



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 339, 18 June 2012

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News

CHANGES TO CANADA'S ENVIRONMENTAL EMERGENCY RESPONSE PROGRAM

Environment Canada (EC) – Canada's federal department of the Environment – is changing the way it provides advice in response to environmental emergencies and other pollution incidents. More specifically, advancements in technology and improved capabilities among partners in environmental emergency response have enabled EC to reorganize, and streamline, its Environmental Emergencies program.

This reorganization will allow the Department to continue to provide high-quality emergency response advice and guidance, just in a different way. Through the new program, EC will continue to uphold core standards of environmental protection and public safety by working to prevent, prepare for and respond to environmental emergencies.

EC plays a key role in reducing the consequences of environmental emergencies, such as oil and chemical spills on sea and on land. EC is not a "first responder", but it provides scientific and technical advice to other federal departments, provinces and territories on a 24/7 on-call basis. These services will continue to be provided, but rather than being provided through six separate 24/7 regional centres, they will now be delivered by a new national, bilingual emergency response team. Staff will be available to travel to significant spills or other situations, as they are now, to support the response efforts when asked by the lead agency managing the spill, or when determined to be necessary by EC. An environmental emergencies employee will also be stationed in each region to maintain relationships with other partners and stakeholders in emergencies management and preparedness, including provincial and territorial authorities and industries regulated by Canada's Environmental Emergencies Regulations.

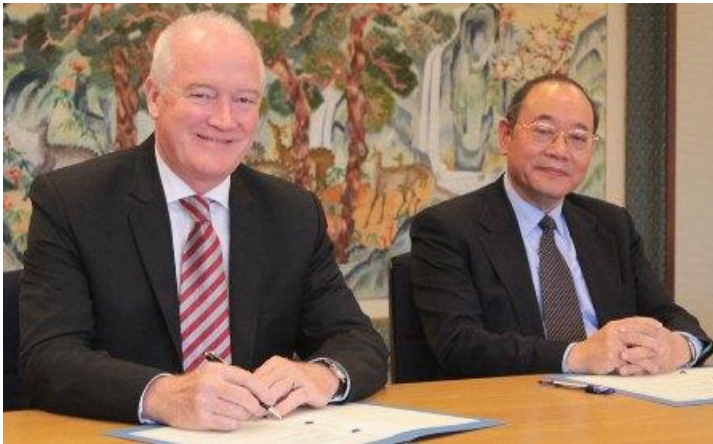
The Environmental Emergencies program will continue to offer a wide array of expertise, such as information and advice on northern and arctic species, weather and wind prediction, birds oiled at sea, species at risk, pollution dispersion modeling and pollution clean-up techniques. Each of these services can be safely and effectively offered from one central location. The environmental emergency program develops or integrates and maintains computer based maps, databases, satellite imagery and other tools containing elaborate information on site-specific environmentally sensitive areas. This kind of local knowledge will continue to be available to our partners and lead responders.

In the majority of incidents, EC does not dispatch staff members to the site of an emergency. Most often, the department provides scientific advice to the lead agency by phone or e-mail. This past practice will continue under the new Environmental Emergencies Program. If a spill or incident becomes significant in nature, and EC's on-the-ground support is required, a response team will travel on-site to support the response efforts.

EC's key objectives have not changed – we are focused on providing Canadians with an environment that is clean, safe and sustainable. The changes the Environmental Emergencies program will reduce duplication, but will not diminish the resources that would bring to bear in the event of a significant emergency. The Department will continue to focus efforts on preventing, preparing for and responding to major environmental emergencies.

EC has been and will continue to be an important partner in environmental emergency management. Canada remains committed to a clean environment and the Environmental Emergencies Program will continue to work to promote environmental emergency planning and preparedness.

AUSTRALIA SUPPORTS IMO'S TECHNICAL CO-OPERATION PROGRAMME WITH NEW AGREEMENT



Mr. Graham Peachey, Chief Executive Officer, AMSA, and Mr. Jianxin Zhu, Director, Technical Co-operation Division, IMO, sign Memorandum of Understanding (MoU) with the Australian Maritime Safety Authority (AMSA), to support IMO's Integrated Technical Co-operation Programme (ITCP) capacity-building activities.

The International Maritime Organization (IMO) has signed a Memorandum of Understanding (MoU) with the Australian Maritime Safety Authority (AMSA), to support IMO's Integrated Technical Co-operation Programme (ITCP) capacity-building activities through the provision of experts and hostship facilities for the delivery of ITCP activities, as well as the secondment of staff from AMSA.

The MoU between IMO and AMSA was signed on Monday (11 June) by Mr. Jianxin Zhu, Director, Technical Co-operation Division, IMO, and Mr. Graham Peachey, Chief

Executive Officer, AMSA, in London during IMO's Council, which is meeting for its 108th session at the Organization's London Headquarters. IMO's Technical Co-operation Committee met last week (from 6 to 8 June).

The new MoU is aimed at assisting developing countries to comply with international maritime safety and environmental protection laws and standards by understanding, implementing and enforcing IMO instruments.

AMSA has a long history of engagement in technical capacity-building, particularly in the Asia and Pacific Region, and actively supports partnerships in the international maritime community to transfer skills and knowledge. Australia is also a significant participant in IMO's Technical Co-operation Committee. *IMO* [Read more](#)

CANADA: ALBERTA SPILL UPDATES

Alberta oil spill mostly contained, firm says

June 10 - Officials say they have a good handle on the [oil that spewed into a central Alberta river and lake earlier this week](#) from a ruptured pipeline.

