ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 269, 7 February 2011

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News

OIL CARGOES AT RISK FROM SOMALI PIRATES

January 27 - Better equipped Somali pirates operating deep at sea threaten oil tankers in key waterways, and more naval firepower is "desperately needed" to combat the growing risk, shipping groups warned on Tuesday.

Seaborne gangs are making tens of millions of dollars in ransoms, and despite successful efforts to quell attacks in the Gulf of Aden, international navies have struggled to contain piracy in the Indian Ocean owing to the vast distances involved.

Shipping associations BIMCO, the International Chamber of Shipping, INTERCARGO and INTERTANKO said in a joint statement on Tuesday the situation had "changed radically" in recent weeks due to new pirate tactics, which included heavier firepower.

"They make greater use of so-called mother ships, some of them large hijacked vessels, which has vastly expanded their range of operation to encompass much of the Arabian Sea between the Gulf of Aden, Somalia and India," the statement said. "Over 40 percent of the world's seaborne oil supply now passes through waters at high risk from pirate attack." Read more:
http://www.safety4sea.com/article.php?id=2430

FORGOTTEN: THE MOST RADIOACTIVE TOWN IN EUROPE

January 30 - Palomares, Spain, still awaits clean-up 45 years after nuclear accident - At about 10.30am on 17 January 1966, when Jesus Caceido heard a deafening explosion coming from the village of Palomares, the future mayor of the area had no idea he had just witnessed one of the Cold War's most serious nuclear accidents – or that nearly half a century later, the 1,500 villagers would still be battling to have the ensuing contamination removed for good. After all, they live in Europe's most radioactive village.

News (continued)

Today, 45 years after four nuclear bombs fell near the village when a US Air Force B-52 bomber and a refuelling aircraft collided in mid-air, tens of thousands of cubic metres of contaminated soil and an estimated – although never officiallyconfirmed – half a kilogram of plutonium remain. And the radiation is getting potentially more dangerous, not less. Read more

ONE MILLION DOLLAR TOP PRIZE IN OIL SPILL RESPONSE COMPETITION – REGISTRATION CLOSES ON FEBRUARY 15

WENDY SCHMIDT OIL CLEANUP X CHALLENGE

This Competition (featured in issue 254 of the ISCO Newsletter) is to demonstrate new spill removal system technologies, using advancing systems for the removal of oil from the surface of the ocean and improving the performance of existing skimmer/boom systems technology. The Competition will award a prize purse of $1,400,000 USD to the Teams that complete the best technology demonstration of the removal of test oil in a test environment with ocean salinity sea water and wave conditions specified in the Competition Testing Protocol. The test environment will be an experimental oil removal tank (OHMSETT – National Oil Spill Response Research & Renewable Energy Test Facility in Leonardo, New Jersey, USA). Teams must prove to the Competition's Judging Panel their ability to recover 2,500 GPM or approximately 35,714 barrels of oil per day (based on a 10 hour operating period) from an oil spill of 1-inch thickness, with an oil recovery efficiency (ORE) rate of at least 70%.

Teams must also prove to the Judging Panel that their technology achieves low environmental impact. The Judging Panel will narrow the field of Teams down to up to ten Semi-finalist Teams based on Competition Submissions. The Judging Panel will then judge the Semi-finalist Teams' demonstrated results from the test environment to identify three Finalist Teams. The three Finalist Teams will then compete to establish first, second, and third place. The Team with the best demonstration during Final Field Testing will be awarded $1,000,000 USD, the second place Team will be awarded $300,000 USD, and the third place Team will be awarded $100,000 USD.

Teams from around the world are invited to register for this competition. In the registration process, they will need to submit their approach for being able to clean up oil slicks created by spills or leaks from ships or tankers (e.g. Exxon Valdez), land drainage, waste disposal, or oil platform spill (e.g. Deepwater Horizon). To join the competition you must register before February 15

More info at: http://www.iprizecleanoceans.org/Page/Home

USA: DISPERSANTS PERSISTED AFTER BP SPILL

January 27 - Nearly 3 million liters (some 771,000 gallons) of a chemical dispersant ejected into oil and gas from BP's *Deepwater Horizon* oil spill last spring and summer lingered until at least September, a new study shows. The chemicals moved in concert with plumes of oil deep beneath the Gulf of Mexico's surface.

