ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

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ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO and is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisations.

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International news

35 YEARS SINCE THE ESTABLISHMENT OF THE FIRST IOPC FUND

October 16 - The 1971 Fund Convention entered into force 35 years ago, on 16 October 1978, establishing the first International Oil Pollution Compensation Fund (the 1971 Fund). The Fund had 14 Member States at that time and has evolved and grown today into what is now known as the IOPC Funds, covering 113 States across the world.

The 1971 and 1992 Funds have unfortunately had to deal with nearly 150 oil pollution incidents over those 35 years, but thanks to the existence of the IOPC Funds and the international compensation regime, compensation totalling £569.1 million has been paid to victims of oil pollution damage.

The agenda for the meetings of the IOPC Funds' governing bodies, set to take place during the week of 21 October 2013, demonstrates the amount of work still being carried out by the IOPC Funds to ensure that the Organisations continue to fulfil their mission to pay prompt compensation to victims and that the practices of the Organisations are regularly reviewed and revised in line with developments in the international maritime community.

Whilst the work relating to the winding up of the original 1971 Fund will be high on next week's agenda, the focus will remain on the ongoing incidents, as well as on the preparation for the challenges which any new incident may bring.
Source document

ARCTIC COUNCIL SEEKS BALANCE AS COMMERCE BECKONS IN THE FAR NORTH

October 16 - Not long ago, the Arctic Council worked in relative obscurity, focusing mainly on protecting the environment and largely ignored even by the eight countries that created it. Not any more.

A conference in Brussels this week underscores how the council has been thrust into the centre of a debate over hundreds of billions of dollars' worth of commercial opportunities, weighed against serious environmental risks.

The rush to develop the Arctic's resources and open shipping lanes has given

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International news (continued)

the council new importance and countries are clamouring to join. This year, China, India, Japan, Singapore, Italy and South Korea became observers, joining six other nations; the European Union is eager to sign on.

There is also a push to include businesses in the discussion about the Arctic's future. Canada, which recently began a two-year term as the council's chair, wants to create a Circumpolar Business Forum to work within the council on economic issues.

Recent interest shows how development of the Arctic has become an international concern, as global warming presents new opportunities for mining, oil exploration and transportation.

It also marks an end to the once cozy, club-like nature of the Norway-based council, which was founded 17 years ago by Canada, the United States, Russia, Norway, Sweden, Denmark, Finland and Iceland. *The Globe and Mail* Read more

UNEP AND KYOTO UNIVERSITY TO COOPERATE ON ENVIRONMENTAL EDUCATION

October 11 - The United Nations Environment Programme (UNEP) and Kyoto University today signed a comprehensive agreement that will see experts and graduate students cooperate on key environmental issues, particularly freshwater management.

This is the first such agreement with a Japanese university, and is one of only a few such arrangements with universities worldwide.

Kyoto University and UNEP have already collaborated for over ten years, with students being placed on the GEMS/Water programme-which supports global, regional, and national environmental assessment and reporting processes on the state and trends of water resources. *UNEP News Centre* Read more

Incident reports

USA: NORTH DAKOTA OIL SPILL DRAWING MEDIA VISITS; CLEAN-UP WILL TAKE MONTHS

October 13 - As crews continue cleaning up after a pipeline break spilled 20,600 barrels of oil near here, more national media outlets are finding their way to the site in northwest North Dakota.

As of Sunday afternoon, crews had recovered about 1,800 barrels of oil, said Eric Haugstad, director of contingency planning and response for Tesoro, which owns the pipeline.

Crews have dug 3,000 feet of trenches in the area of the leak and area using "super sucker" vacuum trucks that pick up solids and liquids from the trenches, Haugstad said. The work continues 24 hours a day.

A St. Paul environmental consultant is on site and working to develop a plan to clean up and restore the site. Haugstad said he expects a plan to be ready within the next week or so. *GrandForksHerald.com* Read more [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Tesoro detected anomalies on North Dakota line before spill

October 17 - Tesoro Logistics LP detected anomalies during an inspection of its 20-year-old North Dakota pipeline just days before the line ruptured and spilled 20,600 barrels of oil onto farmland, the company said on Thursday.

The six-inch pipeline was carrying Bakken oil to the Stampede rail facility outside Columbus, North Dakota, when it ruptured. A farmer harvesting wheat discovered oil spouting from the line on September 29.

A robot, known as a "smart pig," detected anomalies during what Tesoro called routine internal inspections of the pipeline September 10 and 11. *Reuters* Read more

VIDEO: the largest ever US land based oil spill *Mining.com* *October 17* See report and video

Incident reports (continued)

CHINA: TANKER EXPLOSION KILLS 7 IN E CHINA, OIL LEAKS

October 12 - An unknown amount of oil is leaking into the Yongjiang River in the coastal city of Ningbo in East China's Zhejiang province after an oil tanker explosion that killed at least seven people on Saturday morning.

Six ships are dealing with the oil leak at the scene, according to the provincial maritime affairs bureau. *China Daily* Read more

SOMALIA: TANKER SAFE AFTER ATTACK BY SUSPECT PIRATES OFF SOMALI COAST

October 14 - EU Naval Force confirmed that on Friday, 11 October 2013, a fully laden super tanker, known as a Very Large Crude Carrier (VLCC), was fired upon by eight armed men in two 'skiffs' 230 miles off the Somali coast.

The attack was successfully repelled by the Armed Security Team on board the super tanker and the vessel is now safe. *The Maritime Executive* Read more

Other news

CANADA: BC AND ALBERTA CO-OPERATION; TRANSPORTATION OF CRUDE OIL BY RAIL

October 15 - British Columbia, Alberta work together to strengthen resource sector

B.C. Premier Christy Clark and Alberta Premier Alison Redford today released the terms of reference guiding their joint working group to open new energy-export markets.

The two Premiers also announced they would next meet in Vancouver on Nov. 5, following Premier Redford's address to the Vancouver Board of Trade.

