



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, Observer Status at IOPC Funds and is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisation.

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The 4th Conference and Exhibition

Oil Spill Response Workshop (OSRW 2014)

18-19 November, 2014 Beijing China



International news

A FRACTION OF THE GLOBAL MILITARY SPENDING COULD SAVE THE PLANET'S BIODIVERSITY



This is Yellowstone National Park in the United States. Image courtesy Julie Larsen Maher (c) WCS.

A fundamental step-change involving an increase in funding and political commitment is urgently needed to ensure that protected areas deliver their full conservation, social and economic potential, according to an article published in Nature by experts from Wildlife Conservation Society, the University of Queensland, and the IUCN World Commission on Protected Areas (WCPA).

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International news (continued)

The paper, The performance and potential of protected areas, comes ahead of the IUCN World Parks Congress 2014 - a once-in-a-decade global forum on protected areas opening next week in Sydney, Australia.

According to the authors, allocating US\$45 - \$76 billion to protected areas annually - just 2.5% of the global annual military expenditure - could help adequately manage those areas, ensuring their potential contribution to the well-being of the planet is fully met. *Terra Daily* [Read more](#)

7TH ANNIVERSARY OF THE COSCO BUSAN SPILL IN THE SAN FRANCISCO BAY

On 7th November 2007 the MV Cosco Busan container ship struck the San Francisco-Oakland Bay Bridge, causing an environmental disaster that killed thousands of seabirds, yet rallied the public to support the year-round wildlife rehabilitation work by International Bird Rescue and its affiliates.

International Bird Rescue [Read more](#)

WIKIPEDIA LIST OF OIL SPILLS

Although incomplete, this is a useful place to find information. This is a reverse-chronological list of oil spills that have occurred throughout the world and spill(s) that are currently ongoing. Quantities are measured in tonnes of crude oil with one tonne roughly equal to 308 US gallons, or 7.33 barrels, or 1165 liters. This calculation uses a median value of 0.858 for the specific gravity of light crude oil; actual values can range from 0.816 to 0.893, so the amounts shown are inexact. They are also estimates, because the actual volume of an oil spill is difficult to measure exactly.

The largest listed spill is the Gulf War oil spill which impacted Kuwait and Saudi Arabia in 1991.

The oldest spill recorded was from the *Thomas W. Larsen* in 1907, which is reported as having spilled 7,400 tonnes in the Isles of Scilly in the UK.

http://en.wikipedia.org/wiki/List_of_oil_spills

Incident reports from around the world

USA: SUNOCO DECLARES ALL CRUDE OIL RECOVERED FROM SPILL

November 11 - Approximately 4,100 of the 4,500 barrels of crude oil spilled from a broken pipeline into a Caddo Parish bayou last month has been recovered, bringing an end to the first phase of operations, Sunoco Logistics spokesman Jeff Shields said today in a news release.

The response has moved into the monitoring and maintenance phase that will have about 20 Sunoco personnel and contractors on site to monitor the area around Tete Bayou and continue protective measures, he said. At the height of the cleanup, more than 400 people were involved.

The crude oil was released Oct. 13 from Sunoco's 1,000-mile long Mid-Valley Pipeline that crosses the parish south of Mooringsport on its route from Longview, Texas to Samaria, Mich. Cause of the pipeline break is still under investigation. However, repairs were made and oil began flowing thru it again by Oct. 26. *ShrevePortTimes.com* [Read more](#)

THAILAND: CANAL POLLUTED AFTER JET FUEL LEAKS FROM TANK AT CHIANG MAI AIRPORT

November 11 - The leak was reported at around 11.15pm. The fuel leaked from the storage tank into the nearby Mae Kha canal, which flows past three villages.

A 300-metre-long section of a drainage ditch caught fire after an angler threw a cigarette butt into it, the Bangkok Post reported. An emergency response team from state oil and gas company PTT put out the blaze, which damaged two houses but caused no injuries, according to the National News Bureau of Thailand *City News Chiang Mai* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

Incident reports from around the world

PHILIPPINES: COAST GUARD WATCHES FOR OIL SPILL FROM SUNKEN CARGO VESSEL OFF ANTIQUE

November 14 - The Philippine Coast Guard in Iloilo is keeping watch over waters off Antique province for a possible oil spill after the sinking of a cargo vessel there this week.

Coast Guard teams are checking if oil may have spilled from the MV Vital 355, GMA Iloilo reported. On Tuesday night, the vessel sank off Anini-y in Antique, while on its way to Cuyo, Palawan from Carmen, Cebu. *GMA News* [Read more](#)

USA: CHEMICAL SAFETY BOARD DEPLOYING TO FATAL CHEMICAL RELEASE AT DUPONT PLANT IN LA PORTE, TEXAS

November 15 - A seven person investigation team from the U.S. Chemical Safety Board (CSB) is deploying to the scene of a fatal chemical release at the La Porte DuPont Plant located near Houston, Texas.