David Valentine of the University of California, Santa Barbara and his colleagues periodically sampled plume water that flowed at depths of 1,000 meters or more between May and September 2010. They shipped these samples to chemist Elizabeth Kujawinski at the Woods Hole Oceanographic Institution in Massachusetts and her colleagues for analysis.

With rare exception, they report online January 26 in *Environmental Science & Technology*, the dispersant did not degrade but instead moved with the plumes until they were lost to dilution in the Gulf's depths.

"If the dispersant worked, it should have been associated with the liquid oil — that is, moving off laterally into the deepwater plume. Which is where we found it — and the only place," Kujawinski says. "We did not see it below the plume or even sloughing off the top of it."

To scout for the dispersant, known as Corexit 9500A, Kujawinski focused on an active ingredient known as DOSS, or dioctyl sodium sulfosuccinate. It accounted for 10 percent by weight of the dispersant mixture, which was released at rates ranging from around 13,000 to 80,000 liters per day.

Prior to capping the well, plume concentrations of DOSS hovered in the low parts per million range, after which it diminished to parts per billion concentrations. DOSS levels in the plume matched what would have been expected if the dispersants remained with the oil. That, Kujawinski says, suggests no biodegradation of DOSS — and shows why remnants of dispersant applications could be detected 300 kilometers from the wellhead and even two months after their last application.

"When you read about Corexit, it's supposed to biodegrade," observes Carys Mitchelmore of the University of Maryland's Center for Environmental Science in Solomons. But specific rates have not generally been reported, she adds. So the dispersant's apparent persistence in the new paper is somewhat unexpected.

Then again, Mitchelmore notes, "Corexit is made up of multiple chemicals, so each might have different biodegradation rates." The aquatic toxicologist says she would like to see are data showing whether Corexit enhanced the ultimate breakdown of BP's oil. Read more

ALASKA OIL LINE THAT LEAKED DEEMED RISKY SINCE 2008

A risk assessment of the Trans Alaska Pipeline System in 2008 recommended replacing a stretch of line that leaked this month, since a concrete casing made it impossible to inspect for corrosion, operator Alyeska told a U.S. lawmaker this week.

News (continued)

A leak discovered on January 8 in a concrete-encased booster line along TAPS forced the 800-mile (1,287-km) pipeline system to shut last week, temporarily cutting off 12 percent of U.S. oil production, and forcing a risky winter-time repair. The pipeline restarted on Monday.

The last corrosion inspection on the leaky stretch of line occurred in 2008 but was deemed too risky and halted, operator Alyeska told Rep. Ed Markey, the ranking Democrat in the House Natural Resources Committee, in a letter dated January 18 and given to Reuters on Friday.

"Attempts to inspect the below ground concrete encased piping were stopped in 2008 due to the risk of potential damage to the piping during necessary removal of the concrete encasement," Alyeska CEO Thomas Barrett wrote.

"A risk assessment completed in October 2008 recommended not removing the concrete, but rather, replacing the pipeline." [Thanks to Don Johnston of ISCO Associate Member, DG & Hazmat Group for relaying this report] Read more: http://planetark.org/wen/60971

CHINA: REGULATIONS OF THE PEOPLE'S REPUBLIC OF CHINA ON THE PREVENTION OF MARINE POLLUTION FROM SHIPS

We refer operators to previous circulars on the new Regulations of the People's Republic of China (PRC) on the Prevention and Control of Marine Pollution from Ships ("the Regulations"), and the postponement of the requirement that owners/operators of (a) any ship carrying polluting and hazardous cargoes in bulk or (b) any other vessel above 10,000 gt enter into a pollution clean up contract with a Maritime Safety Agency (MSA) approved pollution response company before the vessel enters a PRC port.

