



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
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ISCO & THE ISCO NEWSLETTER

The ISCO Newsletter is published weekly by the International Spill Control Organisation, a not-for-profit organisation supported by members in 45 countries. ISCO has Consultative Status at IMO, Observer Status at IOPC Funds and is dedicated to raising worldwide preparedness and co-operation in response to oil and chemical spills, promoting technical development and professional competency, and to providing a focus for making the knowledge and experience of spill control professionals available to IMO, UNEP, EC and other organisations.

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Oil Spill India 2014
International Conference & Exhibition
18-20 September 2014, Holiday Inn Resort, Goa



International news

International Forum on Group V (Non-buoyant) Heavy Oils
9-10 September, 2014 Detroit, Michigan, USA

Now only 2 weeks away

Who will you meet at the Forum? Key topics, forum sponsors and exhibitors, latest updates See pages 6-7

All the info you need can be found at www.spillcontrol.org

See who will be speaking

<http://www.spillcontrol.org/speaker-profiles>

PODCAST FROM NOAA - ARCTIC SHIELD 2014 - HOW WOULD WE RESPOND TO AN OIL SPILL IN THE ARCTIC?

In the latest Making Waves podcast from NOAA's National Ocean Service, Troy Kitch discusses the Arctic: *Listen instead [here](#).*

What comes to mind when you think about the Arctic Ocean? Sea ice, polar bears, harsh wind, frigid waters. It's a cold place. We all know that. But here's the thing ... it's getting warmer up there. Every summer, the extent of the sea ice in the Arctic is shrinking. And as the sea ice shrinks, here's what we're likely to

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International news (continued)



see: more shipping, more oil exploration, more tourism, and more fishing. And all of this activity means that in the future, some day, we'll probably going have to deal with an oil spill in this remote region. So how do we prepare for that?

The Coast Guard cutter Healy, a 420-foot-long icebreaker, is now heading north in answer to this question. The mission: an annual exercise called Arctic Shield led by the U.S. Coast Guard's Research and Development Center. Onboard the Healy, scientists are gearing up to deal with a simulated oil spill in the icy Arctic.

To tell us all about Arctic Shield and NOAA's role in this expedition, I called Zachary Winters-Staszak, a spatial data specialist on the mission from the National Ocean Service's Response and Restoration office. We caught up with him just before the Healy departed Seward, Alaska.

The Maritime Executive [Read the complete transcript or listen to this interesting podcast from NOAA](#)

International news (continued)

STATUTORY ALERT: NEW SOLAS REQUIREMENTS FOR ENCLOSED SPACE ENTRY AND RESCUE DRILLS, AND DRAFT REQUIREMENTS FOR PORTABLE ATMOSPHERE TESTING



Applicability: All ships governed by SOLAS and all high speed craft, mobile offshore drilling units and dynamically supported craft

Because of the serious threat posed to people working in enclosed spaces on board ships, the IMO has introduced new requirements to SOLAS Chapter III, regulation 19, which enter into force on 1 January, 2015. From this date, crew members will be required to participate in an enclosed space entry and rescue drill on board the ship at least once every two months.

The IMO is also finalising mandatory requirements for portable atmosphere testing instruments to be carried on board ships. These are expected to be adopted in November 2014 for entry into force on 1 July, 2016, as SOLAS regulation XI-1/7.

These portable testing instruments will not be used as part of personal protective safety equipment but as part of the ship's equipment. They will be used to test enclosed spaces from the outside to make sure they are safe to enter and will cover, as a minimum, the following gases: oxygen, flammable gasses or vapours, carbon monoxide and hydrogen sulphide. *Maritime Cyprus* [Read more](#)

International news (continued)

INTERNATIONAL BIRD RESCUE TO RECEIVE ADDITIONAL SUPPORT

August 19 - The Port of Long Beach in the U.S. announced Tuesday that it is expanding its partnership with International Bird Rescue, a global expert in oiled wildlife emergencies and aquatic bird care, a partnership that was unofficially established during an animal cruelty case that made Southern California headlines earlier this year.

The Port has committed a total of \$20,000 during 2014 to support International Bird Rescue's primary mission to care for injured wildlife, affected by the urban environment, including birds found in Long Beach and surrounding communities.

"The Port of Long Beach is thrilled to continue our partnership with the International Bird Rescue. Through the Green Port Policy we are committed to improving the harbor environment both for people and wildlife," said Michael Gold, Port Director of Communications and Community Relations. *The Maritime Executive* [Read more](#)

ITOPF WINS GOLD STEVIE® AWARD IN 2014 INTERNATIONAL BUSINESS AWARDS



ITOPF was named the winner of a Gold Stevie® Award in the 11th Annual International Business AwardsSM. It received the Award in the "training" category for its seven part film series "Response to Marine Oil Spills."

This series promotes good practice and raises awareness of some of the issues involved in oil spill response. The films are freely available to view online or can be purchased as a single DVD from ITOPF's website.

The Stevie Awards were created in 2002 to honour and generate public recognition of the achievements and positive contributions of organisations and working professionals worldwide. Stevie Award winners were selected by more than 250 executives worldwide who participated in the judging process from May to early August.

