code.

The NTC also published a document entitled *How the 2011 Electronic Version differs from the 2007 Printed Version*. [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for forwarding this news item] [Read more](#)

JAPAN: FUKUSHIMA DISASTER PRODUCES WORLD'S WORST NUCLEAR SEA POLLUTION

October 28 - A French study released on Thursday said that the amount of nuclear material called caesium 137 leaked by Japanese plant, Fukushima, has proven to be the world's worst nuclear sea contamination event ever, AFP discloses.

In March, the giant 9.0 magnitude earthquake that struck Japan caused worldwide worry as we watched the Fukushima nuclear plant fall into crisis. Fears of widespread radiation driftage were present worldwide.

The Institute for Radiological Protection and Nuclear Safety (IRSN) reported that from March 21st to mid-July, 27.1 peta becquerels (a unit used to measure radioactivity) of caesium 137 had entered into the ocean. One "peta" becquerel is equivalent to a million billion becquerels, or 10¹⁵.

The IRSN stated in a press release that this is the biggest single outflow of man-made radioactive materials introduced to the marine environment ever seen or recorded. It will take 30 years for the caesium to lose ½ of its radioactivity, as it is a slow decaying element. [Read more](#)

UK: NORTH SEA OIL SPILL RISK 'UNACCEPTABLY HIGH', CLAIMS EUROPEAN COMMISSION

October 27 - The European commission has warned that the likelihood of a Deepwater Horizon-type accident in the North Sea remains "unacceptably high" as it outlined new laws to counter the danger.

The moves have angered the UK government and offshore oil industry while threatening to put a brake on some of the huge profits declared by big North Sea operators Shell and ExxonMobil.

Brussels officials defended their plans to in effect seize overall control of North Sea regulation from the British authorities.

"We need to prevent accidents like Deepwater Horizon in the Gulf of Mexico from happening," said energy commissioner Günther Oettinger. "Securing best industry practices in all our offshore operations is an undisputable must. [Read more](#)

CHINA INTRODUCES PLAN ON GROUNDWATER POLLUTION CONTROL

October 29 - China has introduced the country's first national plan on groundwater pollution control, urging a combination of legal, economic, technological and administrative measures for groundwater protection, according to ministries.

The ministries of environmental protection, land and resources, and water resources announced Friday at a press conference that the State Council, or China's Cabinet, has already approved the national plan on groundwater pollution control for 2011-2020.

China will invest a total of 34.66 billion yuan (\$5.48 billion) on the prevention and treatment of pollution in the country's groundwater in 2011-2020, according to the plan.

The money will go to six categories of projects, including survey, prevention, remediation of groundwater pollution, control of pollution in underground drinking water sources, agriculture-related groundwater pollution control, and underground water environment monitoring capacity building. [Read more](#)

FRESH OIL POLLUTION REPORTED IN NIGERIAN REGION

October 24 - A Nigerian environmental group on Monday claimed an [oil](#) spill from a pipeline operated by Italian firm ENI had badly polluted an area in the south of Africa's largest oil producer.

The spill which reportedly occurred on September 27 is said to have polluted the swamps of the Ikeinghenbiri area of Bayelsa state in the main oil-producing Niger Delta region. [Read more](#)

USA: BP WINS FIRST GULF OF MEXICO DEEPWATER DRILLING PERMIT SINCE DEEPWATER HORIZON DISASTER

October 26 - The federal Bureau of Safety and Environmental Enforcement on Wednesday approved the drilling permit for an exploratory well in BP's Kaskida Field in the Gulf's Keathley Canyon map area. The Bureau of Ocean Energy Management last week approved a supplemental exploration plan for the area, 246 miles south of Lafayette. The well would be in 6,034 feet water depth.

