



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 340, 25 June 2012

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News

EUROPE: PROJECT FOR PREPAREDNESS FOR OIL-POLLUTED SHORELINE CLEAN-UP & OILED WILDLIFE INTERVENTIONS

Most of our readers will not be well informed about the POSOW Project - Preparedness for Oil-polluted Shoreline Clean-up and Oiled Wildlife Interventions. The project has only recently been launched.

The project for Preparedness for Oil-polluted Shoreline clean-up and Oiled Wildlife interventions – POSOW, coordinated by the Regional Marine Pollution Emergency Response Centre for the Mediterranean Sea (REMPEC), is a two year project funded by the European Commission under the Civil Protection Financial Instrument, to improve the preparedness and response in marine pollution in the Mediterranean region.

The project POSOW aims at establishing a regional cooperation synergy through the enhancement of knowledge and capacities of operators (professionals and volunteers) in the field of marine pollution, in European coastal countries of the Mediterranean Sea namely Croatia, Cyprus, France, Greece, Italy, Malta, Slovenia and Spain.

It is implemented by REMPEC and its partners, namely the Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE), the Institute for Environmental Protection and Research (ISPRA), Sea Alarm Foundation, and the Conference of Peripheral Maritime Regions of Europe (CPMR).

By providing training courses and material to civil protection professionals and volunteers, in cooperation with local competent authorities with the support of CPMR, the project aims at improving the effectiveness of emergency response to shoreline pollution following an oil spill in the Mediterranean Sea.

POSOW has just launched a new website. [View website](#) and you can view a Power Point presentation by Gabino Gonzalez of REMPEC [View Presentation](#)

USA: STRENGTHENING SPILL RESPONSE CONTRACTOR IMMUNITY – PROGRESS REPORT

At the ISCO AGM held in May 2011 during IOSC at Portland, Oregon, USA, Members expressed their serious concern about reports that a great many of the contractors who responded to the *Deepwater Horizon* were being sued by a variety of parties and, in consequence, are being exposed to crippling claims and defence costs with potential to put some response contractors out of business and seriously damage others.

The Minutes of the ISCO AGM reported – “The Oil Pollution Act of 1990 provides limited Contractor immunity. The Deepwater Horizon spill has resulted in multiple lawsuits attempting to break this immunity with the resultant threat that responders may be reluctant to respond as readily in future events. The impact of multiple lawsuits can be crippling to businesses and an initiative will be started to strengthen the immunity for responders. A resolution that ISCO should support this initiative received the unanimous support of members present.

Today (22 June 2012) Jon Waldron (who has been spearheading this effort) has advised your Secretary that “Great progress has been made in finalizing the

News (continued)

proposed legislation with key supporters in the House. In addition, the key supporters have made this a top priority for enactment. We are awaiting for the best opportunity to move forward and, if maritime legislation is advanced this year, we would aim for new contractor immunity legislation to be included".

For readers who are unfamiliar with this matter, an article with a summary of the issues involved in ISCO Newsletter can be found in ISCO Newsletter 293 which can be found in the Newsletter archive on the ISCO website. Alternatively, drop a line to the editor at john.mcmurtrie@spillcontrol.org and he will be pleased to send you a copy.

CANADA: YET MORE PIPELINE PROBLEMS

The news over the last few days continues to be dominated by reports on a further spill in Alberta and comment on the recent spate of pipeline spills. Here are a few of these news reports.

Third oil spill fuels call for Alberta pipeline review

June 19 - Environmental critics are calling for a major review of pipeline safety in Alberta after the province experienced a third large oil spill in a month.

About 230,000 litres of heavy crude oil spilled from a pumping station on an Enbridge Inc. pipeline onto farmland, Alberta's oil and gas regulator, the Energy Resources Conservation Board (ERCB), said Tuesday.

The regulator said 1,450 barrels of oil spilled from a pumping station on Enbridge's Athabasca pipeline, 24 kilometres from Elk Point, Alta., a small town roughly 200 kilometres northeast of Edmonton. That pipeline, briefly shut down but then restarted Tuesday, connects the oil sands with Hardisty, Canada's most important crude oil hub. The spill comes while crews are still working to clean up two other large leaks in Alberta, nearly 800,000 litres of oil from a Pace Oil & Gas Ltd. well about 200 kilometres from the Northwest Territories border, and 160,000 to 480,000 litres from a Plains Midstream Canada pipeline that ruptured beneath the Red Deer River.