ITOPF Managing Director, Dr Karen Purnell, said "Having already won the top three prizes at the International Oil Spill Conference Film Festival in the USA, we are delighted that the films have now received accolades beyond our own industry sector. This Award is welcome confirmation that the films are comprehensible and engaging and hit the right notes as a training resource". Nicknamed the Stevies for the Greek word for "crowned," the awards will be presented to winners at a gala awards banquet at the Westin Paris – Vendome Hotel in Paris, France on 10th October.

Incident reports from around the world

USA: OIL SPILL AFFECTS ROCKAWAY RIVER IN NEW JERSEY

August 15 - Authorities in northern New Jersey are cleaning up an oil spill that has affected about two miles of the Rockaway River. Morris County's Office of Emergency Management says a delivery truck bringing diesel fuel to Montville's fuel station's underground storage tank spilled its load. About 400 gallons of fuel were estimated to have spilled. The spill migrated to the Rockaway River through the storm water system due to recent heavy rains. *WOR 710 Radio* [Read more](#)

August 20 - The liquid-petroleum pipeline company notified the DEP this afternoon that it had recovered 3,000 gallons of fuel from its onsite, self-contained sewer system, according to DEP spokesman Bob Considine. An additional 3,000 gallons of fuel mixed with water were also recovered, Considine said. *NJ.com* [Read more](#)

EGYPT: OIL SPILL AT MAHMOUDIYA CANAL IN BEHEIRA GOVERNORATE CONTROLLED

August 16 - The Environment and Water Resources ministries controlled on Saturday pollution caused by an oil spill at Mahmoudiya canal in Beheira governorate. The leak came from an electricity station near Kafr al-Dawar town. Minister of Water Resources Hossam Moghazy said the spill was controlled to avoid damages, adding that the situation is being followed up on. *Egypt Independent* [Read more](#)

USA: TRAINS CARRYING TOXIC CHEMICALS CRASH HEAD-ON

August 17 - Two freight trains carrying toxic chemicals have crashed head-on in the US, killing two people and injuring two others.

Firefighters spent seven hours extinguishing the fire as diesel and chemicals on board burst into flames. Around 500 people were evacuated from the crash scene in Hoxie, a small town in northeast Arkansas. "The fire involved diesel and also there was a tank car that ruptured and it contained an (unknown) alcoholic beverage," said a spokesman for Arkansas Department of Emergency Management. Union Pacific spokesman Brandon Morris said none of the carriages were leaking toxic materials. *Sky News* [Read more and see video](#) [Thanks to ADR Training UK]

Incident reports from around the world (continued)

USA: OIL SPILL CLOSES PORTION OF OHIO RIVER NEAR CINCINNATI

August 19 - A portion of the Ohio River near Cincinnati is closed Tuesday following an oil spill from an aging power station belonging to Duke Energy. The U.S. Coast Guard says it is responding to the spill reported to be 8,000 gallons of diesel from the Duke Energy W.C. Beckjord Power Station near Cincinnati, Ohio. The spill was first reported at 12:20 a.m. EST Tuesday. *gCaptain* [Read more](#)

August 19 - Officials say Greater Cincinnati's drinking water is safe after 5,000 to 8,000 gallons of diesel spilled into the Ohio River on Monday during a routine transfer at Duke Energy's W.C. Beckjord Station in New Richmond. *Cincinnati.com* [Read more](#)
Related report in [The Maritime Executive](#)

August 20 - U.S. EPA Serving as On-Scene Coordinator in Emergency Response to Ohio River Oil Spill - Twenty-four hour operations are underway to contain and clean up oil along a 12 mile stretch of the Ohio River immediately upstream from Cincinnati. *eNews Park Forest* [Read more](#)

BELGIUM: NUCLEAR REACTORS SHUT OVER CRACKS

August 20 - Two Belgian nuclear reactors may have to be shut down permanently after cracks were found in their core tanks.

Production at the Tihange 2 and Doel 3 sites was halted in March for tests after inspectors discovered irregularities in the strength of the tanks. State broadcaster VRT has reported that the reactors may not be fired up again in the spring, as scheduled, because of fears over the safety of the reactors. *Sky News* [Read more](#) [Thanks to ADR Training UK]

USA: OIL SPILL REPORTED IN NORTH DAKOTA

August 21- The government of North Dakota said it was responding to the spill of oil from a broken pipeline in the northern part of the state near the Canadian border. The North Dakota Department of Health said it was responding to an oil spill about six miles southeast of Westhope. The agency said the spill was the result of a broken pipeline at a site owned by drilling company Enduro Operating. *UPI* [Read more](#)

Other news reports from around the world

NEWS REPORTS FROM USA

August 15 - CSB Releases Analysis Showing February 2014 Release of Sulfuric Acid at Tesoro Refinery in Martinez, California, Resulted from Inadequately Tightened Fitting

The U.S. Chemical Safety Board (CSB) today released a technical evaluation report on tubing samples taken from the Tesoro Refinery in Martinez, California, concluding that a sulfuric acid spill on February 12, 2014, resulted from insufficient tightening between a tube and a compression joint at a sulfuric acid sampling station.

The spill burned two workers in the refinery's alkylation unit, who were transported to the nearest hospital burn unit by helicopter.

The spill continued for two-and-a-half hours, by which time an estimated 84,000 pounds of sulfuric acid was released from equipment onto the refinery grounds and into a process sewer system. Cal/OSHA ordered the process unit to remain shutdown from February 18th until the 28th based on worker testimony that the unit was unsafe. The Cal/OSHA PSM Unit is also conducting a comprehensive inspection at the Tesoro Refinery with an emphasis on mechanical integrity and operating procedures. [Read the text of this report](#)

August 19 – OPA 90 - Notice of proposed rulemaking - Consumer Price Index Adjustments of Oil Pollution Act of 1990 for Vessels, Deepwater Ports and Onshore Facilities.

