ISCO NEWSLETTER

The Newsletter of the International Spill Response Community

Issue 378, 1 April 2013

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International news

ISCO AGM WILL BE HELD NEXT WEEK IN AUSTRALIA

ISCO's 2013 Annual General Meeting will be held on Wednesday 10th April during the Spillcon Conference and Exhibition at Cairns, Queensland.

This will be the first time this event has been held in Australia.

For more on this, see ***ISCO News*** on page 6.

OIL SPILL RESPONSE GROUP FORMING EMERGENCY STRIKE TEAM FOR GULF

March 26 - The Marine Well Containment Co., formed in the wake of the 2010 Gulf oil spill to tackle runaway deep-water wells, on Tuesday announced it is assembling a 100-member strike team to operate some of the specialized emergency equipment the firm is bringing online later this year.

The 100 reservists — who will be recruited and trained by Wood Group PSN — will be at the ready in case of another deep-water drilling disaster to run planned equipment for capping wells and siphoning oil to floating capture vessels.

An existing crew of staffers already is available to run current emergency containment equipment offered by the firm. But the Marine Well Containment Company, also known as MWCC, is slated to roll out more specialized cap-and-flow equipment later this year that requires a dedicated crew.
FuelFix Read more

Incident reports

USA: CHEVRON FUEL SPILL IN UTAH MUCH WORSE THAN THOUGHT

March 24 - A Chevron fuel spill near a northern Utah bird refuge is much worse than originally thought as up to 27,000 gallons might have leaked, authorities said.

A split in a pipeline that runs from Salt Lake City to Spokane, Wash., is suspected of releasing diesel fuel into soil and marshes at Willard Bay State Park, according to the U.S. Transportation Department's Pipeline and Hazardous Materials Safety Administration.

The agency has filed a corrective action order against Chevron Pipe Line Co. that requires it to gain government approval before the pipeline can reopen. The order also requires Chevron to operate the pipeline at only 80 percent of normal pressure once it reopens. *San Fransisco Chronicle* Read more Related article in HazardEx

A large Utah oil spill was partially contained thanks to the work of a pack of beavers.

March 30 - Willard Bay State Park in Utah was spared the worst of a 27,000-gallon Chevron oil spill last week thanks to a large dam built and maintained by a group of six beavers. The oil spilled from a pipeline running from Utah to Washington state and was blocked from spreading into the park's marshes and wetlands by the dam.

The six beavers have been rescued and put up at an animal refuge, but sadly three of them suffered chemical burns from the spill and face a difficult road to recovery. *Mother Nature Network* Read more

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USA: MINNESOTA OIL SPILL: CANADIAN TRAIN DERAILS, SPILLING 30,000 GALLONS OF CRUDE IN U.S.

Picture: A train hauling oil from Canada derailed and leaked 30,000 gallons of crude in western Minnesota on Wednesday, marking the first major spill of the modern North American crude-by-rail transit boom. (AP)

March 27 - A mile-long train hauling oil from Canada derailed and leaked 30,000 gallons of crude in western Minnesota on Wednesday, as debate rages over the environmental risks of transporting tar sands across the border.

The leak - the first major spill of the modern North American crude-by-rail transit boom - came when 14 cars on a 94-car Canadian Pacific train left the tracks about 150 miles north west of Minneapolis near the town of Parkers Prairie, the Otter Tail Sheriff's Department said.

Canadian Pacific Railway Ltd, the country's second-largest railroad, said the company was investigating the incident. CP Spokesman Ed Greenberg said only one 26,000-gallon tank car had ruptured, adding it was a mixed freight train carrying crude and other materials. *The Huffington Post* Read more

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USA: CLEAN UP BEGINS FOR MAYFLOWER OIL SPILL FROM EXXON MOBILE PIPELINE

March 30 - It was a rough start to the Easter holiday weekend after an oil spill struck in Mayflower. Authorities said as many as 40 homes had to be evacuated Friday afternoon.

Mayflower Police Chief Robert Satkowski said that the evacuations will remain in effect over-night. The chief also stated that it's too early to say how much oil spilled, but crews have prevented it from getting into Lake Conway. That was a big concern all day; the work ahead will focus on clean-up around the affected areas in town. *THV11* Read more and watch video

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Incident reports (continued)

TURKEY: OIL SPILL HITS TURKISH COAST NEAR ÇANDARLI

March 29 - An oil spill caused by the Italian tanker Alba's crash near Izmir has hit the coast near the Turkish town of Çandarli. According to preliminary data, some 10 tonnes of oil has been spilled as a result of the tanker crash. *Vestnik* Source report

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NIGERIA: ANOTHER OIL SPILL IN FEDERAL CAPITAL TERRITORY

March 29 - When oil spillage is mentioned in Nigeria, the mind goes straight to the South-South region. An imagery of big pipelines running through the forests, swampy landscape, seas and rivers as well as forests quickly forms.

