



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
Issue 294, 1 August 2011

info@spillcontrol.org

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News

US NOT READY TO RESPOND TO ARCTIC OIL SPILLS



July 27 - The top officer of the US Coast Guard said Wednesday that the government is not prepared to respond to an oil spill in Arctic waters if a drilling company fails to control its own well.

Admiral Robert Papp, the agency's commandant, told the Senate Committee on Commerce, Science and Transportation that the government had plenty of resources stationed near the Gulf of Mexico last year and could quickly dispatch communication systems, helicopters and other equipment to BP's runaway Macondo well.

"If this were to happen off the North Slope of Alaska, we'd have nothing," said Admiral

Robert Papp, the agency's commandant. "We're starting from ground zero today."

Shell has applied for permits to drill exploratory wells in the Beaufort and Chukchi Seas next summer. The seafloor sits under 120 to 140 feet of water, compared with Macondo that sat below more than 5,000 feet of water.

Vice President Peter Slaiby told the Senate committee that Shell would beat the federal requirement for deploying response vessels within an hour of spills.

"Shell would not be working in the Arctic had we believed there was something,

News (continued)

an event we could not control," he said. "We simply would not be there. I believe we have the best oil-spill response plan anywhere in the world.

Slaiby said crews would install two sets of shearing rams in blowout preventers and inspect the devices weekly. Because of the shallower depths, he said, divers could respond to problems on the seafloor in addition to remotely operated vehicles.

Papp said drillers have the lead role in responding to accidents, as BP did after Macondo, but the government must get ready to support them.

"Although private industry may assert they're adequately prepared to respond to a spill, we must also determine what response capability our Coast Guard and nation needs so we can mount an adequate response as exploration advances towards production," he said. [Read more](#)

USA: TESTING GULF SEAFOOD



Steven Wilson, chief quality officer for NOAA's Seafood Inspection Program, demonstrates sensory analysis of a sample of shrimp.

Putting a testing process in place took a concerted effort. NOAA, in cooperation with the [Food & Drug Administration](#), the Environmental Protection Agency, and state authorities, agreed on a [reopening protocol](#) that included analytical testing for contaminants. Of greatest concern were potentially toxic and carcinogenic polycyclic aromatic hydrocarbons (PAHs) and the chemicals in the dispersants. Surveillance testing is ongoing.

"We're very confident that the steps that we have put in place to ensure the safety of seafood have worked," says Donald W. Kraemer, acting deputy director of FDA's Center for Food Safety & Applied Nutrition, in a [video](#) posted on the agency's website. "We had an extensive program of

sampling at that time and since then, and the results have consistently been 100 to 1,000 times below our levels of concern."

Balancing consumer protection with the seafood industry's desire to get back in business required analytical methods that could provide answers quickly without compromising accuracy, reliability, or safety. Multiple FDA, NOAA, and state labs worked to refine testing procedures, create new ones, and put them into practice. Although the tests themselves are considered adequate, environmental groups and academic researchers have raised concerns about the government's overall approach to risk assessment.

Experience from previous spills gave regulators an understanding of which PAHs to test for and how long it takes animals to clear oil from their systems, according to Kraemer. Oysters, for example, are the first to pick up contaminants, and they hold on to them the longest. Finfish, or non-shellfish, metabolize PAHs much faster and have a low potential to accumulate them in their tissue and transfer them up the food chain, according to NOAA. Shrimp and crabs fall in between.

UPPER LIMITS Levels of concern set for polycyclic aromatic hydrocarbons in Gulf seafood			
	LEVELS OF CONCERN (PPM)		
CHEMICAL*	SHRIMP/CRABS	OYSTERS	FINFISH
NON-CANCER CAUSING*			
Naphthalene	123	133	32.7
Fluorene	246	267	65.3
Anthracene & phenanthrene	1,846	2,000	490
Pyrene	185	200	49.0
Fluoranthene	246	267	65.3
CANCER POTENTIAL**			
Chrysene	132	143	35.0
Benzo[k]fluoranthene	13.2	14.3	3.5
Benzo[b]fluoranthene	1.32	1.43	0.35
Benzo[a]anthracene	1.32	1.43	0.35
Indeno[1,2,3-cd]pyrene	1.32	1.43	0.35
Dibenzo[a,h]anthracene	0.132	0.143	0.035
Benzo[a]pyrene	0.132	0.143	0.035

* Includes alkylated homologs: C1, C2, C3, C4 naphthalenes; C1, C2, C3 fluorenes; and combined C1, C2, C3, C4 anthracenes/phenanthrenes. ** Target compounds and cancer potential based on Agency for Toxic Substances & Disease Registry. e Based on a 1-in-100,000 increase in lifetime upper bound cancer risk adjusted for exposures expected to last five years. For samples containing any of the last seven compounds, the sum of the individual ratios of the detected levels to the levels of concern cannot exceed 1. SOURCE: Food & Drug Administration

[View Enlarged Image](#) On the basis of such knowledge, levels of concern (LOCs) for contaminants in seafood were set in the reopening protocol by using what Kraemer has called "very conservative estimates" for people's seafood consumption and exposure duration. LOCs fell into the range of hundreds of parts per million for chemicals that FDA viewed as not potentially carcinogenic to as low as parts per billion for more harmful ones.