The Coast Guard proposes to increase the limits of liability for vessels, deepwater ports, and onshore facilities, under the Oil Pollution Act of 1990, as amended (OPA 90), to reflect significant increases in the Consumer Price Index (CPI)

Also proposed is a simplified regulatory procedure for the Coast Guard to make future required periodic CPI increases to the OPA 90 limits of liability for vessels, deepwater ports, and onshore facilities. [Read the complete text of this notice](#)

August 19 - Higher liability limits proposed for oil spills

This article in *The Hill* spells out the cost implications of the OPA 90 price adjustments. [Read the article](#)

NEWS REPORTS FROM THE PHILIPPINES

August 15 - Ways to mitigate oil spill done: 2Go

Pending the evaluation and final decision of the Maritime Industry Authority (Marina) board on the investigation of two passenger vessels' collision a year ago, the management of 2Go Group yesterday said it has adopted several measures to mitigate effects of the oil spill.

Calvin Roselloso, 2Go Group Visayas supervisor, said that the measures were patterned after the recommendations of experts from the International Tanker Owners Pollution Federation (ITOPF) and the London Offshore Consultants (LOC) who arrived in Cebu after the Aug. 16, 2013 tragedy in Luis Ledge in Talisay City, Cebu to help the authorities assess the situation.

Roselloso said that the ITOPF and LOC representatives came to Cebu to share their expertise and advice during various meetings/consultations on the most appropriate oil-spill response that should be adopted. *Sun Star* [Read more](#)

NEWS REPORTS FROM UK

August 15 - Tonnes of toxic waste found at illegal fuel plant in Meigh, County Armagh



About 15 tonnes of toxic waste have been discovered at an illegal fuel plant in the village of Meigh, County Armagh.

HM Revenue and Customs (HMRC), accompanied by police, have removed the waste safely. They also seized 3,000 litres of fuel from the site.

The plant was discovered by HMRC officers when they searched industrial premises in the area on Thursday.

A HMRC spokesperson said the laundering operation was capable of producing nearly 13m litres of illicit fuel a year, and evading over £9m in duty and taxes. *BBC News* [Read more](#) [Thanks to ADR Training UK]

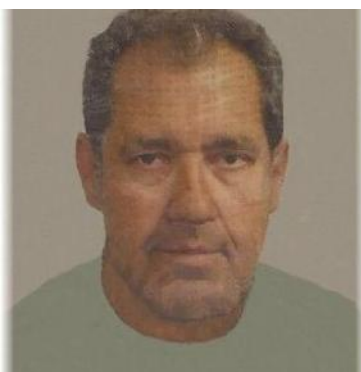
NEWS REPORTS FROM RUSSIA

August 16 – Greenpeace – “Oil Spill Patrol” Team in Russia

“As both the oil companies and the administration fail to localize, report and act on the almost daily spills, Greenpeace together with local groups such as the Save Pechora Committee are the only ones trying to document this ongoing disaster. Even though it is impossible to get a precise overview of the magnitude, the best estimates are appalling. Every 18 months, the same amount of British Petroleum oil that spilled into the Gulf of Mexico in 2010 goes into the Arctic Ocean via Russian rivers. On its way, it wreaks havoc on rivers and soil with dire consequences for fish, animals and humans. And this is only the amount that goes into the Arctic Ocean”. *GreenPeace International* [Read more](#)

Obituaries

ZYGMUNT PRZYBYL (“ZIGGY” TO HIS FRIENDS)



Zygmunt Przybyl, age 58 of Detroit, died Sunday, August 17, 2014 at Detroit Receiving Hospital. He was born May 1, 1956 in Poland, son of the late Jan and the late Jadwiga (nee: Brodzinski) Przybyl.

For most of his working life, Zygmunt's specialty and expertise was centered around the unique field of Marine Pollution Control. Serving as an emergency responder to environmental crises of many kinds, some of his most noted work involved the newsworthy oil spills of the Exxon Valdez in Alaska, and the more recent BP disaster in the Gulf of Mexico,...though his resume and accomplishments span a much greater scope than merely these two examples. He spent many years working for somebody else, until he and a buddy, Mike Popa, decided to start their own firm,...aptly named, "New Horizons Response Services." His work could be grueling at times, but it was also responsible for giving him the opportunity to travel and see some interesting parts of the world,...namely all the 50 states, Hong Kong, Puerto Rico, and so many more. [Read more](#) [Thanks to Mike Rancilio of Marine Pollution Control]

WHO WILL YOU MEET AT THE INTERNATIONAL FORUM ON GROUP V (NON-BUOYANT) OILS?

