ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 299, 5 September 2011

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Application Form

News

ISRAEL, TURKEY AGREE TO INTERNATIONAL MARITIME AUDIT ON POLLUTION

Israel has agreed to undertake a voluntary audit from the International Maritime Organization at the end of 2012, and in doing so, will join Turkey as the first non-EU countries in the Mediterranean region to allow the global body to evaluate how the country is complying with its commitments to sea pollution prevention and nautical safety, officials said at a meeting at the Transportation Ministry.

The program, which aims to foster cooperation among non-EU Mediterranean countries, is a section of the Maltabased Maritime Administration of the Regional Marine Pollution Emergency Response Center for the Mediterranean Sea (REMPEC), part of the International Maritime Organization as well as the United Nations Environment Program.

SafeMed II, which was preceded by a SafeMed I program from 2006-2008, has a 5.5 million euro budget provided by the European Union, and includes Algeria, Egypt, Israel, the Palestinian Authority, Jordan, Lebanon, Morocco, Syria, Tunisia and Turkey.

In order to ensure a safe and thriving Mediterranean, while SafeMed requires the co-operation of many otherwise disparate countries, the project does not force each nation to abide by exactly the same protocols, according to Bergonzo (project officer of the regional program SafeMed II). "An international convention will not go into each and every detail of how things should be done – what is important is the result," he said. "For example, the MARPOL [the International Convention for the Prevention of Pollution from Ships, 1973 as modified by the Protocol of 1978] will say that you need to have a system of penalties to be able to prosecute offenders, but it will not tell you exactly what is a concrete result of this." Read more

CHINA: BOHAI BAY UPDATES

"Oil Spill Watchdog Has No Teeth"

August 22 - The massive oil spill in Penglai 19-3 oilfield is far from over. ConocoPhillips's Chinese unit admitted to the State Oceanic Administration that they could have done better detecting potential leakage points and confessed that new leaks were recently discovered near Platform B.

The oil spill off North China's Bohai Bay on June 4 is the biggest environmental disaster in the area's history. At least 5,500 square kilometers of sea area had been polluted by August 6th.

Why didn't ConocoPhillips give an explanation until a month after the incident?

"It's because no consensus has been reached on the exact cause of the oil spill," said an inside source at the North China Sea Branch of the State Oceanic Administration, or SOA.

According to the ConocoPhillips, the spills at platforms B and C resulted, respectively, from natural causes and human error in drilling.

"This type of underwater oil spill hasn't been seen before in China.[…] The gathering of monitoring data, assessment of contaminated area and the analysis of the cause all take some time," said an official from China National Offshore Oil Corp, or CNOOC, which holds a 51 percent stake in the oilfield. Read more

Company says it has finished cleaning up pollution in sea

September 1 - ConocoPhillips China says it has met the Aug 31 deadline that Chinese ocean officials set for it to clean up oil leaked into Bohai Bay.

By Wednesday, the State Oceanic Administration wanted the company to seal off the sources of the leak and clean up the oil released by accident into the bay. ConocoPhillips was also to submit a report on the causes of the incident and on its response to it. The US oil company said on its website on Wednesday that it had completed both tasks.

ConocoPhillips, a partner in the operation of an oilfield that has released large amounts of oil into Northeast China's Bohai Bay, said the sources of the leaks have been identified and sealed off. It also said precautionary measures are being taken to ensure oil does not start to seep out again, according to a Frequently-Asked-Questions section posted to the company's website on Wednesday.

ConocoPhillips submitted its report on the leaks to the State Oceanic Administration on Wednesday. The document discusses how the sources of the leaks were sealed and what the company learned from an internal investigation into the causes of the disaster.

The company estimated that 3,200 barrels of oil have been released into Bohai Bay.

A preliminary investigation suggested the leaks may have occurred after pressure built up in a reservoir, causing fluid to rise up through a fault in the sea floor, the company said. Read more

SOA Announced its Decisions on PL19-3 Oil Spill Incident

September 4 - On September 2, 2011 State Oceanic Administration of People's Republic of China ("SOA") announced, through SOA's official website, that ConocoPhillips China Inc ("COPC"), as the Operator of Penglai (PL) 19-3 oil field, has neither completely screened out the oil spill risks nor completely sealed the sources of oil spillage. The SOA also announced that, according to the analysis of the Joint Investigation Team ("JIT"), the JIT had determined that the oil spill incident at PL19-3 oil field is clarified as an accident involving liabilities as COPC did not fulfill its duties as a reasonable and prudent operator.

SOA has ordered COPC to suspend water injection, drilling and oil and gas production operations (the "Three Suspensions") at the entire PL19-3 oil field, and to take effective measures to continue screening out the potential oil spill risks, seal all sources of oil spillage and complete the cleanup work in a timely manner. In addition, as announced by the SOA, it has ordered COPC to recompose the Oceanic Environmental Impact Assessment (the "EIA") for the development of PL19-3 oil field and upon further approval on the EIA to resume the operations gradually, and further ordered that COPC must revise the Overall Development Plan (the "ODP") and the "Three Suspensions" will only be lifted after the approval on the ODP.