Environmental groups are now seizing on the confluence of accidents, which includes another massive spill from a Plains pipe last year, to call for an expansive look at pipeline safety in Alberta.

"Given the significant number of pipeline spills in recent months, Alberta should conduct a review of the integrity of Alberta's pipeline system," said Simon Dyer, policy director with Alberta's the Pembina Institute. "Pipeline spills are inevitable but the risks can be reduced through stronger regulation and practices." *The Globe and Mail* [Read more](#)

Enbridge shuts Alberta pipeline after oil spill

June 19 - Enbridge Inc has shut down a major Alberta pipeline that moves oil sands-derived crude after a spill at a pump station, the second release of oil in the Canadian province in less than two weeks, regulators said on Tuesday. *Reuters* [Read more](#)

Enbridge pumping station spills 230,000 litres of heavy crude northeast of Edmonton

June 19 - Enbridge estimates about 230,000 litres has leaked, but the ERCB's Darin Barter said Tuesday that amount hasn't been confirmed.

"It's a significant size spill," said Barter. "Any amount of crude oil out of a pipeline is significant to us. Obviously we've had a number of pipeline incidents in the past short while and we're monitoring cleanup on them and we have a number of investigations underway."

Barter said the pumping station "a 12-year-old facility which is in the middle of a field" has been isolated. He also said the oil has not spilled into any waterways, nor were there any evacuations or injuries due to the leak. "There's absolutely no waterways, there's no water, there's no standing water, it's on dry land," he said. "The company is actually on the scene and they're cleaning up the spill now. We'll remain there for as long as we need to be until our comfort is achieved in cleanup operations."

Enbridge said in a news release that the cause of the leak appears to be a failure of a flange gasket. It said as soon as it detected the leak, it notified civic authorities and other regulatory agencies. *Winnipeg Free Press* [Read more](#)

Enbridge restarts Alberta pipeline after oil spill

June 20 - Enbridge Inc said it restarted its Athabasca oil sands pipeline in Alberta late on Tuesday following an outage prompted by an oil spill at a pumping station. *Reuters* [Read more](#)

Alberta oil spills highlight aging pipelines, lax regulations, say environmental groups

June 20 - Environmental groups are pointing to three major oil spills in Alberta in the last six weeks as proof that the government needs stricter regulations and oversight over the province's aging pipeline infrastructure.

Greenpeace spokesman Mike Hudema said three major oil spills in Alberta in six weeks is not a rare occurrence.

"We have over 300 spills a year and it's due to the aging pipeline infrastructure. That's why the government should appoint an independent body. There are obviously huge problems with oversight and we're leaving too much to companies to regulate and enforce themselves," he said Wednesday. *The Star* [Read more](#)

Spate of oil spills pushes Alberta to look harder at pipeline safety

June 21 -As crews work to mop up more than a million litres that has spilled in Alberta in a month, Premier Alison Redford is steering the province towards a safety review of its 377,000 kilometres of pipeline. *The Globe and Mail* [Read more](#)

USA: 2010 OIL SPILL IN MICHIGAN FAR LARGER THAN OFFICIAL ESTIMATES, EVIDENCE SHOWS



Initial cleanup of the contaminated zone around the pipeline break area. Photo: EPA

June 11 - The 2010 pipeline spill in Michigan's Kalamazoo River was far larger than the pipeline operator has reported, according to accumulating evidence and documents recently released by federal investigators.

The estimate that Enbridge Inc., the pipeline's Canadian operator, has used since a couple months after the spill is [20,082 barrels](#), or 843,444 gallons. The estimate used by the U.S. Environmental Protection Agency is larger—[1 million gallons](#)—but the documented sources indicate that estimate may also be low, by a significant degree.

Inside Climate News [Read more](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

TANZANIA: WITH CLEANING EQUIPMENT, MINISTRY DRAFTS OCEAN POLLUTION REGULATIONS

June 16 - The Government is in the final stages of drafting regulations on merchant shipping (prevention of oil pollution) for efficient implementation of ratified conventions and national plans for responding to pollution incidents.

Speaking at a handover ceremony for marine oil pollution cleaning equipment donated by the bilateral Indian Ocean Commission to Tanzania in Dar es Salaam yesterday, the Transport Ministry's Deputy Permanent Secretary John Mngodo said that the donation marked a milestone in national plans for oil pollution preparedness, response and cooperation.