The Forum will provide great networking opportunities with others who share your interests and concerns. Here are some of the organisations who will be represented at the Forum -

Industry representatives from:

Enbridge, Shell Oil, Esso, TransCanada Pipeline, Trans Mountain Pipeline, and BP

Regulatory representatives from:

USCG, NOAA, Canadian Coast Guard, Transport Canada, International Joint Commission, Texas General Land Office, Washington State Spill Response Program, and The Great Lakes Commission

Spill Responders:

Conestoga Rover & Associates, Lamor Corp., MSRC, Miller Environmental, Eastern Canadian Response Corp (ECRC), AMPOL, AMEC, Clean Harbors, Global Diving and Salvage, Science Diving and Environmental, Aqua Tech, Qualitech, Michigan Marine Terminals, T&T Marine Salvage, Marine Pollution Control, Imbibitive Technologies, Phoenix Environmental, Marine Response Alliance, and Oil Spill Response Limited.

Other Organisations:

International Tanker Owners Pollution Federation (ITOPF), Centre of Documentation, Research and Experimentation on Accidental Water Pollution (CEDRE)

THE THEME AND PURPOSE OF THE FORUM

“Sinking oils (Group V and Class C/D), including oil sands, Dilbit and bitumens, are being increasingly utilized and transported around the world, increasing the risk of spills that can be very difficult to clean up.

With increased movements of these oils by sea to world markets, tanker owners, insurers and spill response organisations are becoming increasingly concerned because incidents involving spills of Group V oils are posing serious challenges, creating new liability concerns and underlining the need for development of improved observation, tracking and recovery techniques. In addition to the marine aspect, the problems caused by spills of Group V oils from pipelines and railcars into rivers and lakes create similar concerns, also needing to be answered.

The forum will present expert analysis of the fates and behaviors of these oils when released, and strategies, tactics and specialized equipment associated with their clean up”.

Some of the specific issues that will be addressed include –

- **Gap Analysis: Preparedness to respond to spills of heavy, sinking oils**
 - **Availability of specialised equipment and techniques for recovery of submerged oils**
 - **Need for more R&D work on location and recovery of sunken oils**
 - **Need for procedures for evaluation of capabilities for recovery of sub-surface bitumen and heavy oils**
 - **Concerns about aging pipelines and their capability to cope with higher pressures and temperatures**
 - **Upgrading of existing contingency plans to meet challenges of dilbit and heavy oil spills**
 - **Particular problems encountered with spills of negative buoyancy oils in shallow and deep waters**
 - **Concerns about the existing capabilities of OSROs to respond to spills of sinking oils**
-

FORUM UPDATES

- A Gala Reception for Delegates, Speakers and Exhibitors will be held on the evening of Tuesday 9th September – More details in next week’s ISCO Newsletter.
- Additional accommodation will be available in hotels in Windsor, Canada just across the Detroit River – For more info contact Michael Rancilio at +1 844-393-6333 or +1 248-914-3915 (cell) or email Michael.rancilio@gmail.com
- It’s a special opportunity to access a very highly targeted audience. A few Exhibitor Booths and Sponsorship Opportunities are still available – Contact Mike Rancilio for more information.
- A local sponsor, Miller Parking, is offering discounted parking at the Port Authority.
- Other Activities going on in Detroit that week include: Major League Baseball Detroit Tigers vs Kansas City Royals 8th, 9th and 10th Comerica Park. NFL New York Giants vs Detroit Lions Monday Night Football at Ford Field Sept 8. For more info on visitor attractions go to www.visitdetroit.com
- The finalised issue of the Programme will be posted on the Forum Website later this week.
- If you haven’t yet reserved your place at the Forum it’s recommended you do so ASAP to avoid disappointment.

A THANK-YOU TO ALL OF OUR SPONSORS AND EXHIBITORS FOR THEIR SUPPORT

Supporters and Sponsors –

- **US Coast Guard**
- **US National Oceanic and Atmospheric Administration (NOAA)**
- **US Dept. of Transportation**
- **Marine Response Alliance**
- **Ambassador Bridge**
- **Miller Parking**

Exhibitors –

- **Lamor**
- **Marine Response Alliance**
- **No Spills**
- **Imbibitive Technologies**
- **Science Diving & Environmental**
- **Clean Harbors**
- **AMEC**
- **Ampol**

It's not too late to register as a delegate, join us as a sponsor or take up an exhibition space. Make a reservation online at <http://www.spillcontrol.org/registration> or contact Michael Rancilio at +1 844-393-6333 or +1 248-914-3915 (cell) or email Michael.rancilio@gmail.com

Science & Technology

THE IMMEDIATE AFTERMATH OF AN OIL SPILL

The immediate aftermath of an oil spill - The fate of oil during the first day after an accidental oil spill is still poorly understood, with researchers often arriving on the scene only after several days. New findings from a field experiment carried out in the North Sea provide valuable insight that could help shape the emergency response in the immediate wake of disasters.

It is well known that oil and water don't mix. Less well known is the fact that when petroleum is spilled onto a water surface, a fraction of the oil immediately begins to evaporate into the air or dissolve into the seawater. These dissolved toxic hydrocarbons can threaten aquatic species, while evaporated compounds may pose a risk to rescue workers or populations downwind of an accident site.

Publishing in the journal *Environmental Science & Technology*, a team of European and American researchers report on a unique study focused on the fate of hydrocarbons during the 24 hours that follow an oil spill.