In addition, the SOA also announced it will, on behalf of State, make claims against COPC for the damage to the marine environment caused by PL19-3 oil spill accident in accordance with Marine Environment Protection Law of the People's Republic of China. Currently, the relevant preparation work is underway. Read more

USA: $112.5 MILLION AWARDED TO RESEARCH CONSORTIA STUDYING EFFECTS OF DEEPWATER HORIZON OIL SPILL ON GULF OF MEXICO

August 30 - Research on the effects of the Deepwater Horizon oil spill in the Gulf of Mexico took a major step forward today with the Gulf of Mexico Research Initiative (GRI) Research Board's announcement that eight Research Consortia will be funded for the next three years. A total of $112.5 million over three years will support this portion of the GRI research effort. These teams will investigate the fate of petroleum in the environment, the impacts of the spill, and the development of new tools and technology for responding to future spills and improving mitigation and restoration.

The grant recipients announced today were selected using a competitive merit-review process.

The GRI Research Board is an independent body established by BP to administer the company's 10-year, $500 million commitment to independent research into the effects of the Deepwater Horizon incident. Through a series of competitive grant programs, the GRI is investigating the impacts of the oil, dispersed oil, and dispersant on the ecosystems of the Gulf of Mexico and the affected coastal States in a broad context of improving fundamental understanding of the dynamics of such events and their environmental stresses and public health implications. The GRI also funds research that improves techniques for detecting oil and gas, spill mitigation, and technologies to characterize and remediate spills. Knowledge accrued will be applied to restoration and to improving the long-term environmental health of the Gulf of Mexico.

The article goes on to give details of all the grant recipients - Read more

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USA: SOME LESSONS LEARNED: USCG REPORT PUTS DWH RECORD STRAIGHT

Much has been said and written about the causes and consequences of the 2010 Deepwater Horizon disaster in the Gulf of Mexico, and about the scramble to respond to an oil spill that no one appeared adequately prepared to deal with. However, the U.S. Coast Guard's incident report, known as the Incident Specific Preparedness Review, or ISPR, provides some fascinating insights into lessons learned from how the response was conducted, and how those lessons might be applied to planning for some future oil spill contingency.

And the annual meeting of the Pacific States/British Columbia Oil Spill Task Force, held in Anchorage, Alaska, on Aug. 24, particularly focused on the ISPR findings.

U.S. Coast Guard Reserve Rear Admiral (retired) Carlton Moore, vice chairman of the ISPR team, told the task force that, despite many public perceptions to the contrary, the organization responding to Deepwater Horizon operated effectively.

The ISPR report, published in January, reinforces this point, saying that the Coast Guard and BP, the party responsible for the spill, had worked together cooperatively to deal with the disaster.

"Media reports often left viewers with the impression that the Coast Guard and the responsible party were at odds periodically during the response," the report says. "To the contrary, the (ISPR) team observed that personnel provided by the responsible party and Coast Guard personnel worked effectively together, and that there was 'unity of effort' throughout the response organization."

However, the response organization was ill equipped to address the political fallout from the response, as day after day people around the country watched television images of oil and gas gushing from the seafloor of the Gulf, Moore said.

"There was a huge public perception, accurate or not, that we were not able to effectively respond," he said. Read more

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CHINA: HUGE STOCKPILE OF TOXIC WASTE IN 12 PROVINCES

August 31 - One million tons of untreated toxic industrial waste are piling up across China, risking environmental disasters like the recently exposed case in Yunnan province, a non-governmental organization has warned.

Earlier this month it was revealed that more than 5,000 tons of chromium residue were illegally dumped on roadsides and in mountains by a chemical factory in Yunnan's Qujing city, causing the deaths of 77 head of livestock.

Official tests found "excessive sexivalent chromium" in water in the area where the waste was dumped.

Tests of the groundwater near the factory by Greenpeace, an environmental protection organization, showed that the concentration of sexivalent chromium in the water was 242 times the national standard. Chromium residue is a heavy metal and hazardous waste residue generated in the production of chromium metal and chromium salt.

Hexavalent compounds in the residue are the most toxic. The soluble and unstable chemical may cause health problems, such as kidney and liver damage, after entering human bodies through respiration, the skin, mucous membranes and digestion of food. Read more

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News (continued)

HUNGARY: AFTER THE SLUDGE: REBUILDING HUNGARY'S TOWNS

Last October a toxic waste spill from an aluminium factory swallowed homes in Western Hungary in what was the country's worst environmental disaster. Nick Thorpe visited the town for One Planet from the BBC World Service to see what had become of its residents.

There is nothing to photograph beyond the stream in Kolontar anymore, just weeds and puddles and a track down the middle that turns right, then peters out on a piece of wasteground beside a ditch. It is astonishing how short a road appears when all the houses are gone. All that is left of Kossuth Street and Mill Street.

Erzsebet and Zoltan Juhasz walk down this way sometimes, to see where their home used to be. They even found a tomato plant, growing among the tall weeds where their garden was.

"I dug it up and replanted it in my new garden and now it's full of fruit!" Erzsebet explains.