According to DuPont officials and media reports, four people were killed when methyl mercaptan, a toxic chemical used as feedstock to make insecticides and fungicide, was released into the air. *CSB* [Read more](#)

Other news reports from around the world

NEWS REPORTS FROM ANGOLA

November 8 - Scientists Find Deep Ocean Tar Mounds



More than two thousand mounds of asphalt harboring a wealth of deep-water creatures have been discovered up to two kilometers deep, off the coast of Angola. In a study published in the journal *Deep-Sea Research 1*, scientists at the U.K. National Oceanography Centre (NOC) have been examining the images and data captured at the site to build an intriguing picture of the life and geology of this underwater area.

The naturally-occurring asphalt mounds are made up of the same substance used to cover roads. They range in size from single football-sized blobs to small hills several hundred meters across. It is the first time that these seabed asphalt mounds have been found on this side of the Atlantic – until now these features had only been seen in the Gulf of Mexico and off the coast of California. These deep-sea 'slow tar volcanoes' are associated with flows of oil from within the sediment and are formed from hydrocarbons migrating around subsurface salt structures.

Researchers have also discovered that the vast array of mounds is home to at least 21 types of deep-water creatures, including large sponges, soft-corals, octopus and fish. Many more common deep-water animals, such as the blobfish and sea cucumbers also live near the mounds. This is a greater number of species than had previously been thought and important information for scientists when predicting biodiversity levels in similar areas of ocean. *The Maritime Executive* [Read more](#)

NEWS REPORTS FROM CANADA

November 11 - Rail carriers keep emergency response plans secret from residents

Railroads cut through almost every community in Canada, but the companies that operate them are keeping secret from the public their emergency response plans.

A Toronto rail safety community group wrote Canada's two largest rail carriers in late September asking for information on emergency response plans, insurance coverage, worst-case scenarios and track maintenance.

In a response sent a month later, CP's director of government affairs, Randy Marsh, said the company has an emergency response plan that is "continually updated and improved" and reviewed with local officials, but it is not a public document. Information on track maintenance and insurance coverage isn't public, either, but the company meets or exceeds federal requirements, he wrote. *The Star* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

NEWS REPORTS FROM INDIA

November 14 - Bhopal Gas Leak: India Pledges More Relief For Survivors

The Indian government has promised new compensation for survivors of the catastrophic gas leak at a Union Carbide pesticide plant in the central Indian city of Bhopal. The government made the announcement Friday, five days after five women started an indefinite hunger strike in hopes that they could spur Indian authorities to take action on behalf of the more than 500,000 people who were poisoned in the leak on Dec. 2, 1984, according to a statement by Amnesty International. *International Business Times*

[Read more](#)

NEWS REPORTS FROM NIGERIA

November 14 - 'Shell was told to replace pipeline six years before Nigeria oil spills'

Shell failed to act on its own internal advice to replace a 30-year-old pipeline years before it wreaked havoc on the Niger Delta by rupturing and spilling thousands of barrels of oil into the area, according to court documents.

The two giant spills, in 2008, affected about 35 square miles of southern Nigeria, including sensitive mangroves, and ruined the livelihoods of up to 15,000 villagers in Bodo in Ogoniland, who are suing the company in London in a case due to start in May.

Furthermore, while Shell has previously admitted fault for the two spills, the court documents show the company has underestimated the volume of oil that escaped. *The Independent* [Read more](#)

NEWS REPORTS FROM UK

November 8 - Britain Plans for Future of Shale Oil and Gas Industry

The British government said on Saturday that it would establish a [sovereign wealth fund](#) with the proceeds from extracting [natural gas](#) from shale.

The announcement, which may be seen as premature because no shale gas production is likely to occur in the near future, is another step by the government of Prime Minister [David Cameron](#) to encourage development of a shale gas industry and overcome public opposition to hydraulic fracturing, or fracking. *The New York Times* [Read more](#) [Thanks to Mike Rancilio of ISCO]

November 15 - Chemical leak from Lisnaskea food factory killed thousands of fish

Thousands of dead fish were found floating in the Upper Lough Erne after a chemical discharge from a nearby poultry plant leaked into the river, Fermanagh court has heard. Western Brand Poultry Products in Lisnaskea, were fined a total of £6,000 after ammonia leaked into drains from a refrigeration plant and into a river, killing several thousands of fish within 40 minutes. *Fermanagh Herald* [Read more](#)

NEWS REPORTS FROM USA

November 10 - Judge Refuses to Fire Gulf Oil Spill Claims Chief

BP's call for the ouster of the administrator of damage settlement claims arising from the 2010 Gulf of Mexico oil spill was rejected Monday by a federal judge.