But in this case, the spillage is right here in the FCT. The Nigeria Security and Civil Defence Corps discovered the leakage of Nigeria National Petroleum Corporation (NNPC)'s pipelines in Lamo village, situated in Gwagwalada Area Council of the Federal Capital Territory (FCT), about a month ago. Lamo village is about two hours drive from Gwagwalada town.

The Kilometer 407.5 NNPC crude oil pipeline right of way at Suma, between Gwagwalada and Kwali area councils, spilled crude oil for over seven days before the NSCDC discovered it on the 19th of February. *Daily Trust* Read more

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UK: MV DANIO SUCCESSFULLY REFLOATED FROM FARNE ISLANDS

March 28 - The MV DANIO, which ran aground on the Farne Islands off the Northumberland coast almost two weeks ago, has been successfully re-floated. (See report in last week's ISCO Newsletter). Checks are still being made but so far there are no reports of any pollution.

Hugh Shaw, Secretary of State's Representative for Maritime Salvage and Intervention said: "I am delighted that the salvors have successfully re-floated the ship without any damage to the environment. I would like to take this opportunity to offer my thanks to all concerned with the operation. In particular I would like to thank Titan Salvage for their professionalism in carrying out the operation in the extremely difficult weather conditions experienced since the grounding. *The Maritime Executive* Read more

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SPAIN: OIL SPILL THREATENS SPAIN'S BEST BEACH

A sabotage on four tank trucks parked near by a petrol station in Os Castros, in Ribadeo (Galicia), has caused a 4,000-liter oil spill.

And part of this floating oil has been washed ashore on O Castro and As Catedrais beaches, in the same region, the latter having been recently chosen as Spain's best beach and sixth in the world recently.

The Xunta de Galicia, regional government, has put into operation a special marine emergency plan, and now is adamant that the spill is under control. *OTB* Read more

Other news

SPILL CONTROL ASSOCIATION OF AMERICA CELEBRATES ITS 40TH ANNIVERSARY

SCAA was founded in 1973 to actively promote the interests of all groups within the spill response community in America. The organization represents spill response contractors, manufacturers, distributors, consultants, instructors, government & training institutions and corporations working in the industry. The strength of the organization can be found in its membership directory. Companies and individuals connected through SCAA creating a unique voice in our industry.

Last month SCAA celebrated its 40th anniversary at its annual meeting / conference and Capitol Hill Visit day held in Washington DC. Founder Member and Past President, David Usher gave an introductory talk during which he recalled that originally the association was called the Oil Spill Control Association of America (OSCAA) but, at the request of the EPA, the name was then changed to the Spill Control Association of America (SCAA). This request was prompted by the increasing concern over spill incidents involving hazardous chemicals.

The opening address was given by Mary E. Landry, U.S. Coast Guard Director of Incident Management and Preparedness. Other speakers included James Watson (Director of Bureau of Safety & Environmental Enforcement), Dr Christine Altendorf (Chief of Environment Division, US Corps of Army Engineers), Craig A. Bennett (Director, National Pollution Fund Center), Captain John Caplis (Chief, Office of Marine Response Policy), Anne Davis Burns (Principal, Anne Davis Burns Communications), Eric Doucette (Commanding Officer, US Coastguard Atlantic Strike Team), Richard Fredricks (Director, American Salvage Association), David Fritz (BP Oil Spill Senior Advisor), Peter Lane (Chairman, ASTM F20 Subcommittee), Dave Westerholm (Head of Pollution Response, NOAA) and Scott Metzger (President of SCAA and Senior Vice-President, Clean Harbors Environmental Services. The meeting presentations can be viewed at http://www.scaa-spill.org/presentations.php

Other news (continued)

Left to right: Scott Metzger, Andrew Altendorf

At the meeting, incoming SCAA President Scott Metzger made a presentation to outgoing President Andrew Altendorf in recognition of his outstanding service as President for the past two plus years.

SCAA announced the appointment of three new SCAA Directors and the renewal of a fourth Director for another two-year term. The new Directors are **Harry Bedrossian**, SPC Brady; **Michael Gallagher**, CI Agent Solutions; and **Devon Grennan**, Global Diving & Salvage, Inc. The Board of Directors extended **John Parker**, a sitting Director and a past SCAA President, for an additional two-year term.