"BP has met all of the enhanced safety requirements that we have implemented and applied consistently over the past year. In addition, BP has adhered to voluntary standards that go beyond the agency's regulatory requirements," said BSEE Director Michael R. Bromwich. "This permit was approved only after thorough well design, blowout preventer, and containment capability reviews." [Read more](#)

USA: MAJOR VICTORY FOR SEACOR IN CONNECTION WITH DEEPWATER HORIZON RIG EXPLOSION

October 28 - Weil, Gotshal & Manges LLP has won complete dismissal, with prejudice, of all claims brought against Seacor Holdings, Inc. and various of its subsidiaries, which own and operate marine vessels that responded to the emergency following the April 2010 explosion of the Deepwater Horizon offshore drilling rig and resultant fire and oil spill in the Gulf of Mexico.

A group of Louisiana landowners, commercial fishermen, and oil and gas industry employees brought suit against the owners and operators of the response vessels, alleging that the water they directed toward the fire caused the Deepwater Horizon rig to flood and sink, which in turn caused the riser pipe connected to the wellhead to collapse, resulting in the ensuing oil spill into the Gulf of Mexico that would become the worst in U.S. history. Plaintiffs asserted claims for property damage and economic losses under general maritime law, the Oil Pollution Act of 1990, and Louisiana state law. [Read more](#)

USA: NEED TO CONTINUALLY UPGRADE ABILITY TO RESPOND TO OIL SPILLS

October 28 - *From an article in the Olympian* - The single greatest threat to the marine waters of Washington state, especially Puget Sound, is a large-scale oil spill.

This month, three small oil spills in Puget Sound and two close calls with cargo ships served as grim reminders that there are catastrophic accidents out there, just waiting to happen.

Now is the time to redouble our efforts to prevent oil spills from happening and improve response capabilities when they do occur.

Government agencies, shippers, the U.S. Coast Guard and other partners in maritime safety must do everything within their power to upgrade and update oil spill prevention and response programs.

Many of the spill prevention and response programs in place are decades old and fail to use technological advances that could reduce the damage from an oil spill. [Read more](#)

USA: WE NEED INVENTORS TO FILL INNOVATION BLACK HOLES AND HELP U.S. ECONOMY

October 23 - *From an article in the Washington Post* - When oil was still spewing uncontrollably from the Deepwater Horizon well last summer, philanthropist Wendy Schmidt and the X Prize Foundation issued a \$1.4 million challenge calling for better technologies to clean up oil spills. Aside from Schmidt's concern for the environment, the need for innovation in this arena was dire.

In 1989, teams cleaning up the oil from the Exxon Valdez spill in Alaska recovered less than 15 percent of the total. Teams cleaning up oil from the Deep Water Horizon spill were not doing much better.



Gerald Herbert/AP - This aerial photo taken in the Gulf of Mexico more than 50 miles southeast of Venice on Louisiana's tip shows the Deepwater Horizon oil rig burning.

Oil spills are a fact of modern life. A better cleanup technology would seem to be a no-brainer. But the hazardous spill and recovery sector is sluggish, due in large part to government contractors and federal and state agencies unwilling or unable to try new things.

More than 300 teams from across the world submitted proposals for the prize. Last summer, the 10 finalists in the Oil Cleanup X Challenge traveled to Leonardo, N.J., home of the National Oil Spill Response Research & Renewable Energy Test Facility. All of the teams brought technology that was more effective, cheaper and easier to use than existing oil spill cleanup systems.

The winner, Elastec/American Marine, utilized a spinning, grooved wheel to pull an astonishing 89.5 percent of spilled oil from the testing ground. The device collected oil at nearly 5,000 gallons per minute — fast enough to make a near-complete recovery of spills a real possibility. Now thanks to the publicity and the prize, this oil spill innovation will likely be commercialized and deployed.

[Read more](#)

AUSTRALIA: AMSA CELEBRATES ITS 21ST ANNIVERSARY

The Australian Maritime Safety Authority (AMSA) celebrated its 21st Anniversary in style hosting a Charity Ball at the National Museum of Australia in Canberra on Friday, 21 October 2011. Recognising the hard work and achievements of AMSA, its staff, and the maritime sector as a whole over the past 21 years, the Charity Ball also provided an opportunity to acknowledge the dedication of key Australian seafarer welfare organisations – Apostleship of the Sea Australia, Mission to Seafarers Australia and the Australian Mariners' Welfare Society.

