ISCO INTERNATIONAL SPILL CONTROL ORGANIZATION

ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 539 20 June 2016

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CELEBRATING THIRTY YEARS 1984 ~ 2014

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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International news

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IMO SECRETARY-GENERAL CALLS FOR IMPLEMENTATION OF 2010 HNS PROTOCOL AT LEGAL COMMITTEE

Photo: IMO Secretary-General Kitack Lim opened the June 8-10 meeting of the IMO Legal Committee

During his opening speech the Secretary-General said "The Committee at this session will turn its attention once again to the 2010 HNS Convention. I am well aware that, with the entry into force of the Nairobi Wreck Removal Convention on 14 April last year, the 2010 HNS Convention is the remaining gap in the global framework of liability and compensation conventions.

The HNS Convention recognizes that accidents can and do happen and it is the last piece in the puzzle needed to ensure that those who have suffered damage caused by HNS cargoes have access to a comprehensive and international liability and compensation regime.

It is clear that an internationally co-ordinated approach for the ratification and implementation of the 2010 HNS Protocol is needed. The number of ships carrying HNS cargoes is growing steadily with more than 200 million tonnes of chemicals traded annually by tankers. I urge all States to consider acceding to the 2010 HNS Protocol as soon as possible in order to bring it into force.

The full text of the Secretary General's opening speech can be found here: http://www.imo.org/en/MediaCentre/SecretaryGeneral/Secretary-GeneralsSpeechesToMeetings/Pages/LEG-103-opening.aspx

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International news (continued)

ARCTIC NATIONS' COAST GUARDS INCREASE CO-OPERATION

Photo: Russian icebreaker Yamal (file image courtesy Wofratz)

June 13 - On Friday, U.S. Coast Guard Commandant Adm. Paul Zukunft joined the leaders of coast guard agencies from all of the seven other Arctic nations – Canada, Denmark, Finland, Iceland, Norway, Sweden and the Russian Federation – to sign a landmark joint statement on creating a strategic framework for the Arctic Coast Guard Forum, an operationally-focused consultative organization.

"Today's signing ceremony marks the culmination of months of collaboration by all eight Arctic coast guards," said Adm. Zukunft. "The Arctic coast guards now have an established framework to exchange information and are finalizing a set of combined operating guidelines to enhance interoperability. This year we will hold a table top exercise culminating in a live exercise in 2017 to address safety of life at sea and the challenges of a mass rescue scenario as more and more cruise ships ply this harsh and unforgiving environment."

Zukunft told USNI News on Monday that last week's forum had given him an excellent opportunity to meet and get to know his counterparts in the Russian Federal Border Service, which handles coast guard duties in the Russian far north. As the Border Service is not a military agency, it is not concerned with geopolitics in the way that the Russian Navy might be, and his three-hour conversation with its representatives was focused on operational concerns rather than diplomatic relations, he said. *The Maritime Executive* Read more

USA AND CANADA: TASK FORCE FORMED AFTER GRAYS HARBOR OIL SPILL MEETING THIS MONTH

June 16 - A task force formed after the 1988 Grays Harbor oil spill will hold its annual meeting this month. Representatives from states and provinces on the Pacific Ocean will gather this year to discuss how best to protect the West Coast from oil spills.

In a release from the Pacific States/British Columbia Oil Spill Task Force, they say that an update on spill-response programs and initiatives will highlight the event. The task force will feature representatives from Washington, Oregon, California, Hawaii, and British Columbia and was formed following the 1988 oil spill in Grays Harbor as well as the Exxon Valdez spill.

Discussion on June 21 will address protections using "emerging technology" including high-speed oil skimmers, aerial surveillance, and oil-containment and recovery capability.

The Task Force members include: Thomas M. Cullen Jr., Administrator, Office of Spill Prevention and Response, California Department of Fish and Wildlife; Keith Kawaoka, Deputy Director, Hawaii Department of Health; Larry Hartig, Commissioner, Alaska Department of Environmental Conservation; Dale Jensen, Spills Program Manager, Washington Department of Ecology; Bruce Gilles, Manager, Oregon Department of Environmental Quality; and Wes Shoemaker, Deputy Minister, British Columbia Ministry of the Environment.

More information and registration for the discussion is available at the event website.

Kxro.com Read the complete article

International news (continued)

ITOPF: NEW FILM – OIL SPILLS IN COLD CLIMATES – AVAILABLE ONLINE

June 9 - The 8th film in ITOPF's series "Response to Marine Oil Spills" is now available to view online. "Oil Spills in Cold Climates" explores the technical and logistical considerations and challenges that would need to be overcome in the event of a spill in icy waters. It includes footage shot in Svalbard (during both 24-hr darkness and 24-hr daylight conditions), aboard Fednav's icebreaking bulk carrier UMIAK in Quebec, and during an Arctic survival training course attended by ITOPF staff in Sweden. Contributions from the Norwegian Coastal Administration, Fednav, and the International Chamber of Shipping bring first-hand experience of operating in ice-infested waters, and the challenges and concerns faced by the shipping industry as it seeks to exploit shorter voyage times as northern routes open up.