In July 2013 the Premiers announced the formation of a working group with the shared goals of opening new markets, expanding export opportunities, creating jobs and strengthening the economy of both provinces through the development of the oil and gas sector.

The terms of reference focus on five key areas: harmonizing marine and land spill response; ensuring fair fiscal and economic benefits to both provinces; consulting with First Nations; exploring resource transportation options; and increasing public awareness of responsible resource development. Both provinces will agree on working teams to develop recommendations.

Over the last two months, the provinces have met regularly, building on the progress achieved by the Premiers. The working group has been sharing information and discussing common goals, while also formalizing the terms of reference for the work ahead. The final report with recommendations and an action plan will be released by Dec. 31, 2013.

Terms of Reference:

http://www.newsroom.gov.bc.ca/ministries/natural_gas_development/Working%20Group_TOF_OCT15_MNGD_BCAB.pdf

British Columbia Newsroom Read more [Thanks to Gerald Graham, World Ocean Consulting]
Another report in the Huffington Post of October 19

October 16 - If B.C. pipelines not built, oil will flow west by rail

Ground shots showing the bitumen flow lines from a SAGD well pad to the Central Processing Facility at Nexen's Long Lake Phase 1 integrated oilsands facility in north eastern Alberta. Photograph by: Dave Olecko

B.C. and Alberta acknowledged Tuesday that if the Northern Gateway and Trans Mountain pipelines to the west coast are not built, rail will fill the "void" to the coast.

It's the first time the B.C. Liberal government has stated that Alberta oilsands bitumen will flow to the B.C. coast and onto tankers destined for Asia whether or not pipelines are built.

The acknowledgment came in a terms of reference released by B.C. Premier Christy Clark and Alberta Premier Alison Redford on their joint effort to co-operate on opening new markets and expanding exports for oil, gas and other resources. *The Vancouver Sun* Read more

Other news (continued)

October 17 - Railways to face stiffer rules for testing crude-oil shipments for volatility

Railways and shippers have been ordered to test and classify crude oil by its volatility under a new set of federal transportation regulations.

The changes, which are a response to the deadly explosion at Lac-Mégantic, Que., are an attempt to address heightened safety risks associated with a surge in companies shipping light crude oil by rail.

The new rules announced Thursday follow several Globe and Mail reports that have highlighted how oil shipped to Canada from the Bakken region of North Dakota is more volatile than previously believed.

Questions over labelling and volatility are at the heart of a probe into the disaster, which killed 47 people and destroyed the core of the small Quebec town. *The Globe and Mail* Read more

USA: BP TRIAL UPDATES

October 12 - Second week of phase 2 of BP trial comes to end

The second week of trial to determine the amount of fines to be assessed in the 2010 BP oil spill has ended with both sides at extreme odds on the amount of oil released into the Gulf of Mexico.

Earlier in the week both the Department of Justice and BP presented expert testimony to U.S. District Judge Carl Barbier, who is hearing the case without a jury, on the amount of oil spilled from the Macondo well, a key factor in determining what the final penalty BP will have to pay under the Clean Water Act. *The Louisiana Record* Read more

October 15 - BP witnesses continue to bolster company's low Gulf oil spill estimates

Three more BP expert witnesses on Tuesday delivered testimony during the federal trial over the company's Macondo oil well blowout designed to support BP's estimate that only 3.26 million barrels of oil were released during the 87-day spill.

The witnesses presented their views on the compressibility of rock in the Macondo oil reservoir, the porous nature of that rock, and estimates of how much the oil "shrank" after it left the reservoir, all factors in the complex accounting exercise being conducted to determine how much oil ended up in the Gulf of Mexico.

In each case, the conclusions of the witnesses backed BP's contention that the spill contained nowhere near the 5 million barrels that the U.S. Justice Department contends was spilled. *The Times Picayune* Read more

October 15 - Ex-Halliburton manager pleads guilty

A former Halliburton manager pleaded guilty Tuesday to destroying evidence in the aftermath of the deadly rig explosion that spawned BP's massive 2010 oil spill in the Gulf of Mexico.

Anthony Badalamenti, 62, of Katy, Texas, faces a maximum sentence of 1 year in prison and a $100,000 fine after his guilty plea in U.S. District Court to one misdemeanor count of destruction of evidence. His sentencing by U.S. District Judge Jay Zainey is set for Jan. 21.

Badalamenti was the cementing technology director for Halliburton Energy Services Inc., BP's cement contractor on the Deepwater Horizon drilling rig. Prosecutors said he instructed two Halliburton employees to delete data during a post-spill review of the cement job on BP's blown-out Macondo well. *SFGate.com* Read more

October 17 - Experts at BP trial try to poke holes in opposing theories of how much oil soiled the Gulf in 2010

On what might have been the penultimate day in the latest convening of the BP oil spill trial, the company on Thursday presented experts who focused on undermining the oil-counting methods of the U.S. Justice Department's experts, and government lawyers in turn scoured the BP testimony looking to expose faults, all with a judge's decisions on millions of barrels of oil and potentially billions of dollars in fines on the line.

BP called Adrian Johnson, a mechanical engineer with expertise in oil and gas hydraulics who works for a firm that provides modeling software for the behavior of fluids in oil and gas production systems. Johnson criticized scientists who produced studies for the government on how much oil gushed from the Macondo well in 2010, saying they failed to factor numerous uncertainties and changing conditions in the well throughout the massive, three-month Gulf of Mexico crisis.

The government experts, Johnson said, used unreliable data from the failed "top kill" effort to jam the hemorrhaging well and the "top hat" project that collected some of the oil that erupted after the Deepwater Horizon rig exploded and sank, killing 11 workers and setting off the historic spill. Among the uncertainties, he said, was how the bits of rubbery "junk" pumped into the well during the top kill affected the oil flow afterward. *The Times Picayune* Read more

Other news (continued)

JAPAN: FUKUSHIMA UPDATES

October 17 - Ministry fails to use 77% of Fukushima decontamination budget; TEPCO refuses to pay

The Environment Ministry has failed to use 76.6 percent, or 247.2 billion yen, of its budget to decontaminate radioactive areas around the Fukushima No. 1 nuclear plant, the Board of Audit said.