Stephen Bart, vice president of crude oil operations for Plains Midstream Canada, said crews have been working around the clock implementing their emergency response since Thursday night, when the company's control centre was alerted to the leak from its Rangeland pipeline system just north of Sundre.

"The good news is that the pipeline wasn't flowing at the time of the release, so the volume of the spill is relatively small," Bart told reporters on Sunday.

"And the other good news is the river was flowing quickly given the high rain fall. So what that did was flush the majority of the spill out into the lake where it can be handled more effectively."

An estimated 3,000 barrels of oil leaked into the Red Deer River and the contamination spread downstream until it reached Gleniffer Lake and reservoir, where the majority of the containment efforts have been deployed.

The pipeline is used to ship light sour crude oil, but only when demand requires it — so the line isn't constantly in use.

Bart said they have up to 100 people on site, including 25 companies that have a high level of experience in cleaning up spills. *CBC News* [Read more](#)

Parts of Alberta oil spill may never be cleaned up

June 12 – Rough weekend weather and a flooded Red Deer River had impeded efforts to clean up a spill of 160,000 to 480,000 litres from a Plains Midstream Canada pipeline. But on Tuesday, a response team of nearly 200 workers set to work skimming, vacuuming and absorbing the spill.

It was difficult work, made worse by the high water that is hampering access to the 25 pools of oil that Plains crews have identified in back eddies along the 30 kilometres of river that stretch between the ruptured pipe and Lake Gleniffer, a reservoir whose dam has helped contain the spill.

"Its been very, very difficult to access a lot of these areas because of the high flows, the very rapid current" said Martin Bundred, the lead man on the spill for Alberta Environment and Sustainable Resources Development. "We have to use airboats to get in [and there are] lots of sandbars, lots of obstacles – whole trees coming down the river. It's not a nice place to be".

In fact, the challenges of cleaning an oil stained river are so great that it's unlikely that all of the oil will be cleaned up. Some will

deliberately be left alone to degrade naturally, an unwelcome prospect for those whose backyards and pasture lands along the Red Deer have been blackened from the leak. *The Globe and Mail* [Read more](#)

Pipeline operators told to increase monitoring around water crossings in wake of Sundre spill

June 13 - Provincial regulators are urging pipeline operators in Alberta to increase monitoring around water crossings almost a week after thousands of barrels of sour oil spilled into the swollen Red Deer River.

The Energy Resources Conservation Board called on companies Tuesday to raise their vigilance even as heavy rains and melting snows flooded into waterways, raising a potential threat to some pipelines.

"High stream flows and flooding have the potential to rapidly scour and wash out pipeline crossings of creeks, streams, and rivers," the board said. *Calgary Herald* [Read more](#)

USA: ARMY SHIP TAKING ON WATER & SPILLING FUEL, COAST GUARD RESPONDS

June 11 - Coast Guard personnel are coordinating with the Army Reserve, the Alaska Department of Environmental Conservation, Alaska Chadux Corporation and other stakeholders in response to the diesel fuel spill that occurred Friday night as a result of damage to the Army vessel Monterrey in Chiniak Bay near Kodiak.

Coast Guard Marine Safety Detachment Kodiak personnel estimate the amount of fuel in the water from two reportedly breached fuel compartments at 15,291 gallons. *The Maritime Executive* [Read more](#)

QATAR: WORKSHOP MULLS CONTINGENCY PLANS FOR SEA POLLUTION

June 12 - A regional workshop on 'national and regional hazardous and noxious substance (HNS) contingency plans' started yesterday in Doha.

The four-day workshop is being organised by the Permanent Committee for Emergency (PCE) of Ministry of Interior in association with the International Maritime Organisation (IMO) and Marine Emergency Mutual Aid Centre (MEMAC). "There is no doubt that the marine safety, protection of lives in the sea, prevention of marine pollution and controlling it, achievement of maritime security and implementation of the rescue work plans are matters of noble and lofty goals and all of us strive to achieve them through mutual co-operation and co-ordination," said Director General of Public Security (DGPS) and head of PCE Staff Major General Saad bin Jassim al-Khulaifi as he welcomed the attendees.

The rapid growth witnessed by the region recently in the economic and tourism activities as well as the increased navigation activities necessitate working on early development of national and regional contingency plans to assist in mitigating the damage and the swift rescue operations by heeding lessons from past experiences," said Sheikh Dr Faleh bin Nasser al-Thani, assistant undersecretary for agricultural, animal wealth and fisheries affairs, Ministry of Environment.

Patricia Charlebois, head of Pollution Response Section at IMO Marine Environment Division, stressed that the organisation gives particular attention to such regional workshops, which serve its aims to promote co-operation between different countries for capacity building and infrastructure development. Charlebois also thanked Qatar for hosting this workshop and the MEMAC for organising it, hoping that similar workshops will be held in other parts of the world. *Gulf Times* [Read more](#)

RUSSIA: ARCTIC OIL SPILL INVESTIGATED IN SECRET

June 5 - A state watchdog wrapped up the investigation of an oil spill in the Russian Arctic, but named no names in what a WWF expert called a setback in an otherwise unusually efficient handling of the incident.