The film is subtitled in ten languages: English, Arabic, Chinese, French, Japanese, Korean, Portuguese, Russian, Spanish and Turkish and is available to view online at http://www.itopf.com/knowledge-resources/library/video-library/video/8oil-spills-in-cold-climates/

The film was launched at an event for P&I Clubs at ITOPF's offices in London on 9 June. *ITOPF News*

Incident reports from around the world

NORWAY: NOAH'S ARK CRASHES INTO COAST GUARD VESSEL… YOU READ THAT RIGHT

Photo: A full-size replica of the Ark of Noah is seen after it crashed into a moored coast guard vessel in Oslo harbour, Norway June 10, 2016. NTB Scanpix/Gorm Kallestad

June 10 - A 230-foot long replica of Noah's Ark collided with a Norwegian Coast Guard vessel as it arrived in Oslo, Norway on Friday, causing damage to both ships.

Media says the wooden replica, built by a Dutch carpenter Johan Huibers after he dreamed of a flood in his home town, was being towed into Oslo harbor when it somehow lost control and crashed into the moored patrol vessel Nornen

Media reports said there were no animals on board when the collision occurred. *gCaptain* Read more

PHILIPPINES: OIL SPILL HITS DIVING SPOT, BUT EXECS SAY VOLUME SMALL

June 12 - The Philippine Coast Guard is investigating the cause of an oil spill detected in the waters near Piscador Island, a known diving spot in Moalboal town, about 88 kilometers southwest of here.

Agapito Bibat, Coast Guard station commander, said authorities have yet to determine the cause of the spill but the area is part of the Tanon Strait where vessels pass by. *Inquirer.net* Read more

June 13 - Implementation of Tañon Strait management plan urged as oil spill detected in part of protected seascape - An international ocean conservation group urged on Monday for the urgent implementation of the General Management Plan (GMP) in Tañon Strait after an oil spill was detected in Pescador Island in Moalboal, Cebu.

A famous dive spot and tourist destination, the municipality of Moalboal is known for its rich coral reef and diverse marine species such as the sea turtles. Moalboal is part of the Tañon Strait Protected Seascape (TSPS), the largest marine protected area in the Philippines. *Manilla Bulletin* Read more

UK: NORTHERN IRELAND - HUGE DIESEL SPILL OFF LARNE COAST THREATENS WILDLIFE

June 14 - Wildlife along the coast may be threatened by 40,000 litres of diesel which have poured into the sea at Larne after a leak at the Caterpillar factory, it's feared.

Residents said a slick stretches from The Gobbins - a key breeding site for seabirds such as puffins - to Ballygally, north of Larne. It has also swept into Larne Lough which is an Area of Special Scientific Interest (ASSI) and home to Northern Ireland's only pair of roseate terns. Locals now want to know why it took until last night for authorities to comment on a "significant spill". *Belfast Telegraph* Read more

Incident reports from around the world (continued)

USA: KENTUCKY DEP CLEANING CHEMICAL SPILL THAT LEAKED INTO PIKE COUNTY CREEK

June 14 - A weekend chemical spill in Eastern Kentucky is causing a mile-long fish kill... The spill happened Saturday afternoon in Peter Creek in Phelps, a small community in Eastern Pike County, Kentucky. Damon White of the Kentucky Environmental Response Team says someone opened a valve on a 300 gallon plastic tote, spilling an unknown chemical into nearby Peter Creek. A witness says the chemical did not have an odor and was similiar to liquid soap. *Fox News* Read more

CANADA: CONOCOPHILLIPS PIPELINE SPILLS OIL CONDENSATE NEAR ALBERTA CARIBOU RANGE

June 14 - A ConocoPhillips pipeline has leaked nearly 2,400 barrels of condensate, an ultra-light form of oil, within an endangered caribou and grizzly bear range in west-central Alberta, the company said on Tuesday.

The Alberta Energy Regulator (AER) issued an environmental protection order to the company, which shut down and isolated the pipeline and is investigating the cause of the spill.

It is the largest hydrocarbon leak from a pipeline in Alberta since Nexen Energy, a wholly owned subsidiary of China's CNOOC ltd, spilled 31,500 barrels of bitumen emulsion in July 2015, according to the AER website. *The Globe and Mail* Read more

USA: ANHYDROUS AMMONIA SPILL KILLS FISH IN SOUTHWESTERN INDIANA

June 16 - The runoff from water used to wash away an anhydrous ammonia spill has killed thousands of fish in a southwestern Indiana creak, state wildlife and environmental officials said Wednesday.