AMSA was created by the Act which received Royal Assent in October 1990, and was established as a portfolio agency under the then Commonwealth Department of Transport and Communications assuming maritime operational functions, regulation and provision of services to the maritime industry, and management of the Commonwealth's maritime assets. Today, AMSA continues its focus on maritime safety, protection of the marine environment and provision of maritime and aviation search and rescue services. [Read more](#)

USA: NO VISUAL EVIDENCE OF OIL FOUND ONBOARD S.S. MONTEBELLO

October 21 – [See earlier report in issue 305 of the ISCO Newsletter] The on-scene assessment operations of the sunken World War II tanker S.S. Montebello are nearly complete off the coast of Cambria, Calif., and the unified command has determined that there is no substantial oil threat from the Montebello to California waters and shorelines. The only operation that remains is the collection of hull samples to help determine corrosion status. [Read more](#)

People in the news

JOSÉ MAURA ELECTED AS NEW DIRECTOR OF THE IOPC FUNDS

The 1992 Fund Assembly has elected Mr José Maura Barandiarán of Spain as the next Director of the IOPC Funds. Mr Maura will officially take up his duties as Director on 1 November 2011.

José Maura, who is 50, has worked for the IOPC Funds for 15 years and prior to joining the Funds, practised law and worked for a Protection and Indemnity Club. He joined the IOPC Funds as a Claims Manager in February 1996 and became the Head of the Claims Department in January 2002. In the absence of the current Director, Mr Willem Oosterveen, due to illness, on 21 September 2010 Mr Maura was appointed Acting Director of the IOPC Funds and on 26 October 2011 was elected Director for a term of five years. [Read more](#)



Events

SPAIN: GRANDES ACCIDENTES MARITIMOS – BILBAO. 25-27 APRIL 2012

First announcement and call for papers - Con ocasión del centenario del hundimiento del Titanic la Asociación Vizcaína de Capitanes de la Marina Mercante convoca este Congreso Marítimo que pretende ser un punto de encuentro de todos los responsables y profesionales de la seguridad marítima y portuaria, donde se analicen algunos de los más importantes accidentes marítimos ocurridos en las costas y buques españoles y se muestren experiencias contrastadas y se expresen opiniones autorizadas del sector.

Este congreso está dirigido a los profesionales del Sector marítimo responsables de la Seguridad, a las Autoridades responsables de la seguridad marítima, a los profesionales de la Seguridad Portuaria, a los profesionales de Emergencias, de salvamento y contaminación marítima, a las empresas de planificación de emergencias, Servicios de rescate y Protección Contra Incendios, Técnicos de Prevención, Entidades aseguradoras, etc.

Presentación de resúmenes: **15 de noviembre de 2011.**

Comunicación de la aceptación: **15 de diciembre de 2011.**

Versión final de la comunicación para su publicación: **15 de febrero de 2012.**

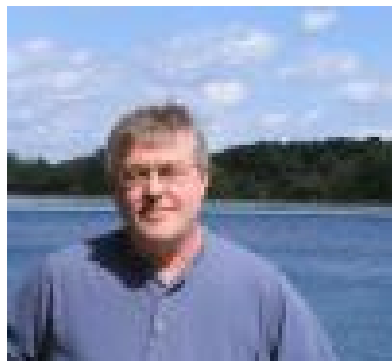
Versión final de la comunicación para la presentación: **15 de marzo de 2012.**

More info: SECRETARÍA TÉCNICA: Evento | Av. Amaia, 2, 1º I. Ed. Inbisa | 48940. Leioa. Bizkaia. España

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Science & Technology

NETHERLANDS: “TREAT CHEMICAL SPILLS AS OIL SPILLS” - PRESENTATION ON NEW CHEMICAL SPILL RESPONSE MANUAL



The Chemical Spill Response manual has been presented on Wednesday 26th October 2011 at the NHL University of Applied Sciences. The lectorate Maritime, Marine, Environmental and Safety Management has conducted studies on risks, response, detection and organisation, rules and regulations on chemical spills.