Progress has been slow because opposition from local residents is making it difficult for the ministry to secure places to temporarily store the contaminated soil and debris collected in the work.

The ministry faces another problem: Tokyo Electric Power Co., the operator of the stricken Fukushima plant, refuses to cover all the costs of the decontamination work as required under law. *The Asahi Shimbun* Read more

October 17 - Japan open to all ideas on how Fukushima No. 1 can be scrapped

Japan will solicit proposals from both domestic and overseas nuclear experts and firms on how best to scrap the ruined reactors at Tokyo Electric Power Co's Fukushima No. 1 nuclear plant, officials said Thursday.

The International Research Institute for Nuclear Decommissioning will publicly seek ideas as early as this month, an institute official said.

While it is not presently putting the entire decommissioning process out to tender, the body's move will be welcomed by the international community, which has long called for Japan to make better use of available expertise around the globe. *The Japan Times* Read more

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TRINIDAD AND TOBAGO: OIL SPILL PLAN TO BE SIGNED TODAY

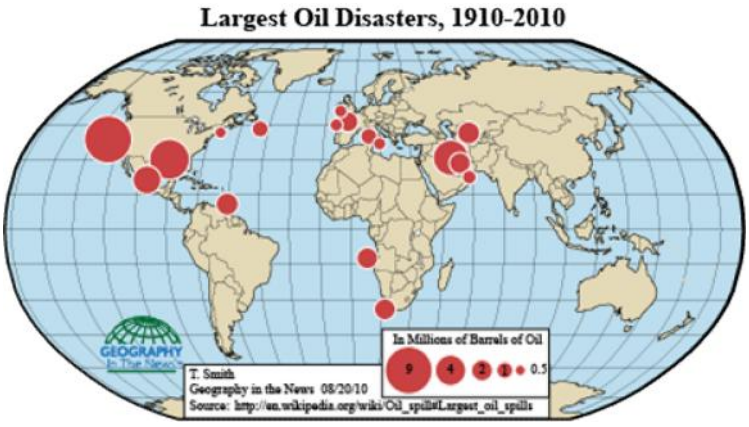
October 16 - Energy Minister Kevin Ramnarine will today preside over the signing ceremony for the National Oil Spill Contingency Plan (NOSCP). The ceremony place at 10.30 am at the Petrotrin Staff Club, Pointe-a-Pierre, and will be followed by a celebratory luncheon. The NOSCP, which is designed to mitigate the effects of oil spills on land and in marine areas across T&T, was approved by Cabinet earlier this year. It sets specific standards for oil spill equipment stockpiles and establishes timeframes for oil spill response.

A release from the Energy Ministry said: "Recent and projected increases in exploration and production activity, invigorated by the signing of production sharing contracts for various blocks, have warranted a comprehensive review of precautionary measures, especially in light of increased industry requirements arising out of the major oil spill incident in the Gulf of Mexico in 2010. Indeed, several measures in the plan have taken effect immediately with full implementation expected by late 2014."
Trinidad and Tobago Guardian Read more

USA: GEOGRAPHY IN THE NEWS: OIL SPILLS

World's Largest Oil Spills - Opening lines of an interesting article in National Geographic

October 12 - The world has followed news of British Petroleum's (BP) Deepwater Horizon's blowout and oil spill in the Gulf of Mexico since the oil rig exploded April 22, 2010. By the time engineers temporarily capped the well July 15, it had poured an estimated 3.0 million to 8.7 million barrels of oil into Gulf waters. How does the magnitude of this spill compare with past oil spills? This article only compares the magnitude of the world's largest oil spills and does not compare damages. No oil spill is without environmental consequences. Those in ecologically sensitive areas, however, may carry particularly long-lasting environmental and economic impacts.



Although there are some differences in estimates of individual oil spills, since 1910, there have been at least 17 oil spills around the world exceeding 30 million U.S. gallons or 715,000 barrels. One barrel of oil equals 42 U.S. gallons.

Unless it derives from a ship disaster, oil spill magnitude is usually difficult to estimate. The volume of oil carried by a ship is always known. Most spills on land are easier to estimate than those that occur underwater from oil well blowouts.

Of the 17 largest spills ever, 10 were from ship groundings, collisions or explosions, four were from oil derrick or platform disasters, two were from pipeline leaks, and one was the purposeful release in Iraq. Read this article

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Other news (continued)

THE 1 THREAT THAT COULD KILL A MAJOR OIL COMPANY

"The first company which will have a leak of oil [in the Arctic]... a drop, is a dead company" -- Christophe de Margerie, Total CEO

October 8 - At a recent event at the Council on Foreign Relations, Total's CEO did not mince words about the risks of drilling for oil in the Arctic: It's risky, and the chances of an oil spill in the region is simply too great for Total to justify investing in oil exploration there. While there are differing opinions across the oil space regarding if and how we should explore drilling in the Arctic, de Margerie's statements raise a very poignant question for oil and gas investors: How much are our energy investments at risk of a "giant killer"-type accident? Let's take a look at the risks involved in Arctic drilling and who is involved in the Arctic.

Oil and gas in the Arctic is quite possibly one of the most tempting oil fields on the planet. According to a 2008 assessment by the U.S. Geological Survey, there are more than 400 billion barrels of oil equivalent that are technically recoverable in the Arctic regions, 84% of which is found in the offshore regions. This would represent more than 22% of the proven reserves in the entire world.

The problem with drilling in these regions is that it is so technically challenging. We need only ask Royal Dutch Shell, which spent $5 billion trying to explore the offshore region of the Chukchi and Beaufort Seas, only to come up with no productive wells and a grounded drilling rig to show for it. In some ways, Shell was lucky -- the incident resulted in no spill
The Motley Fool Read the complete text of this article

People in the news

UK: CIWEM appoints new president

Photo: New CIWEM president Mike Summersgill

October 14 - The Chartered Institution of Water and Environmental Management (CIWEM) has appointed Mike Summersgill as the 27th President of the Institution

The CIWEM Fellow and Trustee replaces former president, Paul Hillman, who was appointed in October last year.