In order to collect data on the immediate aftermath of an oil spill, the researchers collaborated with emergency response specialists of the Dutch Rijkswaterstaat to recreate a four cubic meter oil spill in the North Sea, in a shipping zone already burdened by pollutants, 200 kilometers off the coast of the Netherlands. By studying this relatively small oil release, they were able to gain a better understanding of what goes on in much larger spills, with findings that could be useful to assess the risks to underwater life, as well as to emergency response team workers at the sea surface. *Eurasia Review* [Read more](#)

WATER DROPLETS IN OIL FOUND TO BE MICROHABITATS: COULD CLEAN OIL SPILLS

Water droplets in the oil of asphalt were shown to be microhabitats for microbes and these microhabitats could be used to clean up oil spills. The microbial microhabitats were discovered in very small droplets of water that exist in the world's largest asphalt lake, which is Pitch Lake in Trinidad and Tobago. The researchers also showed that the microbes were degrading the oil in the asphalt.

The droplets of water in the asphalt (which is like tar) were very small with a volume of only a few microliters, which is about one-twentieth the volume of a drop of water. Even though the composition of the asphalt includes very little water, the water droplets that were there had a mini ecosystem inside. The microbes in the water droplets were said to be metabolically active in that the microbes were able to carry out anaerobic (not needing oxygen) degradation of hydrocarbons at the oil-water transition zone. The microbial community degrades the oil into a variety of metabolites, according to the studies carried out by the scientists.

Many more research studies are necessary before practical applications in oil spill clean-up will be possible. It is very hopeful, however, that use of these microbial microhabitats could be applied to clean up dangerous oil spills that create so much damage to the environment and animal life. *Liberty Voice* [Read more](#)

RESEARCHERS FIND WAY TO TRACK INVISIBLE, UNDERWATER OIL

Researchers have discovered a new way to track the presence of oil in water even after visible slicks have vanished, a tool that could help give scientists a better idea of how oil spills impact the environment.

The method involves tracking the levels of carbon dioxide and oxygen released by underwater marine microbes in order to tell how much oil is still present after a spill.

The team of researchers led by Xinping Hu, an assistant professor of chemistry at Texas A&M University -- Corpus Christi, found underwater areas where there was oil present the ratio of carbon dioxide and oxygen released by marine life varied significantly.

The team studied samples of subsurface waters taken before and after the [2010 Gulf of Mexico oil spill](#). Samples were taken from 2006 to 2012. *The Times Picayune* [Read more](#)

SPILL SOME OIL? MAGNETIZE IT FOR CLEANUP

Oil and water don't mix. Despite that age-old axiom, it sure is hard to get spilled petroleum out of seawater, as was evident during BP's blowout in the Gulf of Mexico. But what if you could make oil magnetic?

That thought came to physicist Arden Warner while he watched coverage of the spill back in 2010. And it launched some garage tinkering for Warner, who by day works on improving particle accelerators at Fermilab.

He shaved iron bits from a shovel and sprinkled them atop some engine oil. Lo and behold, a refrigerator magnet pulled the blob of oil wherever he wanted. Now he's got a patent on the concept that he's refined over the past few years.

The Warner method requires only a relatively small amount of magnetic metal dust. And the iron particles mix better with oil than with water, or with anything else the oil might get on, like bird feathers or plants. *Scientific American* [Read more](#)

ELECTRIC BUGS USED TO DETECT WATER POLLUTION

Scientists from our Department of Chemical Engineering have developed a low-cost device that could be used in developing countries to monitor the quality of drinking water in real time without costly lab equipment.

Current methods of detecting pollutants in water are costly, time-consuming and require specialist technical expertise. However researchers from the University in collaboration with Bristol Robotics Laboratory at the University of the West of England, have created a low cost sensor using 3D printing technology that can be used directly in rivers and lakes for continuous water quality monitoring.

The sensor contains bacteria that produce a small measurable electric current as they feed and grow. The researchers found that when the bacteria are disturbed by coming into contact with toxins in the water, the electric current drops, alerting to the presence of pollutants in the water.

Dr Mirella Di Lorenzo, Lecturer in Chemical Engineering at Bath, explained: "When the bacteria feed in a microbial fuel cell, they convert chemical energy into electrical energy that we can measure."

Contributed Article

NOAA AGAIN JOINS COAST GUARD FOR OIL SPILL EXERCISE IN THE ARCTIC

An article by NOAA Environmental Scientist [Dr. Amy Merten](#).

It is no mystery anymore that the Arctic is undergoing unprecedented change and the extent of summer sea ice continues to shrink. As the ice contracts, shipping within and across the Arctic, oil and gas exploration, and tourism likely will increase, as will fishing, if fisheries continue migrating north to cooler waters. With more oil-powered activity in the Arctic and potentially out-of-date nautical charts, the region also will see an increased risk of oil spills.

Although the Arctic may have "ice-free" summers, it will remain a difficult place to respond to spills, still facing conditions such as low visibility, mobilized icebergs, and extreme cold. Much of the increased activity exploits the longer amount of time between the sea ice breaking up in the spring and freezing up in the fall. Accidents on either end of this longer window could mean responding to oil spills [complicated by sea ice](#).

Ready, Set, (Pretend to) Spill

With these challenging circumstances in mind, NOAA's Office of Response and Restoration again will be [sending spatial data specialists](#) aboard the [Coast Guard icebreaker Healy](#) for [Arctic Shield 2014](#), a month-long scientific expedition to the Arctic Ocean to demonstrate and evaluate oil spill tools, technologies, and techniques. The ship leaves for the edge of the sea ice from Seward, Alaska, on August 8. We will be working with the U.S. Coast Guard Research and Development Center (RDC) to operate [Arctic ERMA](#), our mapping tool geared at oil spill response. Normally an online tool, a special internet-independent version of ERMA, known as Stand-alone ERMA, will serve as the common operational picture for scientific data during Arctic Shield.