BP lawyers had said Patrick Juneau should be removed for a variety of reasons, among them that he had a conflict of interest because he once represented Louisiana in talks setting up the claims process and had pushed for favorable terms for those with claims. They also said he had made misleading statements about that work before being named claims administrator. And they said Juneau improperly expedited claims for some people represented by the plaintiffs' steering committee.

But U.S. District Judge Carl Barbier said in Monday's ruling that BP clearly knew of Juneau's previous consulting work for the state. "Mr. Juneau himself disclosed this information to BP and at least six of its attorneys or representatives before he was selected by the parties," the judge wrote. *ABC News* [Read more](#)

November 11 - Investigator | Cleveland Toxic chemical cleanup on river subject of special meeting

The U.S. Army Corps of Engineers is answering questions regarding the toxic and radioactive chemical cleanup of the BASF site on Harvard Avenue. The Army Corps is responsible for the clean-up of radiological contamination at the site and an adjacent property not owned by BASF. *WKYC.com* [Read more](#)

NEWS REPORTS FROM USA (Continued)

November 11 - CSB wants big changes in Calif. refinery regulations

The U.S. Chemical Safety Board (CSB) recommends substantial changes to the way refineries are regulated in California in its final Regulatory Report on the Chevron Richmond Refinery pipe rupture and fire. Among them: the Board wants California to enhance its process safety management (PSM) regulations for petroleum refineries to ensure a more robust and adaptive regulatory regime. *ISHN* [Read more](#) [Thanks to Marc Shaye, Hon.FISCO, Member of ISCO Executive Committee]

November 12 - Media invited to attend multiagency Oil/Chemical Spill Response Exercise at Lake Powell

The media is invited to attend an oil and chemical spill response exercise involving the Coast Guard, state and federal partners working together with SWS Environmental Services and Hull Environmental contractors at Lake Powell, Thursday. The exercise is based around a simulated worst-case oil discharge scenario listed in the area contingency plan. The purpose is to provide hands-on training for an oil spill response to include source control, containment, recovery, protection of environmentally sensitive areas and public awareness. The response organizations will form a unified command and provide a coordinated response and initial assessment of the potential impacts of a sizable oil spill. *US Coast Guard* [Read more](#)

November 12 - House, Senate to vote on Keystone XL pipeline

For the first time in the six-year fight over the controversial Keystone XL pipeline, both houses of Congress will hold a vote on the proposed project, giving each side in a Louisiana Senate election a chance to boost its candidate.

The two lawmakers locked in the runoff contest, Sen. Mary Landrieu (D) and Rep. Bill Cassidy (R), seized control of the congressional agenda Wednesday, extracting assurances from House and Senate leaders that votes will be held to bypass President Obama's authority and authorize construction of the pipeline. *The Washington Post* [Read more](#)

November 12 - Danger on the rails: GRFD trains for crude oil spill

Out of all the chemicals and cargo Grand Rapids Fire Department Hazardous Material Technician Capt. Kathleen Thompson deals with, she calls the raw crude oil transported in railroad tank cars "a scary one."

One only needs to see the images from Lac-Mégantic, Quebec to understand what Capt. Thompson's worried about. In July 2013, runaway tank cars carrying raw crude oil crashed and exploded, leveling portions of the small city near the Maine border and killing 47 people. *WoodTV.com* [Read more](#)

November 13 - ND mulls rules to make crude safer for shipment

North Dakota's top energy industry regulator unveiled new rules Thursday that would require companies to reduce the volatility of crude before it's shipped by rail.

State Mineral Resources Director Lynn Helms told the state Industrial Commission that all crude from North Dakota's oil patch would have to be treated to remove certain liquids and gases to "ensure it's in a stable state" before being loaded onto rail cars. *Associated Press* [Read more](#)

November 14 - BP Loses Bid for New Trial Over Its Gulf Spill Negligence

BP Plc (BP/) lost a bid for a new trial on findings that it was grossly negligent in the 2010 Gulf of Mexico oil spill, a decision that exposes the company to \$18 billion in pollution fines.

The loss follows multiple BP legal setbacks, including failed efforts to cut the cost of its settlement with spill victims. After being told by trial and appeals courts that it must live with the deal it negotiated, BP is awaiting a U.S. Supreme Court decision on whether it will hear the company's complaint that the deal is being misinterpreted to compensate claimants BP says it didn't intend to pay. *Bloomberg News* [Read more](#)

November 14 - My Turn: Real oil spill solution long overdue

When the Exxon Valdez Oil Spill Trustee Council meets Nov. 19 at Alaska Pacific University, it has some important unfinished business. After 25 years, government studies have confirmed that many of the fish and wildlife populations, habitats and resource services haven't yet recovered from the 1989 oil spill. Some are not recovering at all. *Juneau Empire* [Read more](#)

Other news reports from around the world (continued)