Summersgill is a Chartered Civil/Soils Engineer and a Chartered Environmentalist with almost 40 years of experience in the planning, design and construction of civil engineering and property development projects. *Edie Water* Read more

ISCO news

MORE PROMINENCE AND RECOGNITION FOR MEMBERS OF EXECUTIVE COMMITTEE AND MEMBERS OF ISCO COUNCIL

Following on requests the layout of the front page of the ISCO Newsletter has been changed to give more prominence and recognition to the members of our Executive Committee and Council. These are people who have accepted positions of responsibility in the organization and, as such, should be more widely recognised for their contributions to the success and continuing development of ISCO.

For those who may not know how ISCO is managed, an elected Executive Committee (EC) is responsible for managing the organization. Members of the EC are elected by all of the members of ISCO at the annual AGM to serve for a three year term. If willing to continue to serve as EC members they are eligible to have their term of office extended if so approved at the AGM, at which all members are entitled to vote either in person or by proxy. The EC can include up to 12 members and every member of ISCO has the right to nominate a candidate for membership of the EC. Nominations received are considered by an elected Nominating Committee and subject to approval are put forward as candidates for election at the next AGM.

The ISCO Council is a non-executive body that is consulted by the EC on important policy matters and helps to steer the direction of the organization by considering new initiatives and advising on important decision-making issues. In effect each Council Member is the national representative of the membership in his/her country and has defined responsibilities, helping grow membership of ISCO, bringing together individual professionals, companies and other entities involved in spill control in their countries, as a means of raising levels of knowledge and competence, facilitating sector recognition and creating a channel of communication with governments and other in-country organizations.

Members in any country can put their own names forward or nominate another candidate for membership of Council. All in-country members of ISCO will then be consulted and, subject to their approval, the nomination will be put forward for endorsement by members at the next AGM. An in-country election will held if there is more than one candidate.

ISCO news (continued)

DENNIS VAN DER VEEM OF THE NETHERLANDS CO-OPTED ONTO ISCO EXECUTIVE COMMITTEE

ISCO is pleased to announce that, following on the unanimous recommendation of the Nominating Committee and consultation with the Executive Committee, Mr Dennis van der Veem, has been co-opted on to the Executive Committee with immediate effect. It is anticipated that his election as a member of the Executive Committee will be formalised at the 2014 AGM.

Mr. Van der Veen graduated in 2007 from the Open University in Environmental Sciences, specialising in environmental risks in the marine transport of hazardous goods. He has 20 years of professional experience in environmental sciences, of which 10 years with the Dutch Institute for Applied Sciences TNO and 12 years at the Dutch governmental agency Rijkswaterstaat. Currently he is managing director of the consultancy firm ASCC. In both the positions at Rijkswaterstaat and at ASCC Mr. Van der Veen is international recognized as expert on remote sensing and bioremediation.

Mr. Van der Veen has executed and managed a number of projects, including EU-projects and EU-workshops on topics dealing with oil spill response, law enforcement and remote sensing of spills. He is co-author of the IMO Guidelines on Bioremediation and is currently working on the Action Plan for implementation of IMDG-Code in Turkey.

Correspondence

FROM ISCO MEMBER, KEVIN WANG, PRESIDENT OF POWERPLUS CLEANING SOLUTIONS

On his experience of trying to provide assistance in clean-up of radioactive pollution in Japan

"This may sound cynical yet is our very well informed and experienced conclusion - Japan is absolutely resolute in not doing any business with "foreigners" in this endeavour.

They welcome the influx of hopeful businesses coming into their "economic island" and leaving their dollars while the Japanese pull out whatever they can as far as knowledge and technology - "economic health principle" in K-12 grade.

Due to their very bad meters and worse testing methods they don't "see much contamination". The reality is there is about 10 times the contamination that they can see.

The reason there is that the multiplicity of contamination overwhelms the sensors and internal shielding in the detection heads of their poor meters that are being used incorrectly. So even when they use the meters wrongly or they are incorrectly calibrated they begin to see radiation.

It is heart breaking as the people deserve the truth and the help of others".

FROM JENNIFER A. BRODIE BSc OF BINN SOIL NUTRIENTS

Follow-up on an article in issue 398 of the ISCO Newsletter on the subject of using rock dust to bio-remediate / clean-up spilled oil.

"Having spent all of the 1990's with Briggs Marine Ltd, a company concerned with minimising oil pollution from both North Sea exploration and production of crude oil, to the downstream delivery and use of the end product, this article may mean a little more to me than most.

Here a senior chemist, Ugo Amadioha, with a USA consulting company is hoping to use locally sourced rock dust to restore farms and waterways polluted with oil in his native country of Nigeria. In so doing, he hopes to create opportunities for disaffected young folk to both help with the clean-up and to replenish the depleted soils of the Nigerian Delta.

The Canadian Department of Fisheries and Oceans has already shown that rock dust can prevent oil droplets from coalescing and so leave a bigger surface area for the degradation of the oil by naturally occurring microbes. When I found this article in Remineralize the Earth website I submitted it to John McMurtrie (my old boss!) who now puts together the ISCO (International Spill Control Organisation) newsletter.

Once again, a simple solution using nature's seemingly unsophisticated tools is well challenged to find the funding to do a job that no energy-demanding, sophisticated, synthetic chemical will ever achieve. For full article see Page 9, of Issue No. 398. Has anyone out there got some funding for Ugo (and ourselves!) for further research?!"