"It is the only light moment in a conversation about a subject which is still usually too painful to talk about - the moment when her 14-month-old daughter, Angyalka, was swept from her arms when a tidal wave of red sludge hit their house on 4 October last year.

“We never dreamed of living in a new house, one like this”

As we speak in her new kitchen, another little girl, Dori, runs in, laughing hilariously, three years old, wanting to play. Seven-year-old Gergo comes in to listen solemnly to the grown-ups.

His father asks him to go out again - both he and Erzsebet are crying - as they tell their story. But the boy stays, and Dori plays, and outside 13-year-old Renata stands by the slide. And Erzsebet is expecting a new baby, a boy, in November.

"We've very grateful for all the help we received, from the Red Cross, from the Baptist charity, from the state too, for giving us this house. I mean, they didn't have to, did they? They could have waited for the aluminium company to pay up."

Instead, the missing half of Kolontar has been rebuilt in record time, 21 brand new houses on the highest ground in the village. Read more

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USA: OIL COMPANIES FORMING LAKE SPILL RESPONSE COMPANY

Companies developing oil wells around Lake Sakakawea will share costs of equipment and training to handle oil spills on the lake should more occur.

Six companies, including Whiting Oil and Gas, have said they’ll sign an agreement Friday to create Sakakawea Area Spill Response LLC.

The new company will spend an initial $300,000 on three boats, boom and two oil skimmers and store them near New Town, possibly as soon as October

Jack Braun, of Whiting, who’s heading the group, said 16 other companies have said they are interested in being part of the group, but want to see the formal contract first.

Braun said a second set of boats, boom and skimmers would then be purchased and stored on the east end of the lake’s north shore, possibly in the Parshall vicinity. Read more

People in the News

FORMER LLOYD'S REGISTER EXECUTIVE JOHN CURLEY JOINS RESOLVE SALVAGE & FIRE (EUROPE), LTD. AS COMMERCIAL DIRECTOR

ISCO Member, RESOLVE Marine Group, Inc., a leading marine salvage and emergency response company with worldwide operations, has announced that John Curley has joined the company as Commercial Director for RESOLVE Salvage & Fire (Europe), Ltd. (RSFA). As Commercial Director of RSFA, Curley is the corporate representative and industry liaison for RESOLVE and its subsidiary companies. In addition to facilitating delivery of services to the company’s OPA90 clients, Curley will promote RESOLVE’s worldwide marine emergency response, salvage, wreck removal and other marine services to ship owners, operators and other shipping industry interests, as well as maritime underwriters and P&I Clubs in the U.K. and worldwide. Curley will be based in London. Read more

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People in the News (continued)

TITAN ANNOUNCES ORGANIZATIONAL CHANGES

TITAN Salvage has appointed Mark Hoddinott (on left) to global director, marketing and strategy, responsible for developing, delivering and managing the company's strategic marketing and business development plans. He will operate out of Titan's United Kingdom (UK) facility at Newhaven, East Sussex, and will report to Rich Habib, TITAN's vice president. Hoddinott, who will continue his role on the senior management team, will work closely with TITAN's commercial division.

Additionally, TITAN's Neil Ives (on right) has been appointed operations manager, Europe. Ives' responsibilities include managing the sales and marketing efforts for the region, pursuing new business, drafting proposals and contracts, supporting the salvage warehouse and operations and overseeing the administrative requirements in the UK office. Read more

SCOTTISH ENVIRONMENTAL AGENCY CEO TO STEP DOWN

SEPA's Chief Executive, Campbell Gemmell, is to step down later this year to take on a new role in Australia. Dr Gemmell, who joined SEPA as Director of Strategic Planning in 2001, has been CEO for the past eight years. He will remain at SEPA until the end of the year, and will take up the post of Chief Executive of the Environment Protection Authority South Australia, in Adelaide, in the New Year.

SEPA's Chairman, David Sigsworth, said, "Campbell is a visionary and dynamic CEO who has been the architect of transformational change which has positioned SEPA to deliver effectively and sustainably into the future. He is also a champion of high quality, efficient services across the public sector landscape. "I wish Campbell every success in his new role in South Australia. I am sorry that Scotland will be losing a formidable intellect, but I have absolutely no doubt that Scotland's loss will be Australia's gain. Read more

Science & Technology

USA: CLARKSON UNIVERSITY RESEARCHERS WILL TRACK OIL SPILLS WITH ROBOTIC SENSOR TECHNOLOGY

Clarkson University researchers James S. Bonner and Temitope O. Ojo have acquired an autonomous underwater vehicle (AUV) equipped with sensors that are capable of detecting and tracking plumes of hydrocarbon in the aftermath of an oil spill.

The instrument, which will aid emergency response activities in the event of an oil spill, was obtained through use of a $200,000 MRI-RAPID grant from the National Science Foundation for their research "Development of Surface and Submerged Oil Detector using Fluorescence and Laser Light Scattering."

Bonner is the Shipley Center for Innovation fellow and a professor of civil & environmental engineering. Ojo is a research assistant professor of civil & environmental engineering.