"Although Tanzania has never experienced a major oil spill pollution incident, we are quite mindful of the fact that there are risks of pollution in our controlled waters. Many ships pass through our coastal waters or come in to our ports laden with oil, so such pollution could arise out of ship collisions, groundings or out of criminal acts including piracy," he said.

"The equipment will assist us to gain efficiency on responding to oil spill pollution incidents. The draft National Marine Oil Spill Response Contingency Plan is in the final stage of validation and approval. Following this validation, stakeholders will be asked to meet and discuss the plan for purposes of agreeing on a framework for its implementation, he elaborated.

The government is embarking on necessary steps to protect the marine environment through the preparation of national response contingency plans and fostering cooperation with other countries in the region, he declared.

Mngodo also disclosed that the country has ratified the major international convention for protection of marine environment including the international convention for prevention of pollution from ships (MARPOL). *IPP Media* [Read more](#)

LEBANON: MIKATI CALLS FOR INTERNATIONAL TRIBUNAL TO TRY ISRAEL FOR 2006 LEBANON OIL SPILL

Lebanese Prime Minister Najib Mikati attends the funeral of Saudi Crown Prince Nayef bin Abdul Aziz in the Grand Mosque during on June 17, 2012 in the holy city of Mecca in western Saudi Arabia. (AFP PHOTO/FAYEZ NURELDINE)

June 22 - Prime Minister Najib Mikati called Thursday for the creation of an international environmental tribunal to try Israel for causing the 2006 oil spill on Lebanon's shoreline, and criticized the Jewish state's refusal to comply with U.N. resolutions.

"Lebanon proposes establishing an international environmental tribunal following the environmental consequences of the 2006 war – primarily the oil pollution crisis over which Lebanon has not received any compensation from the Israeli enemy," Mikati said during his speech at the U.N. conference for Sustainable Development in Rio de Janeiro, Brazil.



Mikati was referring to Israel's bombing of Lebanon's Jiyeh power station during the 34-day conflict in July and August of 2006. The bombing caused the power station to release 15,000 tons of unrefined fuel oil into the Mediterranean sea. *The Daily Star* [Read more](#)

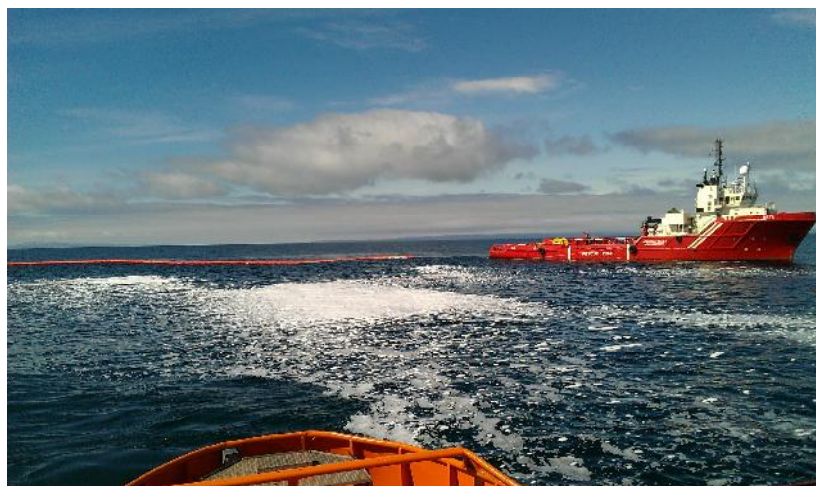
USA: CANTWELL INTRODUCES BILL TO BRING OIL SPILL RESPONSE INTO 21ST CENTURY

June 15 - U.S. Senator Maria Cantwell (D-WA) has introduced legislation to jumpstart research and development into new oil spill response technology, bringing oil spill response into the 21st century. Her bill – the *Oil Spill Research and Technology Act of 2012* (S. 3298) – would create grants to support the research and development of new technologies to better contain and clean up all types of oil spills. In addition, the bill requires the United States Coast Guard to establish a program to evaluate and implement 'best available technology' to effectively respond to and clean up oil spills.

"Oil spills pose a great threat to Washington's economy and the fragile coastlines we all cherish," said Cantwell. "We must do everything we can to prevent a spill, but if one happens we need to have the best technology on hand to minimize the damage. It's time to bring the technology we use to clean up oil spills into the 21st century. This bill will help protect our growing coastal economy from the threat of oil spills."