These requirements were postponed pending additional rules to be issued by the MSA. The International Group understands that additional rules (the PRC Regulation on the Emergency Prevention and Handling of Marine Pollution) have now been agreed and are due to be issued in the near future with an accompanying Implementation Notice and, further, that this Notice will indicate the date on which owners/operators will be required to comply and contract with an approved spill responder. There will therefore be a "grace" period before enforcement of the requirement to contract with an approved spill responder. The International Group also understands that the list of approved responders in each Chinese port will be issued either with the Notice or shortly thereafter and that the list of responders will be issued for the first year by the China MSA and in future years by the individual local MSAs. Read more

AUSTRALIA: NATIONAL PLAN TO COMBAT POLLUTION OF THE SEA

The Federal Government is to undertake a thorough review of Australia's level of preparedness in the event of a serious maritime pollution incident.

The Australian Maritime Safety Authority has awarded the review contract to Parsons Brinckerhoff and Thompson Clarke Shipping.

The review will investigate:

- How well Australia meets its obligations under the International Maritime Organisation Convention on Oil Pollution, Preparedness, Response & Co-operation.
- Whether current responses meet government and industry expectations.
- The suitability and adequacy of the existing accountabilities, roles and resources.
- Response capability to all types of marine spills and future preparedness.

A reference group will assist the review team and include representatives from all states and the NT, the shipping, oil and ports industries, Maritime New Zealand and AMSA. Read more

GHANA: CONTAINING THE POSSIBILITY OF MAJOR OIL SPILL

A major concern Ghanaians have expressed in respect of the country's entry into the club of oil producing nations has to do with its ability to effectively manage the environmental impacts of the industry.

Already, it is believed that the consultants who worked on the Jubilee Environmental Impact Assessment did not exactly do a good job. They are said to have used more of historical data rather than trend data in their analysis of potential impact on fisheries. Besides, impacts on livelihoods were trivialized to the extent that no clear mitigation measures were articulated in the management plan, the result of which is the increasing sea-use contestations that have characterized company-community relations.

A test case of the adequacy of the country's laws to deal with matters of spill when they occur, revealed last year that in spite of the Environmental Protection Agency's rhetoric, there are yawning gaps in our environmental and petroleum exploration and production laws, which made it possible for Kosmos Energy to escape sanctions for spilling low toxicity oil based mud in its operational area. Read more

USA: KALAMAZOO SPILL IS A WAKE-UP CALL FOR STATE

Michiganders have watched in horror over the past week as a thick layer of oil from a pipeline rupture near Marshall rode down the Kalamazoo River toward Lake Michigan. Even in these divisive times, protecting the Great Lakes from contamination is a concern that commands unanimous support.

Workers try to contain a flow of oil on A Drive North as oil-spill cleanup continues along the Kalamazoo River in Marshall on Thursday. Enbridge owns the pipeline that ruptured, and the company estimated 820,000 gallons of oil were spilled.

News (continued)

So it is scarier yet to remember that the same pipeline crosses under the St. Clair River en route to Sarnia and points beyond in Ontario. Numerous other pipelines crisscross the state, including one for natural gas under the Straits of Mackinac and another filled with refined products such as gasoline, which ruptured near Jackson in June 2000.

Because virtually all of Michigan lies within the Great Lakes basin, any major pipeline break or other incident involving oil products has the potential to reach the waters that give Michigan its rightful sense of pride. The gasoline loosed in the 2000 pipeline rupture near Jackson got as far as the Grand River, which also flows into Lake Michigan, but it did not travel nearly as far as the Marshall spill has. Read more
[Thanks to Don Johnston of ISCO Associate Member, DG & Hazmat Group, for passing on this report]

USA: CANNON HAD ROLE IN OIL TANK FIREFIGHTING

Oil cannon donated to Wood County Historical Center

Some marveled at the oil industry's varied attempts to seal the surging oil leak in the Gulf of Mexico last year. But it appears unorthodox attempts to divert disaster are nothing new in the industry.

An example of a creative solution to a crude problem - a cannon to stop oil tank fires - was recently donated to the Wood County Historical Center.