NEWS REPORTS FROM USA (Continued)

November 14 - CSB Receives Peer Awards for Three Safety Videos

The U.S. Chemical Safety Board (CSB) has won top honors in nationally-recognized awards for three Safety Videos. An animation depicting a tragic refinery accident in Anacortes, Washington, a safety video on the Deepwater Horizon blowout in the Gulf of Mexico, and a safety message about the dangers of high school laboratory demonstrations each won awards. CSB [Read more](#)

November 15 - Keystone: House sends oil pipeline bill to Senate

Congress inched closer yesterday to a possible showdown with President Obama over the Keystone XL oil pipeline as the Republican-controlled House approved the project. Supporters in the Democratic-run Senate predicted they will get the 60 votes needed to pass it next week.

The House vote was 252-161 in favor of the bill, which was sponsored by Rep. Bill Cassidy, a Louisiana Republican, in an effort to boost his chances to take a Louisiana Senate seat away from Democrat Mary Landrieu. The two are headed for a Dec. 6 runoff and have been touting their energy credentials in the oil and gas-producing state *Concord Monitor* [Read more](#) Related report from [Reuters](#)

People in the news

ISCO INDUSTRY PARTNER, INTERTANKO, ELECTS NIKOLAS TSAKOS AS ITS NEW CHAIRMAN



INTERTANKO's Council of Members met this week in Dubai and elected Nikolas Tsakos as Chairman of the Association. Tsakos has been a member of Council since 2002 and Vice Chairman since 2012. He succeeds Graham Westgarth who stepped down after five years in post.

"Graham has been a charismatic leader during the tanker industry's unprecedented downturn," said Tsakos. "I am honoured to take over from him at a time when INTERTANKO's role in today's challenging environment is more prominent than ever. Operational excellence and environmental protection together with commercial sustainability will continue to be the Association's main goals."

"I look forward to leading INTERTANKO as it continues to advance the interests of the independent tanker owners. We can make a difference in the technical, operational, regulatory and commercial arenas in which we work; we can make a day-to-day difference for our Members; and we can make a difference for our industry." *Intertanko* [Read more](#)

ISCO News

YOUR INVITATION TO VISIT ISCO AT CLEAN GULF 2014 IN SAN ANTONIO, TEXAS, USA

ISCO President David Usher and Membership Director Mary Ann Dagleish are looking forward to seeing you on Booth 142 at Clean Gulf in San Antonio over 2-4 December. Please drop in by to say hello and hear about what ISCO is planning for 2015.

MORE SPILL RESPONSE GUIDELINES AND OPERATING MANUALS ADDED TO ISCO'S TECHNICAL AND REFERENCE DATABASE

Over the last week more information has been uploaded in the Chemical / HNS and Homeland Defence sections of the Technical and Reference pages on the ISCO website.

Members are invited to review the pages and send in their comments and suggestions for adding new information sources.

Regarding Homeland Defence, the resources available to public authorities are limited and following on interventions to save human life and deal with other immediate priorities, these organizations are usually under pressure to disengage. This means that they need to be able to hand over responsibility for follow-up activities. Many spill response companies, who already have a 24/7 response culture for emergency response, trained personnel and other relevant resources have stepped up to fill the gap. For those companies that are ready to react, post-event work can provide a valuable source of income, especially during times when oil/chemical spill events are infrequent. New additions to the Technical Reference Section may give you food for thought.



In this issue of the ISCO Newsletter we are printing No. 186 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 186: PROGRESS ON NEXT STEPS

With articles 1 - 184 of this Column having reviewed the knowledge to be collated as the repository supportive of the new contingency and incident-specific planning approach, article 185 indicated that further intermittent articles would report progress towards implementation. Accordingly, this article now reports that the ISCO document IOPCF/OCT14/4/6 entitled Compensation for Casualty Response was presented to the October 2014 session of the IOPC Funds; that the ISCO document MEPC/67/ INF.13 entitled Harmonisation of Technology and Environment was postponed to MEPC/68 as was its entire agenda item, three others and part of a fifth because of extended discussion on those continuing to cause unresolved dissent; and that the report of the October 2014 session recorded that the observer delegation of the International Spill Control Organisation (ISCO) presented document IOPCF/OCT14/ 4/6 relating to compensation for casualty response and made the following statement:

Following discussion of claim submission guidelines at the May 2014 session of the 1992 Fund Administrative Council, ISCO was reported as stating that staff changes had been mentioned in relation to the difficulty in presenting claims; that the terms 'reasonable' and 'proportionate' were undefined in the Convention; that the new ISCO approach to incident-response would rectify both of these deficiencies; and that this approach comprises a repository of knowledge supportive of a knowledge-only contingency plan based on the physicochemical parameters which control the fate and effects of releases, which determine prevention and response, and which by their incident-specific values predict incident-specific fates and effects, thus enabling incident-specific prevention and response to be cost-effective (see IOPCF/MAY14/10/1, paragraph 4.1.19). Again, ISCO was reported as stating that on completion of this approach, coastal States will have access to a repository of knowledge secure against staff changes and a contingency plan from which even fresh staff will be able to prepare and execute incident-specific plans which will enable predictions made, decisions taken, accredited contractors employed, results obtained, and costs incurred to be reported to the IOPC Funds in fully documented form and to IMO for enhancement of the thus shared repository of knowledge. Yet again ISCO was reported as indicating that a document justifying this approach would be available for MEPC 67 with a shorter version on claims settlement being available for the October 2014 session of the IOPC Funds; and that the former is now available as MEPC 67/INF.13, though pressure of other business has postponed it to MEPC 68.

As to the deficiencies of current guidelines for submission of claims and for the selection of experts for their assessment, paragraphs 1.1-1.5 of document (IOPCF/OCT14/4/6) show that debate of opinion/ counter-opinion is merely debate of belief/counter-belief respectively supported by partially-selected facts/counter-facts, neither set of which is debate-terminating knowledge; that the only possible outcome is a transient belief-consensus; that there are as many opinions as there are self-styled experts; that no consensual majority ever eliminates minority dissent though it may temporarily suppress it; that the dissent over the terms 'reasonable' and 'proportionate' is resolvable only by the knowledge which would define them; and that this knowledge-only approach to casualty-response raised no dissent when serially presented to meetings 10-16 of the OPRC-HNS Technical Group, dissent from knowledge and assent to its counter-belief being truly irrational as re-emphasised in MEPC 67/ INF.13.

However, paragraphs 2.1 - 2.2 recall that the definitive differentiation of knowledge from belief was first established in 2010 by observing that our senses stimulate our imaginations to beliefs transformable to positive or negative knowledge by evaluation of their compatibility or incompatibility with reality, or to beliefs unacceptable as knowledge by being beyond this co-defined reality-evaluation in principle or in pro tem practice. Thus, paragraphs 3.1 - 3.3, show how the presence of this reality-evaluation identifies the knowledge to be included in the repository while its absence identifies the beliefs to be omitted from it. Again, paragraphs 4.1-4.3 show how the knowledge-only contingency plan will be derived from the repository, while paragraphs 5.1 - 5.3 show how this contingency plan will produce all future incident-specific plans, and how their enumerated steps will satisfy the needs of claim-submission, claim-settlement and further knowledge-acquisition, as identified in paragraph 1.2.

It is further recorded in the report of the October 2014 session of the IOPC Funds that this knowledge-only approach will be fully available to all interested parties prior to the next meeting; and that the 1992 Fund Assembly thanked ISCO for the information provided.

Thus, with the ISCO document IOPCF/OCT/14/4/6 on claim settlement having thus been presented to and recorded by the October session of the IOPC Funds, and with its companion document MEPC 67/ INF.13 on harmonisation of technology and environment being on the agenda for (MEPC 68, the knowledge repository will now be collated and its knowledge-only contingency and incident-specific planning approach will now be completed to make both available to coastal States; to accredit response contractors as to competence in their use; and to facilitate liaison with IMO, IOPCF and P&I Club secretariats and coastal States towards claim-settlement through mutual acceptance of casualty-response knowledge, and towards enhancement of the knowledge repository through continual reportage of newly acquired incident response knowledge to the IMO.

- 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.

BITUMENS AND DILUTED BITUMENS FROM WESTERN CANADIAN OIL SANDS: CHAPTER 2



A short series of articles on Bitumens and Diluted Bitumens from Western Canadian Oil Sands contributed by Dr Merv Fingas of Spill Science, Edmonton, Alberta, Canada T6W 1J6 fingasmerv@shaw.ca

Merv Fingas MSc PhD worked for more than 35 years in the field of oil spill technology at Environment Canada's Environmental Technology Center in Ottawa, Ontario. As head of the Emergencies Science Division at the Centre, he conducted and managed research and development projects. He is currently working independently in Alberta. Dr Fingas is the Member of ISCO Council for Canada.

Bitumens and Diluted Bitumens from Western Canadian Oil Sands

This serial covers the topic of bitumen products such as from the Canadian Oil Sands and diluted bitumen products (Dilbit and others). This is the second of nine issues by Dr. Merv Fingas, Member of ISCO Council for Canada.

1.3.1 Bitumen

The composition of the oil sands and related bitumens are dominated by unresolvable compounds.

These oils, however, can be refined into usable products. To be transported to refineries, bitumens must be diluted with condensates or with synthetic crude oils.

The properties of some bitumens are given in Table 1 (ESTC, 2014).