Cantwell's bill would reorganize and streamline the Federal Oil Spill Research Committee – something the Government Accountability Office [recommended](#) last year – made up of the National Oceanic and Atmospheric Administration, Coast Guard, Environmental Protection Agency, and Department of the Interior. *Press Release* [Read more](#)

NORWAY: EPPR WORKSHOP OBSERVING AN OIL SPILL RESPONSE EXERCISE IN KIRKENES



June 15 - The increased focus on potential exploration of Arctic offshore oil and gas and shipping this summer is made evident by a busy month of June for the Emergency Prevention Preparedness and Response working group (EPPR). On 5-7 June 2012, a workshop was held in Kirkenes, Arctic Norway, where the participants had the opportunity to observe the annual Russian - Norwegian *Exercise Barents*.

The workshop was organized in the context of the Russian – Norwegian Arctic Council project, *Development of Safety Systems in the Arctic*. The objective is to share information and knowledge on Search and Rescue (SAR), Oil Pollution Prevention and Oil Spill Response (OSR).

Oil Spill Prevention considerations were highlighted with presentations on the recent developments of the International Maritime Organization (IMO) [Polar Code](#) as well as trends in international shipping incidents with relation to the future of Arctic shipping.

News (continued)

Many related risk analysis projects were on the agenda, for instance the [Barents 2020](#), [BE-AWARE](#) (Greater North Sea) and [BRISK](#) (Baltic Sea) in addition to the EPPR Prevention to Arctic Oil Spill project.

The workshop participants were given the opportunity to observe the Exercise Barents 2012 which took place at the border area between Russia and Norway. The exercise included Norwegian and Russian SAR and OSR units. The two Barents Sea neighbors practiced the cooperation between Murmansk Maritime Rescue Coordination Center (MRCC Murmansk), the Norwegian Joint Rescue Coordination Center in Bodø (JRCC North Norway) and the [Norwegian Coastal Administration](#) among other governmental bodies. *Arctic Council* [Read more](#)

NIGERIA: GROUPS RAISE ALARM OVER EFFECTS OF OIL SPILL IN BAYELSA COMMUNITY

June 19 - Advocate organisations, Environmental Rights Action (ERA) and Friends of the Earth Nigeria (FoEN), have called for urgent measures by the Nigeria Agip Oil Company (NAOC) to stem effects of continued oil spill in Kalaba community in Yenagoa Local Government Area of Bayelsa State.

They stressed the need for a properly constituted Joint Investigation Visit (JIV) team to come up with acceptable report on the oil spill and adequate compensation paid to the victims of the spill without delay.

The group in their report also called for the immediate cleanup and effective monitoring of facilities by the company to forestall further environmental damage due to long delay. *Business Day* [Read more](#)

USA: 13,000 GULF OIL SPILL SETTLEMENT CLAIMS FILED IN FIRST 2 WEEKS

June 19 - There have been more than 13,000 economic [Gulf oil spill](#) damage claims filed to 18 new court-supervised intake centers since the terms of [a negotiated settlement](#) kicked in two weeks ago. Patrick Juneau, the administrator appointed by U.S. District Judge Carl Barbier to handle the claims, said he's happy with the early results.

Since launching the new [settlement claims process](#) June 4, there have been 13,157 claims filed -- about 31 percent each from Louisiana and Florida, and the rest mostly split between Mississippi and Alabama. BP estimates that at the end of the process and after paying out a separate settlement for medical claims, it will spend \$7.8 billion to pay the two settlement classes. *Nola.com* [Read more](#)

JAPAN: AGENT ORANGE AT OKINAWA'S FUTENMA BASE IN 1980S

June 20 - The U.S. Marine Corps buried a massive stockpile of Agent Orange at the Futenma air station in Okinawa, seriously sickening the base's former head of maintenance and potentially contaminating nearby residents and the ground beneath the base. The barrels were abandoned in Okinawa at the end of the Vietnam War - when the U.S. government banned the dioxin-laden defoliant for health reasons — and were buried at the installation in the city of Ginowan after the Pentagon ignored repeated requests to safely dispose of them, according to the veterans who served at the installation in the 1970s and 1980s.

Closing down Futenma has been the center of a bitter 16-year struggle by Tokyo and Washington to realign U.S. forces on the island - and a recent poll by Ryukyu Shimpo showed that 90% of Okinawans were opposed to the base. ("Ninety percent of people in Okinawa oppose Henoko relocation plan", Ryukyu Shimpo, May 9, 2012.) These latest allegations are likely to raise fears that even after Futenma's eventual shutdown, the land beneath the base will be too poisoned for civilian use for decades, as is the case with former U.S. installations that stored Agent Orange in South Vietnam. *Truth Out* [Read more](#)

USA: KALAMAZOO RIVER REOPENS TWO YEARS AFTER ENBRIDGE OIL SPILL

June 22 - For the first time in a long time, Jim Rutherford was able to stretch his hand into the waters of the Kalamazoo River, overturn a few rocks, and not pull his hand out covered in oil.