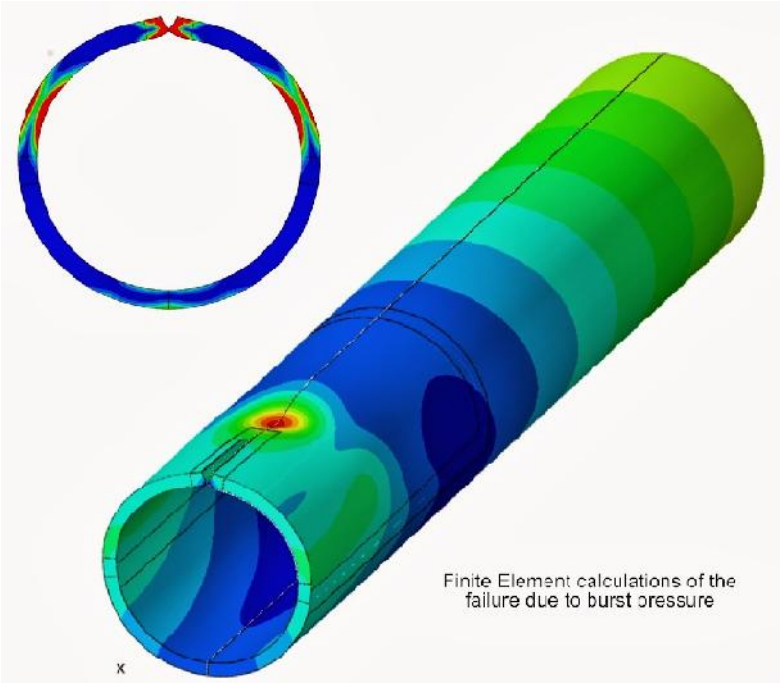
Science and technology

BUREAU VERITAS LAUNCHES PIPELINE DAMAGE ASSESSMENT TOOL

Tecnitas, the marine advisory arm of leading international classification and verification group Bureau Veritas, has launched a major new technology simulation system for pipeline damage assessment, in collaboration with Total. This new technology system,

Science and technology (continued)

called EMPREINTE, allows pipeline operators to quickly determine safe operating pressures after a pipeline is damaged. It is a software suite which provides a vital decision making tool which will save operators money and cut downtime for pipeline repairs.



Offshore energy pipelines can sustain all sorts of damage like dents and gouges due to external injuries, internal or external corrosion due to a corrosive effluent and failure of coating or cathodic protection, weld defects and straining due to ground movements. Operators need to know if the pipeline is safe to continue operating or if some pressure reduction or shutdown is required. EMPREINTE does that very quickly.

Level 3 assessments of pipeline damage are based on advanced calculations such as finite elements. The advantage of finite element calculations is that they give a more accurate assessment of the state of the pipe and the safe operating pressure but they need usually detailed material data and are very time consuming. EMPREINTE is a pre and post processor to Abaqus finite element calculations which will perform reasonably conservative level 3 assessments in a very short time period, typically within 48 hours from defect discovery to assessment. That will typically permit pipeline use to continue when it might otherwise have needed to be shut for repairs. EMPREINTE can also be used in the design phase of the pipeline. *The Maritime Executive* Read more

Contributed article

A serialised article contributed by Carlos Sagrera M.Sc., MISCO.

Carlos Sagrera is an independent oil spill control and environmental advisor in onshore and offshore activities with 20 years of experience in Latin America. He has been an ISCO Member since 2012 and is the author of this paper, initially written in September 2012, and adapted for the ISCO Newsletter in October 2013. Views expressed are the author's own comments and opinions.

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PART 2 - CONTROL AND PREVENTION OF OIL SPILLS: SOME OUTLINES OF A REACTION IN LATIN AMERICA ON THE DWH INCIDENT

Nowadays, all Latin American countries have valid contingency plans, following ARPEL guidelines in varying degrees.[6] Its regular update is arguable, but to a greater or lesser degree organizations and procedures are described, adapted to their realities and normally centred on the leader organizations, which are Coast Guards (Argentina, Chile), National Guard (Venezuela, Cuba), Navy (Mexico, Brazil, Ecuador, Guatemala, Peru, Uruguay) or Maritime and Port Authorities (Panama, Costa Rica, Nicaragua, Honduras, Caribbean countries). ARPEL, following the IPIECA framework, has made good efforts in this regard; from the 90s, it has sought some homogenization and coherence, and their guides are the benchmark in the region.[7] The problem is that most of the cases are in deficit with the offshore emergency situations in those countries that follow the required guidelines. Brazil and Mexico, for its particular offshore development, have progressed in that regard; the case of PETROBRAS is more remarkable than PEMEX due to the recent investment made in equipment, which does not yet mean enough efficiency in operative responses. Nonetheless, it is clear that there are emerging efforts with the presence of specialized vessels and massive purchases of equipment, which must be sustainable over time with procedures, as well as specialized and qualified human resources. Confirming it, from 2013 PETROBRAS is member of the Subsea Well Incident Preparedness and Response Project[8] and, according to the OSRL, they will play an important role with its branch in Brazil.[9]

The previous assertion introduces us into another lesson learnt after the DWH incident, the one referred to the interrelation model with the contractor. It is clear that the bond transcends economy in its consequences, and the mastery of the sophisticated technology demanded for the exploitation in deepwaters is a cause of dependence to take into account. Latin American countries depend on the technology from abroad. This is one of the main reasons why many countries from Latin America, historically reluctant to opening their oil exploitation to foreign countries, have now opened their block concessions partially or totally to the foreign multinational oil companies. Brazil, Peru, Argentina, Trinidad and Tobago, Colombia, Guyana, Surinam, Bahamas, Jamaica, Uruguay, even Ecuador, Nicaragua, Venezuela and Cuba, have followed that path, seeking a gradual access to a know-how that is integrated to their national companies. It is easy: there is no other way.