All seafood samples underwent initial sensory screens, or sniff-and-taste tests, which are common in food inspection. Specially trained at NOAA's National Seafood Inspection Laboratory in Pascagoula, Miss., inspectors can detect unusual odors and flavors at down to about the 10-ppm level. If samples failed, the associated fishing areas were kept closed. Seafood samples that passed were then subject to chemical analysis.

Because of previous oil spills, chemical screening methods already existed for seafood. The accepted NOAA method for PAH detection uses gas chromatography along with mass spectrometry. However, the method requires extensive sample cleanup. To handle the large amounts of seafood that would

need to be tested, FDA wanted a simpler approach with higher sample throughput.

By late July 2010, FDA scientists and collaborators had adapted known extraction and liquid chromatography-fluorescence detection (LC/FD) methods. In the adapted method, PAHs are extracted from pulverized seafood through a modified QuEChERS (quick, easy, cheap, effective, rugged, and safe) sample prep developed for monitoring pesticide residues in food. The extracts are filtered but don't require further cleanup for LC/FD analysis. Testing times were reduced from about a week to two days.

[Read more](#)

USA: KALAMAZOO RIVER OIL SPILL RESPONDERS 'WRITING THE BOOK' ON SUBMERGED OIL CLEAN UP

This is the first time the U.S. Environmental Protection Agency has had a diluted bitumen spill of this size, and responders are "writing the book" on how to respond, said Ralph Dollhopf, EPA incident commander for the spill.

"At minimum, we're writing a chapter in the oil spill cleanup book on how to identify submerged oil," Dollhopf said. "We're writing chapters on how it behaves once it does spill (and) how to recover it."

Editor - Two interesting articles on the clean-up that is still ongoing after the spill one year ago. The videos are also well worth watching.

[Article and Video \(1\)](#) [Article and Video \(2\)](#)

USA: YELLOWSTONE SPILL UPDATE

July 28 - EPA continues to oversee the response to the ExxonMobil Silvertip Pipeline Spill on the Yellowstone River. At this point, there are nearly 900 personnel engaged in cleanup and shoreline assessment efforts. Unified Command has conducted helicopter lift operations to get equipment into areas that were previously inaccessible to cleanup crews and to remove contaminated debris. This has accelerated cleanup efforts and will enable contaminated debris piles to be removed more effectively.

EPA is working with a team of local, regional, and national experts in an Agricultural Impact Subcommittee to develop a fact sheet for agricultural questions that will be made available to the public as soon as it is completed. This fact sheet will provide guidance to landowners on remediation techniques and will serve as a framework to address their concerns.

Sampling data results will be made available as quickly as validated results permit. A decision was made by Unified Command early on to ensure that all the response data associated with this incident be consistent with Montana DEQ methodology and standards. As such, we are using only certified labs in Montana and those businesses have been working diligently to process samples and data packages. When data becomes available it will immediately be posted to the maps section of the EPA website.

[Read more](#)

CANADA: ALBERTA PIPELINE SPILL RELEASES 1,300 BARRELS OF OIL

July 21 - Another northern Alberta oil pipeline has been shut down after operator Pembina Pipeline discovered a leak in a remote area north of Swan Hills.

An estimated 1,300 barrels were released from the underground pipeline onto muskeg and into a creek before the Calgary-based company shut down the line, said Pembina spokeswoman Shawn Davis.

"We detected a volume imbalance at our control centre and from that we initiated air and ground investigations," Davis said Wednesday. "And from there we found that there was a leak."

The pipeline was shut down around 7:45 a.m. Tuesday when the system showed a dip in volume, and the oil spill visually confirmed in the evening, she said. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this report]

SHELL SAYS 100,000 BPD STOLEN IN NIGERIA

"We don't have any confirmed figures for theft of oil, but we estimated about 100,000 barrels a day. But other estimates are much higher," said Nick Wood, Shell vice president of communications for the company's international upstream operations, according to a Dow Jones report.

Shell said that in the last five years, 75% of oil spills in the region have been caused by "third party interference". Spills in the Niger Delta are common, caused by militant attacks on oil infrastructure or locals stealing oil from pipelines for use in illegal refineries.