NOAA provides scientific support to the Coast Guard during oil and chemical spills, and ERMA is an extension of that support. Arctic Shield is an opportunity to work with the Coast Guard in as realistic conditions as possible—on a ship in the Arctic Ocean. Once the *Healy* makes it far enough north, the Coast Guard RDC will deploy a simulated oil spill so they can test oil spill detection and recovery technologies in ice conditions. The team will test unmanned technology platforms (both airborne and underwater) to detect where the spilled "oil" is and to collect ocean condition data, such as sea temperature, currents, and the areas where oil is mixing and spreading in the water column. In this case the simulated oil will be fluorescein dye, an inert tracer used for other simulated spills and water transport studies in the ocean and rivers. (Other simulated spilled "oils" have included peat moss, [rubber ducks, and oranges.](#))



Photo:NOAA's remote-controlled Puma aircraft. (NOAA)

One major objective is for [NOAA's Unmanned Aircraft Systems group](#) to fly their 8.5 foot wingspan, remote-controlled *Puma*, instead of an airplane with a human observer, to delineate the extent of the "oil" plume. ERMA's job will be to display the data from the *Puma* and other unmanned technologies so all of the team can see where measurements have been taken and identify insights into how they could hypothetically clean up a spill in the remote, icy environment.

Arriving at the Arctic

In many ways, our office is a newcomer to the Arctic, and we still have a lot to learn about past research and current ways of life in the region. As the NOAA co-director for the Coastal Response Research Center (a joint partnership with the University of New

Hampshire), I worked with my co-director, UNH professor Nancy Kinner, to promote understanding of the risks the Arctic is facing. In 2007, we participated in a joint industry study which brought me to the Arctic at the SINTEF lab on Svalbard in Norway. Here, I saw firsthand how difficult it can be to find oil mixed in ice and then try to do something about it, such as burn it. The temperature extremes in the Arctic limit mobility and the amount of time one can be outside responding to a spill—if you can get to the spill in the first place.

At the same time, we were developing [ERMA](#)[®] (Environmental Response Management Application), a web-based mapping tool for environmental response, which is customized for various regions in the United States. As NOAA's Office of Response and Restoration began developing strategies for working in the Arctic, support emerged for customizing ERMA for the Arctic region. We worked with several organizations, including Arctic communities, to develop Arctic ERMA, taking care to make connections and build relationships with the people who live in and know the region and its natural resources. ERMA also will use the *Healy's* onboard satellite communications to relay data back to the live [Arctic ERMA website](#), allowing people outside the vessel to stay up-to-date with the mission.

Responding to Reality

I'm excited for my ERMA colleagues, Jill Bodnar and Zach Winters-Staszak, to experience this extreme and special environment firsthand. Academically, you can think through the challenges a spill in the Arctic would present, but actually experiencing it quickly reveals what will and will not work. Partnering with the Coast Guard is helping those of us at NOAA be proactive responders in general, and in particular, is teaching the ERMA team how to pull into this tool data from multiple platforms and improve response decision-making.

We're all connected to the Arctic; weather and oceanographic patterns are changing world wide because of the rapidly changing Arctic. Oil and gas coming from the Arctic will fuel the U.S. economy and current way of life for the foreseeable future. We hope that Arctic Shield and other oil spill exercises will better prepare us for whatever happens next. Follow along with NOAA's efforts during Arctic Shield at -

<http://oceanservice.noaa.gov/arcticshield/>.



The Author: Amy Merten is the Spatial Data Branch Chief in NOAA's Office of Response and Restoration. Amy developed the concept for the online mapping tool ERMA (Environmental Response Mapping Application). ERMA was developed in collaboration with the University of New Hampshire. She expanded the ERMA team at NOAA to fill response and natural resource trustee responsibilities during the 2010 Deepwater Horizon/BP oil spill. Amy oversees data management of the resulting oil spill damage assessment. She received her doctorate and master's degrees from the University of Maryland.

Products & Services

Editor: The primary purpose of this Section in the ISCO Newsletter is to help Corporate Members of ISCO to share news about new products and services that they have recently developed. In the absence of such news, your editor may, from time to time, report on other products and services that he comes across and thinks may be of interest to our readers.

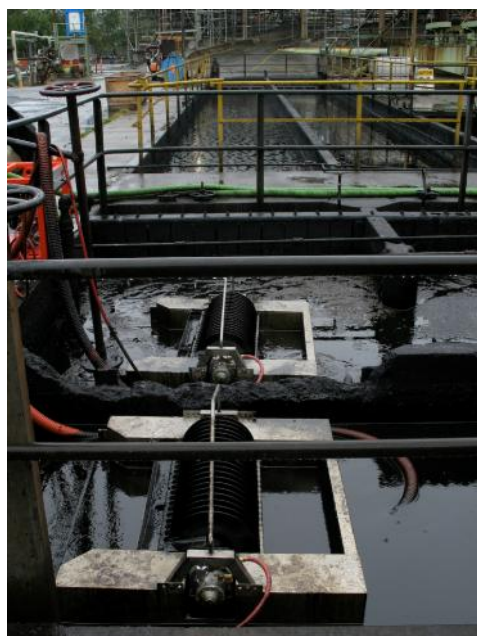
AWARD WINNING OIL SKIMMING TECHNOLOGY RECOVERS VALUABLE LOST PRODUCTS ALONG WITH HELPING GLOBAL REFINERIES COMPLY WITH EVER-STRINGENT ENVIRONMENTAL REGULATIONS.