The spill of about 500 gallons of anhydrous ammonia on Tuesday and the water spray left high levels of chemical residue at the scene a day later, the Indiana Department of Environmental Management said. Crews removed soil and dug pits to collect rain and prevent further runoff of contaminated water into Lattas Creek, which is less than 300 feet from the spill site, IDEM said. *The Washington Times* Read more [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

RUSSIA: OIL SPILL OCCURS IN RUSSIA'S NAKHODKA PORT

June 16 - An oil spill has occurred in the Russian port of Nakhodka, located in Primorsky Territory, Russia's Federal Agency for Maritime and River Transport (Rosmorrechflot) reports.

The oil spill occurred over an area of 1,500 square meters. It follows an earlier spill over an area of 3,000 square meters, which occurred in the port of Nakhodka earlier this month. *Sputnik News* Read more [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

MAURITIUS: BULK CARRIER HARD AGROUND AFTER FIGHT ON BOARD

June 17 - A 44,000 DWT bulk carrier is hard aground in Mauritius after a fight apparently broke out on board among crew members, with some reports going as far as describing possible mutiny.

Local media reports that Liberian-flagged MV Benita was sailing from India to Durban, South Africa when a fight erupted in the engine room Thursday night, resulting in the ship drifting into land along the southeast coast of Mauritius.

The ship is reportedly not laden with cargo, but is carrying about 150 tons of oil. *gCaptain* Read more and watch video Another report in The Maritime Executive

Other news reports from around the world (countries listed in alphabetical order)

CANADA: ITOPF ATTENDS EVENTS IN CANADA

June 16 - ITOPF attended a workshop on the long-term persistence of stranded oil (5th-6th June) and the 39th AMOP Technical Seminar on Environmental Contamination and Response (7th-9th June), which were held back-to back in Nova Scotia, Canada.

The first workshop was co-organised by Owens Coastal Consultants Ltd and Triox and gathered 33 participants from academic institutions, research organisations, OSROs, consultancies and the oil industry. Based on the experience and knowledge of renowned experts such as Dr Ed Owens and Dr Ken Lee, it aimed to summarise our understanding of oil weathering processes for different types of oil in different coastal environments in order to assist planners, responders and decision makers in the definition of clean-up strategies and end points.

This 2-day workshop was followed by the 39th AMOP Conference held in Halifax. Romain Chancerel gave the final talk on recent oil spill experiences, focusing on two cases, FINACIA 32 and FLINTERSTAR, and highlighting some of the issues faced by the shipping industry during a pollution incident. *ITOPF News*

NIGERIA: COMMUNITY THREATENS EXXONMOBIL OVER OIL SPILL CLEAN-UP

June 13 - One of the hosts to ExxonMobil oil facilities in Akwa Ibom State, the Ibeno community has given the oil major one week ultimatum to clean up the latest oil spill alleged from its facility or faced sanctioned in the area.

Also, the inability or refusal by ExxonMobil to disclose the actual quantity of oil spill allegedly recorded from its installation at Ibeno recently has raised dust when Joint Inspection Team (JIT) of stakeholders visited the site of the spill weekend.

The Akwa Ibom State Government had in a meeting held June 1, 2016 ordered the JIT comprising representatives from Ibeno community, ExxonMobil, Depthwize Nigeria Limited, NOSDRA and other stakeholders to investigate the latest oil spill reported in the area and the clean-up procedures. *AllAfrica.com* Read more

NIGERIA: WHO ARE THE NIGER DELTA AVENGERS?

June 17 - The Niger Delta Avengers (NDA) are Nigeria's "new" Niger Delta militancy phenomenon. They have issued challenges to the Nigerian government, international oil companies, and the military. Within a span of less than 3 months they are believed to be primarily responsible for reducing Nigeria's oil production from a (theoretical) 2.2m barrels per day to around 1.4m barrels per day by the end of May 2016. They have mainly targeted Nigerian state and international oil companies' pipeline infrastructure with explosives attacks. The spectre of their involvement in maritime piracy and kidnappings has been raised as well.

There is very little evidence-based information on the NDA. Even the Nigerian security services are not totally sure what they are up against, although the group has made stock demands for Niger Delta autonomy, greater participation in the oil wealth, and cessation of environmental destruction. Former militants, the government, and other stakeholders variously blame former militant leader Tompolo, the opposition Peoples' Democratic Party (PDP), former President Goodluck Jonathan, and other ex-militants for being behind the group. The NDA themselves reveal little, except for their geographic origin: Warri South West local government area (LGA) in Delta state. So far they have run rings around the Nigerian military, avoiding direct confrontation and eluding arrests. *The Maritime Executive* Read more

SOUTH KOREA: SALVAGE OF THE SEWOL ENTERS NEW PHASE

June 12 - On Sunday, a team from Shanghai Salvage Company began a new stage in the recovery of the lost ferry Sewol, and dozens of family members of her 300 deceased passengers were on hand to observe as the work got under way.

Due to public pressure and government requirement, the Sewol will be lifted whole – an unusual arrangement intended to ensure that the last missing human remains will not escape the hull.