The first copy of the book was presented to author Wierd Koops.

The research was made possible by RAAK, an innovation project assisted by Syntens, Netherlands. Innovation consultant Dirk-Jan Hummel explained their aim is to link business with sources for research and knowledge and experience.

Project engineer Marieke Zeinstra gave insight in statistics of risk profiles of various types of vessels and cargo. She also covered places where cargo could get lost and what the characteristics of the spill would be. Some will evaporate into a cloud, others will sink, float or dissolve. They all require a different strategy.

Wierd Koops explained that for response purposes, only spills that are floating or sinking are worthwhile following up in response efforts. When the chemicals evaporate, they disappear and when the materials are dissolving, these can be dangerous at a time but will thin out by nature. For chemicals that are sinking or floating, methods and equipment comparable to oil spills can be applied. It often is difficult to detect the nature of the spilled chemicals.

The students of Ocean Technology made a decision structure of spills and optimal use of detection equipment. [Read more](#)

USA: URI PROFS TO TRY NEW OIL SPILL CLEANERS

The Rhode Island Consortium for Nanoscience and Nanotechnology is getting a grant of \$10.4 million from BP -- following the Gulf of Mexico oil spill -- to study how current chemical dispersants behave and are carried through the water, and to develop new dispersants.

Specifically, one project being tackled by chemical engineering professors Arijit Bose and Geoffrey Bothun is a study of the effectiveness of environmentally friendly nanoparticles to stabilize oil droplets, rather than chemical dispersants.

A dispersant tries to keep the oil suspended deep in the water so naturally occurring ocean bacteria can eat it, the university said in a news release this week.

"If the oil rises to the surface, the lighter components evaporate, leaving behind the heavy components that are difficult to disperse," Bose said in the release. Then, they damage the ocean's ecosystem. [Read more](#)



In this issue of the ISCO Newsletter we are printing No. 49 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](#)

KNOWLEDGE OF DISPERSANT USE (CHAPTER 49)

After testing for efficiency by WSL, dispersants passed for potential use were tested for toxicity by the Ministry of Agriculture Fisheries and Food under the provisions of the Dumping at Sea Act. Initially, LC₅₀ values were measured over a 48 hour exposure of *Crangon crangon* (common shrimp) to the dispersant itself. Later, when concentrate dispersants were introduced, this organism was exposed to the dispersant/oil mixture for comparison with the toxicity of oil itself under otherwise identical conditions with failure or success being judged whether not the dispersant/oil toxicity was greater than that of the oil alone.

Testing involved setting up five replicates containing 1000ppm oil (fresh Kuwait Crude) dispersed in seawater with 1000ppm of conventional dispersant or with 100ppm (10 : 1 dilution) when concentrates for operational dilution to 10% were being investigated, and five replicates containing 1000ppm of oil alone, all of these replicates being in a series of 22.5 litre Perspex cylindrical tanks each fitted with a stirring system intended to maintain the oil or the oil/dispersant in a uniformly distributed state despite their respective absence/presence of dispersant, with the stirrer paddles revolving in mesh cylinders to protect the shrimp from mechanical injury, and with the filtered seawater being continuously aerated. After 1 hour, 20 acclimatised shrimp were added to each tank external to the cylindrical mesh and after 2 hours the aerators were removed and the stirrers installed. The appropriate quantity of oil was then added to the water surface in each tank and to half the tanks dispersant was added to the oil layer and after 1 minute, stirring was started and the shrimp exposed to the tank contents for 100 minutes after which stirring was stopped, the tank contents were siphoned off, and the shrimp transferred to flowing clean aerated sea water with mortalities being observed after 24 hours.