Experts of the Federal Service for Environmental, Technological and Atomic Inspection established the people responsible and the technical causes behind the spill which took place on April 20 at the Trebs oil field in Nenets autonomous district, the agency's Pechorskoye branch said on its website on Tuesday.

The spill was due to incorrect and missing oilwell tubing details, the agency's main website said on Monday. However, neither report named any names. *RIA Novosti* [Read more](#)

JAPAN: RADIOACTIVE 'BLACK SOIL' PATCHES: A SCOURGE OR A SOLUTION?

June 14 - Koichi Oyama noticed something strange when he was measuring radiation levels in Minami-Soma, Fukushima Prefecture. In many places where the readings jumped, the municipal assembly member found patches of dried dark soil.

News (continued)

Further studies found similar patches of soil--along with high radiation readings--in parts of Tokyo. In fact, the radioactive soil has been discovered as far away as Miyagi, Yamagata and Niigata prefectures.

Researchers are now referring to "black soil" to describe these patches of dirt with unusually high levels of radiation. It is a sort of play on the "black rain" term used by victims of the atomic bombings in Hiroshima and Nagasaki to describe the mysterious precipitation that seemed to bring strange illnesses and untold suffering.

Yet black soil, as ominous as it may seem, could end up actually helping in the decontamination efforts following last year's accident at the Fukushima No. 1 nuclear power plant.

The discovery of the black soil is not all bad news. Experiments are continuing on using the absorbent qualities of cyanobacteria to remove radioactive cesium from the soil.

In August 2011, Micro Algae Corp. of Gifu city, a research and development company handling micro-organisms, began a joint research study with Iwaki Meisei University.

Soil from Iwaki contaminated with radioactive materials was placed in trays. One form of cyanobacteria known as Nostoc commune was scattered in the soil. In one month, about 8 percent of the radioactive cesium in the soil had moved. Calculations showed that in one year, about 69 percent of the cesium could be removed. That would mean that if black soil is removed and buried, it could contribute to decontaminating those areas since the cyanobacteria could absorb high levels of radioactive materials from the surrounding environment. *The Asahi Shimbun* [Read more](#)

USA: RAILROADS, REFINERIES SEE PROFIT IN SHIPPING CRUDE OIL ACROSS STATE

June 11 - The modern-day oil boom in the western U.S. and Canada is fueling interest in shipping crude oil by rail across Maine to a refinery in the Maritimes.

But the prospect of long trains of oil-filled tanker cars rumbling through Maine also has state environmental officials concerned, particularly in the wake of a recent derailment that sent several tanker cars of nonhazardous materials tumbling into the Penobscot River. As a result, state officials are reviewing their spill response strategies and making other preparations.

"It definitely got my attention with 104 rail cars of crude coming through the state," Barbara Parker, head of the Maine Department of Environmental Protection's hazardous materials response team, said in reference to a recent oil shipment.

Pan Am Railways and Montreal, Maine and Atlantic Railways are both exploring the feasibility of moving vast amounts of crude to an Irving Oil refinery in St. John, New Brunswick. Pan Am's rail network was used to successfully deliver the first shipment of 100-plus tanker cars in late May, and MMA reportedly plans to follow suit soon. *Maine Sun Journal* [Read more](#)

INDIA: GERMAN AGENCY TO INCINERATE BHOPAL WASTE

June 8 - The Indian [government](#) on Friday approved a proposal for a German environmental agency to dispose of over 350 tonnes of waste produced by the Bhopal factory where a gas leak killed thousands in 1984.

Home Minister P. Chidambaram and other senior ministers met in New Delhi to clear a deal in which the waste will be taken by air to Germany for incineration.

"The ministers have given a green signal," a senior [home](#) ministry official told AFP, declining to be named.

"The German Society for International Cooperation (GIZ) has been awarded the contract to transport the waste to Germany for disposal," he said.

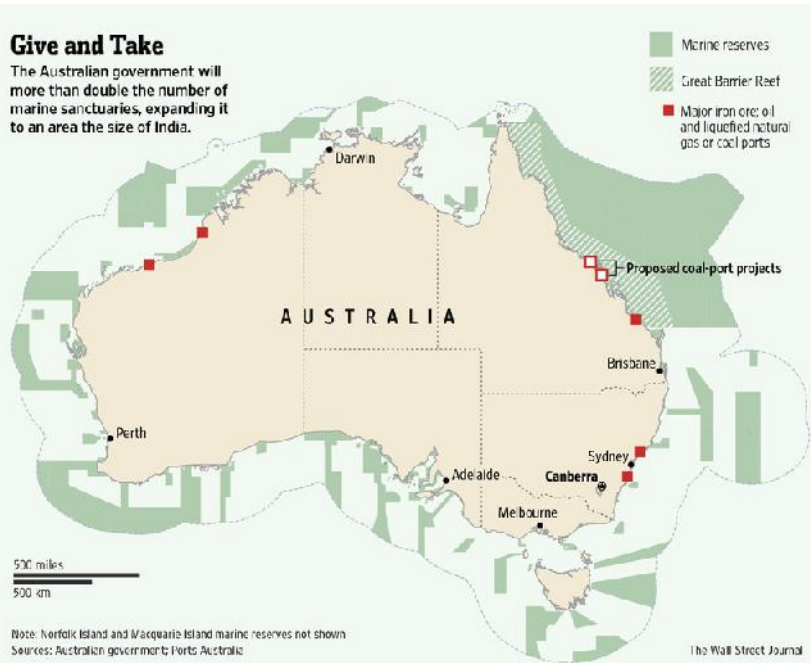
The GIZ, based in Bonn, is a government-run enterprise that works on international environmental issues and sustainable development. *TerraDaily* [Read more](#)

AUSTRALIA PLANS WORLD'S LARGEST MARINE RESERVE

June 14 - A plan to create the world's largest marine park to prevent oil and gas companies drilling in more than a third of Australia's territorial waters doesn't go far enough in protecting the nation's sea life, lawmakers and environmentalists said Thursday.