Total salvage expenses are estimated to run in excess of $70 million. In order to pick the vessel without cutting it into sections, salvors will emplace over a dozen lifting beams beneath the wreckage in order to prevent it from breaking up under the strain. *The Maritime Executive* Read more

Other news reports from around the world (continued)

UK: SCOTLAND - MACDUFF HARBOUR LAUNCHES FULL-SCALE OIL SPILL RESPONSE

June 11 - A north-east harbour was the scene of a full-scale response to an oil spill yesterday as part of a training exercise.

Clean-up and emergency services descended on Macduff Harbour as the local authority launched tested the port's oil spill contingency plan.

Dubbed Exercise Britannia, it had been arranged to offer practical experience to a ranger of partners including the local authority itself and neighbouring Highland and Moray councils. *The Press & Journal* Read more

USA: EMERGENCY RESPONDERS, RAIL COMPANIES TRAIN FOR DERAILMENT AND OIL SPILL ON MISSISSIPPI RIVER

June 16 - Emergency responders in Dubuque practiced how to handle a train derailment and oil spill on the Mississippi River Thursday morning.

This was after two major derailments last year in or near Dubuque County. In February 2015, a Canadian Pacific train derailed at the edge of the Mississippi in Dubuque County, near Balltown. Three tanker cars fell onto the ice, leaking ethanol into the soil and the river water. Then in March, A BNSF train carrying Bakken crude oil derailed near Galena. *ABC News* Read more & see video

USA: WASHINGTON - OFFICIALS PERFORMING DYE-TRACER TEST IN REVIEW OF OIL LEAK

June 16 - The waters of a wildlife refuge near Washington may turn a bright peach color as officials do a dye-tracer test to try to determine how mineral oil leaked from a Dominion Virginia Resources substation into the Potomac River earlier this year.

The Washington Post (http://wapo.st/21mEDXt) reports officials are conducting the test Thursday. It was ordered by the Virginia Department of Environmental Quality. Dominion spokesman Charles Penn says the dye is nontoxic. *New York Times* Read more

USA: EPA - FINAL RULE (TECHNICAL AMENDMENT) TO HAZARDOUS CHEMICAL REPORTING

June 17 - The Environmental Protection Agency (EPA) is amending its hazard categories in the regulations (40 CFR part 370) for reporting under Sections 311 and 312 of the Emergency Planning and Community Right-to-Know Act (EPCRA) due to the changes in the Occupational Safety and Health Administration (OSHA) Hazard Communication Standard (HCS).

OSHA's HCS was revised in 2012 to conform to the United Nations Globally Harmonized System of Classification and Labeling of Chemicals (GHS).

- Under the revised HCS, chemical manufacturers and importers are required to evaluate their chemicals according to the new criteria adopted from GHS to ensure that they are classified and labeled appropriately.
- Manufacturers and importers are also required to develop standardized Safety Data Sheets (formerly known as "Material Safety Data Sheets/MSDS") and distribute them to downstream users of their chemicals.

These changes to OSHA's HCS affect the reporting requirements under sections 311 and 312 of EPCRA.

- Based on the new classification criteria adopted by OSHA, EPA is revising the existing hazard categories for hazardous chemical inventory form reporting under EPCRA Section 312 and for list reporting under section 311.

Many states have developed their own software for hazardous chemical inventory reporting. Other states use Tier2 Submit, electronic software developed by EPA. To provide enough time for states (as well as EPA) to modify the software to incorporate the new hazard classes, this final rule will be effective on January 1st, 2018.

- This means that, by March 1st, 2018, facilities are required to provide information on their hazardous chemicals during 2017 calendar year. In this action, EPA is also making a few minor corrections in the hazardous chemical reporting regulations For more information: https://www.epa.gov/epcra/epcra-non-section-313-amendments-and-guidance

USA: CALLS FOR IMPARTIAL STUDY OF MACKINAC PIPELINES MOUNT

June 17 - Enbridge Energy is ramping up defense of the safety of its aging underwater pipelines in the Straits of Mackinac as public pressure mounts to stop the flow of oil through the Great Lakes.

The Alberta-based petroleum transportation giant is launching a public relations campaign next week in northern Michigan, hosting a series of community barbecues to highlight new emergency response equipment stationed in the straits that would be used to respond to a spill.

Enbridge also is touting the findings of a study commissioned by the federal pipeline safety regulator that concluded there are no signs of external or internal corrosion. "It's the first independent assessment of the lines under the Straits of Mackinac," Enbridge engineer Millan Sen told The Detroit News this week. *The Detroit News* Read More [Thanks to Marc K. Shaye, Hon.FISCO]

SHORELINE CLEAN-UP – PART 23

A series of articles contributed by Mark Francis of Oil Spill Solutions

Mark Francis has been involved with the oil industry since 1975. He attended his first oil spill in 1976, the Tanker Elaine V incident. He became head of response for inland spills within the UK for British Petroleum E & P in 1980 for 10 years responding to well, storage tank and pipeline spills throughout the UK. Over the next 25 years he continued to build his international operations experience and has also specialised in spill response training, delivering IMO and other courses in more than 20 countries.