"It's such an interesting thing," said Kelli Kling, who is in charge of marketing, public relations and special events at the historical center. "When I first heard about it, I was skeptical. What would an oil company do with a cannon?"

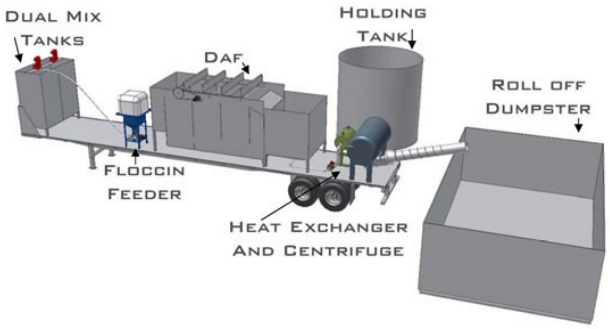
As it turns out, the cannon was used when a storage tank for oil caught on fire, often when touched off by lightning or by sparks from passing steam engines. The fires were often impossible to extinguish and raged on until all the oil burned. So, the cannon was used to shoot gaping holes in the side of the tanks for the oil to drain out.

"It's so interesting that a cannon would be used as a firefighting tool. But there's nothing they could do but let it burn out. We've come a long way, but we're still making it up as we go along," Randy Brown, curator of the historical center, said referring to the unusual attempts to cap the Gulf oil leak last year.

The cannon was donated to the museum by the Buckeye Pipeline Co., in Northwood. The cannon, which weighs about 500 pounds, was cast in North Baltimore and was used during the 1920s in the Cygnet oil fields. The large wooden tank structures, with metal roofs and highly combustible oil, were very vulnerable to lightning, Kling explained. "You've got these giant tanks, full of oil. It wouldn't take much," Brown said. "It's not like today, with all the safety equipment. This was a guy with a cannon." Read more
[Thanks to Don Johnston of ISCO Associate Member, DG & Hazmat Group, for passing on this story]

Technology

MOBILE OIL/WATER TREATMENT UNIT



Integrated Engineers has developed a process to remove oil from water or salt water using a mobile 100 gpm DAF system. The oily sludge that is skimmed from the DAF is stored in a Sludge Tank and then separated using a 3-phase centrifuge where 80% of the oil is recovered and recycled. The oil can be free oil or emulsified oil before separation in the DAF. The 48 foot trailer mounted unit is mobile across country and leveled at the site for cleanup purposes such asProduced Water sites, natural gas fractionating, oil well drilling, as well as oil spill locations.

The process uses a sump pump to pump the oil/water to the Mix Tanks where the Floccin™ is added. The Flocced water is pumped to the DAF where it is separated by floating the oil/solids to the surface and skimmed off to the sludge Holding Tank. The treated water is returned to the point of origin. The solids are pumped through a heat exchanger where it is heated to 150 degrees F and then separated 3 ways into oil, water and solids with the 3-phase centrifuge.
Read more

People in the News

MATTHEW SOMMERVILLE JOINS IOPC FUNDS

Matthew Sommerville joined the IOPC Funds Secretariat as Technical Adviser/Claims Manager on 1 February 2011.

Marine Engineer by profession, Matthew brings 26 years of experience in the marine spill response sector from the UK Government, scientific research establishments, commercial and not for profit organisations. As a manager, technical adviser, trainer and consultant, he has had active involvement in a variety of roles in spill incidents, from field operations to incident command in marine, coastal and inland environments worldwide.

He is also experienced in claims handling, having been involved in the preparation, assessment and management of claims working with ITOPF, P&I Clubs and the IOPC Funds on a number of incidents starting with the Sea Empress in 1996 up to the *Solar 1* in 2007.

Cormack's Column

In this issue of the ISCO Newsletter we are printing the 12th article in a series 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.