Experts estimate that at least 9 million barrels of crude oil have been spilled in the Delta since oil production began there in 1958 – nearly twice as much as flowed last year into the Gulf of Mexico from BP's Macondo well. [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this report]

NIGERIA: FEDERAL GOVERNMENT HEIGHTENS WAR AGAINST OIL SPILLS

Dr Levi Ajuonuma Group General Manager Group Public Affairs, NNPC with Hon. Adeola Solomon, Representative of the Alimosho Federal Constituency in the House of Rep. during a tour of the Diamond Estate Oil Leak site along the Igando/Iba Expressway, Lagos recently

The federal government at the weekend amplified war against oil spill and its perpetrators in Nigeria promising to ensure the implementation of the National Oil Spill Contingency Plan (NOSCP) consistent with the International Convention on Oil Pollution Preparedness, Response and Cooperation (OPRC).

Director General of the National Oil Spill Detection & Response Agency (NOSDRA), Peter Idabor who stated this during a visit to the Chief of Naval Staff (CNS) maintained that the agency is billed to take delivery of a response boat from the United Kingdom by the first week of August.

He said: "We recently acquired a 19-meter "POLLCAT" Oil Spill Response Boat from the United Kingdom. The boat, christened "Recovery One" will, among other things, enable NOSDRA respond effectively and efficiently to oil spill incidents, especially those that may occur within our territorial waters.

"It has a cruising range of 800 nautical miles with oil recovery speed of 6 knots using ZRV oil mop system. Other fittings include: hydraulic crane, deck flood light, oil dispersant spray system, boom reel mounts, VHF radio, search and navigation lights, among others.

"The boat is due for delivery in the Port Harcourt Port by the first or second week in August. [Read more](#)



SINGAPORE & MALAYSIA: CHEMICAL SPILL EXERCISE



July 29 - The results of an exercise held yesterday to test emergency responses in the face of a chemical spill showed good coordination between the authorities of Singapore and Malaysia.

The chief executive officer of the National Environment Agency (NEA), Mr Andrew Tan, said that this was also due to officers from both countries being familiar with each other's equipment.

The 8th Malaysia-Singapore Joint Emergency Response Plan Exercise was held at the Second Link in Tuas. The exercise is jointly organised annually or once every two years by NEA and Johor's Department of Environment (DOE). It was first held in 2000.

Yesterday's exercise involved officers from the Singapore Civil Defence Force (SCDF), Singapore Police Force and the Immigration & Checkpoints Authority, and other government agencies, and their Malaysian counterparts.

The exercise involved a simulation of a chemical spill following a collision of four vehicles, including a Singapore-bound chemical tanker and a lorry carrying hazardous materials, which resulted in 10 "casualties" along a stretch of the Second Link linking Singapore and Johor Baru.

It caused "phenol" - used in the preparation of cosmetics such as sunscreen and hair dye - to flow onto the road from the damaged chemical tanker.

Drums of "nitric and sulphuric acid" also leaked from the lorry, while others fell overboard into the sea, causing four "anglers" to suffer from breathing difficulties due to the fumes released.

SCDF officers quickly arrived at the scene, along with their Malaysian counterparts, putting in place absorbent pads and a water curtain to prevent the leaked chemicals from spreading.

News (continued)

The exercise involved some 540 personnel from both countries. The two-hour rescue operation took up four of the six lanes on the Second Link, and caused a traffic diversion for about seven hours.

Each year, about 110,000 tonnes of hazardous chemicals are transported between Malaysia and Singapore. These include phenol, ammonia, acids and alkalis. [Read more](#)

CRACKING DOWN ON FRACKING: THE US REGULATORY TREND AND WHAT THAT MEANS FOR OIL COMPANIES

In June 2011 Enhesa is focusing on an emerging Oil & Gas issue, which has recently become a major concern for Oil Companies in the United States. Hydraulic fracturing or “fracking” has long been used for natural gas and oil production in the United States. However, due to growing concern on its environmental impacts, the US Federal Government and various states are assessing the need for Fracking regulation. According to Enhesa’s research, the regulatory trend will most likely continue to grow, and major oil states are already taking the lead in the rulemaking process.

✓ [For Free Access to the full article in PDF format click here](#)

UK: OFFSHORE SAFETY MOVES IN RIGHT DIRECTION

The number of UK offshore oil and gas leaks that could potentially lead to a major incident has fallen according to safety statistics published this week by the HSE. The figures show there were 73 major or significant hydrocarbon releases associated with offshore installations in 2010-11, compared with 85 the previous year. Hydrocarbon releases are regarded by the Regulator as potential precursors to major accidents if ignited and a key indicator of how well the offshore industry is managing its major accident risks. There were 432 dangerous occurrences reported, 11 fewer than in 2009-10. More than a third (38.9%) were hydrocarbon releases and just over a quarter (25.9%) related to equipment failures. The figures still exceed record lows set two years ago.