Shoreline Clean-up (Continued)

Cutting vegetation

The cutting of plants covered with oil to less than 3cm above the sediment is a cleanup technique that results in direct physical destruction of the plant fibers.

This severely reduces the quantity of photosynthesizing tissue, except for in marshes during the time that the aerial portion of the plants dies to sprout again.

At the time of the cut, plants are more exposed to the toxic substances in the oil, increasing contamination and reducing immunity.

Cutting at the base of a plant increases penetration of the oil into the substrate, in addition to killing the plant itself. Areas where the plants are removed or trampled are also susceptible to erosion.

De-oiling Agents

The use of these materials should have the approval of the environmental authorities.

The technique has the objective of increasing the efficiency of the removal of the oil from contaminated substrates.

De-oiling agents, such as d'limonenes, act as solubilisers, breaking the adhesion of oil to substrates so that it can be easily be removed by hosing with water.

Some de-oiling agents are slightly toxic, but the main problem is that liberated oil (and de-oiling agent) can re-pollute if not contained and collected. Use of sorbents is often the most practical way to recover the liberated oil.

An advantage of the technique is that the wash-down process can be carried out in an effective way using water at a reduced pressure and hot water is not required.

Other de-oiling products such as oil spill dispersants work in a different way, dispersing the oil into surrounding seawater or assisting removal by sea energy as the tide comes in.

If the de-oiling product does not disperse the oil in the column of water, the liberated oil should be recovered from the surface of the water with sorbent booms.

The use of these clean-up techniques should be restricted in areas of high biological sensitivity.

The toxicity and the effects of the dispersal of the treated oil vary widely among the products. The selection of a product should always take into consideration its toxicity.

Many of these products have certificates of biodegradability and have reduced toxicological effects on organisms.

Oil spill dispersants applied on shorelines can sometimes increase the penetration of oil into the sediments or contaminate intact areas in the inter-tidal zone. Expert advice should be sought.

There is also evidence that dispersed oil has varying degrees of toxicity for plants.

According to the mixture, type of oil and dispersant, the problem of the application of dispersants occurs because often there is the bio-availability of the oil at the time of application.

Chemicals can be important in small clean-ups in littoral fringes in combination with low-pressure flushing but in general their use is not recommended. Chemicals alone are not efficient with emulsified oils or very viscous oils.

Special feature (continued)

There is a need to perform experiments to test the toxicity and the efficiency of the different de-oiling chemicals available for the various types of oil that are transported along our coasts.

There are many de-oiling chemicals on the market made from oranges and lemons. They smell nice but in many cases quite large quantities have to be used to get better results than high pressure water jetting.

Gelling agents

Gelling agents transform the oil from the liquid state to a solid state. Polymers are applied at a rate of 10% to 45%, and can solidify the oil in minutes.

Unfortunately they tend to work considerably better in the laboratory than they do at the spill site.

In confined areas the use of gelling agents can impede the penetration of oil into cracks in the rocks, sediments and can reduce spreading.

Sometimes the oil will not completely solidify, unless the product is well mixed with the oil. Generally it is not used with very viscous oils.

These products are insoluble and have very low toxicity in the aquatic media. The oil that solidifies and is not recovered could have a longer impact because of the slower rates of weathering.

Physical disturbance of the habitat is very probable during application and recovery.

If the product is well applied there could be a reduction in the volume of water recovered during the operation and the solidified residues could be transported more easily.

Some countries accept disposal in sanitary landfills.

Mechanical removal

Mechanical removal is a method often employed on sandy coasts, on which the contamination is extensive and penetration is not very deep.

Normally, teams of beach cleaning personnel are deployed to remove the surface layer of contaminated oil. The thickness of the layer to be removed should never be thicker than the depth of penetration by the oil.

The sand contaminated with oil should be removed manually. We should be careful not to remove sand unnecessarily, because this increases the problem of waste disposal and can have an adverse effect on the properties of the beach.

The rapid removal of sediment is justified when short-term considerations are present, such as the need to clean a fishing beach or a beach with tourist activities or for the importance of re-establishing socio-economic activities.

Another consideration we should make is in reference to the constructive cycles of the beach. If at the time of the spill, a constructive period is underway, burial of contaminated sediments may take place and rapid oil removal may be considered.

Heavy vehicles can cause compaction of the sediment, causing the death of countless organisms due to crushing.

The movement of vehicles should preferentially be restricted to the driest part of the sand (Supra littoral). Routes used for vehicular access to beaches should be strictly controlled to minimize damage to dune systems and vegetation.

Bear in mind that in past incidents mountains of waste have been generated using heavy machinery, anything up to 30 times more beach material than oil. Imagine an impacted shoreline with 50,000m^3 of oil, this could become 1.5 million m^3 of oily waste.

To be continued in next week's newsletter

Correspondence

ABSORBENTS AND ADSORBENTS – LAST WEEK'S EPISODE OF MARK FRANCIS' ARTICLE ON SHORELINE CLEAN-UP PROMPTS COMMENT AND DEBATE

Letter received from John Brinkman of ISCO Corporate Member, Imbibitive Technologies.