According to Bonner, a leading expert in oil spill response and countermeasures research, the team will also integrate sensors, which have been in development within the Clarkson research laboratories, into the robotic vehicle. Read more

USA: DTD PIONEERS NEW HORIZONTAL BLIND WELL TECHNOLOGY

DTD has pioneered the development of a new technology for completing blind wells of extended lengths, even in adverse drilling conditions. The technology retains all the benefits of real-time directional drilling while virtually guaranteeing that well screens and casing can be installed, even in wells several hundred feet long.

Until now, single-ended, or 'blind' well installations required that the bore be completed, then all of the tooling is removed from the bore and the casing installed as a subsequent operation. This method has generally been satisfactory for short wells, up to a few hundred feet, in stable drilling conditions. But when longer wells have been attempted, or if the bore is subject to collapse or caving, the combination of skin friction from casing advancement and caved material in the bore often resulted in failure.

As DTD has completed ever longer double-ended well installations, the need for longer single-ended wells has also been recognized. Through extended research and development, and the building of several prototype systems, the result was a system that retains the ability to navigate and steer, using conventional walkover navigation systems, while allowing the well casing to be placed through the drill string when the bore is completed. By leaving the drill string in place, the bore never has the opportunity to collapse and skin friction during installation is greatly reduced inside the flush-interior drill rods. After the screen and casing are inserted, the drill rods are retracted, leaving the well materials in place. Read more

CHINA: NOVEL HYDROGEL-COATED MESH IS PROMISING MATERIAL FOR OIL SPILL CLEAN-UPS

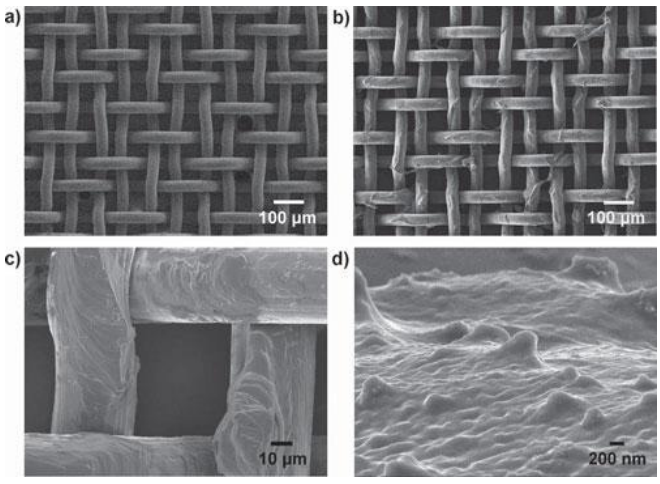
Editor – This is an extract from an article from *Nanowerk Spotlight* and follows up on work that was featured in a previous issue of the ISCO Newsletter.

Earlier this year, in the follow-up to the Deepwater Horizon oil spill in the Gulf of Mexico, we published a *Nanowerk Spotlight* on nanotechnology-based solutions for oil spills. Although the application of nanotechnology for oil spill cleanup is still in its nascent stage, it offers great promise for the future. In the last couple of years, there has been particularly growing interest worldwide in exploring ways of finding suitable solutions to clean up oil spills and deal with industrial oily wastewater through use of nanomaterials. Key for the success of these materials is a high separation capacity, with resistance to oil fouling, and that are easily recyclable.

Oil/water separation is an interfacial challenge, and novel materials designed to possess special wettability have different interaction and affinity for oil and water, thus can realize the separation.

"Until now, researches in this field all focus on materials with both hydrophobic and oleophilic properties," Lin Feng, an associate professor in the Department of Chemistry at Tsinghua University in Beijing, explains to Nanowerk. "Those materials realized filtration or absorption of oils from water selectively and effectively – the so-called 'oil-removing' type of materials. However, the oil-removing type of materials is easily fouled even blocked up by oils because of their intrinsic oleophilic property. The adhered oils, especially high-viscosity oils, seriously affect the separation efficiency after using for limited number of times. In addition, oils adhered or absorbed are hard to remove, which result in secondary pollution during the post-treatment process as well as a waste of both oil and oleophilic materials."

In new work, Feng and a team os scientists from Beijing National Laboratory for Molecular Sciences and Beihang University, fabricated a novel superhydrophilic and underwater superoleophobic hydrogel coated mesh. As they reported in the August 17, 2011 online edition of *Advanced Materials* ("A Novel Superhydrophilic and Underwater Superoleophobic Hydrogel-Coated Mesh for Oil/Water Separation"), this new material can selectively separate water from oil/water mixtures such as vegetable oil, gasoline, diesel, and even crude oil/water mixtures effectively (more than 99 %) and without any extra power.



SEM images of the PAM hydrogel-coated mesh prepared from a stainless steel mesh with an average pore diameter of about 50 µm. a) Large-area view of the uncoated stainless steel mesh. b) Large-area view of the PAM hydrogel-coated stainless steel mesh. c) Enlarged view of a single pore of the PAM hydrogel-coated stainless steel mesh. d) The higher magnifi cation image of one single wire on hydrogel-coated stainless steel mesh, in which the nanostructured papillae can be clearly observed. (Reprinted with permission from Wiley-VCH Verlag)

Feng points out that during the separation process, the underwater superoleophobic interface with low affinity for oil drops prevents the coated mesh from fouling by oils, which makes the recycling of oil and materials easy. *Read the complete article*

UPDATE 1- NEW JAPAN METHOD EYED TO REMOVE RADIATION FROM SOIL

An improved method to remove radioactive cesium from soil may mean Japanese authorities will no longer have to strip vast amounts of dirt to clean up areas contaminated by the world's worst nuclear disaster in 25 years, a Japanese research institute said.