[Source Document](#) [Thanks to JOIFF and Don Johnston of ISCO Industry Partner, DG & Hazmat Group, for providing the link to this report]

OIL STILL LEAKING AT 2 PLATFORMS ON NE CHINA SEA

July 29 - Oil continues to leak at ConocoPhillips's two platforms in northeast Bohai Bay more than two weeks after Chinese authorities ordered a shutdown of their output, said China's oceanic watchdog on Friday.

Remote satellite sensing and a survey made by a patrol boat of the sea area on Wednesday and Thursday, both conducted by the China State Oceanic Administration (SOA), identified several oil belts in an area of 4.6 square kilometers to the east of the Penglai 19-3 oilfield, though ConocoPhillips's oil-cleaning efforts continue.

The surveillance has determined that the oilfield's platform C is leaking at a speed of about 2.52 liters per day and found oil belts near platform B despite the company's cleaning efforts, said Lin Fangzhong, an official with SOA North China Sea Branch, on Friday. [Read more](#)

Technology

JAPAN: MINING TECHNOLOGY COULD PURIFY WATER AT FUKUSHIMA

Technology used in mines to quickly decontaminate radioactive water could be used at the crippled Fukushima No. 1 nuclear power plant, according to researchers at Kyoto University.

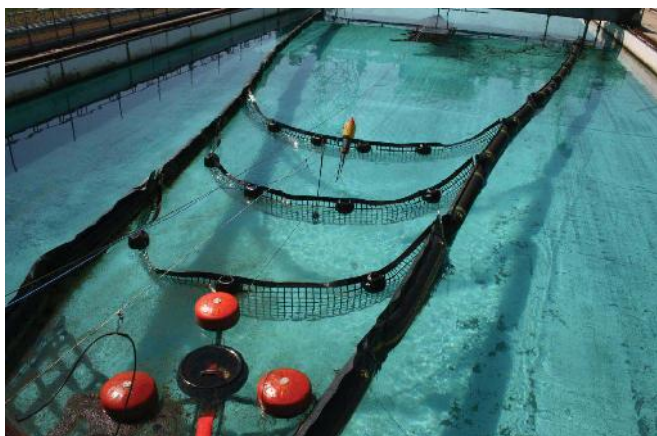
The technique is cost-effective because it requires no heating and involves smaller amounts of chemical agents.

The method leaves less radioactive waste than the purifying equipment now at work at the Fukushima No. 1 nuclear power plant, the scientists said.

The method involves mixing compounds of iron, nickel and other elements with radioactive water to coat cesium and other radioactive substances. After chemical agents are added, the radioactive substances adhere to air bubbles injected into the water and float to the surface, allowing for removal.

Koyanaka tested the method on low-level radioactive waste fluid from a research reactor at the Kyoto University Research Reactor Institute. Five radioactive substances, including cesium, strontium and zirconium, were eliminated at rates of more than 99 percent. [Read more](#)

EVALUATION OF ADVANCING BOOM SYSTEM



Speed Sweep's cross netting is designed to reduce the relative current speed downstream of each net to achieve a near quiescent contained area within the apex.

Applied Fabrics Technologies Inc. / Desmi Ro-Clean (AFTI/DRC) recently evaluated a prototype advancing boom system at Ohmsett.

The Speed Sweep boom is designed to exploit the effects of flow inhibiting netting to reduce relative flow velocities in the boom apex.

Speed Sweep's cross netting is designed to reduce the relative current speed downstream of each net to achieve a near quiescent contained area within the apex.

[Read more](#)

OILSHAVER PROTOTYPE ADVANCING BOOM SYSTEM TEST

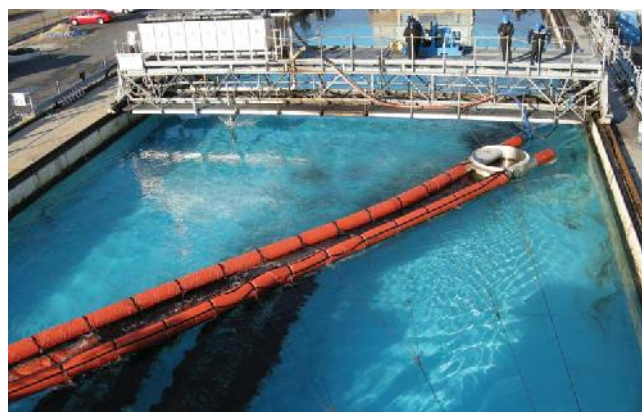
The OilShaver prototype is tested with oil in calm water conditions in the Ohmsett test tank.

After many years of design experience using unique approaches to oil spill recovery, HUSEN AS of Norway developed a high seas advancing boom system prototype.