The director of the Calhoun County Public Health Department did this after joining with officials from the Environmental Protection Agency and Kalamazoo County to declare all but 1,000 feet of the Kalamazoo River open to the public today.

News (continued)

“We are lifting the river ban effective immediately, today, now, that has been in place for almost the last two years,” Rutherford said on a stage in front of the river at Fort Custer State Recreation Area. “This removes all of our legal and regulatory authority as it relates to keeping the community out of the river.”

The reopening of 34 miles of river — all but 1,000 feet in Kalamazoo County near Morrow Pond — does not mean the cleanup is complete, officials said. *Battle Creek Enquirer* [Read more](#)

GIBRALTER: MARITIME CHIEFS PROBE WEEKEND OILS SPILL

June 23 - Maritime officials in Gibraltar are investigating the cause of an oil spill that occurred during a ship refuelling operation off the North Mole on Friday evening. The refrigerated vessel Frio Dolphin was taking fuel from the bunker tanker Vemaoil XX when around three tonnes of fuel was spilt into the sea.

“The source of the oil was determined as a bunkering accident which is being investigated and followed up with the relevant parties,” the Gibraltar Government said in a statement. The Gibraltar Port Authority [GPA] and the Department of the Environment activated the Gibraltar Oil Spill Contingency Plan and moved swiftly to contain the spill. *Gibraltar Chronicle* [Read more](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

UAE: DIVERS TRY TO PLUG LEAKS IN SUNKEN TANKER

June 12 - The White Whale, an oil tanker that ran aground in late October, poses a serious risk to coastal marine life in the UAE if it cannot be salvaged or the 1,000 tonnes of diesel stored in its holds safely drained, an official has warned. Lying on the seabed 35 kilometres off the coast in Umm Al Quwain, the vessel continues to leak fuel, according to reports, despite efforts to patch holes in the hull late last year.

The latest attempt to salvage the sunken tanker is now under way with specialist crews at the wreck site since Wednesday, said Sultan Alwan, the assistant undersecretary for external audit at the Ministry of Environment and Water. *Gulf News* [Read more](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

UK: RIVER NENE POLLUTION 'CAUSED BY VANDALS', COMPANY SAYS

June 21 - The company responsible for the chemical pollution of a Cambridgeshire river has blamed vandals for the leak. Safapac, a hazardous chemical manufacturing company based at Orton Southgate near Peterborough, was broken into at the weekend, its director said. Martin Steele said five 1,000-litre containers were opened and the contents poured into the River Nene.

The Environment Agency said about 4,000 fish are believed to have died as a result of the incident. *BBC News* [Read more](#)

SLOVAKIA: FUEL SPILLS INTO DANUBE AT SLOVAK PORT OF BRATISLAVA, SME SAYS

June 12 - As much as 13,600 liters (3,588 gallons) of diesel fuel spilled into the Danube river today in the Slovak capital, Bratislava, Sme reported, citing an unidentified official at the Environment Ministry.

The fuel leaked into the river during the loading of a tanker at the city's port, the newspaper said. Crews are working at the site of the accident to contain the spill, Sme said. *Bloomberg Businessweek* [Read more](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

USA: DEQ INVESTIGATES SPILL - BENZENE RELEASE GREATER THAN FIRST REPORTED

June 23 - What was initially believed to be about a 10-pound release of benzene June 14 at the ExxonMobil Chemical Plant in Baton Rouge, could be as much as 28,700 pounds by the time the chemical cleanup is complete, according to a required incident report from the company.