Table 1 Bitumen Properties

(ETC - 2014, AOSTA, 1984)

Name	Density Range	Viscosity Range	Sulphur %
	kg/m ³	mPa.s (cSt)	%
Athabasca	1006 to 1016	90,000 to 900,000	4.4 to 5.4
Cold Lake	977 to 1006	100,000 to 450,000	4.1 to 6.9
Lloydminster	980 to 1016	100,000 to 450,000	4.1 to 6.9
Peace River	1001 to 1006	90,000 to 900,000	4.4 to 5.4

1.3.2 Condensates

Condensates are liquid hydrocarbons taken from gas wells and gas production facilities.

These condensates vary widely, however in Alberta there are several steady streams which are used as bitumen diluents as shown in Table 2 (Crude Monitor, 2014).

Table 2 Condensates

(Crude Monitor, 2014)

Name	Supplier	Density	Sulphur %	BTEX total
		kg/m ³	(%)	(vol %)
CRW (blend)	Enbridge Aggregate	715	0.15	3.92
Fort Saskatchewan Condensate	Keyera	679	0.04	2.51
Peace Condensate		751	0.21	5.02
Pembina Condensate	Pembina pipeline	758	0.11	5.92
Rangeland Condensate	Plains Midstream	757	0.25	5.35
Southern Lights Diluent	U.S. Midwest	674	0.02	2.6

Enbridge uses significant amounts of condensate to transport Dilbit in pipelines.

Enbridge has set minimum specifications for this diluent condensate as shown in Table 3 (CAPP, 2012).

Table 3 Specifications for condensates

Quality parameter	Units	(Crude Monitor, 2014)	
		Minimum	Maximum
Density	kg/M ³	600	775
Viscosity	cSt		2
Sulphur total	wt%		0.5
Olefins	wt%		<1
Reid Vapor Pressure	kPa		103
Aromatics (BTEX)	vol%		2
Mercaptans & volatiles <C3	ppm		175
H ₂ S	ppm		20
Benzene	vol %		1.6
Mercury	wppb		10
Oxygenates	m		100
Filterable solids	mg/L		200

1.3.3 Diluted Products

1.3.3.1 Dilbits

Dilbit, the mixture of two highly variable products, bitumen and diluent, results in very variable end products.

Table 4 shows the summary properties of various Dilbits (Crude Monitor, 2014). It should be noted that these properties are similar if the diluent is straight condensate or a C4/C5 enhanced condensate.

Table 4 Dilbits

(viscosity < 300 cSt or mPa.s)

Name	Diluent	(Crude Monitor, 2014)	
		Density	Sulphur %
		kg/m ³	(%)
Access Western Blend (AWB)		923	3.9
Borealis Heavy Blend (BHB)	hydro-treated naphtha	926	3.8
Christina Dilbit Blend		924	3.9
Cold Lake Dilbit	condensate	928	3.8
Kearl Lake Dilbit		927	3.8
Peace River Heavy crude		928	5.1
Statoil Cheecham Blend		929	3.8
Western Canadian Select (WCS)		929	3.5

A comment on the use of C4/C5 to supplement condensate as a diluent, should be added here. There is shortage of condensate in Western Canada to dilute bitumen (Armstrong and Brandt, 2013; KMC, 2013). This shortage will continue to rise in the future, necessitating the use of other products to dilute bitumen.

One of the solutions at this time is to use C4 (butanes) and C5 (pentanes) as a supplement to the diluent streams to extend the amount of condensate needed. This reduces the amount of condensate needed to meet pipeline minimum specifications, however increases the flammability of the product when released and decreases the Dilbit stability.

An increasing amount of alkanes such as C4 or C5 can cause the asphaltenes to precipitate which could cause great difficulty for a pipeline.

Currently, the amount of C4 is set to a maximum of 5% (of total oil mass) after which there is a penalty for this product. The resulting properties of the Dilbits shown in Table 4 would not change much with the addition of C4, however less diluent would be used.

1.3.3.2 Synbits

Synbits are almost as variable in properties as Dilbits, however, in terms of oil spill countermeasures are quite different. The end properties after weathering are much less viscous and dense than those of Dilbits. The diluent used in a Synbit is a synthetic crude oil, namely a crude oil made by initial refining of bitumen.

The properties of the synthetic crudes are much closer to those of the bitumen and thus there is not as much of a change in properties after release. Properties of some Synbits are shown in Table 5 (Crude Monitor, 2014).

Table 5 Synbits

Name	Source	(Crude Monitor, 2014)	
		Density kg/m ³	Sulphur % (%)
Long Lake Heavy crude	North East AB	929	3
Mackay River crude	North East AB	936	2.8
Statoil Cheecham Synbit	North East AB	931	3.1
Suncor Synthetic	North East AB	927	3.1
Surmont Heavy Blend	North East AB	936	3
Albian Heavy Synthetic crude*	Edmonton area	926	2.4

* also shipped as a DilSynBit

A variation on the theme of a Synbit is the product known as a Dilsynbit, which is a Synbit additionally diluted with condensate to allow the product to meet pipeline specifications.