More info and http://www.scaa-spill.org/ [Thanks to David Usher Hon.FISCO, President of ISCO, Founder Member and Past President of SCAA]

BRAZIL: PETROBRAS CHARTERS OIL SPILL RESPONSE VESSEL

An OSRV is designed to respond to a discharge of oil and recover the oil dispersed on the sea surface

March 25 - Athens-based Nautilus Marine Acquisition Corp on Friday announced it has taken delivery of an oil spill recovery vessel to be chartered to oil giant Petrobras offshore Brazil.

The *SK Line 69* is a 5150 BHP anchor handling tug/supply (AHTS) vessel built in December in China. It has been successfully converted into an oil spill response vessel (OSRV) and renamed *Vega Jaanca*.

Oil & Gas Technology Read more

USA: STORM WRECKAGE POSES RISK FOR RIVER-CLEANUP WORKERS

Picture: The bank of the Peckman River in Woodland Park, which is to be cleaned this week to ease flooding problems. The debris deposited by superstorm Sandy includes fallen trees and less conventional objects.

March 25 - A capsized Coast Guard vessel beneath the Rutgers Bridge. Delivery trucks and steel shipping containers washed ashore in Harrison. Huge chemical barrels littering Elmwood Park.

Hurricane Irene and superstorm Sandy not only ruined homes, they littered the waterways with some unusual — and dangerous — debris.

The Passaic Valley Sewerage Commission's River Restoration workers have been pulling out storm wreckage of all sizes from the Passaic River and its tributaries for months. *North Jersey.com* Read more

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PERU DECLARES AMAZON OIL CONTAMINATION EMERGENCY

Peru's government declared an environmental state of emergency on Monday in a remote Amazon jungle region it says has been affected by years of contamination at the country's most productive oil fields, which are currently operated by Argentina-based Pluspetrol.

Indigenous groups in the Pastaza River basin near the Ecuador border have been complaining for years about the pollution and the failure of successive governments to address it. Authorities say one reason the pollution was never addressed is that until now Peru lacked the requisite environmental quality standards.

In declaring the emergency, Peru's Environment Ministry said the contamination included high levels of lead, barium and chromium as well as petroleum-related compounds. The region is inhabited mostly by the Quichua and Ashuar, who are primarily hunter-gatherers. *Associated Press* Read more

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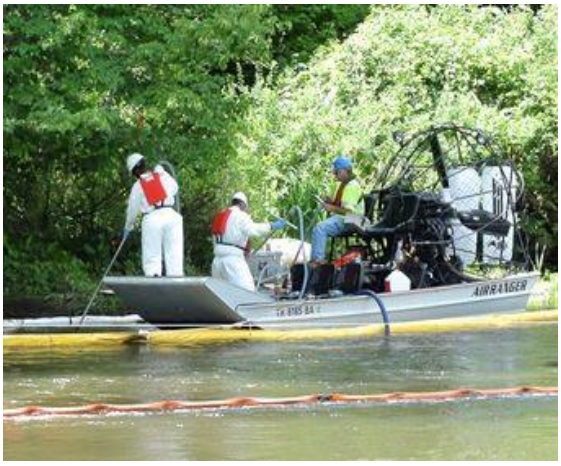
Other news (continued)

USA: CLEANUP OF 2010 MICH. DILBIT SPILL AIMS TO STOP SPREAD OF SUBMERGED OIL



Workers pump jets of water into the riverbed to remove submerged oil from the Kalamazoo River, June 2011. Credit: U.S. EPA

March 27 - If all goes well, the next oil removal operation on Michigan's Kalamazoo River will mark the beginning of the end for the cleanup of the largest oil pipeline spill in U.S. history

The spill, which occurred in July 2010, already has cost pipeline operator Enbridge Inc. more than $820 million in cleanup expenses. That figure could top $1 billion by the time the latest operation is carried out.

The goal of the new effort is to dredge three areas of the river where the U.S. Environmental Protection Agency says oil is still accumulating. When the EPA first proposed the idea in October, Enbridge asked the agency to delay its decision until it conducted more scientific studies. But Enbridge agreed to comply after the EPA issued an order on March 14 *Inside Climate News* Read more

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USA: WATERLESS FRACKING MAKES HEADWAY IN TEXAS, SLOWLY

March 27 - In most hydraulic fracturing operations, several million gallons of water, together with sand and chemicals, get pumped down a hole to blast apart rock that encases oil or gas. But with water increasingly scarce and expensive around Texas, a few companies have begun fracking with propane or other alternatives.