While it is impossible to duplicate sea conditions fully in the laboratory however hard we might try, it is notable how far from sea conditions those of this test were deliberately set. In assessing how far this test is from sea conditions we might start by comparing the concentrations of oil and indeed of dispersants as tabulated in previous articles (c.f. article 47) which report the rapidly decreasing concentrations of dispersed oil from an oil layer of 1-4ppm thick while the layer thickness of Phase II spreading layers are 0.1mm thick and while conventional dispersants are applied to slicks in the dispersant : oil ratio of 1 : 10. Thus, we immediately see how far actual oil/dispersant concentrations differ from the 1000ppm of both which are employed in the above test. Again, when the point of applying dispersant to oil is to create the smallest possible droplet sizes to maximise the extent of dispersion without re-coalescence, it is surely bizarre to design a test which runs the risk of failing those which succeed in so doing and passing only those which fail to do so. Yet again, we may wonder why the aeration is stopped during shrimp exposure to these inexplicably high concentrations. Overall, the only possible explanation must be that toxicity would be immeasurably low were the shrimp to be exposed to the actual concentrations reported elsewhere in these articles.

A beach toxicity test was also designed by MAFF in which the test organism is *Patella vulgata* (the common limpet. In this test limpets which have been allowed to attach to Perspex plates are sprayed with dispersant or with oil and left in moist air for 6 hours before being washed for 15 seconds in running water. The plates (5 for dispersant only and 5 for oil only) are placed vertically in recovery tanks where further rinsing takes place over a simulated tidal cycle. Limpets detaching from the plates are recorded as dead and are removed from the recovery tank immediately after the simulated tidal cycle and at 24 and 48 hours after the start of the test. After this 48 hours, any remaining limpets which are not firmly attached to their plates are gently detached and placed on the tank floor and if these have not reattached in a further 48 hours these too are presumed dead. In this test, dispersants are passed or failed on being less or more toxic than the oil.

Once again, this test may be evaluated as to its simulation of reality. Ideally, dispersants would clean oil covered limpets without killing them. Why, therefore, does this shore test not apply dispersant alone, oil alone and oil followed by dispersant to groups of Perspex-clinging limpets? This, sequence would reveal whether dispersant kills un-oiled limpets, whether oil kills them, and whether dispersants would clean rather than kill them. However, while knowing that coating shoreline organisms with oil is a closer simulation of stranded oil than is exposing them to oil droplets orders of magnitude more concentrated than those of actual dispersed oil in seawater, and while knowing that careless application to clean limpets onshore is likely enough for inclusion of such a test, we also know that oil-coated limpets are likely to die anyway; and that shoreline cleaning by dispersants aids re-colonisation. Thus, both the sea and shoreline simulations are inadequate/misleading in ways which could easily have been rectified. Indeed, their having been thus poorly designed in the first place, suggests a desire to support anti-dispersant belief rather than to acquire knowledge as to how dispersants can be beneficial when used correctly.

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.

THE TEN LARGEST SPILLS IN HISTORY

Reproduced here with acknowledgement to *The Telegraph*, this is a list of the ten largest oil spills in history.

1. Gulf War, 1991

Kuwait

240 to 336 million gallons

As Iraqi forces retreated from Kuwait during the first Gulf War, they opened the valves of oil wells and pipelines in a bid to slow the onslaught of American troops. The result was the largest oil spill history has seen. Some 240 million gallons of crude oil flowed into the Persian Gulf. The resulting oil slick spanned an area just larger than the size of the island of Hawaii.

However, the largest oil spill the world has seen exacted little permanent damage on coral ecosystems and local fisheries, according to a report by the Intergovernmental Oceanographic Commission at Unesco.

2. Deepwater Horizon 2010

Mexican Gulf

210 million gallons

The BP oil spill flowed for three months, becoming the largest accidental marine oil spill in the history of the petroleum industry. The spill stemmed from a sea-floor oil gusher that resulted from the April 20, 2010, explosion of Deepwater Horizon, which drilled on the BP-operated Macondo Prospect. The explosion killed 11 men working on the platform and injured 17 others.

On July 15, 2010, the leak was stopped by capping the gushing wellhead, after it had released about 4.9 million barrels of crude oil. An estimated 53,000 barrels per day escaped from the well just before it was capped.