PEMEX itself, once an advocate of the oil autarky in Latin America and between the political electoral ups and downs of the year 2012, has already announced that it will seek that technology among third parties, after announcements regarding findings of crude oil in deepwaters of the Gulf of Mexico. Indeed, evidence of sands impregnated with light crude oil with a thickness of 100 meters

has been found in the well Trion-1, located in the cross-border of Cinturón Plegado de Perdido in front of the coast of Tamaulipas state. The depth of the finding is no minor detail: 2,550 meters, which will imply an immeasurable technological leap for Mexico[10]. To achieve that step, Mexico will have to modify its legal framework, which will open the door to foreign capital and the technology associated with it. This is the only way to access its promising offshore reserves in deepwaters[11]. It was interesting to note that this announcement became effective one year and a half before a timely agreement between Mexico and the US, regarding joint exploitation of reserves located in the maritime border between both countries in the Gulf of Mexico. This exploitation will necessarily involve this oilfield and eventually other cross-border in the same geologic area as Perdido. The agreement, signed in February 2012, sets out the conditions for the American oil companies and PEMEX to explore the possible crude oil reserves that may exist in cross-border oilfields in the Gulf of Mexico[12]. In general, the document establishes the commitment to share the information of the oilfields that may be discovered in the seabed and subsoils that both countries share. There is a possibility to carry out joint explorations and the country that has the bigger oil reserve will be the one in charge of its exploitation. The other country shall take the corresponding proportional part of the oilfield. This avoids the so-called "Straw effect" by which with the installation of platforms and pipelines close to the cross-border, a country could "suck" the crude oil from the other without previous authorization[13]. In any case, there were concrete signs of advances of the companies from the US side, which already had three wells closer than 10 km from the maritime boundary. The agreement also has a very interesting potential regarding prevention of accidents and spills, since it requires that PEMEX accept and apply the international standards in health, industrial security and the environment. Preventive measures, procedures and resources to be used must be presented and be available for both sides. In brief, this agreement has achieved a significant change in the Mexican oil system that allows the potential entry of the necessary know-how regarding security, in this particular case for the offshore exploitations in deepwaters.

It will not be surprising that in the future, similar agreements apply between these countries with other neighbours with potential offshore reserves such as Belize, Cuba or Jamaica or even Nicaragua. The model could be exported outside the sub-region to the South: Argentina-Uruguay or Brazil-Uruguay, Venezuela-Colombia, Venezuela- Trinidad and Tobago, Colombia-Ecuador, Peru-Ecuador, Brazil-French Guiana or Suriname-Guyana, as examples of adjacent countries with shared maritime spaces, regarding the offshore or even in potential onshore exploitations in borderlands between other Latin American countries. It should be noted that this type of agreement between neighbouring countries, in this case between Mexico and the US, triggers internal decisions that enable the improvement of control efficiency. In México, after the bilateral agreement in terms of offshore with the US, the Dumping in Mexican Maritime Zones Act was created. This act empowers the Navy Secretariat (SEMAR) to prevent and combat pollution in seas and national coasts[14]. The change of powers is no minor question, since the activity of control had been assigned to PROFEPA (Procuradoría Federal de Protección Ambiental), which had difficulties in its application due to the lack of qualified teams. With this new act, SEMAR can make verification visits to and surveillance of the oil platforms (it is even talked about penetrating, as in "sneaking in", if necessary); apply sanctions; fix the amount that should be covered to guarantee the damage repair or pursue legal action in the issue. In an extreme case it can even sink or destroy the polluting facility. Please note the implications for oil platforms in these times of exploitation in deepwaters, far from the coast. It will be necessary here to create protocols of intervention with oil state company PEMEX, which somehow sees its hegemony challenged in terms of security with the extension of the offshore exploitation in deepwaters. As a result of the above, President Peña Nieto's new government has approved the worldwide state-of-the-art environmental act (Ley Federal de Responsabilidad Ambiental). This act establishes that the environment shall be subject to autonomous protection and it has decentralized its application to individuals and interested organizations (such as NGOs), regardless of their ownership of the damaged asset[15]. It will be interesting to see how this act is applied in Mexico upon future oil spills, although it is clear that costs will rise considerably.

Footnotes

6 ARPEL1998: Guía Ambiental ARPEL N°17. "Pauta para el desarrollo de planes de contingencia para derrames de petróleo en la industria petrolera". ARPEL, 2005. "Cómo elaborar un plan nacional de contingencias ante derrames de hidrocarburos". Guía Ambiental ARPEL N°39. ARPEL. Montevideo, Uruguay.

7 Moyano, Miguel.- The Role of ARPEL in Contingency Planning Cooperation: The Petroleum Industry Operating in Latin America. IOSC 1997, Fort Lauderdale, Florida. USA.

8 http://subseawellresponse.com/

9 http://www.oilspillresponse.com/about-us/2011-12-21-08-34-02/news/387-oil-industry-unveils-new-containment-concept

10 El Universal, Ed. 29.08.12. "Halla PEMEX mega yacimiento en el Golfo de México".
Web: http://www.eluniversal.com.mx/notas/867070.html

11 http://www.nytimes.com/2013/08/13/world/americas/mexican-president-invites-foreign-investment-in-energy.html?_r=0

12 Agreement for the Exploration and Exploitation of the Transboundary Oilfields. Signed by the Secretary of State Hillary Clinton (US) and Chancellor Patricia Espinosa (Mexico) on 02.20.2012 in Los Cabos, Baja California Sur, Mexico.

13 http://www.eluniversal.com.mx/finanzas/62759.html

14 http://eleconomista.com.mx/sociedad/2012/10/25/ejecutivo-presenta-reforma-combatir-contaminacion-mares

15 http://www.eluniversalmas.com.mx/editoriales/2013/07/65485.php

Cormack's Column

In this issue of the ISCO Newsletter we are printing No. 149 in a series of articles contributed by Dr Douglas Cormack.