"The information provided by Mark Francis is in our opinion technically inaccurate and adds to the confusion surrounding the expected performance of various sorbing technologies used during spill response operations.

All of the products referred to in Mark's article rely upon "liquids coating surfaces", which in accordance with ASTM International (Brussels, Belgium) Performance Standard definitions are "adsorbents". According to ASTM International it does not matter if the

surface is external, such as that found on a clay granule or internal such as those found within activated carbon; the sorbing material is an adsorbent. Similarly, filling interstitial space between matted polypropylene fibers is also defined as adsorption (and not absorption as is incorrectly indicated within the text). The liquid is still available in discrete droplets and available for re-release through gravitational pull or leaching in water.

In order for a product to meet the ASTM International definition for Absorbents the sorbent material must "swell" to at least 50% of its original size. It is the "swelling" characteristic that differentiates an absorbent from an adsorbent. The swelling also indicates that the liquid has integrated into the sorbent material; thereby eliminating the liquid phase and eliminating secondary contamination of response personnel and the surrounding environment. (Conversely, anyone who has tried to pick a spilled liquid with polypropylene pads and booms is aware that they will release an amount of their contents upon retrieval).

Also, the swelling of the material means that it can pick-up several volumes of liquid per volume of sorbent material. This reduces the amount of sorbent required in order to pick-up significant volumes of spilled liquid.

Further to this, the elimination of the liquid phase through the application of super-absorbents (such as Imbiber Beads®) has demonstrated their ability to reduce the rate at which hazardous vapours are released; thereby making the spill site safer to operate within. It is the vapours that are toxic when inhaled and it is the vapors that support combustion. Tests have shown that the application of Imbiber Beads® "blankets" to fuel and solvent releases has reduced the concentration-in-air to below LEL in many instances, and consequently raised the flashpoint. These are serious occupational safety & health considerations when aromatic/aliphatic liquids are present.

Best Regards,
John S. Brinkman,
President
Imbibitive Technologies

To further illustrate the points being made John attached a paper he presented at the US EPA RRT 3 Meeting Sorbents Workshop in Delaware in May, 2011 – click on link below.

2016 - June 14th,
ISCO - Absorbents ve

Your Editor asked the author, ISCO Member, Mark Francis, FISCO, to comment. Mark replied –

"After reading the references provided I am confused as to why we have always called booms and pads absorbents. I think it's because they do absorb the oil into the fibres which increase in size and dependent on the manufacturer are effective in holding the oil as with the blue sorbents we used at Briggs. The oil only came out when they were put into a centrifuge. On the other hand, a different make of sorbent booms were useless for diesel; when lifted the fluid ran out like from a drain pipe.

Adsorbent's, such as oil snags or pompoms, used for recovering weathered, emulsified or heavy fuel oil are, as I wrote, suitable for thick tacky oil that sticks to the surface.

The article was written from my practical point of view not from a scientific one.

Thinking about the question more – Since 1985 I have been buying and working with what both manufacturers and responders call absorbent booms. Even the IMO courses reflect what I wrote as the information responders should be trained in. It would seem we all have the terminology wrong according to ASTM standards for testing.

Here is an extract from ITOPF Technical Information Paper No. 8 -
Absorbents – "Liquids diffuse into the matrix of a solid absorbent material by a process similar to capillary action, causing it to swell and combine with the material in such a way that it will not leak out, nor can it be squeezed out under pressure. Absorbents available for pollution response are made from engineered polymers with a high surface area to promote rapid absorption. As they may reduce the surface area of the liquid, absorbents can be used with volatile products. While absorbent materials are, in theory, capable of recovering light fuel oils and some crude oils, the time required for absorption may be longer than is practical or desirable and, as a consequence, they are suited more to the recovery of low viscosity liquids and spilt chemicals, particularly hazardous and noxious substances".

To have the benefit of an independent third opinion, your Editor also contacted Dr Merv Fingas, Hon.FISCO, Member of ISCO Council for Canada. Merv has commented –

"Thanks for the opportunity -- while John Brinkman has his points - the average person and dictionary define absorbent as both adsorbent and absorbent-- technically speaking what is used in the oil spill industry are adsorbents, typically called sorbents - I believe that everything that was in the Mark Francis article was correct and does not need apologies or corrections

The only absorbent product out there is the imbiber beads - but no one should use them externally - that is uncontained such as on a beach - how would you ever pick them up which one should do - further when used on anything heavier than Naphtha the process is again adsorption - heavy oil does not enter into the imbiber bead"

Correspondence (continued)

Comment from your Editor

"As suggested by ITOPF, to minimise confusion regarding Absorbents and Adsorbents, the widely used generic term "Sorbents" can be used to describe both. I suspect that, like most people, the word "sorbent" suggests to me the familiar pads, pillows and booms we all use to mop up spills. As for Imbiber Beads, as John Brinkman has pointed out, they are technically "absorbents" but I tend to think of Imbiber Beads as a rather special and unique product that offers particular advantages in cases where volatile solvents / light petroleum fractions (such as gasoline) have been spilt. As John points out, "it is their ability to reduce the rate at which hazardous vapours are released; thereby making the spill site safer to operate within. It is the vapours that are toxic when inhaled and it is the vapours that support combustion. Tests have shown that the application of Imbiber Beads® "blankets" to fuel and solvent releases has reduced the concentration-in-air to below LEL in many instances, and consequently raised the flashpoint. These are serious occupational safety & health considerations when aromatic/aliphatic liquids are present".