"We don't use any water," said Eric Tudor, a Houston-based official with GasFrac, a Canadian company that fracks with propane gel and butane. "Zip. None." At a GasFrac operation in South Texas last month, a sticker on one worker's hard hat showed a red slash through the word H2O.

Water-free fracking still remains an early-stage technology, with potentially higher initial costs than conventional fracking methods. But as lawmakers and oil regulators focus on the large quantity of water used for fracking wells, the concept is getting a closer look. GasFrac has led the way, bringing its propane fracking operations to Texas, and there is talk of using other substances like carbon dioxide or nitrogen. *Transportation* Read more

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NIGERIAN AGENCIES SEEK $11.5 BILLION OIL SPILL PAYOUT FROM SHELL

March 27 - Two Nigerian government agencies told a parliamentary hearing on Thursday that Royal Dutch Shell should pay a total of $11.5 billion (7.6 billion pounds) in compensation for damage caused by an oil spill at its offshore Bonga field in December 2011.

Shell has said that there is no legal basis for the proposed fines and the Nigerian government has never publicly charged foreign oil companies large sums for oil spills.

The national assembly can recommend fines the government should impose on oil companies but it has no power to enforce them. *Reuters* Read more

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USA: CLEAN GULF ADDS NEW RAPID RESPONSE VESSELS

March 28 - Gulf of Mexico oil spill response resources have received boost with the addition of two new 95-foot rapid response vessels to the Clean Gulf Associates fleet. The Breton Island and Galveston Island complete the line-up of three new oil spill response boats designed and purchased since early last year by the non-profit oil spill clean-up consortium, joining the H.I. Rich, which was dedicated and posted to Leeville, LA, in July 2012.

The two new vessels will be stationed in Venice, LA, and Galveston, TX to help anchor spill response readiness all along the Gulf Coast. These vessels represent a $10.5 million investment in new Clean Gulf response resources designated for the Gulf of Mexico. Each vessel is manned by a crew of six specially trained response team members. *MarineLog* Read more

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People in the news

PATRICK KEENAN JOINS TITAN SALVAGE AS DIRECTOR OF OPERATIONS

Patrick Keenan has joined the **TITAN Salvage** team as director of operations, bringing more than 20 years of worldwide, hands-on experience in naval architecture, marine engineering, salvage and marine pollution abatement. In his new position, Keenan will report to Managing Director Rich Habib and will be based in the company's Pompano Beach, Fla., headquarters. TITAN is a Crowley Maritime Corp. subsidiary.

Prior to joining TITAN, Keenan, who is a bilingual English-Spanish speaker, spent four years as the supervisor of salvage and diving, and director of ocean engineering for the U.S. Navy in Washington, D.C. *The Maritime Executive* Read more

ISCO news

ISCO AGM AT SPILLCON IN CAIRNS, QUEENSLAND, AUSTRALIA

ISCO's Annual General Meeting will take place on Wednesday 10th April at the Cairns Convention Centre, Queensland, Australia.

As both the Conference and the Exhibition close at 5 pm on this day, it will be convenient for members to proceed directly to the meeting.

Members and guests are invited to join David Usher and Mary Ann Dalgleish for cocktails from 5 pm onwards and the meeting is expected to start about 5.20 pm or as soon members and guests are assembled. The meeting should end quite early, about 7 pm, giving you plenty time to join friends at other evening events.

At time of writing, details of the meeting room allocated for the meeting are awaited but, as soon as received, an email with this information will be sent to members.

Our guest speaker will be Mr John Wardrop, the Member of ISCO Council representing Australia. During the past year he has been involved in establishing ASCA – The Australian Spill Control Association. During 2012, Australia also saw the formation of AA – The AusSpill Association, which has a focus on equipment and materials for spill response. You will have the opportunity to meet key members of both associations.

ISCO's President, David Usher and Membership Director, Mary Ann Dalgleish will both be present. Unfortunately ISCO was unable to secure a booth in the Exhibition Area, but David and Mary Ann will be circulating and hoping to meet as many members as possible.

To help gauge the numbers attending the AGM and ensure adequacy of seating arrangements and catering provision, please drop an email to john.mcmurtrie@spillcontrol.org to advise if you will be coming.

The Agenda and Meeting Papers have been sent out to all members. If you did not receive these, please advise the Secretary.

Papers will not be distributed at the AGM so, if you wish to refer to them during the meeting, you should print out copies. A Proxy Form is included for the convenience of members who are unable to attend.