Oil companies are starting to reap the rewards from implementing state of the art oil skimming technology in their refineries. For over 60 years global refineries have used a split pipe weir system to "skim" surface oil from their oil/water separators.

The method of using a split pipe weir system is extremely inefficient and recovers mostly water (98-99%) and very little oil (1-2%). Therefore pushing higher volumes of water with surface and suspended hydrocarbons from the primary into the secondary separation chamber where chemicals are used to knock out higher volumes of hydrocarbons.

Over the past 15 years environmental standards for the discharge of refinery effluent back into the environment have become extremely stringent and are currently at 15 ppm. This can put a lot of pressure on oil companies to comply. Aqua-Guard recognized the need to assist refineries increase their efficiencies in effluent discharge but also saw a value in a higher level of oil recovery. Therefore Aqua-Guard proposed to assist refineries meet their needs with the installation of their oil skimming systems equipped with RBS TRITON™ skimming technology which recovers up to 98% surface oil therefore increasing the efficiency of the primary separation stage by almost 99%.

Industrial wastewater found in the internal collection sewers and basins of oil refineries contain valuable petroleum bi-products and raw crude oil. Installing this technology would help recover these valuable products and return them into the refining process. Besides the financial return, there is a positive benefit to the environment by reducing the amount of hydrocarbons in the effluent waste water.



For example several skimmers were installed in Chevron's Burnaby Oil Refinery in September of 2008 and have since been in service recovering valuable hydrocarbons 24 hours/day, 365 days/year. The skimmers are serviced only twice a year, primarily for maintenance purposes.

The Problem

In 2008, Chevron approached Aqua-Guard to design a custom solution for a Chevron Refinery to replace the outdated and inefficient pipe weir skimming system for their API separation basins. With the ever-stringent regulations Chevron were eager to upgrade their system to fully meet all effluent discharge requirements at the time.

In order to cut down the amount of chemicals used in the secondary processing stage, Chevron asked Aqua-Guard if they could design and supply a system that would remove most of the surface hydrocarbons in the primary separation ponds, therefore reducing the amount of carry over hydrocarbons into the secondary treatment ponds.

The Solution:

Working with Chevron they designed a specific system for installation in the primary oil water separation stage of aging API separators. These industrial skimmers would have to be of all stainless steel construction for the highly corrosive API environment. The system would rely on adhesion of oil to the surface of a rotating stainless steel disc. As the disc insert rotates through the oil/water surface, the oil would adhere to the surface and be removed by a scraper. The product would be collected in a common sump and pumped back into the refinery system for use. Discs could be interchanged with either drums or brushes for recovering various oil types that may be encountered inside the API separator pond.

Since the site had an abundant air power source the systems were designed with pneumatics in mind. The unit would have to be 100% powered pneumatically from the oil skimmer head and the rotating stainless steel disc recovery system to the double diaphragm pump used to recover the product.

Products & Services (continued)

Therefore it was decided that a stainless steel, floating oil-skimming system would be installed in each primary separation pond. Each skimmer being capable of recovering up to 63m³/h of surface hydrocarbons.

The skimmers were paired with 2 stainless steel pneumatic pumps mounted externally. Each Pump capable of 20m³/h of hydrocarbon recovery.

The skimmers had to be self-adjusting in order to adapt to the fluctuating basin levels thus reducing wastewater circulation and maximizing valuable oil recovery. Other benefits would include the skimmer's ability to recover virtually any viscosity oil along with being fully automated, which would reduce operating costs for Chevron.

The Result

From time of installation in 2008 to early 2014, Chevron has enjoyed a trouble free system operating for over 50,000 hrs. The installed oil-skimming systems have been running 24/7 since being first installed in 2008, collecting a wide range of oil viscosities during the operation. The estimated maximum hydrocarbon recovery of these systems since inception 870,000 cubic meters of recovered product returned back to the customer for re-processing. A huge savings for Chevron with a positive environmental impact.

Shell oil refineries in Asia and other national oil companies in Latin America now also employ the patented oil skimming technology in their industrial processes to help optimize their refining operations thus putting profits back into the refinery all the while assisting the companies to conform to local environmental standards.

These systems also are able to recovery ultra-heavy oil. Heavy oil tests have been conducted and witnessed by Det Norske Veritas (DNV). These tests followed the ASTM F631-99 ³Standard Guide for Collecting Skimmer Performance Data in a Controlled Environment². The viscosity of the oil used during these recovery tests was 195,959 cSt. Brush recovery modules in combination with an onboard positive displacement lobe pump proved to be the most effective method of recovering such viscous oil.

Since this article was written Aqua-Guard has launched and supplied a new RBS TRITON™ 100 industrial oil skimming system capable of recovering up to + 100 m³/h (629 bbl./h). These systems have been specifically designed for export to countries where higher amounts of oil are present in their primary separation ponds and require higher recovery rates from skimming systems.

Although many refineries around the world still use the old split pipe weir skimming systems they are seeing the benefits of upgrading their systems to include new state of the art oil skimming technology in order to turn once thought of waste to profit along with helping to protect the environment.