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Japan is faced with the task of cleaning up thousands of square kilometres of land contaminated by radiation from the Fukushima Daiichi nuclear power plant after it was crippled by a devastating earthquake and tsunami in March.

The National Institute of Advanced Industrial Science and Technology said it has improved on a method that uses an acidic solution to remove radioactive material from soil. Without this method, removing topsoil in the 12 municipalities surrounding the Daiichi plant could result in millions of tonnes of soil that needs to be disposed of or stored, it added.

"The cost to dispose of or store soil removed from Fukushima would be astronomical. Our method could cut the amount of soil that needs to be removed to one hundredth of what it would otherwise be, which also means disposal and storage costs would be slashed by the same extent," said Tohru Kawamoto, who led the research.

Kawamoto said his group was aiming to begin cleaning up some school grounds and other places in Fukushima prefecture on an experimental basis within the next six months and that it might take another six months before its operations could be widened out throughout Fukushima.

In the new method, the acidic solution is heated to almost boiling point, after which almost all of the cesium is taken out through agents known as Prussian Blue nanoparticles, allowing the solution to be used again.

Various types of cesium, which spread from the crippled Daiichi plant, can have a half life of up to 30 years. Half life is the amount of time required for a radioactive substance to decrease by half. Read more

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LESSONS LEARNED FROM THE TWO WORST OILS SPILLS IN U.S. HISTORY

One year after the notorious BP Deepwater Horizon oil spill in the Gulf of Mexico and two decades after the Exxon Valdez spill in Prince William Sound off the coast of Alaska the scientific lesson is clear â€“ microbes matter! Despite vast differences in the impacted marine ecosystems and the circumstances of these two worst oil spills in U.S. history, oil-degrading microorganisms played a significant role in reducing the overall environmental impact of both spills.

"Responders to future oil spills would do well to mobilize as rapidly as possible to determine both natural and enhanced microbial degradation and what the best possible approach will be to minimize the risk and impact of the spill on the environment," says Terry Hazen, microbial ecologist with the Lawrence Berkeley National Laboratory (Berkeley Lab).

"The fate of all oil spills will depend upon a unique set of circumstances that will govern risk and impacts, including the volume of oil spilled, the chemical nature of the oil, and the ecosystems with their specific environmental conditions impacted by the spilled oil," he says. "However, the one common denominator is the cosmopolitan nature of oil-degrading microbes."

Hazen, who leads the Ecology Department and Center for Environmental Biotechnology at Berkeley Lab's Earth Sciences Division and has studied microbial activity at both spill sites, is the co-author with Ron Atlas, a University of Louisville biology professor, of a paper featured on the cover of this month's issue of the journal Environmental Science & Technology. The paper is titled "Oil biodegradation and bioremediation: A tale of the two worst spills in U. S. history."

Petroleum hydrocarbons in crude oils, such as those released into marine ecosystems by the Exxon Valdez and BP Deepwater Horizon spills, are natural products derived from aquatic algae laid down between 180 and 85 million years ago, the authors note. Because these hydrocarbons regularly seep into the environment from underground reservoirs, especially in marine environments, a large and diverse number of microorganisms, including bacteria, archaea and fungi, have evolved the ability to utilize these petroleum hydrocarbons as sources of food and energy for growth. While these oil-degrading microorganisms are ubiquitous, they may only represent a small proportion of a pre-spill microbial community in any given ecosystem. In both the Exxon Valdez and the BP Deepwater Horizon spills, the sudden and dramatic surge in the presence of crude oil sparked a sudden and dramatic surge in the presence of oil-degrading microorganisms that began to feed on the spilled oil.

"In the case of the Exxon Valdez spill, nitrogen fertilizers were applied to speed up the rates of oil biodegradation," Hazen says. "In the case of the BP Deepwater Horizon spill, dispersants, such as Corexit 9500, were used to increase the available surface area and, thus, potentially increase the rates of biodegradation." Read more

Cormack's Column

In this issue of the ISCO Newsletter we are printing No. 41 in a series of articles contributed by Dr Douglas Cormack.

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

KNOWLEDGE OF THE FATE OF RELEASED OIL / HNS (CHAPTER 41)

This article continues with the ITOPF property tabulations for Half-Life Groups III and IV.