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

CHAPTER 149: CAMPAIGN FOR KNOWLEDGE-ONLY ENVIRONMENTAL POLICY

Having definitively differentiated belief from knowledge in articles 145 & 146, I showed that belief in species-extinction/ecological-disaster arising from total cargo/bunker releases from ships, let alone from very much smaller operational discharges, is refuted by our knowledge that the resulting oil concentrations in seawater are never more than a few parts per million even initially; and that these rapidly dilute while non-toxically biodegrading to carbon dioxide and water. Again, having shown in articles 147 &148 that belief in the deleterious effects of combusting sulphur-containing heavy oils ignores our knowledge of the biological cycles of both carbon and sulphur, I now add that sulphur dioxide recycles from the atmosphere by rainout and neutralisation as sulphite/sulphate in the buffered pH system which is seawater and is thus again available for organic biosynthesis; that atmospheric nitrogen and oxygen combine symbiotically to nitrite/nitrate in fertilising the soil; and that any such combination in the cylinders of internal combustion marine engines will dilute in the atmosphere prior to its rainout and neutralisation as nitrite/nitrate in the sea with the fertilising propensity it has on land.

However, despite having thus revealed the insignificance of concerns about power station emissions of sulphur dioxide, we see that these concerns have been resurrected in respect of ships as have the responses earlier suggested for decreasing them, such as reactive scrubbing. Again, despite having revealed the insignificance of concerns about emissions of nitrogen oxides from internal combustion engines, we see that these concerns have been resurrected in respect of ships as have the responses earlier suggested for decreasing them, such as lean fuel-air mixtures, exhaust gas recycling and ammonia addition. However, this article now shows that belief-inspired agitation for response to unreal problems immediately gives rise to real problems; and that the search for solutions thereto distracts attention from the initiating unreality. To exemplify this distraction, I resume my review of the means by which operational oil discharges from ships were to be reduced to zero despite their having no biologically deleterious effects in reality.

Thus, beyond the steps noted in articles 147 & 148 which somewhat questioned the need for further development, WSL built a test rig for evaluating oil-water separators to the then IMO specification. Without going into details, this rig could accommodate separators of capacity up to 100 tonnes h-1 with appropriately scaled storage and recovery tanks for oil and water, the oils being specified by IMO as medium fuel of viscosity 950 second Redwood No 1 at 37.8^{0}C and a light distillate (diesel) fuel oil of specific gravity ~ 0.83 at 15^{0}C. It was also specified that if the separator is intended to be fed by the ship's bilge pumps, then a centrifugal pump running at not less than 1000rpm and of capacity not less than 1.5 times the separator capacity at the delivery pressure required for the test must be used. It might be noted in passing, that these medium to light oils and these pumping arrangements would increase the presence of the smallest droplets. However, the flow to the separator could be regulated by throttling the pump discharge or by using a bypass system, while separators equipped with integral pumps could be tested without reference to the above centrifugal pump requirement.

In a test run, the equipment was filled with water and subsequently exposed to a flow of 100% oil for 5 minutes to ensure that the oil section was full and the supply pipe surfaces saturated. The inlet flow was then reduced to 0.5 - 1.0% oil and the system allowed to settle for 15 minutes before a 30 minute evaluation run at this oil concentration during which three outlet samples were taken for analysis at prescribed intervals, the last being taken at the end as flow ceased after oil-water flow is stopped and air allowed to enter. A further settling period at a flow of 25% oil was then followed by 3 outlet samples being taken over 30 minutes as before. Then 100% oil flowed for 5 minutes after which a further sample was taken and the oil stopped, and another taken after 15 minutes. The test then proceeded to a 3 hour sequence in which 25% oil for 15 minutes alternates with no oil for 15 minutes with one sample being taken at the end of the three hours. All was then repeated with the light oil except for the 3 hour sequence. Throughout, continuous discharge was checked through an observation window.

The results obtained with this test rig confirmed those earlier obtained by WSL from bilge and heavy-oil/fuel-tank ballast water. Thus, in the course of evaluating commercially available separators in the presence of a DTI marine surveyor, a typical result at 600rpm and inlet concentration of 0.5% was an outlet of 135ppm and with an inlet concentration of 25%, the outlet was 630ppm, while at 1000rpm and inlet 0.5% the outlet was 870ppm and at inlet 25% the outlet was 2,335ppm. Nonetheless, these results are unsatisfactory only when contrasted with the arbitrarily chosen target of 100ppm. In reality, a reduction in oil content from 25% to 2,500ppm is a reduction of 99% and pro rata. Nonetheless no satisfaction was expressed by those who believed it should be 100%. Thus, when a downstream coalescer reduced the above 135ppm to 2.5ppm, the 870ppm to 5ppm, the 630ppm to 3.1ppm, and the 2,335ppm to 50ppm and even when a downstream coalescer-filter combination reduced another gravity separator output at 25% oil from 1,932ppm to 2.83ppm, believers were still dissatisfied and will not be satisfied short of regulating for zero discharge throughout all seas and oceans whether or not coastal states provide reception facilities of adequate capacity and zero oil discharge to local waters.

1 The *Rational Trinity: Imagination, Belief and Knowledge*, D.Cormack, Bright Pen 2010 available at www.authorsonline.co.uk
2 *Response to Oil and Chemical Marine Pollution*, D. Cormack, Applied Science Publishers, 1983.
3 *Response to Marine Oil Pollution - Review and Assessment*, Douglas Cormack, Kluwer Academic Publishers, 1999.

Publications

FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	July-August 2013
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	September 30 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	September 1 issue
USA EPA Tech News & Trends	Contaminated site clean-up information	May 2013 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	July 1-31 issue
Intertanko Weekly News	International news for the oil tanker community	No. 42 2013
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	October 2013 issue
IMO Publshing News	New and forthcoming IMO publications	Aug-Sept 2013
IMO News Magazine	News from the International Maritime Organization	No 3, 2013
Pollution Online Newsletter	News for prevention & control professionals	October 16 issue
EMSA Newsletter	News from the European Maritime Safety Agency	October 2013 issue
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2013 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	October 2013 issue
HELCOM Newsletter	Baltic Marine Environment Protection Commission	May 2013 issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	September 2013 issue