It promises to be an interesting and enjoyable meeting and it is hoped that there will be good attendance of members.

ISCO MEMBER IN INDIA IS SEEKING MUTUAL AID AGREEMENTS WITH OVERSEAS PARTNERS

Captain D. C. Sekhar, Member of ISCO Council for India and MD of AlphaMERS, writes "Bangalore based OSR company AlphaMERS reported a satisfactory growth curve and is in process of diversification. Besides its original activity of oil spill response, it already has activities in design innovation and assessments of offshore renewable energy. The company also carries out marine environment impact assessment studies (Marine EIAs).

The company is now embarking in backward integration of its OSR activities. It is setting up its own production facilities to manufacture OSR equipment, and is expanding its manpower strength. The company plans to stockpile a significant OSR inventory in India within a year. The technical director Mr.Ramesh Rao, a veteran class surveyor and a marine chief engineer himself, said the company is well poised to manufacture OSR equipment, given its innovation profile and experience in quality processes and standards. He said the company was scouting for overseas OSR companies to sign up mutual aid agreements"

You can contact Captain Sekhar at sekhar@alphamers.com and visit the AlphaMERS website at http://www.alphamers.com

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Cormack's Column

In this issue of the ISCO Newsletter we are printing No. 120 in a series of articles contributed by Dr Douglas Cormack.

Dr Douglas Cormack is an Honorary Fellow 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 120: KNOWLEDGE THWARTED BY BELIEF-ONLY REGULATION

Because of belief-based official reluctance to bring casualties into safe havens for sheltered cargo/ bunker transfer, salvors are forced to provide their services in exposed seas at no little danger to themselves as individuals, while ships' crews are deprived of the traditional right of entry to a safe haven when in distress, a deprivation which but for belief in species-extinction/ecological-disaster could have long since been positively resolved by the Marine Safety Committee of the IMO.

Nonetheless, despite real and belief-imposed difficulties, member companies of the International Salvage Union provided their services to 169 ships in 1996, many of which involved the transfer of oil, chemicals (HNS) and bunkers amounting to nearly 2 million tonnes in total, the corresponding figures for 1994 and 1995 being 2.1 million and 1.87 million tonnes respectively. For 1996, the potential pollutants removed were 1.75 million tonnes of oil, 62,000 tonnes of chemicals and 58,000 tonnes of bunkers in a total of 20 ship-to-ship transfers, while in 1995 there had been 21 such transfers of which the largest were 290,000 tonnes from the *Galp Funchal* and 343,000 tonnes from the *Kraka*. By February 1996, therefore, it was impossible to doubt that the cargo remaining after the initial impact-release is potentially salvable; and that such quantities released to the sea would far exceed anything preventable from stranding by dispersant-use or mechanical recovery at sea and or inshore waters.

At this point, it should be recalled on the basis of realistic encounter rates that the WSL R&D programme recommended a contracted aerial dispersant-spraying capacity to treat 5,000 tonnes of oil per operational day whether emulsified or not, this target being the release-limit from a damaged IMO-designed tank (articles 47-61); that the nominal recovery capacity, again based on realistic encounter rates, had been set by the same R&D programme at 1,200 tonnes of wind-rowed 80% emulsion per working day, this to be provided by a Springsweep system deployed from *RV Seaspring* and from each of two coastal tankers of opportunity, together with one Force 7 Oil Mop deployed from an offshore supply/service vessel of opportunity, with the expectation of achieving 2,000 tonnes were Springsweep systems to be double-deployable on their three ships (articles 70-91). Again this R&D programme recommended the stockpiling of a range of specialist beach cleaning equipment capable of dealing with up to 5,000 tonnes of oil in a matter of weeks for use by coastal local authorities (articles 92-102), and of emergency Oil/HNS cargo/bunker transfer equipment with the capacity to safely create void space at the rate of $1000m^3h^{-1}$ for use by salvors in transferring un-released cargo/bunkers to sound vessels or direct to refineries even when casualties are without power, and thus to encourage adoption of a safe havens policy for such transfers, refineries supplied by sea being themselves located for weather protection n just such havens.