HARMONISATION OF TECHNOLOGY AND MARINE ENVIRONMENT (PART 12)

As to quantification of oil inputs to the sea, we already know those from land sources to be greater than those from ships, while the latter receive more environmentalist attention than the former despite neither having so far produced the species-extinction/ecological-disaster expected by environmentalism. Again, we know that operational releases from ships have been steadily reduced by progressive introduction of knowledge-based crude oil washing of cargo tanks, the collection of these washings in a single tank and the loading of the next cargo on top of the washings; by dedicating individual cargo- tanks to ballast-carriage and by segregating cargo-tanks from ballast-tanks to avoid all danger of discharging oil with water, and by improvements in oil-water separation prior to bilge discharge.

Thus, while such as the *Torrey Canyon* and *Deepwater Horizon Incidents* distort annualised figures for oil tanker and offshore well releases, the reduction in frequency and size of operational discharges of oil to the sea from ships is confirmed by the annual estimated inputs[3] shown in Table 1.

Source (million tonnes)	1973	1981	1989
Tanker Operations	1.080	0.700	0.159
Bilges and Bunkering	0.500	0.300	0.253
Marine Terminals	0.003	0.022	0.030
Dry Docking	0.250	0.030	0.004
Tanker Accidents	0.200	0.400	0.144
Non-Tanker Accidents	0.100	0.020	0.007
Total	2.133	1.472	0.597

As to comparison with annual oil inputs to the sea other than from ships, Table 2 shows the estimated inputs from offshore oil production, land-source oil and natural petroleum seeps[3] for 1978.

Source	million tonnes, 1978
Offshore Production	0.06
Coastal Refineries	0.06
Industrial Waste	0.15
Municipal Waste	0.30
Urban Runoff	0.40
River Runoff	1.40
Atmospheric Rainout	0.60
Natural Seeps	0.60
Total	3.57

Again for comparison with the above, Table 3 shows estimates of natural organic and hydrocarbon production in the sea, hydrocarbon production by forests, and geological seepage[3] on an annual basis.

Source	million tonnes annually
Total Phytoplankton	86,000
Phyto-Hydrocarbons	26
Forest Hydrocarbons	13 -432
Hydrocarbon Seepage	0.60

Thus, it can be seen that natural hydrocarbon production by marine phytoplankton and forests on land are many times greater than inputs from marine transport, from offshore oil production, and indeed from both combined. Admittedly, emissions from growing trees are relatively unstable in air and light. However, even if 99% was oxidised to carbon dioxide and water in the atmosphere and only 1% reached the sea, it would be a substantial amount in comparison with the individual entries and their totals in Table 2, let alone Table 1. In addition, it should be noted that while there are no estimates of the total natural runoff of organic compounds from the decay of all land-source flora and fauna, this must be very substantial prior to its ultimate transformation to carbon dioxide and water or to its interim transformation to natural gas, oil and coal before their combustion as fuel completes what would otherwise have been their natural transformation to carbon dioxide and water. Indeed, petroleum is estimated to accumulate at a rate of 1400 million tonnes per annum while its precursors may be considered the basal components of the marine and land-based food chains. Thus, environmentalists are invited to reality-evaluate or reality-refute[1] their belief in species-extinction/ecological-disaster in light of the above knowledge and the knowledge which I will next present on the intensity of oil inputs, these evidently being too low to cause any such extinctions or disasters.

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.

Events

More information on future events and training courses is on the events page of the ISCO website

UK: ARCTIC OIL SPILL CONFERENCE 2011

14-15th June 2011, The Hilton Hotel, London Paddington

15% Discount on Registration for ISCO Members !

The Arctic has one of the most pristine marine environments in the world and could be seriously impacted if an oil spill, caused by either a pipeline leak or blow-out, occurred at a time corresponding to wildlife concentrations and migrations.

This topical event will provide information on the **very latest industry research and developments**, review what is being done to **prevent oil spills on ice and in ice-covered waters** and outline some of the methods in place for **containing and cleaning up oil spills** if they do occur.