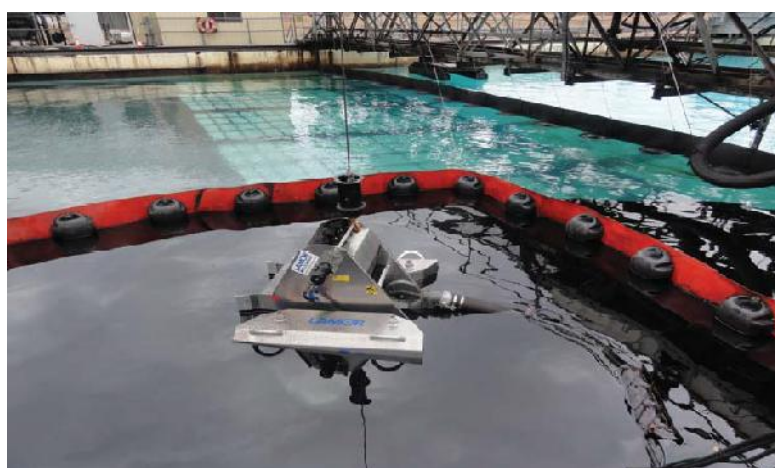
Using an advanced rigging and bridle design, the OilShaver is towable at full speed from one common towing point.

With a wide width sweeping recovery system, the design is extremely beneficial for rapid deployment with minimal ancillary equipment necessary.

[Read more](#)



TESTING OF LAMOR SKIMMERS



The Lamor Multimax 50 is tested with ANS crude oil in accordance with the ASTM F 2709 - Standard Test Method for Determining Nameplate Recovery Rate of Stationary Oil Skimmer Systems.

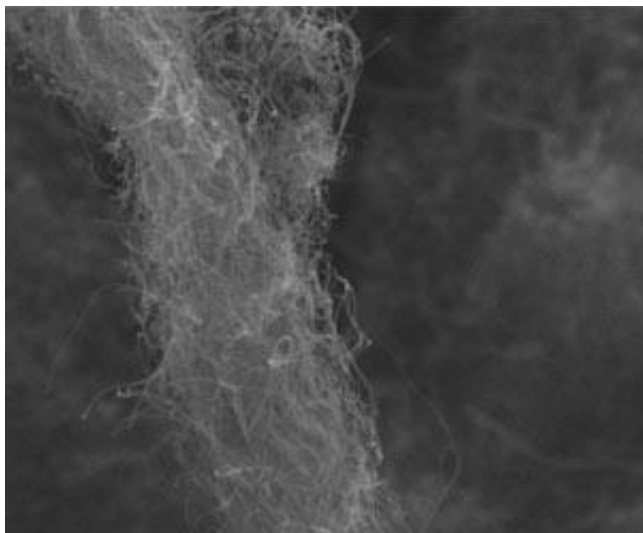
The Lamor Minimax 12 skimmer, Lamor Multimax 50 skimmer, Lamor Side Collector (LSC) and a few next generation prototype skimmers were tested during a 10-day period.

The skimmers were tested with Lamor's new patented Aquatread principle using Alaska North Slope (ANS) crude oil. All skimmers, with the exception of the advancing LSC, were tested in accordance with the ASTM F 2709 - Standard Test Method for Determining Nameplate Recovery Rate of Stationary Oil Skimmer Systems. [Read more](#)

NANOTECHNOLOGY FOR WATER FILTER

Nanotechnology has developed tremendously in the past decade and was able to create many new materials with a vast range of potential applications. Carbon nanotubes are an example of these new materials and consist of cylindrical molecules of carbon with diameters of a few nanometers - one nanometer is one millionth of a millimeter. Carbon nanotubes possess exceptional electronic, mechanical and chemical properties, for example they can be used to clean polluted water.

Technology (continued)



Carbon nanotubes by scanning electron microscopy. University of Vienna.

Scientists of the University of Vienna had recently published in this new research field in the well-known journal "Environmental Science and Technology".

Among many potential applications, carbon nanotubes are great candidate materials for [cleaning](#) polluted water. Many water pollutants have very high affinity for carbon nanotubes and pollutants could be removed from contaminated water by filters made of this nanomaterial, for example water soluble drugs which can hardly be separated from water by activated carbon.

Problems due to filters' saturation could be reduced as carbon nanotubes have a very large surface area (e.g. 500 m² per gram of nanotube) and consequently a very high capacity to retain pollutants. "Maintenance and wastes related to water depollution could thus be reduced", says Thilo Hofmann, Vice Dean of the Faculty of Earth Sciences, Geography and [Astronomy](#) of the University of Vienna. [Read more](#)

ABANAKI CORPORATION RELEASES HEAVY OIL GROUNDWATER REMEDIATION SYSTEM

Abanaki Corporation is pleased to announce a Heavy Oil Groundwater Remediation System designed to remove high viscosity oils such as bunker C and No. 6 fuel oil from groundwater. Typical applications are remediating oil contamination from groundwater using existing monitoring or remediation wells.