Thus, with the International Convention on Intervention on the High Seas having been incorporated in national law and with the *Sea Empress Incident* having provided a glaringly obvious opportunity to intervene within the 3-mile limit, it was not surprising that failure to do so caused an Enquiry to be held under Lord Donaldson into the conduct of salvage operations in the UK. However, while being surprised to find that the Enquiry was inviting answers as to what intervention powers a Secretary of State might need to correct current deficiencies, I responded that the powers were adequate if knowledgeably used; but that even when officialdom did move the *Sea Empress* to its destination-refinery, it remained uncertain whether the powers had been invoked or not. In any case, I referred the relevant sections of my 1983 book to the secretariat provided to the Enquiry by the Policy Division of the UK Shipping Administration and, while hearing no more about it, I was somewhat gratified later to learn that a new post of Secretary of State's Representative (SOSREP) had been created, and that the newly appointed incumbent was intended to do whatever he judged necessary and to be dismissed if this was later judged to be wrong. However, I remained ungratified in recalling that judgement is mere belief-consensus; and that knowledge was still being ignored.

Later in 1997, it was reported in the aftermath of the *Exxon Valdez Incident*, that the US National Plan for Oil Spill Response had empowered the senior on-scene USCG representative to resolve all differences of opinion as to how to proceed in marine incident response, and that the USEPA now had a similar role at inland incidents. However, even with these stated intentions, it remained unclear whether the conduct of incident response would ever be based on the knowledge being reviewed in these articles or whether opinion/counter-opinion, *i.e.* belief-consensus, would continue to override this long-existing knowledge as appears yet again to have been the case in the *Deepwater Horizon Incident*.

Thus we see that belief in species-extinction/ecological-disaster thwarts the cargo/bunker transfer which is the sole means of preventing post-damage releases from posing any risk of either; that it does so without producing any specific regulation; and that it persists despite total cargo/bunker releases never having produced any extinction/disaster. Again, we see that this belief produces regulation preventing dispersants being used to increase the natural dispersion/biodegradation which prevents releases from stranding and which would resume natural dispersion/degradation by returning stranded releases to the sea. Yet again, we see that this belief produces regulation preventing the online decanting of water separated from releases recovered at sea and onshore, that it thus requires all processing/decanting to be through regulated installations onshore despite its being more quickly and cost-effectively achieved at sea or on shorelines; that in thus leaving increased amounts to strand, it increases the amount

Cormack's Column (continued)

inseparably mixed with particulate beach-material which belief-based regulation then bars from disposal to landfill that which would have been much reduced in the first place, had separation of pollutant from water been permitted at sea and had dispersants been permitted to separate pollutant from beach material onshore by returning the former to the sea for dispersion/dilution/biodegradation, while leaving the latter *in situ*.

In the next batch of articles, I will be contrasting knowledge with its counter beliefs and inviting believers and belief-based regulators to consider their position.

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 - Inland spills

RESPONSE TO INLAND OIL SPILLS – PART 14

A short series of articles contributed by Mark Francis of Oil Spill Solutions.

Mark Francis has been involved with the oil industry since 1975. He attended his first oil spill in 1976, the Tanker Elaine V incident. He became head of response for inland spills within the UK for British Petroleum E & P in 1980 for 10 years responding to well, storage tank and pipeline spills throughout the UK. Over the next 20 years he continued to build his international operations experience and has also specialised in spill response training, delivering IMO and other courses in more than 20 countries. Mark's website is at http://www.oilspillsolutions.org

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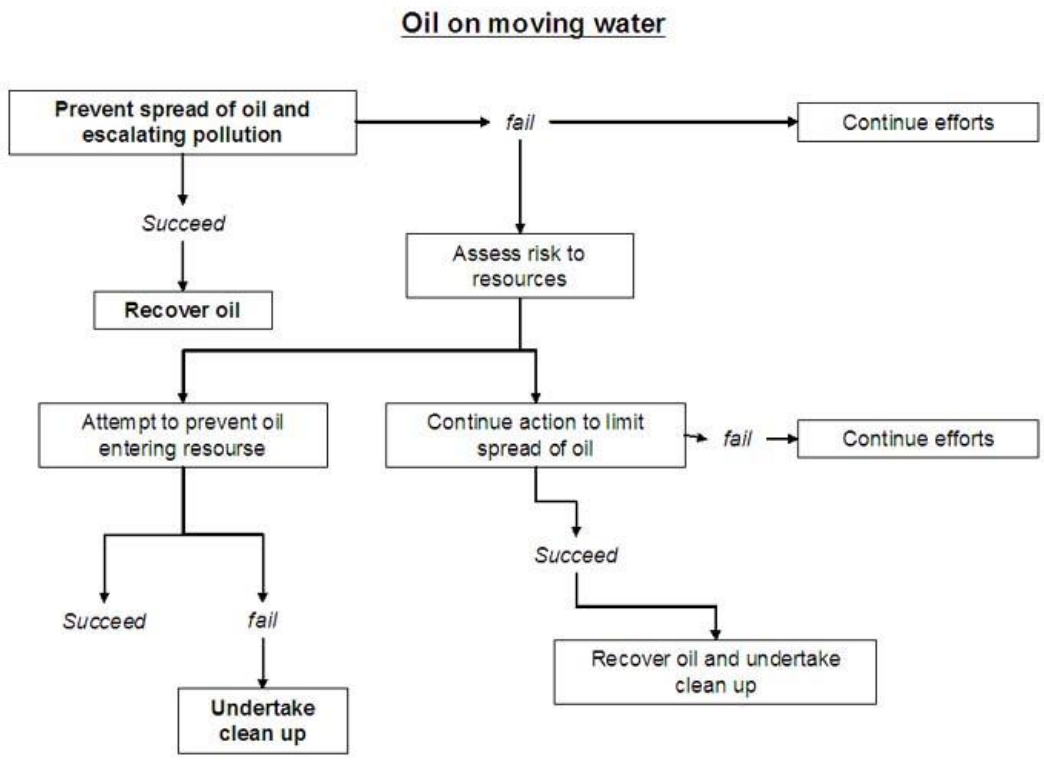
Oil on moving water