The final estimate of emissions — beginning when the leak started June 14 and ending with the treatment of the material in the wastewater treatment plant — is 28,688 pounds of benzene, 10,882 pounds of toluene, 1,110 pounds of cyclohexane, 1,564 pounds of hexane and 12,605 pounds of volatile organic compounds, according to ExxonMobil's report. *The Advocate* [Read more](#)

ISCO WELCOMES MORE NEW MEMBERS

Since ISCO last announced new members at the beginning of this month, we are pleased to welcome some additional new members –

New Corporate Members

International Environmental & Marine Services (Egypt)
Chatoyer Environmental (Australia)
Neocos Consulting (UK)
Chevron Indonesia Company (Indonesia)
Hong Kong Spill Response Technology Ltd. (China)
Power Plus Cleaning Solutions (USA)

New Individual Members

Captain D.C. Sekhar (India)
Richard Barta (USA)
John Ostergaard (Sweden)

Technology

RESEARCHERS INVENT 'MAGNETIC EMULSION' THAT COULD CLEAN UP OIL SPILLS

June 22 - Over the years, scientists have proposed many ways of cleaning up oil spills effectively, but none have really held promise or been properly utilized.

But now, a research team from the University of Bristol, publishing their work in the journal, *Soft Matter*, have come up with quite a novel way to clean up oil spills, indeed any chemical spills, and is so effective that it promises to "revolutionise the chemical industry."

What the researchers have come up with is a new molecule that can make "magnetic emulsions." The molecule in question is able to mix and coat liquids and because it has magnetic properties, it can be affected when a magnetic field is applied to it, making it, in a way, a sort of coat that could cover oil and then be scooped up by a magnet, effectively cleaning any other liquid the oil is mixed with.

Speaking about this new molecule that his team created, Julian Eastoe of the University of Bristol said, "We're making emulsions from essentially seawater and the kind of oils that would be spilled, and we're seeing that we can manipulate them using a magnetic field," and that the molecule could be used to clean up oil spills and is a "a practical application without a shadow of a doubt."

This new magnetic emulsion is an extension of the same team's "magnetic soap," which they had created back in January, publishing their work in the journal, *Angewandte Chemie*.

The magnetic emulsion is based on the idea of surfactants or surface-active agents, which are basically metal atoms that react when a magnetic field is applied. The surfactant is designed such that as a chain of metal atoms, one end of the chain becomes "hydrophilic", or water-loving, while the other is "hydrophobic" or water-fearing. This property of the surfactant allows it to bind to say oil in an oil/water mixture, with the "hydrophobic" section attaching to the oil molecules and the hydrophilic pointing outwards toward the water. This in turn creates an emulsion, which is affected by a magnetic field, possibly enabling the removal of pollutants from water. *All Voices* [Read more](#)

Cormack's Column



In this issue of the ISCO Newsletter we are printing No. 82 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 82: KNOWLEDGE OF MECHANICAL RECOVERY

It has been observed that water carries pollutant beneath any barrier when its velocity, v , relative and normal to the barrier exceeds ~ 1 knot, that the oblique arms of a V-shaped boom array can be towed relative to the water until $v \cos \theta = 1$ knot, where θ is the $\frac{1}{2}$ angle at the apex; but that the 1 knot limit still applies at the apex where a skimmer would be placed thus presenting a barrier at 90° to lateral movement. However, as reasoned by Commander Teasdale, it might be possible to collect such otherwise escaping

Cormack's Column (continued)

pollutant by deflecting it over the adjustable lower lip of what would otherwise be a simple weir skimmer and into an internal calm region which after re-coalesce if necessary, could be pumped to storage, the initial downwards deflection being accomplished by an angled wave-damping flexible canvas deflector. On this basis he constructed his Oleanic catamaran skimmer for use at the apex of V-boom arrays and offered it to WSL for evaluation. In this catamaran, the modified weir is positioned between the hulls at its centre of gravity and buoyancy so that the horizontal slot, between the after lower edge of the deflector and the forward lower edge of the lower weir lip is minimally displaced by the pitching and heaving of the catamaran in waves.

This catamaran was 5metre long with a beam of 3.5metres and a weir width of 1.53 metres and was designed to take a pollutant/surface-water layer thickness of 2.5 cm iso-kinetically at 1 knot for which encounter rate would be 45 tonnes per hour. However, with an upper pollutant-layer thickness of 0.1mm the pollutant encounter rate would be only 0.275 tonnes per hour. However, with WSL oil carpets of 0.3 -0.35mm, it recovered 90% in calm conditions and with a V-boom array with a mouth of 100m it would have been expected to collect 27-31.5 tonnes per hour. Indeed, it was equipped with twin transfer pumps with a total capacity of 60tonnes per hour. Nonetheless, In the presence of even the smallest waves, their interaction with the canvass deflector was observed to drive the pollutant beneath the weir lip to escape behind the catamaran: waves again defeating design.