The Heavy Oil Groundwater Remediation System does not use a groundwater or torpedo pump, therefore it is not subject to their associated problems, such as frequent clogging. Instead, this system is equipped with the innovative Abanaki PetroXtractor® belt oil skimmer fitted with the ultra-durable poly belt plus stabilizer rods. It can remove up to 12 gph of oil from water and can be installed in well casings with a 2' inside diameter or greater.

Once the PetroXtractor picks up the skimmed oil, it is deposited into a transfer tank. When the tank is full, the removed oil is automatically pumped to a customer-provided, collection container.

Each Groundwater Remediation System oil skimmer uses an endless belt in 1', 2', or 4' widths that will fit in 2', 4', and 6' or larger diameter well casings. These systems can also be adapted using other skimmers in Abanaki's range for applications in ponds, trenches, and wastewater pits. Abanaki oil skimmers and systems require very little maintenance, are easy to install, and have low energy costs. [Read more](#)

Training

FORTHCOMING GI WACAF TRAINING WORKSHOPS

Nigeria 10-14 October - Regional workshop and Conference GI WACAF 2011

Equatorial Guinea 03-04 November - National Workshop for the finalisation of the National Oil Spill Contingency Plan and the development of oil spill sensitivity maps

Angola 07-11 November - National workshop on dispersant use and the development of local oil spill contingency plans

Sierra Leone 14-18 November - Update of the National Oil Spill Contingency Plan and extension of the geographical scope to the national level

Cameroon 25-29 November - National workshop on Dispersant Use Policy

For more information, please contact –

Antoine Blonce, Project Consultant
International Maritime Organization (Marine Environment Division)
4 Albert Embankment, SE1 7SR, London
Tel: +44 207 463 4127
Fax: +44 207 587 3210
Email: ablonce@imo.org



In this issue of the ISCO Newsletter we are printing No. 36 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 36)

While intentional and accidental combustion of cargo oils in casualty incidents gave rise to investigations of combustion as a means of preventing oil release so also did the incidental combustion of floating oil give rise to investigations of combustion as a means of responding to releases (c.f. articles 34 and 35). Indeed during the latter investigations, intentional burnings were attempted at a number of incidents. Thus, at the *Arrow* incident of 1970, some intentional burns were achieved with difficulty on beaches and on slicks in Chedabucto Bay, Nova Scotia, while some 2,000 gallons of a 15,000 gallon fuel oil release were burned when *Barge B-65* grounded in Buzzards Bay, Massachusetts in 1977 and some Bunker C was burned when trapped in ice following the *Othello/Katelsia* collision in Tralhavet Bay, Sweden, in 1979.

Meanwhile, investigation of ignition response and flame spreading rates were showing that the most volatile oils were the most susceptible to ignition and subsequent combustion; that prior evaporative loss of volatile components and emulsification had an inhibiting effect on both; that burning rates of between 1400 and 6300 litres per square metre per day and surface regression rates of between 2 and 3mm per minute were achievable; that surface regression rate decreased rapidly when layer thickness decreased below 5mm due to increasing heat-transfer to the underlying water; that combustion ceases to be sustainable at thicknesses around 1-2 mm; and that small and mesoscale burning in open pans suggest that regression rates of about 3.3mm per minute could be achievable independent of area.

With combustion efficiency defined as the ratio of oil finally removed to the amount initially present per unit area, the small scale pan experiments showed efficiency to be dependent on initial slick thickness. Thus, while a 2mm thickness burning down to 1mm would exhibit 50% efficiency, a 10mm burn to 1mm would exhibit 90% efficiency. On this basis, it was shown that test oils emulsified to 25% water-content gave a burning efficiency of 70-80%, while at 50% water-content they gave 70-80% efficiency and at 75% water-content their efficiencies fell from 35% to 5%. Again, at mesoscale, a fresh Louisiana crude gave a 90% efficiency for the primary burn, while kerosene addition enabled the residue to burn also.

However, while these layer thickness limitations on surface regressions and burn efficiencies are compatible with substantial amounts of oil being burned in ships' tanks given adequate ventilation, cargo/bunker transfer remains by far the preferable option. Again, while the circumstances in which 5mm oil layers would be routinely encountered are difficult to visualise (c.f. Phase II spreading thickness of 0.1mm) and while arrangements could be made to apply dispersants at encounter rates appropriate for 1mm thick layers, it is difficult to visualise their being effective on burnt-out residues.