Publications

AN INTERESTING ARTICLE BY STEVE CANDITO, PRESIDENT, FORESEA CONSULTING

Steven Candito is the Founder, President and CEO of Foresea, which provides advisory services including strategic planning, regulatory compliance and crisis management to the maritime and environmental communities. Previously, Candito was President and CEO of NRC. He has extensive experience with OPA 90 compliance issues with particular focus on vessel owner and insurance matters. Before that, Candito was an attorney with Haight Gardner Poor & Havens, specializing in maritime and environmental law. Candito has also served as a marine engineer aboard Exxon USA's domestic tanker fleet. He is a graduate of Hofstra University School of Law and the United States Merchant Marine Academy. A past President of the Spill Control Association of American (SCAA), his roots in the oil spill response and environmental communities run deep.

The referenced article appeared in the June issues of Marine News and MarineLink.com. Steve Candito comments on several topical issues that are of interest to our community, including, *inter alia,* the ongoing ISCO – BIMCO initiative to develop a standard contract for speeding up mobilisation of spill response services and equipment in case of serious spill events.

The article is well worth reading and your editor recommends it to you. Just click on the link - http://www.marinelink.com/news/president-insights410596.aspx

IMO PUBLISHES GUIDE TO SPILL RESPONSE IN ICE

Responding to an oil spill in the Arctic – or any area where ice may be present – can be challenging in the extreme

June 7 - At 183 pages, Guide to Oil Spill Response in Snow and Ice Conditions provides a unique insight into the issues and strategies surrounding the challenge of spill response in the Arctic. Commissioned by the International Maritime Organization (IMO) and the Arctic Council working group for Emergency Prevention, Preparedness and Response (EPPR) from a team comprising Owens Coastal Consultants and DF Dickins Associates, it will be supplemented by a companion volume to be issued shortly by IMO that includes the Antarctic and other subarctic areas affected by ice. It can be downloaded at: https://oaarchive.arctic-council.org/handle/11374/403.

The objective of the Arctic version of the IMO guide is to identify and describe those aspects of planning and operations that are directly associated with a response to an Arctic oil spill in ice and snow conditions. Response strategies to deal with Arctic oil spills in summer open-water conditions are not considered in the guide.

Offshore Wind Journal Read the complete text of this article

Publications (continued)

OIL SPILL SCIENCE AND TECHNOLOGY. EDITION NO. 2

June 7 - Oil Spill Science and Technology, Second Edition, delivers a multi-contributed view on the entire chain of oil-spill related topics from oil properties and behaviors, to remote sensing through the management side of contingency planning and communicating oil spill risk perceptions.

Completely new case studies are included with special attention to the Deepwater Horizon event, covering the impacts of wetlands and sand beaches, a mass balance approach, and the process for removing petroleum chemicals still trapped near Alabama beaches. Other new information on lingering oil left behind from the Exxon Valdez spill, the emergency system used in the Prestige incident, and coverage on the Heibei Spirit spill in Korea are also included.

This updated edition combines technology with case studies to identify the current state of knowledge surrounding oil spills that will encourage additional areas of research that are left to uncover in this critical sector of the oil and gas industry.

- Updated with new chapters on risk analysis and communication, contingency planning, restoration, and case studies

- Supported with technological advances evolved from the Deepwater Horizon/BP oil tragedy and events in the Arctic/Antarctic

- Multi-contributed from various industry experts to provide an extensive background in technical equipment and worldwide procedures used today

Research and Markets *More info about this new publication from Elsevier Science & Technology*

Links for recent issues of other publications (in alphabetical order)