Give and Take

The Australian government will more than double the number of marine sanctuaries, expanding it to an area the size of India.



Australia's Greens Party, on whose support the government depends to pass laws, said the plan to exclude large coastal areas off Western Australia amounted to a "surrender" to the powerful oil and gas industry. The state is where the bulk of the country's mining projects are concentrated.

Australia, home to the Great Barrier Reef off Queensland state—considered one of the seven wonders of the natural world—is struggling to balance the competing interests of oil and gas explorers and commercial fishing with environmentalist calls to protect fragile natural habitats that draw millions of tourists each year.

Conservation maps the government unveiled Thursday show a proposal to more than double the number of marine reserves in Australia, expanding the size of protected areas to 3.1 million square kilometers.

The Wall Street Journal [Read more](#)

USA: INLAND OIL SPILLS POINT TO PIPELINE THREATS (FURTHER COMMENTS)

Further to the headline article in last week's ISCO Newsletter in which one of the conclusions reached by EPA Analyst, Thomas Brody, in an article on pipeline spills in the journal *Risk Analysis* was reported as - the problem is the plethora of "roads, railroads, pipelines, tanks" crossing some 10,851 watershed locales stretching from Minnesota to Ohio, each one a potential spill location.

Your editor suggested that some of the conclusions were relevant not only in the USA but in many other countries and went on to identify several of the problems faced by pipeline operators, particularly in the context of ageing pipelines. One thing not mentioned was the absence in some older pipelines of adequate protective measures for pipeline at vulnerable crossings. The absence of such measures - for example, installation of pipeline "sleeves", use of heavier gauge pipe at higher risk locations, or encapsulation in reinforced concrete - can also increase risk of failure at higher risk crossings.

USA: STEPHEN BALDWIN LOSES BP OIL SPILL CASE AGAINST KEVIN COSTNER

June 15 - Claims that [Kevin Costner](#) and his business partner duped fellow actor Stephen Baldwin and a friend out of millions of dollars from a [BP](#) contract for using oil clean-up devices after the 2010 Gulf of Mexico spill have been rejected by a US jury.

The federal panel, sitting in US district court eastern district of Louisiana in New Orleans, deliberated for less than two hours before delivering the verdict in the lawsuit brought by Baldwin and his friend Spyridon Contogouris. The pair had asked for more than \$17m in damages, the amount they estimate they would have received if they hadn't sold their shares in a company that marketed oil-separating centrifuges to BP before the oil giant made an \$18m deposit on an order for 32 of them. The jury gave them nothing.

Costner said he was grateful for the opportunity to clear his name. *The Guardian* [Read more](#)

People in the news

FERGUS PERRY APPOINTED AS OPERATIONS MANAGER AT SWIRE EMERGENCY RESPONSE SERVICES



ISCO has just heard that Fergus Perry has joined ISCO Corporate Member, Swire Emergency Response Services in Dubai, UAE.

His new appointment will be as Operations Manager.

Until recently, Fergus was Regional Sales Manager at Vikoma International Ltd. He has worked in the oil spill response industry for more than 20 years.

A MESSAGE FROM ISCO PRESIDENT, DAVID USHER



Here are some thoughts I'd like to share with you about ISCO's past and future.

When ISCO was founded in 1984, its focus was support of government agencies in dealing with environmental issues. Since then, our mission has expanded to serve as a voice for the response industry as well as providing advice and support to national governments and international organizations. This reflects the growing sophistication and complexity of our profession.

In 2005, the organization re-launched itself, and what followed was an increase in membership and in readership of the ISCO Newsletter.

In 2007 we were granted consultative status with IMO as an NGO for oil and hazardous substances pollution control activities, and we're very pleased that IMO acknowledges our participation.

Recently, our presence at the various spill control conferences has led more professionals to become aware of and appreciate the information ISCO provides in the weekly newsletter. This has encouraged us to consider inaugurating an international conference next year.

Now we are ready to start up our Professional Membership initiative, which has been requested by many who are active in pollution control.

I'm very proud to be associated with John McMurtrie, our Secretary and Editor, and want to acknowledge him for his tireless efforts and commitment in what we are doing for environmental issues. He is a driving force in helping the membership grow, something we need to support these activities and programs.

We're thankful for the participation of all the members we have, and we encourage those who are not yet members to join. This is an exciting time for ISCO.

UPDATE ON PROFESSIONAL MEMBERSHIP OF ISCO

As mentioned in David Usher's message (above) Professional Membership of ISCO will very soon become available to those in our industry who wish to gain professional recognition.