Nonetheless, Dome Petroleum undertook a major oil burning trial in the Beaufort Sea in 1979/80 in which 19m³ were discharged under ice in winter, became sandwiched in the thickening ice sheet and began to appear on the ice surface during the spring melt, and were finally localised to the extent of 85% within a 50 metre radius of the initial discharge point prior to ice break-up. As to combustion, it was estimated that 50% of the re-surfaced oil, none of which had emulsified, was removed with efficiencies of up to 95% being recorded in individual melt pools. Trials have also been conducted on water surfaces where ice cover is significant. Thus, fresh and weathered samples of Prudhoe Bay crude oil at ice coverage ranging from 75-90% achieved burning efficiencies of 60 - 80%, though efficiencies decreased with increased evaporative loss and increased water-content of emulsions, while minimum oil layer thickness for combustion increased as the water temperature dropped.

Again, it was found that Norman Wells crude oil could be burned in the channels (leads) which appear as the ice sheet opens up; that the fresh oil would burn to a layer thickness of 0.6 mm while for highly weathered oil, burning stopped at 3mm thickness; that wind-herding to thicker layers against ice-edges in leads suitably oriented to wind direction was beneficial, with burning efficiencies up to 90% being achieved; that ignition was equally effective at the upwind and downwind edges of wind-herded oil; and that evaporative losses of up to 20% did not affect the burning efficiencies of Norman Wells oil.

Yet again, the adsorption capacity of snow for oil depends on the properties of both snow and oils. Loose dry granular snow has a capacity for Prudhoe Bay crude of 40 - 70% by volume as measured after melting. Once ignition has been achieved the oil layer thickness in the melt region is controlled by the rate of oil release, the area of the melt-water pool and the spatial distribution of the wind-herded oil within the pool. Once started, however, maintenance of combustion requires the melting process to compensate for the oil removal by burning. Burning efficiencies of 90 - 99% have been achieved with oil and diesel, these efficiencies being facilitated by the ability of snow to inhibit evaporative loss and the absence of the turbulent energy necessary for water-emulsification, ease of ignition depending on the oil-content of the snow.

1 *The Rational Trinity: Imagination, Belief and Knowledge*, D.Cormack, Bright Pen 2010 available at www.authorsonline.co.uk

2 *Response to Oil and Chemical Marine Pollution*, D. Cormack, Applied Science Publishers, 1983.

3 *Response to Marine Oil Pollution - Review and Assessment*, Douglas Cormack, Kluwer Academic Publishers, 1999.

Publications

US EPA: TECHNOLOGY INNOVATION NEWS SURVEY

The May 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/>

Events

GI WACAF REGIONAL CONFERENCE AND WORKSHOP 2011

10-14 October 2011, Lagos, Nigeria

The Global Initiative for West, Central and Southern Africa (GI WACAF Project) is a long-standing partnership between the International Maritime Organization (IMO) and the IPIECA, the global oil and gas industry association for environmental and social issues, to enhance the capacity of the twenty-two countries in the region to prepare for and respond to marine oil spills through the promotion of public/private partnerships whereby oil industries and the relevant national authorities work together. The Project is jointly funded by the IMO and eight oil company members of IPIECA.

This biennial event will gather the main government and industry stakeholders of the region with responsibility for oil spill preparedness, response and cooperation with a view of strengthening the oil spill response capability in the region.

The theme for this year's Conference is "Towards Operational Oil Spill Response in West, Central and Southern Africa" and it aims at enhancing regional cooperation in preparedness and response under article 10 of the OPRC Convention by promoting the implementation of the revised Emergency Protocol to the Abidjan Convention (2011).

The main objectives of the GI WACAF Regional Conference and Workshop 2011 will be to:

- review the progress achieved since the last regional conference
- facilitate information sharing and lessons learned in the region;
- review the Action Plans at national and regional levels to strengthen oil spill response capability for the coming biennium 2012-2013
- raise awareness on oil spill preparedness and response issues.

Following the Regional Dispersant Workshop that was held in Accra, Ghana, from 22 to 24 June 2011, and to prepare for the next biennium of the Project, those additional events are scheduled during the Conference and Workshop:

- regional Meeting of the GI WACAF Focal Points;
- review of the Regional Dispersant Use Policy; and
- training Session on Shoreline Response Techniques.

More information is available on the GI WACAF website: <http://www.giwacaf.org/>.

OFFSHORE ARABIA 2012 – CALL FOR PAPERS

Dubai, UAE. February 27-29, 2012 - "Offshore Oil Spill Prevention and Response through New Technology and International Cooperation"



Offshore Arabia attracts and partners with companies from Oil Spill, Environmental sector, alternative & renewable energy, coastal & urban offshore developers and companies related to Marine & Environment looking to explore the increasing opportunities in the Middle East, Asia and North African market.

Offshore Arabia conference attracts the attention of the industry's elite. The conference is a platform for exchange of knowledge, discussion

and debates.