Group III

High Pour Point	Property Identification Symbol			
Oil	A	B	C	D
Bakr	7	1500	14	60
Belayim (marine)	15	s	22	55
Cabinda	21	s	21	52
El Morgan	7	30	25	47
Manji	9	70	21	53
Sovo	15	s	21	48
Suez Mix	10	30	24	49
Trinidad	14	s	23	28
Zaire	15	s	23	55

Low Pour Point	Property Identification Symbol		
Oil	B	C	D
Arabian Light	14	30	40
Arabian Medium	25	29	45
Arabian Heavy	55	25	49
Buchan	14	31	39
Champion Export	18	15	26
Flotta	11	34	26
Forcados	12	18	34
Forties	8	32	36
Iranian Heavy	25	29	44
Khafji	80	25	49
Kuwait	30	29	46
Maya	500	25	49
Nigerian Medium	40	14	40
Santa Maria	250	22	54
Tia Juana Light	2500	24	45
Medium Fuel	1500-3000		

These oils disperse with Group III half-lives at ambient temperatures above their pour points. At temperatures below their pour points they were to be treated as Group IV oils (but c.f. article 42).

Group IV

Individual Oils	Property Identification Symbol			
	A	B	C	D
Bachequero Heavy	-20	5000	10	60
Bahia	38	s	24	45
Boscan	15	s	4	80
Bu Attifil	39	s	19	47
Cinta	43	s	10	54
Cyrus	-12	10,000	12	66
Duri	14	s	11	54
Gamba	23	s	11	54
Handil	35	s	23	33
Heavy Lake Mix	-12	10,000	12	64
Jatibarang	43	s	14	65
Jobo/Morichal	-1	23,000	3	76
Lagunillas	-20	7,000	9	73
Merey	-23	7,000	10	66
Minas	36	s	17	53
Panuco	2	s	3	76

Cormack's Column (continued)

Individual Oils	Property Identification Symbol			
	A	B	C	D
Pilon	-4	s	2	92
Quiriquire	-29	1,500	3	88
Shengli	21	s	9	70
Taching	35	s	3	78
Tia Juana Pesado	-1	s	3	78
Wafra Eocene	-29	3,000	11	63
Heavy fuel		5 - 30 x 10^3		

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.

Training

OIL SPILL TRAINING CARRIED OUT AT ADANI PORT, MUNDRA, INDIA

ISCO Member, Viraj Clean Sea Enterprises Pvt Ltd, Navi Mumbai, India conducted a combined IMO level 1 and 2 Oil Spill Response training for its employees from 22 to 27 August, 2011 at Adani Port, Mundra. Personnel from Adani port also participated.

The training was conducted by Oil Spill Control Team (OSCT), Indonesia and four of their trainers were in India to carry out the training. The trainees were also taken to sea by Adani Port vessels to have a complete experience of oil spill response activities. The offshore activities lasted a full day. The week long event finished with a dinner at Hotel Sapphire in Mundra, where senior personnel from Adani port, Adani Power, Coast Guard and HPCL Mittal Energy Limited present in addition to the trainers and Senior personnel from VirajCSE.

AHMP EMERGENCY RESPONSE SIMULATION SHOWS IMPORTANCE OF COMMUNICATION, PREPAREDNESS

On Aug. 30, the Alliance of Hazardous Materials Professionals (AHMP), along with the University of Texas (UT) at Austin, simulated a response scenario involving a chemical spill. AHMP Executive Director Cedric Calhoun, FASAE, CAE, spoke with EHS Today to discuss the response efforts and the importance of communication and preparedness.

The simulation used non-hazardous dye to represent waste oil. Three drums of this "oil" fell from a truck and spilled in Waller Creek, which runs from the north side of the UT Austin campus to Lady Bird Lake and, ultimately, the Colorado River. Calhoun stressed that in an actual response scenario, this highly hazardous, highly flammable substance could enter the watershed very quickly, especially if the creek was moving at rapid speeds. "It's important for groups to exercise this," Calhoun explained. "You can never really create the real thing, but I think it was a true testament to the program that they had [everything] in line and were able to communicate and follow their process without any hitches."

Multiple entities responded to the simulated crisis, including UT's emergency response team, UT's campus police and fire department and Austin's fire department and police department. Responders assessed the material that had spilled, put down boom and worked to stop the flow. Calhoun pointed out that the response also included cleanup operations as part of the demonstration even though the dye would not cause any harm to the environment or the public.

"They actually gathered some of the dye and showed the participants how they removed it from the water and then contained it in a drum for later disposal," Calhoun explained. "Our group appreciated seeing [the demonstration come] full circle."

Approximately 35 professionals from private industry, EHS departments, universities or government agencies watched the demonstration, which was part of AHMP's annual national conference. Calhoun called the response "incredible" and especially praised "the fact that the communication structure was so tight and that [responders] had a plan that they were able to execute."

Responders communicated via pagers, text messages and 14 radio signals. In an emergency response situation like this one, Calhoun pointed out, "You can't just get on the horn and call someone. You've got to think and look at the technology and interoperability to maximize your region in a very short period of time." Overall, Calhoun said that the simulation's most important message was simple: Be prepared. Read more

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Wendy Schmidt Oil Clean-Up X Challenge Finalists

THE SEVENTH IN A SERIES OF ARTICLES FEATURING THE FINALISTS IN THE COMPETITION

"Inspired by Squalus"

The Lamor Squalus (Latin for shark) new brush technology has been developed to meet the demand of the company's customers when it comes to larger weather windows and wave conditions for oil spill response operations (OSRO) and at the same time increasing encounter and recovery rates dramatically….