Necessary changes to provide information about Professional Membership on the website are in progress and, as soon as this is complete, an announcement will be made in the ISCO Newsletter.

In the meantime, there is a growing list of individuals who have indicated that they want to apply and if you want to be included in the first group of candidates to be considered by the Professional Membership Standards Committee you should drop a line to the Secretary at john.mcmurtrie@spillcontrol.org

For practical reasons, the assessment of applications for Professional Membership will be carried out at predetermined intervals with closing dates for each submission of applications to the Professional Standards Committee.

Technology

MEDITERRANEAN: GUARDING AGAINST OIL SPILLS



EU-funded high-frequency radars will beam hourly data on waves and currents, promoting better security and safety at sea and vastly improving our ability to respond to oil spills.

June 10 - An improved response to marine hazards will soon be available thanks to new technology that helps monitor the sea between Malta and Sicily.

An improved response to marine hazards will soon be available thanks to new technology that helps monitor the sea between Malta and Sicily.

Technology (continued)

A seminar held recently, as part of the Calypso project between Italian and Maltese partners, revealed a plan to set up an array of high-frequency radars to monitor conditions on the sea surface in real time.

In his opening address, project leader Aldo Drago of the International Ocean Institute-Malta Operational Centre's Physical Oceanography Unit at the University pointed out that Malta's coastline was under constant threat from the millions of tonnes of crude oil and hazardous materials passing by in close proximity.

Contrary to popular misconception, oil and other pollution is not so easily washed away from our shores. Often it can be expected to be driven by currents towards our shores from Sicily, be blown away only to return repeatedly with every change in conditions.

Partly financed under the Italy-Malta operational programme 2007-2013 the project has four Italian partners made up of the regional environmental protection agency Arpa, the institute for coastal environment IAMC-CNR and the universities of Palermo and Catania.

Transport Malta, the Civil Protection Department and the Armed Forces of Malta are the other local partners in the project, which combines research entities with public entities responsible for civil and environmental protection, surveillance and security.

The compact, high-frequency radars to be installed near the Ta' Barkat treatment plant in Malta and at Il-Qortin in Gozo are expected to be fully operational by early next year.

A third radar installation at Pozzallo, Sicily, will overlap with real time data of surface currents and waves updated hourly via the two radars in Malta and Gozo. While the radar masts are modest in size, the technology has big implications for coastal protection from oil pollution on both sides, not just on the open sea but close to shore where potential impact is highest.

With the support of numerical modelling applications, the high-frequency radar data will provide accurate information to monitor and respond effectively to threats from marine oil spills. Apart from their application in oil spill response, these radars also provide an avenue for wider applications, including search and rescue, and safer navigation. *The Times of Malta* [Read more](#)

Cormack's Column



In this issue of the ISCO Newsletter we are printing No. 81 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](#)

CHAPTER 81: KNOWLEDGE OF MECHANICAL RECOVERY

The general conclusions on the disturbing influence of the heaving and pitching of floating skimmers, especially when rigidly attached to even small boats, can be extended to their rigid attachment to ships which neither heave nor pitch in the wave amplitudes and lengths which thus affect boats, but which nonetheless proceed as a wave-train along the sides of ships to which skimmers might be rigidly attached. The opportunity to observe the effect of such attachment arose when the US Navy Department of Salvage invited WSL to evaluate the French Cyclonet recovery system which had been designed for just such attachment. This system-design assumed that with the unit attached to a ship's side, water and surface pollutant would pass through a square duct-opening half above and half below the ship's load-line to enter a vertical cylinder to create a vortex in an inverted cone beneath the cylinder; and that this vortex would cause the lower density pollutant to accumulate centrally for pumped recovery and the higher density water to exit to the sea through the open bottom of the said cone.

However, while centrifugal oil/water separation is a recognised technique, it requires the mixture to be pumped through the cyclone at a high linear-velocity, in contrast to which the Cyclonet relied on sufficient linear velocity being available from the forward movement of the ship despite its having to overcome the internal backpressure of the unit itself before any centrifugation could ensue. This seemed unlikely. On the contrary, it seemed quite likely that backpressure would counter the initial entry of oil/water, that this together with the submerged bulk of the unit would create a 'bow wave'; that, while some fluid would pass through the system, some would pass over and under it depending on the amplitude and length of the waves in which it was apparently expected to operate.

In the event, all of these phenomena were observed with the unit attached to the side of RV Seaspring as she proceeded at the speed recommended for vortex inducement with waves of 30-50cm amplitude passing along her side. However, samples taken from the recovery pipe positioned in central core of the presumed vortex showed oil concentrations < 1000 ppm (0.1%) in even calmer conditions while the WSL variable thickness oil carpet laid ahead of the unit was sufficient for the recovery concentration to have been 1% assuming all the oil to have been dispersed to the entry duct's average water depth of 0.5 metres. Thus, the extractable inner core contained only 1/10 of the oil presented to, showing that the negative effect of waves and associated turbulence to have been very significant.