AMSA Aboard	News from the Australian Maritime Safety Authority	April 2016
AMSA On Scene	Australia: National Plan for Marine Environmental Emergencies	March 2016
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	April 2016
Celtic and Biogenie enGlobe Newsletter	Technical Information on Polluted Site Remediation	Spring 2016
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	Current issue
EMSA Newsletter	News from the European Maritime Safety Agency	June 2016 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	June 2016 issue
IMO News Magazine	News from the International Maritime Organization	No 1, 2016
IMO Publlshing News	New and forthcoming IMO publications	May 2016
Intertanko Weekly News	International news for the oil tanker community	No 25, 2016
IPIECA eNews	Int'l Petroleum Industry Environmental Conservation Assoc'n	February 12 issue
JOIFF "The Catalyst	Int'l Organisation for Industrial Hazard Management	January 2016 issue
MOIG Newsletter	News from the Mediterranean Oil Industry Group	Quarter 1, 2016 issue
NOWPAP Quarterly	News from the North West Pacific Action Plan	Quarter 1, 2016 issue
OCIMF Newsletter	News from the Oil Companies International Marine Forum	May 2016 issue
Pollution Online Newsletter	News for prevention & control professionals	June 15, 2016 issue
Sea Alarm Foundation Newsletter	Oiled wildlife Preparedness and Response news from Sea Alarm	Autumn 2015 issue
Technology Innovation News Survey	News from US EPA – Contaminated site decontamination	April 16-30, 2016
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	Feb 29, 2016 issue
Transport Canada Newsletter	News and articles re transport of dangerous goods in Canada	Winter 2014 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	June 1, 2016
USA EPA Tech News & Trends	Contaminated site clean-up information	Spring 2016 issue
WMU Newsletter	News from the World Maritime University	March 2016 issue

Your editor depends on regular receipt of updated links for listed publications. If these are not received, relevant entries may be discontinued.

Events

INTERNATIONAL TASK FORCE FOCUSES ON PROTECTING WEST COAST FROM OIL SPILLS

June 15 - Public welcome at annual June 21 meeting in Seattle. Representatives from states and provinces on the Pacific Ocean will gather this year in Seattle to discuss how best to protect the West Coast from oil spills.

The Washington Department of Ecology is hosting this year's annual meeting. The Pacific States/British Columbia Oil Spill Task Force is comprised of British Columbia, along with the states of Washington, Oregon, California and Hawaii.

The states will update one another on spill-response programs and initiatives. The Task Force will also provide an update on projects underway. A facilitated session will address policy and emerging technology aspects of best achievable protection, with invited panelists from federal, state and industry organizations.

The June 21 meeting occurs 8 a.m. to noon, in the Microsoft Auditorium at the Seattle Central Public Library, 1000 Fourth Ave. The meeting is open to the public and is free of charge. Registration is online. *Washington Department of Ecology* Read more

Events

POSTPONEMENT OF IMarEST SHIP SALVAGE CONFERENCE

IMarEST regrets to have to advise that this event scheduled to take place in London on 29th June has had to be postponed.

The Conference will now be held later in the year and a new date will be advised as soon as possible.

UPCOMING EVENTS SUMMARY

COUNTRY	2016	TITLE OF EVENT	LOCATION
For more information click on Title of Event			
LITHUANIA	June 20-22	Exercise Balex Delta 2016	Klaipeda
USA	June 21-23	Clean Pacific Conference & Exhibition	Seattle. WA
SOUTH AFRICA	June 20-23	Workshop to review National Contingency Plan	Cape Town
UK	June 22	3rd Premiam Conference on Post-Spill Monitoring	London
Panama	June 27	EcoCanal 2016, NRT-ACP Drill	Panama
UK	June 29	IMarEST Ship Salvage Conference **POSTPONED**	London
FRANCE	July 11-12	MARPOCS Project Meeting	Brest
LIBERIA	August 1-4	W'shop on Conting'y Planning & Sensitivity Mapping	Monrovia
NIGERIA	August 2-3	National Workshop on Oil Spill Modelling	Abuja
INDIA	August 11-12	Oil Spill India	Mumbai
INDIA	Sept. 12-14	International Rivers Symposium	New Delhi
SINGAPORE	Sept 12-14	Salvage and Wreck Asia	Singapore
NORWAY	Sept 12-16	International NOSCA Oil Spill Technology Seminar	Bodo
INDIA	Sept. 22-24	India Clean Seas Conference 2016	Goa
FRANCE	October 10-14	Sea Tech Event 2016	Brest
UK	October 12-13	The Contamination Expo Series 2016	London
UAE	October TBA	EI Middle East HSE Technical Forum	Abu Dhabi
UK	October 18	UK Spill – Spill Science Seminar	Southampton
USA	November 1-3	Clean Gulf 2016	Tampa FL
USA	November 1-4	Emergency Preparedness, Hazmat Response Conf.	Pittsburgh
MALTA	November 2-3	JOIFF Fire & Explosion Hazard Mgmt. Conference	St. Julians
	2017		
USA	May 15-18	International Oil Spill Conference	Long Beach CA
To request posting of an event of interest to the Spill Response Community please send details to the Editor			

Company news

ISCO MEMBER, SCATMAN, HAS PUBLISHED NEW REFERENCES FOR SCATMAN TOOLS

Scatman, the specialists in developing mobile tools for shoreline assessment and other purposes, has delivered several new solutions for its industrial customers and built a set of mobile packages to start with SCATMAN Tools. Check below what mobile package could help you in saving time and effort in your operations:

Package 1: Check lists, field reports and quality deviations
Package 2: Device and asset tracking
Package 3: Installation documentation
Package 4: Field service tasks and follow-up
Package 5: Production tracking
Package 6: Work time reporting
Package 7: Safety training and induction

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