Photo – First sea trials in Finland

"Moreover, the modular design and multi-use possibilities represents good value for money, in other words customers may respond to a large variety of spill scenarios with a limited number of skimmers," says Lamor Corporation's Strategic R&D Manager **Jari Ahoranta**.

"The shark idea comes from the smooth and fast movement of sharks through water, the shape of the shark head and the tongue and gills of the shark as well as the aggressive concept we have developed for fast flow through of water in order to separate oil from water," he explains.

Photo – Assembly of the skimmer for the first sea trials

The shark head shape is used in the belt brush configuration for large area for the oil to attach to the brushes as well as for damping waves that enables fast speeds through water while separating water from oil. "This means we can achieve much higher encounter rates than ever before and its modular design can be used in free floating skimmers, side collectors and new multi-module ship systems. Lamor Squalus is capable of recovering both light oils and heavy and weathered oils including bitumen with a simple change of setup by quick changing the position of the brush package," explains Ahoranta.

Picture – Lamor Team Leader Jari Ahoranta inspecting the installation

The hybrid technology in the Lamor Squalus includes a brush wheel, brush belt and DIP system features with totally new scarper design. "This hybrid technology will meet all recovery challenges with the same skimmer and combine the best features of the different basic technologies. And the technology can be used in at least five different modes. With the modular design this gives a huge flexibility for unique skimming setups with the same skimmer that can also use the patented Aquatread brush configuration," he says.

"Moreover, it can be integrated with several pump technologies giving enormous capacity range depending of the number of modules used. With further development at Lamor, the Squalus will result in a multi-tool skimmer system for all possible oil spill scenarios," Ahoranta concludes. http://www.lamor.com/

Publications

BOEMRE RELEASES STUDY ON INCORPORATING CLIMATE EFFECTS INTO OIL-SPILL RISK ANALYSIS

The Bureau of Ocean Energy Management, Regulation and Enforcement (BOEMRE) today released a new report evaluating how climate change may affect the environmental conditions measured and used in mathematical modeling for oil-spill trajectory analysis in the Arctic region. Key findings from the study include recommendations on the scientific methodology to use in explaining recent, rapidly changing Arctic conditions.

"As we make decisions regarding potential energy development in the Arctic, we need the best scientific data available to understand the impact of the changing climate," said BOEMRE Director Michael R. Bromwich. "This study will help improve our computer modeling and analyses and adds to the growing body of research regarding effects of climate change on the Arctic marine environment."

The two-year study included a literature review of the most current oceanographic knowledge available on the Arctic, particularly with respect to the Beaufort and Chukchi Seas, and focused on the effects of climate change on sea ice, circulation, river discharge, and other environmental conditions in the Alaska Arctic. The report includes a summary of results and feedback from leading oceanographic and atmospheric scientists who attended a three-day workshop held in March 2011 as part of the project.

The report recommends that BOEMRE organize a data archive that includes information from national, international and industry sources for atmospheric, sea ice and oceanic conditions in the U.S. Arctic in order to document major environmental changes. Other recommendations include that the agency conduct analyses to determine how the expected path of a hypothetical oil spill may change with respect to changes in climate variability; and run multiple hindcast models using statistics over a five-year period to see the impact of the different models on movement of a hypothetical oil spill. BOEMRE uses hindcasting for oil-spill trajectory analyses when making decisions regarding lease sales and uses the analyses in other National Environmental Policy Act (NEPA) documents. Read more

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NEW US EPA PUBLICATIONS

Technology Innovation News Survey - The July 1-31, 2011 *Technology Innovation News Survey* has been posted to the CLU-IN web site. The *Survey* contains market/commercialization information; reports on demonstrations, feasibility studies and research; and other news relevant to the hazardous waste community interested in technology development. The latest survey is available at: http://www.clu-in.org/products/tins/

Tech Direct - TechDirect's purpose is to identify new technical, policy and guidance resources related to the assessment and remediation of contaminated soil, sediments and ground water. September 1 issue is available at: http://www.clu-in.org:80/techdirect/td092011.htm

Contributed Article

OCCUPATIONAL SAFETY AND HEALTH: MINIMUM STANDARDS ARE JUST NEVER ENOUGH

An article by Member of the ISCO Executive Committee. Marc K. Shaye. Although the case histories used in the article don't relate to spill response activities, the lessons are there for everyone to learn.

Having represented clients in workplace health and safety for more than 30 years, I have realized there is one inescapable truth: Sometimes no matter how vigilant you are about safety, injury and fatalities occur.

Doing all you can, however, can minimize, if not totally eliminate the unintended consequences. I have chosen four case studies to share, which arose from personal experience and frustration borne out of tragic circumstances. All of the cases resulted in fatalities. Could they have been prevented?

You decide.