Cormack's Column (continued)

This dispersion of floating layers by the turbulence arising from the incompatibility of the inertial-mass/linear-dimensions of solid floating objects such as skimmers, boats and ships with the amplitude/ length of waves, also arises when booms are coupled to integral skimming-craft and when differing booms are coupled one to another. Thus, having found it essential for skimmers to follow the sea/oil/air interface in waves without disturbing the pollutant layer and for booms to be light and flexible enough to follow this interface without permitting the layer to overtop or pass beneath them as beneath a bridge, it has also been found that even when the boom is satisfactory in this regard, the point of its sealed attachment to a skimming craft such as the Marco V, experiences an increased pitching amplitude and a phase lag with respect to the boom itself. Such incompatibility can produce severe stressing and cause the boom to be lifted clear of water-oil-air interface or driven beneath it *i.e.* to cause damage and/or loss of the pollutant intended for recovery.

Thus, a hull lifting to a wave and pitching into the next, causes water displacement associated with high linear and vortex velocities which entrain pollutant droplets into the water to escape under whatever boom draught remains. Again when the end of a hull lifts the wave is already passing under it and accentuating the lift while the volume vacated draws in water from the immediate vicinity thus entraining pollutant this time to be lost under the hull, while the subsequent dropping of the hull-end displaces this water in a manner which prevents approach of the pollutant. Thus the incompatibility of movement of skimming-craft and boom pumps pollutant past both. Such considerations also apply to the joining of differing booms, to extents depending on the difference, irrespective of how clever the coupling-design may be.

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

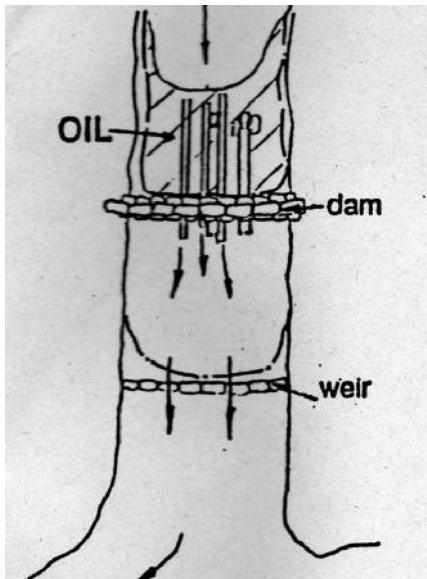
2 *Response to Oil and Chemical Marine Pollution*, D. Cormack, Applied Science Publishers, 1983.

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

Special feature

ANATOMY OF AN OIL SPILL (CONTINUED)

The story so far - A leak of heavy oil from an industrial plant in the Scottish Highlands has resulted in pollution of a local burn, a larger stream / minor river and the main river into which it runs. A pollution response company has been called out and the spill has been contained both at source and where the stream flows into the river. The next phases, RECOVERY and CLEAN-UP are about to begin.



In this sketch, the underpass dam illustrated is a pipeline underpass rather than a bridge type underpass dam, but the principle of operation is the same.

Monday – 0630

Patches of thick black oil are now piling up steadily behind the underpass dam near the point where the stream flows into the river. Personnel from the pollution control company are setting up oil recovery equipment⁴ on the bank of the stream, ready to recover oil into the vacuum tanker. Senior members of the team are carrying out an inspection of the small burn, the larger watercourse and the river. It is no longer raining.

⁴ *In the initial phase of recovery when there is a lot of oil to pick up it would be practical to suck off the oil directly into the vacuum tanker using a floating suction head on the hose. One disadvantage is that quite a lot of water will be collected with the oil.*

10.00

The preliminary inspection has discovered extensive oiling along the burn and minor river, although vagaries in the current have also left many sections of the banks uncontaminated. Fortunately, the rise in water levels due to the rainfall have not resulted either in a heavy "tide mark" or much spreading out of the oil where the banks are low. Along the main river, there is some oiling of the banks on the village side, but due to the

currents no pollution at all has been found on the opposite shore. However, as the river is relatively low at this time of year, there are areas exposed of boulders and stones and some oil has fetched up where the water runs through these. A narrower section of river at the end of the village seems to mark the limits of oiling, with only isolated patches noted in waterside vegetation, and one accumulation discovered in an eddy under a small cliff further downstream.

10.30

The vacuum tanker is now full and leaves to deliver its load to a waste oil reprocessing company. Because a considerable volume of water was recovered with the oil, the contents of the tanker have been "cut" several times, by simply releasing the water layer beneath the oil inside the tanker back into the stream – above the dam. This allows the maximum amount of oil to be taken away.

While the tanker is away, recovery continues using the air compressor to operate a skimmer, with the recovered oil being passed into a portable tank on the bank⁵. This too is "cut" from time to time.

⁵ *The skimmer must be of a type that can recover heavy oil. A small weir skimmer ("Dragonfly" or similar) can be used with a section of floating hose. A suitable pump would be an air-operated double-diaphragm type (Wilden or similar). By regulating the air*

Special feature (continued)

supply to the pump, the height of the weir of the skimmer can be “tuned” to minimise the amount of water recovered with the oil. A suitable portable tank would be a 10 ton capacity Fastank or equivalent.

Oil has also been collecting in the “mini” interceptor dam where the factory drain exits into the small burn. Here, the amount of oil is not large and can be manually scooped into open top drums.