ARCTIC RESPONSE TECHNOLOGY – PREPAREDNESS

OIL SPILL DETECTION AND MAPPING IN LOW VISIBILITY AND ICE: SURFACE REMOTE SENSING - FINAL REPORT 5.1

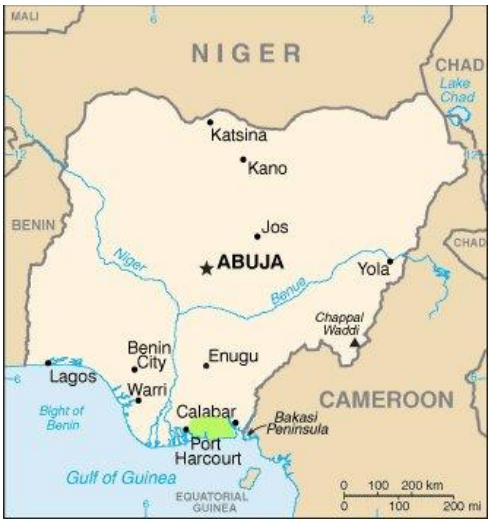
Report from The Joint Industry Programme to define the state-of-the-art for surface remote sensing technologies to monitor oil under varying conditions of ice and visibility. Published 15 October 2013

In 2012, a Joint Industry Program (JIP) was established to build on past research for spill response in ice-affected waters and advance knowledge and capabilities in several areas including dispersants, environmental effects, trajectory modeling, remote sensing, mechanical recovery and in situ burning.

This study was conducted under the Remote Sensing Technical Working Group of the recently formed Arctic Oil Spill Response Technology Joint Industry Program. The primary objective is to define the state-of-the-art for surface remote sensing technologies to monitor oil under varying conditions of ice and visibility. A review of current and emerging technologies with a documented ability to detect oil on water was conducted, their potential for application in ice affected waters assessed and near term recommendations for Research and Development (R&D) priorities assigned. Performance parameters in ice and low visibility were defined to evaluate technologies. Many imaging systems are available that can be used from helicopters, fixed-wing aircraft, vessels and drilling platforms.

About the JIP - Over the past four decades, the oil and gas industry has made significant advances in being able to detect, contain and clean up spills in Arctic environments. To further build on existing research, increase understanding of potential impacts of oil on the Arctic marine environment, and improve the technologies and methodologies for oil spill response, in January 2012, the international oil and gas industry launched a collaborative four-year effort – the Arctic Oil Spill Response Technology Joint Industry Programme (JIP). Download the report

NIGERIA: OGONI: VIDEO REPORT ON NIGER DELTA OIL SPILLS



After an explosion in a Niger Delta oil pipe line last June [2013], the London based newspaper *The Guardian* sent Journalist John Vidal to visit the region and find out what the effects of the spill and the oilfields in general are on the regions inhabitants.

Below is an article by: The Guardian.

The Niger delta, home to some of the biggest oilfields in the world, is heavily polluted from five decades of living with the oil industry. In June, an explosion at one of Nigeria's major pipelines spilled 6,000 barrels of crude into the creeks and swamps around Bodo village, killing several people. In this special investigation, John Vidal visits the region to find out why oil and the delta's residents do not mix. They speak to traders and visit the communities most affected, and ask what can be done to develop the area to the benefit of the people living there.

You can find the video report at the link above, and the full article here.

- See more at: http://www.unpo.org/article/16465#sthash.PPv1iOxZ.dpuf

Source: *The Unrepresented Nations and Peoples Organisation*

Publications (continued)

USA: NIMS FOR EMERGENCY OPERATIONS CENTERS & FACILITY EMERGENCY MANAGEMENT

Designed for federal, state, tribal and local governments, as well as private industry and disaster response personnel, this training programme demonstrates how to organize your EOC to mirror the National Incident Management System (NIMS). More info

WEB-BASED SPILL RESPONSE RESOURCE FOR THE PACIFIC NORTHWEST

Sent in by Gerald Graham of Ocean Consulting Systems. View the web-based spill response resource

Events

ISAA AGM AND "ALL IRELAND" STEERING GROUP MEETING

This will be held at 10 am on Thursday 21 November 2013 at the Old Courthouse in Hillsborough, Co. Down, Northern Ireland. It is planned to hold a lunch and have a guest speaker. More details later.

USA: F20 HAZARDOUS SUBSTANCES AND OIL SPILL RESPONSE

Tuesday October 22 2013 - Wednesday October 23 2013 at the: Hyatt Regency Jacksonville Riverfront; Jacksonville, FL US More info

GERMANY: PIPELINE MAINTENANCE & OPERATIONS SUMMIT

27-28 November in Dusseldorf, Germany. Programme includes The Latest Pipeline Integrity and Corrosion Management Technologies; The Use of Fibre-Optic Sensors in Pipeline Inspection; Emergency Subsea Pipeline Repair Solution; and Intelligent Pigging Technologies and Project Execution. More info

UK: RISK & REMEDIATION CONFERENCE – SUSTAINABLE BROWNFIELD REMEDIATION

The conference will take place on 24th October at the Radisson Blu Portman Hotel, London. More info

Company news

CANADA: NEW VIDEO RELEASED BY AQUA-GUARD SPILL RESPONSE INC - RBS TRITON™ OIL SKIMMING TECHNOLOGY IN ACTION 2013 Watch the new video

NETHERLANDS: KOSEQ BV - ACQUISITION PROVIDES MORE OPPORTUNITIES FOR INNOVATIVE SOLUTIONS FOR OIL SPILLS AT SEA

On August 1 2013, The Bodewes Group acquired Koseq BV from Puttershoek. Koseq is a designer and manufacturer of mechanical oil recovery equipment. The innovative Koseq sweeping arms are very successfully used worldwide for oil spills on inland waterways and at sea. The acquisition of Koseq fits into the Bodewes Group strategy to raise its profile in innovative, shipbuilding and related niche markets. The combined expertise of both companies is a response to the growing demand for effective oil recovery equipment.

Koseq will operate within the Bodewes Group as an independent organisation under its own name. The combination of both organisations specialties will raise developing, manufacturing and servicing to an even higher level. Their combined activities means approximately 40 professionals are available to service customers' wishes. More info from design@koseq.com