The spill caused extensive damage to marine and wildlife habitats and to the Gulf's fishing and tourism industries. Skimmer ships, floating containment booms, anchored barriers, sand-filled barricades along shorelines, and dispersants were used in an attempt to protect hundreds of miles of beaches, wetlands, and estuaries from the spreading oil.

Scientists also reported immense underwater plumes of dissolved oil not visible at the surface as well as an 80-square-mile "kill zone" surrounding the blown well.

3. Ixtoc 1 Oil Well, 1979

Bay of Campeche, Mexico

140 million gallons

In June 1979, an oil well in the Bay of Campeche collapsed after a pressure buildup sparked an accidental explosion. Over the next 10 months about 140 million gallons of crude spouted into the Gulf of Mexico from the damaged oil well. In order to slow down the flow of oil from the damaged well, mud and later steel, iron and lead balls were dropped down its shaft. The resulting slick measured 1100 square miles.

4. Atlantic Empress, 1979

Trinidad and Tobago, West Indies

88.3 million gallons

One stormy evening in July 1979, two full supertankers collided off the coast of Tobago in the Caribbean Sea, precipitating the largest ship-sourced oil spill in history. Crippled by the accident, both vessels began to leak their crude and caught fire. One of the tankers exploded 300 nautical miles offshore, killing 26 crew.

Luckily, only minor shore pollution was reported on nearby islands.

5. Fergana Valley, 1992

Uzbekistan

87.7 million gallons

Nearly 88 million gallons of oil spilled from an oil well in Fergana Valley, one of Uzbekistan's most active energy- and oil-refining areas. While the spill didn't get much press at the time, it is the largest inland spill ever reported. The ground absorbed this spill, leaving nothing for cleaning crews to tackle.

Special feature (continued)

6. Nowruz Oil Field, 1983

Persian Gulf

80 million gallons

During the Iran-Iraq War, an oil tanker crashed into the Nowruz Field Platform in the Persian Gulf and knocked it askew, damaging the well underneath. The oil well then leaked about 1500 barrels a day, but because it was in the center of a war zone, seven months went by before it was fixed.

7. ABT Summer, 1991

Off the coast of Angola

80 million gallons

En route to Rotterdam, the fully loaded tanker ABT Summer experienced an explosion onboard and caught fire while it was 900 miles off the coast of Angola, leaking its payload into the ocean. Surrounded by a growing oil slick that spanned 80 square miles, the tanker burned for three days before sinking. The oil is thought to have been broken up by high seas at little environmental cost, thanks to the incident's offshore location.

8. Castillo de Bellver, 1983

Off Saldanha Bay, South Africa

78.5 million gallons

The tanker caught fire about 70 miles northwest of Capetown, South Africa, on August 6, 1983. The blazing vessel was abandoned and drifted offshore until it eventually broke in half. The stern capsized and sank into the deep ocean. The vessel was carrying nearly 79 million gallons of crude at the time of the accident. About 1500 gannets that happened to be gathered on a nearby island, gearing up for their breeding season, were oiled, but the impact on local fish stocks was minimal.

9. Amoco Cadiz, 1978

Off Brittany, France

68.7 million gallons

The tanker ran aground off the coast of Brittany after its steering failed in a severe storm. Its entire cargo of 246,000 tons of light crude oil was dumped into the roiling waters of the English Channel, with the grim consequence of killing off more marine life than any other oil spill to date at the time. Cleanup efforts were foiled by strong winds and heavy seas and less than 3300 tons of dispersants were used.

10. Odyssey Oil Spill, 1988

700 nautical miles off the coast of Nova Scotia, Canada

43 million gallons

In November 1988 the Liberian tanker Odyssey, virtually full to the brim with North Sea crude oil, broke in two and sunk in the North Atlantic 700 miles off the coast of Nova Scotia.