Case #1: Blood Plasma Processing Facility

A sophisticated and complex technology required the use of large pressurized vessels -- large enough for a worker to climb into for maintenance. The accident was on the eve of a three-day holiday, and the late afternoon shift was performing a routine maintenance purge of the tank system. The shift foreman, known to his fellow workers as the "wizard," was going through the checklist requirements to ensure the tanks were cleared and cleaned for the next processing batch. The name "wizard" came comfortably to this young man who had scored high marks in every safety program provided by his employer. He also taught his fellow employees the intricacies of the job and the safety requirements for operating all aspects of the system.

The evening of the accident, the shift foreman was aware that a critical pressure valve was not working properly. For whatever reason: constraints of time; his experience operating the equipment; and the assumptions he may have made about a relief valve protecting against pressure build-up, the "wizard" applied more and more pressure to the vessel. As he stood over the large steel lid cover to peer through the observation window, the bolted lid blew out and drove him several feet across the room to his death.

The ensuing investigation raised a number of concerns about safety, including the security afforded by the bolts on the lid cover, which were discovered to be either defective or that an insufficient number of bolts were used. Each of these concerns, including the requirements for using bolts and discarding defective bolts was addressed in detailed protocols developed by the employer.

Through training and safety programs mandated for each employee, these protocols were reinforced on a regular basis. In fact, it was apparent to the investigators that not only did this employer have a strict safety program, but that its protocols went beyond the regulations of both the Occupational Safety and Health Administration and the Food and Drug Administration for a facility that processes blood plasma.

Case #2: Water Main

A construction project in Ohio involved a 96-inch water main that stretched over two miles and included the installation of manhole entrances. The circumference of these portals was very large and required temporary metal covers as construction proceeded. The covers, designed with eyebolt attachment points, could be folded back in their middle. Each day the covers were lifted on and off the shaft openings by a crane. On the day of this accident, one of the workers rode the cover, and when the cover folded, the instability caused the employee to fall 65 feet to his death. Workers had been warned not to ride the cover. The company claimed that had a supervisor been present that morning, the worker would have been ordered off the cover and reprimanded for this safety infraction.

Case #3: Retractable Safety Line

The employer had a safety program with an outstanding national reputation. It mandated that all ironworkers wear a safety line with a retractable unit attached. A worker was setting deck plates on the top of a convention center expansion when he fell 65 feet to his death through a hole in the flooring. The retractable safety line, which had saved the lives of eight of the employer's workers over the years, failed.

The employer commissioned specialized laboratory studies on the equipment to determine why this retractable unit malfunctioned. Throughout six months of investigation by the federal authorities, no evidence was uncovered that suggested any safety standard had been breached. The government did not issue one citation in the matter.

Case #4: Staging Trusses

An ironworker close to retirement took the assignment to earn enough money to go on a fishing trip to Oregon with his sons. The work involved repositioning 75-foot trusses from one staging area to an assembly area. The units weighed in excess of 30,000 pounds and were handled by a crane.

The construction site foreman convened a meeting of his crew before the start of work that night. As was customary, every detail of the work was reviewed, including safety procedures. The crew was experienced and had done this procedure at least 25 times. The truss, with an eccentric plate attached, arrived at the assembly area. While attempting a controlled descent of less than six feet, the truss flopped to the ground. The employee was struck from the descending steel and was killed. He was standing close to other workers who were sure he knew that the descent had been initiated. His fellow workers were puzzled why he moved to a spot where he was in certain danger rather than move a few feet back to where he first stood.

Who is Responsible?

In today's corporate climate where accountability has new and far-reaching consequences, managers and corporate officers must view workplace health and safety issues as priorities. One possible scenario when a worker dies on the job is the potential for criminal prosecution. In the case studies provided, this potential was never realized; yet, the consequences to personnel and organizational objectives were devastating.

Making safety a value is embodied in the Corporate Code of Ethics developed by the National Safety Council, http://www.nsc.org/Pages/Home.aspx. The Code calls on all corporations, businesses and employees to adopt an Occupational Safety and Health Code of Ethics that establishes safety and health leadership, responsibility and accountability.

- Adherence to the Code will: Commit organizations to making safety and health a core value shared by each employee.
- Recognize safety and health cannot be compromised in any decisions.
- Establish an effective system of accountability to ensure that hazards are identified and mitigated.
- Establish a goal of zero injuries and illnesses and the will to achieve it.
- Confirm the belief that all injuries are preventable.
- Create a work environment that fosters employee and management participation and employee empowerment.

About the Author

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Company News

RESOLVE ACQUIRES ELLIOTT BAY DESIGN GROUP'S NEW ORLEANS OFFICE

RESOLVE Marine Group, Inc. (RESOLVE) has acquired the staff and assets of the Elliott Bay Design Group's (EBDG) New Orleans, Louisiana office. The addition of former EBDG personnel in New Orleans expands RESOLVE's in-house engineering team, creating a new company and wholly owned subsidiary RESOLVE Engineering Group, LLC. The Group will support RESOLVE's extensive worldwide operations while continuing to serve both former and new clients as a full-service naval architecture and marine engineering group. RESOLVE Engineering Group, LLC provides new design, salvage engineering, modifications, feasibility studies, stability analyses, forensic engineering, incident response and damage stability plan development among other services to support shipyards, and vessel owners and operators in the public and private sectors, in the U.S. and worldwide. Read more