The clean-up operation has also started by now, with the primary objective of tackling the banks of the main river. Booms are set out extending from the bank to approximately mid-stream to catch some of any oil dislodged during bank cleaning, and help to channel it back towards the shore. However, because of the heavy nature of the oil and the speed of the current, these measures can only be partially successful. Therefore booms will be set out at several locations in the smoothest sections of water found. Cleaning up is carried out manually – No dispersants or other chemicals are used. Oiled vegetation on the bank is slashed down and bagged; oily gravel and small stones are dug out and bagged – oil on larger rocks is cleaned off as much as possible with sorbent sheets. Patches of oil or emulsion are similarly mopped up. Progress is slow, but painstaking.

11.30

The oil pollution in the stream above the dam, and its tributary, the small burn that runs past the factory, has not been neglected. Although no more pollution can escape past the underpass dam, there is always the danger that heavy rain will raise the level in the watercourses and spread the oil further up and down the banks, or even cause a spate that could threaten the dam and weir. Accordingly, the sooner the clean-up is completed the better. Since any oil released will be contained downstream, the cleaning process is commenced at the uppermost point of the polluted part of the watercourse and progress downstream to the dam location.

Two cleaning teams work in tandem – one removing oiled vegetation⁶, the other equipped with a portable low pressure washing pump⁷ in order to flush as much oil as possible from the banks and from between rocks and tree roots.

⁶ *For clearing oiled vegetation from heavily overgrown watercourses a variety of hand tools are needed – small bushman saws, machetes, sickles, pruning shears – plus a plentiful supply of large heavy-duty plastic bags for bagging up oiled materials.*

⁷ *A lightweight petrol (gasoline) engine centrifugal pump can be used and can be carried on a lightweight frame (like a hospital stretcher). A four-person washing team is recommended – two carrying the pump, one looking after the suction hose (fitted with a bottom strainer) and the fourth directing the delivery hose (fitted with a fire nozzle).*

2030

The team working on the main river have reached a point slightly past a foot bridge. There are oil stains still on many of the stones, and it is likely that a few pockets of oil are lying out of sight here and there, but generally the banks now appear clean.

The teams working on the small burn below the factory have reached the larger watercourse and covered a couple of hundred yards downstream

The oil skimming team at the dam site are doing well but small twigs and leaves need to be constantly cleared away from the skimmer's weir in order to maintain a good rate of oil recovery.

2130

It is now getting dark and, as the pollution is well contained, a decision is taken to stop work until the next day.

In case there is rain during the night and a rise in water level, it is decided to maintain a night watch at the dam site. This decision meets with the full approval of the local midge population who have turned out in force during the evening. (Midges are small biting insects and will be familiar to anyone who has visited the Scottish Highlands). TO BE CONCLUDED NEXT WEEK

Contributed article

NEW DEVELOPMENTS AT THE NATIONAL SPILL CONTROL SCHOOL, TEXAS A&M UNIVERSITY - CORPUS CHRISTI, TEXAS, USA

The National Spill Control School has been offering oil spill response classes since 1977. The NSCS typically trains 500 to 1000 people from government and industry annually and is a part of Texas A&M University at Corpus Christi, located on an island in Corpus Christi Bay. TAMU-CC has a student population of about 10,200.

Corpus Christi is the 5th largest port in the US and the deepest on the Gulf coast. There are 17 major refining and petrochemical companies around Corpus Christi Bay. The weather in Corpus Christi is almost always pleasant and sub-tropical and annual seawater temperature ranges from 50 to 85 degrees. Corpus Christi is a great place to visit, fish, and enjoy the beach; the city and region have a strong industrial foundation; and Corpus is the perfect place to for year-round spill response training.

The National Spill Control School is currently expanding operations and course offerings. We are offering new course titles, specialized courses, and the NSCS will be offering all of our core spill response courses in Spanish within the next year.

Contributed article (continued)

Two major developments have recently occurred which further embellish the capacity of the NSCS to expand our programs. First, we have received a tremendous beneficial contribution of a 30 ft. Kvichak Harbor Class Skimmer from BP. Second, we anticipate offering deepwater and offshore spill response classes in collaboration with the Marine Spill Response Corporation within the next 6 months.

BP's contribution of the Kvichak Skimmer Vessel was augmented by their contribution of 3 other skimmer systems, pumps, computers, marine radios, about 5000 feet of oil spill containment boom, a portable/towable tank, and various other equipment. This contributed equipment will not only make our oil spill training programs much more relevant and realistic, but will also have the capacity to support the preparedness and protection of the unique marine resources around Corpus Christi Bay. Not only will the NSCS and TAMU-CC benefit from this contribution, but the entire community will be better prepared to respond to an environmental release in our coastal marine environment. The NSCS expects to ultimately become an approved training facility for the Kvichak Harbor Class skimmers. With over 70 of these systems now in service this is the most acclaimed and effective oil skimming vessel on the market. With twin 70hp motors the Kvichak can respond at a speed of more than 17 knots. Once on the site of a spill it is rated to remove up to 427 barrels of oil per hour. The Kvichak skimmer can then store up to 1000 gallons of recovered oil or transfer it to another vessel for recovery at a rate of 250 gallons per minute.

The BP donated computers will be used to collect and record field data in the GIS and Shoreline Cleanup Assessment Team (SCAT) courses that are taught by the NSCS.

The NSCS courses and schedules are available online at www.nscs.tamucc.edu. The 2013 course schedule will be published in September. In the meantime, look for further announcements regarding the NSCS Spanish and Offshore spill response courses in the near future.