Dams

If the spilt material mixes with water you can't boom the watercourse as the pollution will just flow under the boom. If it's a small watercourse and has a low flow rate, you may be able to dam it and stop the water flow which will prevent the pollution spreading.

You will see below that different materials can be used to build a dam, e.g. sand bags, wooden planks, hay bales and soil. Keep these near any planned damming point and train people how to dam the watercourse.

Special feature - Inland spills (continued)

You'll need an alternative response plan in case high flow or rainfall makes damming impractical.

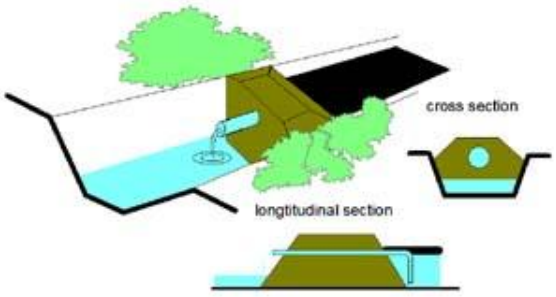
There are two types of basic dams – first, those ones that allow the water to flow normally and, second, those that form a large dam obstructing water flowing. The latter is easier to build because a barrier will increase the water level, and have outlets made in the barrier to allow the control of the water level in the barrier.

Hand-made dams, by excavators only, with sacks of sand, soil or with pre-fabricated materials, such as wooden boards, aluminium or steel plates, can be made with or without discharging the water.

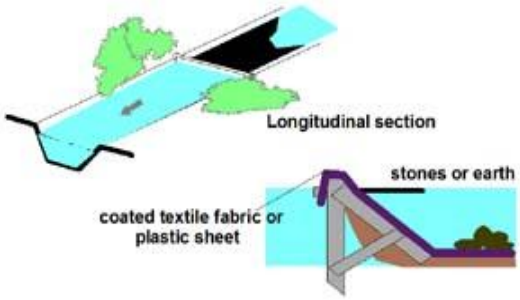
If the water course is shallow and the width is small then in many cases dams can be built quickly and cheaply to reduce the spread of the oil. There is always a need to allow water to flow through the dam and in many cases this flow is regulated. If this is not done there is a danger that the weight of water will push the dam over. Care also has to be taken with flooding. As the water level rises at the dam it also starts to back up in the stream.

Here is a collection of different types of dams which appeared in a CONCAWE report no 10/83 "A field guide to inland oil spill clean-up techniques".

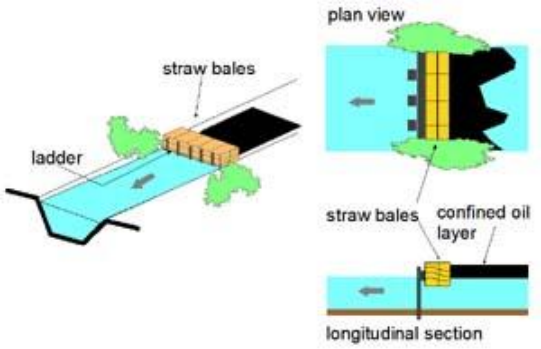
They can quickly be put into place before the manufactured equipment arrives e.g. boom and skimmers.