Training

ISAA TRAINING EVENT AT CORK, IRELAND



Some 40 delegates from City and County Councils, Oil Spill Response Contractors and Fuel Oil Distributors attended the ISAA Training Event held at the National Maritime College at Ringaskiddy near Cork. The theme for the training was inland spill response.

Those attending the Desktop Exercise received an introduction to Inland Oil Spill Response Contingency Planning, participated in a lively discussion and received expert presentations on inland spill response. During the afternoon delegates were able to view response activities being undertaken by delegates participating in the "hands-on" practical course. The Desktop Exercise ended with an interactive session focused on the initial actions and considerations that need to be addressed by response managers during the critical initiation phase of response.

Training (continued)

In the forenoon students participating in the Practical Course received classroom training on response to oil spills on inland surface waters, then an introduction to the equipment to be used in the afternoon exercise. This was followed by practical exercises on aspects of spill containment and recovery.

Publications

QUARTERLY RAC-REMPEITC NEWSLETTER

All the latest news from The Regional Marine Pollution Emergency Information and Training Center for the Wider Caribbean (REMPEITC-Caribe). This is the Regional Activity Center (RAC) for the Protocol Concerning the Cooperation in Combating Oil Spills in the Wider Caribbean Region (Oil Spills Protocol). [Download the newsletter](#)

US EPA: TECHNOLOGY INNOVATION NEWS SURVEY

The September 1-15, 2011 *Technology Innovation News Survey* has been posted to the CLU-IN web site. The *Survey* contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. The latest survey is available at: <http://www.clu-in.org/products/tins/>

Products and Services

SOIL REMEDIATION SYSTEM - NEW TRAILER-MOUNTED PORTABLE AFTERBURNER

The Problem - A major Vapor & [Odor Control](#) company needed a portable solution to clean the soil leftover at old [fuel stations](#) – a portable afterburner.

The Process: [Soil Remediation](#) Afterburners & [Oxidizers](#) are manufactured to treat soil containing contaminants such as [petroleum hydrocarbons](#), with diesel oil, gasoline, [aromatic hydrocarbons](#), solvents and many other [volatile organic compounds](#) (VOC). These systems are designed with a large turn down ratio for varying flow rates and a modulating burner system for fluctuating process stream concentrations. Because of the highly volatile nature of the vapors, detonation and flame arrestors are used.

The Solution: Epcon developed a 'Complete System Technology' Vapor Extraction System (VES) [Read more](#)

TECHNOLOGY MAKES WASTEWATER RECYCLING COST-EFFECTIVE NEAR THE WELLHEAD

October 25 - A significant technological advance in the treatment of [shale gas](#) wastewater was introduced today at a ceremony near Fort Worth, Texas.

[Fountain Quail Water Management](#), a wholly owned subsidiary of Calgary-based Aqua-Pure Ventures, Inc. (AQE – TSX Venture), unveiled its ROVER System, the latest addition to its industry-leading line of [oil and gas](#) field [water treatment](#) solutions. The ROVER mobile clarifier package is a rugged, durable in-field technology designed for primary treatment of shale gas flowback at or near the source.

The self-contained system, which can treat up to 10,000 barrels of flowback and [produced water](#) per day, addresses some of the most pressing challenges faced by operators in shale gas plays across North America. [Read more](#)

NOVACES DEVELOPS NEW CAPABILITIES FOR THE INCIDENT COMMAND SYSTEM IN SUPPORT OF PROJECT MANAGEMENT FOR DEEPWATER HORIZON OIL SPILL

[NOVACES](#), a [management consulting](#) firm that provides [performance management](#), continuous process improvement (CPI), and [project management](#) services to public and private sector organizations, announced the availability of its innovative solution to look beyond the normal Incident Command System (ICS) planning cycle and predictably identify personnel, materials, equipment and costs over the entire course of an [emergency response](#).

This new application provides response teams a better analysis of the scope, resources and costs throughout completion of an incident.

The National Interagency [Incident Management](#) System (NIIMS), based on ICS, is a systematic process for the command, control, and coordination of emergency response used by all levels of government and by many organizations in the private sector.