Introducing the National Spill Control School's new Kvichak 30' Harbor Class Rapid Response Vessel and MARCO Filter Belt Skimmer System – [View the presentation](#)

Events

NORWAY: THE 8TH ANNUAL ARCTIC OIL & GAS CONFERENCE

Oslo, 4-5 October 2012. Arctic Oil & Gas Conference: exploring opportunities and developing innovative solutions for safe Arctic operations - The leading annual event for oil & gas professionals operating in Arctic regions. [More info](#)

USA: WATER QUALITY EXPERTS WILL GATHER IN DENVER FOR NATIONAL WATER POLLUTION CONFERENCE

The world's foremost experts on storm and surface-[water quality](#) will get together in Anaheim, CA August 19 - 23 to explore the newest water pollution prevention and mitigation technologies, share their recent experiences and discuss which strategies are most effective in minimizing [surface water](#) pollution.

With [NPDES](#) compliance in mind, *StormCon 2012* brings together municipal and government officials, builders & contractors, site inspectors, civil engineers, designers, regulators, enforcement officials, planners, consultants, researchers, educators, EPA officials, property executives and other [water quality](#) professionals under one roof to focus on this critically important topic. *Environmental Expert* [More info](#)

UK: INTERTANKO / INTERCARGO LUNCHTIME SEMINAR ON TUESDAY 26 JUNE, 2012

The following message has just been received from INTERTANKO -

The next lunchtime seminar of 2012 for INTERTANKO and Intercargo Members and Associates is scheduled for **Tuesday 26 June**, at our combined offices in the Minories.

We are very pleased to announce that Peter Glover, Associate, Norton Rose will present the seminar entitled 'Reporting of Incidents, the ISM Code and Privilege'. Peter is a disputes lawyer based in London specialising in shipping and admiralty law. In addition to being a qualified lawyer, Peter holds a Master Class 1 Certificate of Competency and has over 11 years' experience in the maritime industry.

Peter's practice involves advising clients in relation to all aspects of 'wet' and 'dry' contentious and non-contentious matters. He has attended casualties worldwide and has particular expertise in oil pollution matters. In addition to shipping litigation, Peter has experience in general commercial advisory work and criminal law and has appeared as an advocate for clients in board of inquiry and court environments.

During the presentation, Mr Glover will:

- review the requirement for the reporting of incidents under the ISM Code
- consider the reporting of incidents with a view to both disclosure and privilege
- discuss the classes of documents likely to be disclosed

Events (continued)

- highlight some of the commercial considerations for masters, owners and operators which arise as a consequence of the reporting of incidents

Date: Tuesday 26 June 2012

Time: 1200-1400 (arrivals 1200 for 1215 start of presentation, followed by questions and a sandwich lunch).

Venue: St Clare House – 9th floor, 30-33 Minories, London EC3N 1DD.

The seminar is free of charge but spaces are limited and registration is required. We would very much appreciate it if you could register by **Friday 22 June 2012** by contacting Alexandra Hardman on alexandra.hardman@intertanko.com

Training

WEBINAR TOPIC: NEW TECHNOLOGIES BRIEFING - *IN SITU* TREATMENT ADVANCES

You are invited to join a webinar presentation on new groundwater and soil remediation products developed by Regenesis. This one-hour online briefing will be held from 11:00 to 12:00 BST (UK time) on Wednesday, 20th of June 2012. [More info](#)

Publications

USA & CANADA: WILDLIFE RESPONSE GUIDELINES – ANNEX TO MARINE POLLUTION CONTINGENCY PLAN

The Canada-United States Marine Spill Pollution Contingency Plan, CANUSLANT Annex - Operational Appendix: Wildlife Response Guidelines (CANUSLANT Wildlife Response Guidelines) have been adopted by the undersigned Canadian and United States officials to provide guidance to wildlife resource agency representatives in coordinating or conducting response activities for wildlife that are oiled or potentially-oiled when the annex is activated. The CANUSLANT Wildlife Response Guidelines were designed to facilitate the initiation and conduct of selected wildlife-related response activities to help ensure that those activities are conducted in a timely, efficient, and coordinated manner. [Download the Guidelines](#)

IPIECA: IMPROVING SOCIAL AND ENVIRONMENTAL PERFORMANCE: GOOD PRACTICE GUIDANCE FOR THE OIL AND GAS INDUSTRY

This guide provides a summary of all of IPIECA's good practice publications. [Download PDF \(English, 8.41 MB\)](#)

IPIECA: OIL SPILL PREPAREDNESS AND RESPONSE REPORT SERIES SUMMARY

This summary publication brings together the complete Oil spill report series under one cover. It provides a complete overview of issues that can be referenced in the preparation for, and response to, oil spills at sea. The core content of this publication is made up of report summaries which reference the full report series. [Download PDF \(English, 4.87 MB\)](#) Also available in other languages - see http://www.ipieca.org/library?tid=8&tid_1=12

Company news

EARTHSOFT HELP DESK NOW OPERATING IN EUROPE

EarthSoft has announced Help Desk resources in Europe. EarthSoft has hired Jannik Stephanus in Stolberg, Germany as a Help Desk Engineer, supporting the rapidly-growing EQUIS client base in Europe. Jannik will support the hosted server in Munich and other EQUIS implementations in the area.

EarthSoft's EQUIS is a very widely used environmental data management software for subsurface and geo-environmental data management. [More info](#)

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