5 reasons why this is a must attend event:

1. Benefit from hearing from ***recognised experts and oil industry professionals*** providing a unique opportunity to ***knowledge share, discuss and debate!***

Events (continued)

2. Enhance your comprehension of the ***regulatory and legislative requirements***
3. Gain an understanding of basic ***oil behaviour in ice and the implications for response***
4. Obtain crucial information regarding **shoreline protection**
5. Learn how to develop ***oil spill response strategies*** and gain an understanding of the various oil ***spill response technologies*** available More info

BAHRAIN: MEOS 2011

March 20-23, 2011 - Inaugurated in 1979, MEOS is the most established exhibition of oil and gas products and services in the Middle East, attracting NOCs, IOCs and major operating companies. The conference, organised by the Society of Petroleum Engineers (SPE), is the largest and best attended technical event of its kind in the region. At MEOS 2011 they combine to offer exceptional networking, business and educational opportunities to all professionals with an interest in the future of the Middle East's hydrocarbon industry.

More info

FRANCE: SAFER SEAS III 2011

"For safer and cleaner seas" - Tuesday 10 **to** Friday 13 May 2011, Quartz conference center – Brest, France.

The Brest métropole océane urban council is working in coordination with the technopôle Brest Iroise science park, and supported by the Pôle Mer marine competitiviness cluster, the European Union, the Brittany regional council and the Finistère general (county) council, to organize the 3rd international Safer Seas event to be held from 10 to 13 May 2011 at the Quartz conference center, devoted to issues of maritime safety and security. An event designed with an international scope, Safer Seas was granted the High Patronage of the International Maritime Organization [IMO] and of The European Union. More info

CANADA: INTERNATIONAL CONFERENCE ON ENVIRONMENTAL POLLUTION AND REMEDIATION

August 17-19, 2011 Ottawa, Ontario, Canada - The aim of ICEPR'11 is to bring together the Canadian and international community working in the field of environmental sciences, engineering, and technology, and to foster an environment conducive to present advances in this field. This conference will also provide a golden opportunity to develop new collaborations and gather world experts on the different topics including pollution detection, environmental remediation, and pollution prevention. The ICEPR'11 program will include invited keynote talks, oral presentation sessions, and poster sessions. More info

USA: CONTINGENCY PLANNING CONFERENCE AND EXHIBITION 2011

May 9-11, 2011, Las Vegas, NV. - focuses on the needs of CPM and information officers and professionals, in the public, private and education sectors, who are responsible for ensuring the ongoing flow, protection, and rapid re-deployment of critical business information, functions and personnel in the instance of natural or man-made disasters.

More info

Publications

FIRE ON THE HORIZON

"The Untold Story of the Gulf Oil Disaster" a book by John Konrad and Tom Shroder.

Blending exclusive first-person interviews and investigative reporting, FIRE ON THE HORIZON: The Untold Story of the Gulf Oil Disaster (Harper; on sale March 1, 2011) is the definitive account of the April 20, 2010 explosion of the Deepwater Horizon, one of the most sophisticated and expensive industrial machines ever built. Written by veteran oil rig captain John Konrad and award-winning Washington Post journalist Tom Shroder, FIRE ON THE HORIZON captures life aboard the rig and the life of the rig, itself, vividly detailing the events that preceded its demise. The authors lay bare the logistics and mechanisms of deepwater drilling and identify the many factors behind the accident. More info

DISASTER RESPONSE STAFF OFFICER'S HANDBOOK

A US Army publication - Provides a good overview/summary of many emergency response systems, laws, etc... [Thanks to Gregory Banner of Hazmat 101 Group for passing on this item] More info

USA: TECHDIRECT & TECHNOLOGY INNOVATION NEWS SURVEY

TechDirect's purpose is to identify new technical, policy and guidance resources related to the assessment and remediation of contaminated soil, sediments and ground water. February 2011 issue at: http://clu-in.org/techdirect The December 16-31, 2010 *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/

Company News

T&T BISSO & RESOLVE FORM FIREFIGHTING COALITION

RESOLVE Marine Group and T&T BISSO announced their coalition for Marine Firefighting services in U.S. waters. This agreement combines both companies' extensive firefighting infrastructure to produce overlapping coverage and higher volume firefighting capacity throughout the U.S. This coalition was crafted specifically to help tank vessel operators fully comply with the new Oil Pollution Act of 1990 regulations that will be effective on February 22, 2011.
Read more