References:

AOSTA, *The Thermodynamic and Transport Properties of Heavy Oils and Bitumen*, AOSTA - Alberta Oil Sands Authority, 1984

Armstrong, M., and M. Brandt, *Strategies for Improved Naphtha Processing*, http://www.digitalrefining.com/article_1000881.pdf, 2013

CAPP, Quality Guidelines for Western Canadian Condensate, Presentation by Randy Segato, Suncor, to CAPP, 2012.

Crude Monitor, <http://www.crudemonitor.ca/home.php>, 2014

ESTC (Environmental Technology Centre), *World Catalogue of Oil Properties*, WWW.ETC-CTE.ec.gc.ca, 2014.

KMC, *The Diluent Market*, Kinder Morgan Presentation at the Wells Fargo Fundamental Forum, 2013.

Events

THE NETHERLANDS: INTERSPILL 2015, AT RAI AMSTERDAM

The Call for Papers for Interspill 2015, to be held at RAI Amsterdam over 24-26 March, had a record 150 abstracts submitted. The Conference programme is now being confirmed, and to quote the Conference Chairman, Rob James of OSRL, “the content is very exciting, and we have had to expand the programme”. See more details on the websites, www.interspill2015.com. The Exhibition is also close to full, that is 25% more space than 2012. Contact Reed to secure space.

Conference Delegate Registration is now open, with an Early Bird booking offer, of 2012 prices, if booked before 31 December 2014. Visit www.interspill.org / www.interspill2015.com for details.

CYPRUS: MEDITERRANEAN OIL INDUSTRY GROUP WORKSHOP : 10-11 DECEMBER 2014

The MOIG workshop shall be held in Cyprus to bring together MOIG members, EU project leaders, National authorities, Regional and International Oil Spill Responders, Manufacturers, Research and Development institutions and key personnel from the oil and gas sector of Cyprus. The reason Cyprus was selected for this technical session is that Cyprus has recently began exploration for oil and gas offshore and boasts a new regional hub oil terminal, the country has actively participated in regional forums such as the joint forum between MOIG and REMPEC, MEDEXPOL in 2013.

Events (continued)

"The MOIG recognizes that there are various levels of experience and expertise within and available to the MOIG membership. We would like this workshop to bring that experience and expertise together so that we can all individually as MOIG members and collectively as an industry group benefit through participating in this workshop." - MOIG CHAIRMAN

Oil and Gas exploration and production activity is gradually increasing throughout the Mediterranean region. In addition the region also has various new oil terminals which will further increase shipping and subsea pipeline activity. It is without any doubt that we all have a deep interest in continuing to recognize the menace a major oil spill in the Mediterranean could cause.

All MOIG Members have a vested interest as potentially every country could be affected to varying degrees. In line with the annual technical session of the MOIG, members from various Mediterranean countries have expressed an interest to hold a workshop where various members and technical partners can come together to openly discuss issues related to oil spill preparedness and response.

[Registration Form](#) More info: Contact Capt. Richard Byrnes at rbyrnes@iemseg.com

USA: NSU TO HOST FORUM ON OIL SPILLS, USE OF DISPERSANTS

November 11 - Nova Southeastern University's (NSU) Oceanographic Center will be hosting a technical forum on the role of dispersants in oil spill response. This forum will bring together officials and experts from such diverse areas as Australia, Europe, South America, Alaska and the Gulf States – all of whom will gather to present the latest scientific and operational information on the use of dispersants to Nova Southeastern University's (NSU) Oceanographic Center will be hosting a technical forum on the role of dispersants in oil spill emergency response planners and decision-makers.

The forum will run for three days: Wednesday, Nov. 12 through Friday, Nov. 14 at NSU's Oceanographic Center, 8000 North Ocean Drive, Hollywood (inside John U. Lloyd State Park.) Speakers will include representatives of the U.S. Coast Guard (USCG,) the National Oceanic and Atmospheric Administration (NOAA,) the oil industry and academia (including NSU.) *The Maritime Executive* [Read more](#)

ESTONIA: 9TH MEETING OF THE HELCOM EXPERT WORKING GROUP ON RESPONSE ON THE SHORE

Tallinn, 24 November 2014 [More info](#)

KUWAIT: MEMAC – MASTER PLAN IMPLEMENTATION MEETING

Kuwait, 2-4 December 2014 [More info](#)