This article was received from ISCO Corporate Member, Aqua-Guard Spill Response Inc. The company provides a range of state-of-the-art oil spill response and industrial solutions including the RBS TRITON™ range of oil skimmers all the way up to offshore URO Skimmer Systems - all built on Aqua-Guard's patented RBS TRITON™ technology to deliver some of the highest efficiency and recovery rates in the industry. Website is at www.aquaguard.com

BOC'S NEW EMERGENCY OXYGENATION SERVICE FOR OVERLOADED TREATMENT PLANTS AND POLLUTED LAKES



When Chemical Oxygen Demand (COD) load to a plant increases beyond the maximum oxygen transfer rates of the installed aerators or diffusers, performance will suffer leading to potential consent failure, pollution incidents and litigation.

In such situations, plant operators require a solution that could significantly increase oxygen transfer and that could be deployed in short notice. BOC's Emergency Oxygenation Service is designed with just these two requirements in mind.

With oxygen transfer rates of up to 1 tonne per day, Emergency Oxygenation Service could be deployed in 24 hours in most UK locations, enabling quick increase in oxygen transfer.

Emergency Oxygenation Service does not require power to operate and hence could be deployed in wastewater treatment plants, lakes, ponds and rivers that are hard to access. The kit includes a skid mounted liquid oxygen vessel, BOC's SOLVOX® oxygen diffuser systems and a control system. Since you rent the service for the time you need, you are not burdened by capital and operating expenses.

The Emergency Oxygenation Service could also be used to support wastewater treatment plant performance in plant overload, maintenance, power failure or load shedding situations. **Click here to enquire about this story**

Note from editor: Although not specifically mentioned, this service can provide an effective emergency response to high BOD spills such as accidental spills of agricultural slurries into watercourses, lakes and rivers.

Links for recent issues of other publications

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[Bow Wave](#)
[Cedre Newsletter](#)
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[USA EPA Tech Direct](#)
[USA EPA Tech News & Trends](#)
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[Sea Alarm Foundation Newsletter](#)
[Regenesis Remediation News](#)

News and commentary on HSE issues from George Holliday
Sam Ignarski's Ezine on Marine & Transport Matters
News from Cedre in Brittany, France
Alliance of Hazardous Materials Professionals
Remediation of contaminated soil and groundwater
Contaminated site clean-up information
From US EPA - Contaminated site decontamination
International news for the oil tanker community
Canberra & Regions Oil Industry Emergency Response Group
New and forthcoming IMO publications
News from the International Maritime Organization
News for prevention & control professionals
News from the European Maritime Safety Agency
Int'l Organisation for Industrial Hazard Management
Environmental Monitoring, Testing & Analysis
News from the Oil Companies International Marine Forum
Int'l Petroleum Industry Environmental Conservation Assoc'n
From the World Maritime University in Malmo, Sweden
News from the Australian Maritime Safety Authority
News from the Sea Alarm Wildlife Protection Organisation
Case studies, articles and upcoming events in Europe

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Note from Editor - Envirotech Online Newsletter from International Environmental technology –

Recently many of you have been interacting with the Environmental Technology Online link posted on "Links for recent issues of other publications". Envirotech has noticed that users who have clicked the "request for more information" icon in the Envirotech newsletter have been presented with the "thank you" and confirmation note implying that your details have been passed on to the manufacturer. This unfortunately due to the link we posted did not occur and the information passed on to the manufacturers was in fact sent to my email address - john.mcmurtrie@spillcontrol.org

If you have requested information in the past, please be aware that you will not receive any follow up information. This issue has now been corrected and we are working with Envirotech to make sure the link is now functional and a form is provided to request information.

Company news

BRIGGS MARINE GETS ISO CERTIFICATION FOR DIVING



Briggs Marine's Diving Division, which was launched in April of this year, has recently been awarded accreditation of ISO 9001, 14001 and OHSAS 18001 by NQA, the UK's leading assessment, verification and certification body.

Alistair Blue, dive superintendent said: "Our personnel, equipment and diving plant are already fully compliant with current UK regulations and we are full members of IMCA, the ADC and a certified diving contractor with the UK HSE. The addition of these accreditations proves that the company is investing heavily in achieving high standards of service, quality and safety – something that is seen as a vital element of our new department and sets Briggs Marine Contractors apart from other marine and diving contractors."

Briggs Environmental Services Ltd. is a longstanding supporter and Corporate Member of ISCO

SAUDI ARAMCO AND QATAR PETROLEUM WIN ENVIRONMENTAL EXCELLENCE AWARDS

March 6 - Saudi Aramco won three environmental excellence awards during the Offshore Arabia Conference & Exhibition. The award for excellence in capability and response went to Qatar Petroleum's oil spill and emergency response department. [Arab News](#) [Read more](#)

Legal disclaimer: Whilst ISCO takes every care to ensure that information published in this Newsletter is accurate unintentional mistakes can occur. If an error is brought to our attention, a correction will be printed in the next issue of this Newsletter. Products and services featured in the ISCO Newsletter and/or the ISCO website, including the International Directory of Spill Response Supplies and Services, have not been tested, approved or endorsed by ISCO. Any claims made by suppliers of products or services are solely those of the suppliers and ISCO does not accept any liability for their accuracy. Subscription is subject to acceptance of ISCO's Terms and Conditions as published on the website www.spillcontrol.org