It is a process by which personnel, policies, procedures, facilities, and equipment are integrated into a common organizational structure designed to manage emergencies or disasters of all types, including fires, [floods](#), hurricanes and [oil spills](#). All emergency response organizations are trained in this standardized approach. [Read more](#)

Products and Services (continued)

RUGGED SEARCHLIGHTS ARE SPOT ON

Workboats, emergency vessels and military craft that operate in rough conditions require top-notch searchlights. With superior light output and heavy-duty construction, XR series Xenon Searchlights and Solar-Ray Searchlights from Perko are the top choices of marine professionals.

Xenon-filled lamps in Perko's XR series produce an extremely far-reaching, narrow beam of intensely bright white light. The 15" short arc Xenon XR operates continuously at 500W to produce 35 million candlepower over 3 nautical miles. The 19" XR operates at 1,600W to provide over 100 million candlepower up to 5.5 miles.

With marine-grade aluminum housing, yoke and base, the lights are completely sealed and waterproof. Timkin ball bearings allow for frictionless 380° rotation. Integrally cast cooling fans prevent bulb overheating and an optional heater system is available when operating in icy conditions. [Read more](#)

Company News

EVTN RECEIVES MULTI-UNIT VORAXIAL® ORDER FROM MAJOR OIL COMPANY

October 27 - Enviro Voraxial Technology, Inc. (OTCBB: EVTN) announced today that it has received a multi-unit purchase order to install four (4) Voraxial® 2000 Separators at the oil production facilities of one of the world's largest oil and gas production and exploration companies. The Voraxial® Separators, which were recently shipped, will be installed for bulk oil/water/solid separation.

This application for the Voraxial® represents a large global market requiring bulk oil, water and solid separation as a critical part of the oil production process. EVTN's patented Voraxial® technology provides the oil producers with a more compact and effective solution which increases efficiencies and decreases cost for the oil companies.

This customer processes millions of gallons of produced water per day and is a world leader in applying advanced technology to boost production from mature oil and natural gas fields and access hard-to-reach reserves. It is a high priority for most oil companies to consistently replace and expand reserves through improved recovery. EVTN's advanced Voraxial® separation technology can assist the oil companies in meeting these objectives. [Read more](#)

Corrections

Kate Nwuba writes –

Dear Editor,

I am a keen reader of ISCO newsletter. I was just going through the article written on Nigeria: NOSDRA - Challenges of cleaning oil spill and came across where my organisation was totally given a wrong name. Kindly note that NIMASA stands for Nigerian Maritime Administration and Safety Agency and not National Institute for Maritime Accident and Safety as stated. It is a government Agency under the Federal Ministry of Transport and is responsible for the implementing all Conventions and Codes developed by the International Maritime Organisation (IMO) which Nigeria has ratified and domesticated. The Agency ensures Safe, Secure Shipping and a clean Marine Environment among other functions.

Kindly effect the correction in your next edition since this is an international newsletter which is read globally.

Best regards

MRS. NWUBA, CATHERINE, C.

CHIEF (MARINE ENVIRONMENT MANAGEMENT OFFICER) POLLUTION CONTROL DIVISION
MARINE ENVIRONMENT MANAGEMENT DEPARTMENT, NIGERIAN MARITIME ADMINISTRATION AND SAFETY AGENCY
MARITIME RESOURCE CENTRE, APAPA, LAGOS.

Editor - Please accept my sincere apologies for an error I should have noticed and corrected. Glad to hear you enjoy reading the ISCO Newsletter.

Legal disclaimer: Whilst ISCO takes every care to ensure that information published in this Newsletter is accurate unintentional mistakes can occur. If an error is brought to our attention, a correction will be printed in the next issue of this Newsletter. Products and services featured in the ISCO Newsletter and/or the ISCO website, including the International Directory of Spill Response Supplies and Services, have not been tested, approved or endorsed by ISCO. Any claims made by suppliers of products or services are solely those of the suppliers and ISCO does not accept any liability for their accuracy.