Events

The 3 day conference will focus on current trends of the industry and would like to invite you to submit your papers based on the following conference topics:

- 🔥 Technology Innovation as Applied to Oil Spill Response:
 - 💧 Satellite Imagery
 - 💧 Mapping
 - 💧 Surveying
 - 💧 Cleanup Techniques & Best Application of Chemical Dispersants
 - 💧 Restoration and Rehabilitation of Affected Wildlife and Shorelines
 - 💧 Treatment and Final Disposal
- 🔥 Oil Spill Prevention, Contingency Planning and Emergency Response
- 🔥 Regional and International Legal Requirements, Conventions and Oil Spill Cooperation Initiatives
- 🔥 Offshore Security, Safety and Risk Management
- 🔥 Offshore Knowledge Sharing & Lessons Learned from Case Histories & Recent Major Incidents

[More information](#)

Company news

SEACOR RESPONSE AND POLLUTION CONTROL EQUIPMENT LTD FORM ALLIANCE FOR PROVISION OF OIL SPILL RESPONSE IN UGANDA

July 27 - SEACOR Response, a global leader in emergency preparedness and response solutions, and Pollution Control Equipment Ltd (PCE), a local provider of pollution services and equipment, announced today that they have formed an alliance to provide a broad range of oil spill preparedness and response solutions to support the developing oil and gas sector in Uganda.

[Read more](#)

Correspondence

INVITATION FOR COLLABORATION – UNIVERSITY OF CALGARY

Editor – Further to the letter in last week's Newsletter, Dr Assilzadeh advises "Unfortunately still I haven't received any contact regarding to collaboration interest. The time for submitting proposal is early of August and I am still looking!" In the hope that one of our readers can assist, I am re-printing Dr Assilzadeh's letter below. If you can't help directly, perhaps you can pass this on to a friend or colleague.

"We are at the Department of Geomatics in University of Calgary targeting a series of projects that will promote the delivery of Event Based Pipeline Accident Monitoring and Management System across Canada through TECTERRA's Investing in the Commercialization of Geomatics Technology Solutions.

Our goal is to establish an adaptable and intelligent monitoring and management system for oil and gas pipeline accidents in terrestrial, underground and aquatic environments.

The system comprises an Internet-based Temporal GIS, Mobile Emergency Asset Management System and Event Driven Based Communication Infrastructure for wide range of spatial data, remote sensing and other observational technologies and monitoring instrumentation. The technology plays innovative rule for oil and gas pipeline accidents monitoring and management.

The event based communication model is based on real time publish/subscribe mechanism in which client will automatically receive data immediately after generation from the data sources including remote sensors, devices or other data publishers deployed on pipeline infrastructure. Internet-based Temporal GIS and Mobile Emergency Asset Management System will support emergency response by producing early warning, hazard location map, hazard extent map, real time location of mobile emergency assets "Ships or vehicles or emergency players" to facilitate the accidents response. Early warning and other disaster products will be generated and transact to the authorities in real time and without supervision using event based communication model. Hazard location map will be simulated by hydrodynamic modeling of the pipeline and the hazard extent will be extracted from remotely sensed data processing. Monitoring of the hazard extent in underground and underwater will be produced by detection of natural gas and hydrocarbon spills using hyperspectral image, and using Laser Induced Fluorescence LIDAR.

Other advantage of event based model is its adaptability which makes its services for unlimited data sources; event based model is intelligent that makes its services to many-to-many data communications style. Integration capability of event based model makes its configurations easy within the networks and different application software and heterogeneous systems.

As this project required to be multidisciplinary and networked between universities, governments and industries for each specific goal of the projects, we are now looking for industries partner for collaboration. Collaborations require cash and in kind supports. If you interested in collaborating please write to me and cc to the flowing emails for further information:

Dr. Hamid Assilzadeh: hassilza@ucalgary.ca

Dr. Yang Gao: ygao@ucalgary.ca

ROAD TANKER ROLL-OVER RESPONSE

Editor – Comment received from ISCO Member, Brian O'Connor of the Canberra and Regions Oil Industry Emergency Response Group (CROIERG) in Australia.



Dear Editor,

Further to your article in Newsletter 293 on Road Tanker Rollovers.

In Australia road tankers that have been drilled (cold-cut) for product recovery can and are repaired if the damage is only minor. If there is major structural damage the tanker unit is written off. The aluminium is only 4 to 5mm thick after all.

We do have first class tanker fleets in Australia and they range from the typical rigid to huge road trains, which are operated by very professional companies.

If your readers haven't seen just how big the road trains are I am attaching a photograph of an 88-wheeler that hauls 151,000 litres of diesel and has a GCM of 177.5 tonnes

Our organisation has the only nationally accredited training course Australia for industry emergency responders to road tanker incidents.

We are more than willing to exchange information etc with kindred souls in other countries and would welcome enquiries.

Regards from Oz

Brian O'Connor, Secretary CROIERG
PO Box 362, YASS NSW 2582
AUSTRALIA

Email: eejoconn@bigpond.net.au Web www.croierg.com.au