However, having seen that floating continuous rope or band skimmers had very substantial wave-following capability, but that increasing speed through the drive-rollers exhibited rapidly diminishing returns because the increasing shear forces reduced pollutant attachment to the mop, it was recognised that the latter could be eliminated while pollutant encounter rate could be increased by mounting the loop between the hulls of a catamaran to pass through its squeeze rollers at zero velocity relative to the forward motion of the catamaran. This arrangement not only offered flexibility as to encounter rate but also as to the linear adsorption capacity and the numbers of ropes or bands thus deployed. Such a system, operated by the Milford Haven Harbour Authority, proved effective at the *Sea Empress Incident* in 1966

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 (CONCLUDING PART)

The story so far – A leak of heavy oil from an industrial plant in the Scottish Highlands has resulted in major pollution of a local burn, a larger stream and some minor pollution of the river into which they flow. A pollution response company has been called out, and the CONTAINMENT phase has been completed. The RECOVERY and CLEAN-UP work is continuing.

This sketch shows a "mini" interceptor dam that can be built to catch and retain oil entering a watercourse via a water drain. The advantage is that an oily drain can be decontaminated (flushing or cleaning with a high pressure retrojet) without risk of oil entering the watercourse.

Tuesday, Wednesday and Thursday

The washing down of the stream continues and the bank cleaning squad is working its way down from the factory. Most of the river cleaning team carry on where they left off, while three people head downstream to tackle the isolated patches of oil below the village.

The vacuum tanker returns and commences by emptying the portable holding tank at the underpass dam. Open top barrels used for holding recovered oil at the "mini" interceptor where the factory drainage system exits to the small burn also have to be emptied.

Thursday evening

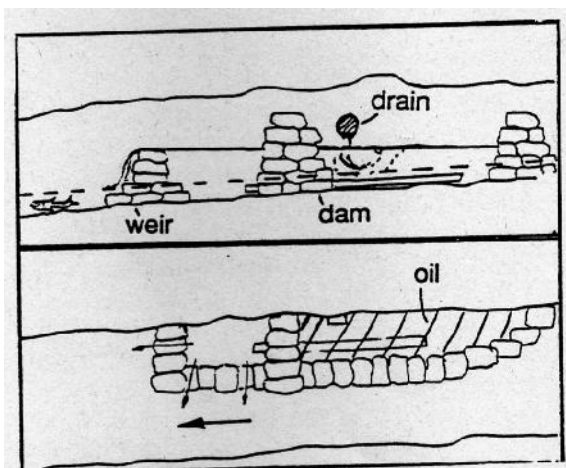
Clean-up work on the main river has been completed. Inspections carried out at an earlier stage found no other traces of oiling downstream of the parts that have been cleaned. It is apparent that the decision to build a failsafe interceptor dam in the stream just before it flows into the river was correct. The amount of oil that entered the main river was very small.

The washing-down squad has almost reached the dam, and the clean-up team is almost 2/3 of the way down the stream. Skimming operations at the underpass dam have been continuing throughout.

Friday evening

With both the washing-down and bank cleaning completed, the main phase of the response has been completed. All oiled vegetation has been removed for disposal and now there are no signs that an oil spill has occurred apart from some stains on rocks and tree roots. Over time, natural biodegradation will take care of this problem.

The interceptor dams will be left in place for a further three weeks to collect any final traces of oil. They will be inspected daily by factory personnel and weekly by a representative of the response contractor.



Special feature (continued)

For security reasons, the skimmer, pump, hoses and portable tank are recovered and the recovery site is tidied.

Three weeks later

No problems have been found during inspections and, over the period, only a small amount of oil has accumulated at the dams.

The contractor's team returns with a pick-up truck and necessary equipment. A final oil skimming operation is carried out, oily twigs and leaves behind the dam are collected and bagged for disposal. The large dam is dismantled and sandbags emptied. Equipment and dam building materials are loaded on the truck. A final site tidy-up is carried out.

There may still be pockets of oil in the factory drainage system and, for this reason, it was decided to leave the "mini" interceptor in place until such time drains have been cleaned and the possibility of any further oil seepage can be discounted.

Together with the factory manager the response contractor's team leader makes a final inspection to ensure that all work has been carried out to the client's complete satisfaction.

Throughout the duration of the work phase the team leader has been keeping the factory manager regularly informed on progress and forward plans. The client has also been kept informed on costs being incurred.

Back at the response base, equipment will be cleaned and serviced ready for the next spill.