Links for recent issues of other publications

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	October 2014
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	September 29 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	November 1 issue
USA EPA Tech News & Trends	Contaminated site clean-up information	Summer 2014 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	September 16-30 2014
Intertanko Weekly News	International news for the oil tanker community	No 46 2014
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	October 2014 issue
IMO Publishing News	New and forthcoming IMO publications	October 2014
IMO News Magazine	News from the International Maritime Organization	No 1, 2014
Pollution Online Newsletter	News for prevention & control professionals	November 12 issue
EMSA Newsletter	News from the European Maritime Safety Agency	November 2014 issue
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2014 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	November 2014 issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	October 2014 issue
IPIECA eNews	Int'l Petroleum Industry Environmental Conservation Assoc'n	February 2014 issue
WMU Newsletter	From the World Maritime University in Malmo, Sweden	May 2014 issue
AMSA Aboard	News from the Australian Maritime Safety Authority	May 2014 issue
Sea Alarm Foundation Newsletter	News from the Sea Alarm Wildlife Protection Organisation	Summer 2014 issue
Regenesis Remediation News	Case studies, articles and upcoming events in Europe	Summer 2014 issue

Training

CANADA: NEIA ANNOUNCES FALL DATES FOR CONTAMINATED SITES HEALTH & SAFETY TRAINING

[More info](#)

Company news

ISCO CORPORATE MEMBERS, SWIRE EMERGENCY RESPONSE SERVICES (SERS) AND INTERNATIONAL ENVIRONMENTAL AND MARINE SERVICES (IEMS) ANNOUNCE NEW PARTNERSHIP TO PROVIDE ENHANCED OIL SPILL RESPONSE SERVICES TO THE OFFSHORE OIL AND GAS INDUSTRY

November 11 - SERS and IEMS will also open a joint Oil Spill Response Centre in South Africa to provide supplementary personnel and equipment as part of this new partnership.

Dubai-based Swire Emergency Response Services (SERS), a fully owned subsidiary of Swire Pacific Offshore group, announced its partnership with Mediterranean-based International Environmental and Marine Services (IEMS) to jointly provide Tier 2/3 response services to clients in Europe, Africa and the Middle East. The partnership was inked on 24 October in Dubai.

"We are excited about the collaboration between SERS and IEMS. This partnership will allow both companies to leverage on each other's expertise and provide a broader range of highly sophisticated, prompt and reliable emergency response services to the offshore oil and gas industry. With the combined strengths and experience of both companies, we are confident that we will be able to provide prompt and high standards of response capabilities to manage oil spill incidents across the globe," says General Manager, Emergency Response Services of Swire Pacific Offshore Operations (Pte) Ltd, Mr Eric Kraan.

The partnership will offer joint Tier 2 / 3 response services to clients in Europe, Africa and the Middle East. SERS provides oil spill response and equipment rental services on a global basis. It does so by providing rental of prepackaged oil spill response equipment, offering retainer services during clients' drilling/ production programme and offering consultancy services and training prior to and during a project. SERS owns and operates one of the largest available oil spill response stockpiles in the Middle East and has further comprehensive equipment stockpiles in Dubai, Singapore, South Africa and West Africa. IEMS is the first independent international environmental and marine services company in the Middle East and specialises in providing and installing custom contingency equipment packages as well as oil spill deflection and protection systems.

"The strategic alliance between SERS and IEMS will provide a co-ordinated network of resources comprising vessels, equipment, personnel and response centres with standardised (ISO 9001, 14001 and OHASAS Certified) operating procedures. Through our partnership, we will be able to provide effective yet cost-effective local, national and international emergency response services to the global offshore oil and gas industry," says Chief Executive Officer (CEO) of IEMS, Captain Richard Byrnes.

As part of this partnership, SERS and IEMS will also jointly establish an Oil Spill Response Centre (OSRC) in South Africa by the end of 2014. This centre will provide supplementary personnel and equipment to enhance the response capabilities of the current OSRCs of IEMS and SERS. Both companies will also jointly offer International Maritime Organization (IMO) Level 1 and Level 2 Oil Spill Training from dedicated operational OSRCs in the Red Sea and the Mediterranean. The training will equip clients' personnel with effective oil spill response knowledge, to undertake initial assessments of spill risks and to choose the correct response options.

UK: RVL OIL SPILL GROUP SECURES £2.8M CASH INJECTION

November 15 - The company behind a revolutionary new fleet of planes adapted to clean-up oil spills has received a cash injection of £2.8m from the Business Growth Fund (BGF).

RVL Group is converting Boeing 737 aircraft into spraying machines that will clear pollutants at sea on behalf of oil giants such as BP and Shell. The company successfully completed a test flight in November last year. It will use the growth capital to finesse its prototype.

RVL operates a fleet of 15 aircraft based at East Midlands Airport and also conducts aerial surveys for the Government and private sector. Founded in 2007 by aviation specialists Colin Dennis and Steve Guynan, RVL developed the invention in tandem with the Maritime and Coastguard Agency. The technology is expected to significantly reduce the time it takes to clear spills.

The Telegraph [Read more](#)

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