Events

UPCOMING SOIL AND GROUNDWATER EVENTS

Events in USA, France, Italy and Germany collated by Environmental Expert [View details](#)

SALVAGE & WRECK ASIA

Singapore. 13-14 September 2012. Asia's only specialist salvage and wreck removal event [More info](#)

Training

USA: THE NEPA COMPLIANCE WORKSHOP

San Antonio, Texas. 17-18 September 2012. Implications and requirements of the National Environmental Policy Act, 1969 [More info](#)

USA: UNDERGROUND STORAGE TANK TRAINING AND CERTIFICATION

The Federal Energy Policy Act enacted by the U.S. Congress in 2005 mandated training for all underground storage tank, or UST, system operators.

One day course. [More info](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

Publications

ITOPF: TECHNICAL INFORMATION PAPERS (TIPS) AVAILABLE IN CHINESE

ITOPF's series of 17 Technical Information Papers, published in March, are now available in Chinese. The papers provide practical guidance on the many aspects of oil and chemical spill response in the marine environment, based on the experience of ITOPF'S technical staff at almost 700 pollution incidents worldwide. Each paper presents a specific subject in a concise manner, illustrated with photographs and diagrams. Papers are available to download individually or as a set from our [Chinese publication page](#). [More info](#)

Publications (continued)

ITOPF: NEW TECHNICAL SERVICES BROCHURE

ITOPF has just published a 6 page brochure providing an introduction to ITOPF and the technical services we provide. The brochure is available in English and Chinese. Electronic copies can be downloaded from our [publications pages](#) and hard copies are available free of charge from [Terry Goodchild](#). [More info](#)

Products and services

OIL SMART® SPILL PREVENTION TECHNOLOGY

See Water, Inc. is a manufacturing firm that is located in San Jacinto, CA. SEE Water, Inc. designs and manufactures water [pump controls](#), [high liquid alarms](#), and [pump control panels](#), with a primary focus on the design of Oil Smart® Technology. Oil Smart Technology has the unique ability to differentiate between oil and water; the technology will automatically pump water without the risk of pumping oil into the environment and will alert in the event of an oil spill. As a leading manufacturer of [pump control panels](#), SEEWATER is a UL/CUL 508 approved panel shop with a diverse range of electronic design capabilities. [More info](#)

Company news

USA: OAK CREEK ENVIRONMENTAL FIRM TO HELP REMEDIATE KUWAIT OIL DISASTER

June 8 - Kuwait officials have tapped the resources of BioGenesis Enterprises Inc., a division of Oak Creek-based Amiran Technologies LLC, to remediate the Kuwait oil spill from the first Gulf War.

BioGenesis has an initial contract of \$15 million to provide a sand washing system to extract and separate oil, salts and other contaminants. The project will initially employ about 200 people.

Biogenesis will use its proprietary systems to clean up the oil and other contaminants in the sands of Kuwait. The oil spill was caused by Saddam Hussein's Iraqi troops in 1990 and the oil leakage lasted at least eight months after the Gulf War ended in 1991. Hussein's forces blew up more than 600 oil wells. The flowing oils and the billions of gallons of sea salt water used to extinguish the flames altered thousands of acres of desert sand, and caused extensive air pollution, plant and animal mortality. Some of the oil has seeped over 40 feet into the sand and the aquifer used for drinking water and has severely damaged ecosystems. *BizTimes.com* [Read more](#) [Thanks to Don Johnson of ISCO Industry Partner, DG & Hazmat Group]

VIGOR COMPLETES CONVERSION ON PART OF SHELL'S ALASKA SPILL RESPONSE FLEET

Vigor Marine, a Vigor Industrial subsidiary, recently completed work on Barge Klamath, converting the vessel from a petroleum tank barge to an OSVR measuring 350' x 76' x 22'. The barge is owned by Crowley and leased to Shell as part of its comprehensive Alaskan oil spill response fleet in the Beaufort and Chuckchi seas.

"Vigor's extensive expertise in ice classing vessels for arctic waters, combined with the geographic proximity of their facilities, has made them a strong partner for Shell's planned offshore operations in Alaska," said Curtis Smith, spokesman for Shell Alaska.

The Klamath was a petroleum tank barge when it arrived at Vigor's Seattle yard. Vigor Marine teams fabricated and installed a 30 foot high section of one inch plate steel around the rake of the vessel to meet stringent ice class requirements. In the highly unlikely event of an oil spill, Klamath will play a key role in skimming and booming a spill. *The Maritime Executive* [Read more](#)

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