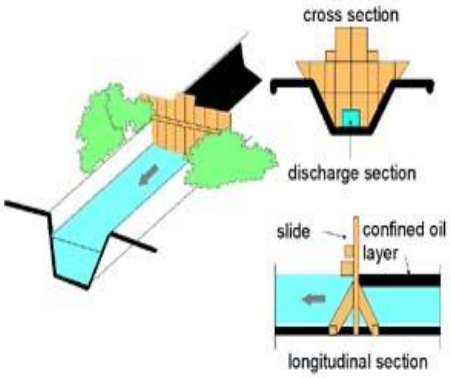
Earth dam



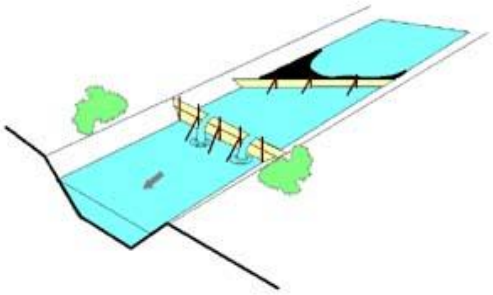
Plastic sheet dam

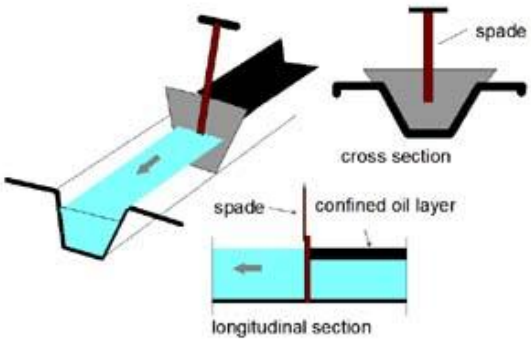


Straw bale dam

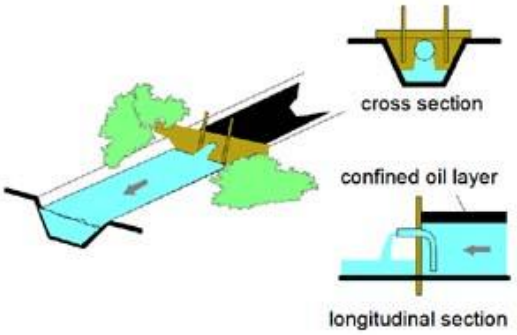


Wooden plank dam

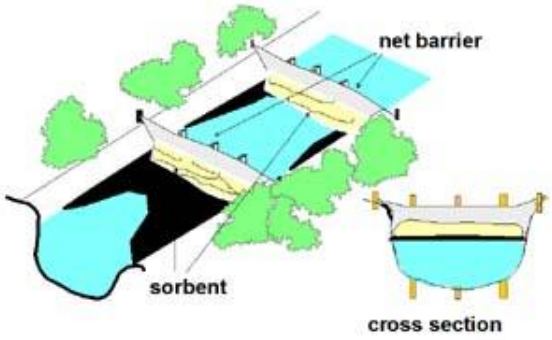




Wooden weir and barrier



Prefabricated spade dam



Improved prefabricated spade dam

Net barrier with sorbent

It needs to be said that the straw bale dam is very temporary as the straw absorbs large quantities of water and the bales *left* are tied with two thin polyproplene strings and are designed to be handled dry.

When wet they weigh considerably more than the string was made to withstand and they fall apart when removing them from the water thus causing even more contamination and work.

Right shows someone who has not learned the lesson yet. Here the bale when dry weigh approx.1 ton. Imagine when they get wet.

Just to cause another problem these bales are made like a swiss roll with the straw being held together with a plastic mesh. So we have plastic as one type of waste, the natural fibres as another, and the oil as yet another all needing different destinations.

To be continued

Special feature – In situ burning

IN SITU BURNING: CHAPTER 12

A short series of articles on In Situ Burning contributed by Dr Merv Fingas of Spill Science, Edmonton, Alberta, Canada T6W 1J6 fingasmerv@shaw.ca

Merv Fingas MSc PhD worked for more than 35 years in the field of oil spill technology at Environment Canada's Environmental Technology Center in Ottawa, Ontario. As head of the Emergencies Science Division at the Centre, he conducted and managed research and development projects. He is currently working independently in Alberta. Dr Fingas is the Member of ISCO Council for Canada.

Summary of the Serial

This is the 12th of a series of articles on in-situ burning of oil spills. This series will cover in-situ burning step-by-step and will present the latest in knowledge on the topic.

12. Assessment of feasibility of burning

When an oil spill occurs, information must be obtained on the spill location, weather conditions, and any other relevant conditions at the site. The necessary questions to be asked before deciding to use in-situ burning are outlined in Figure 12.

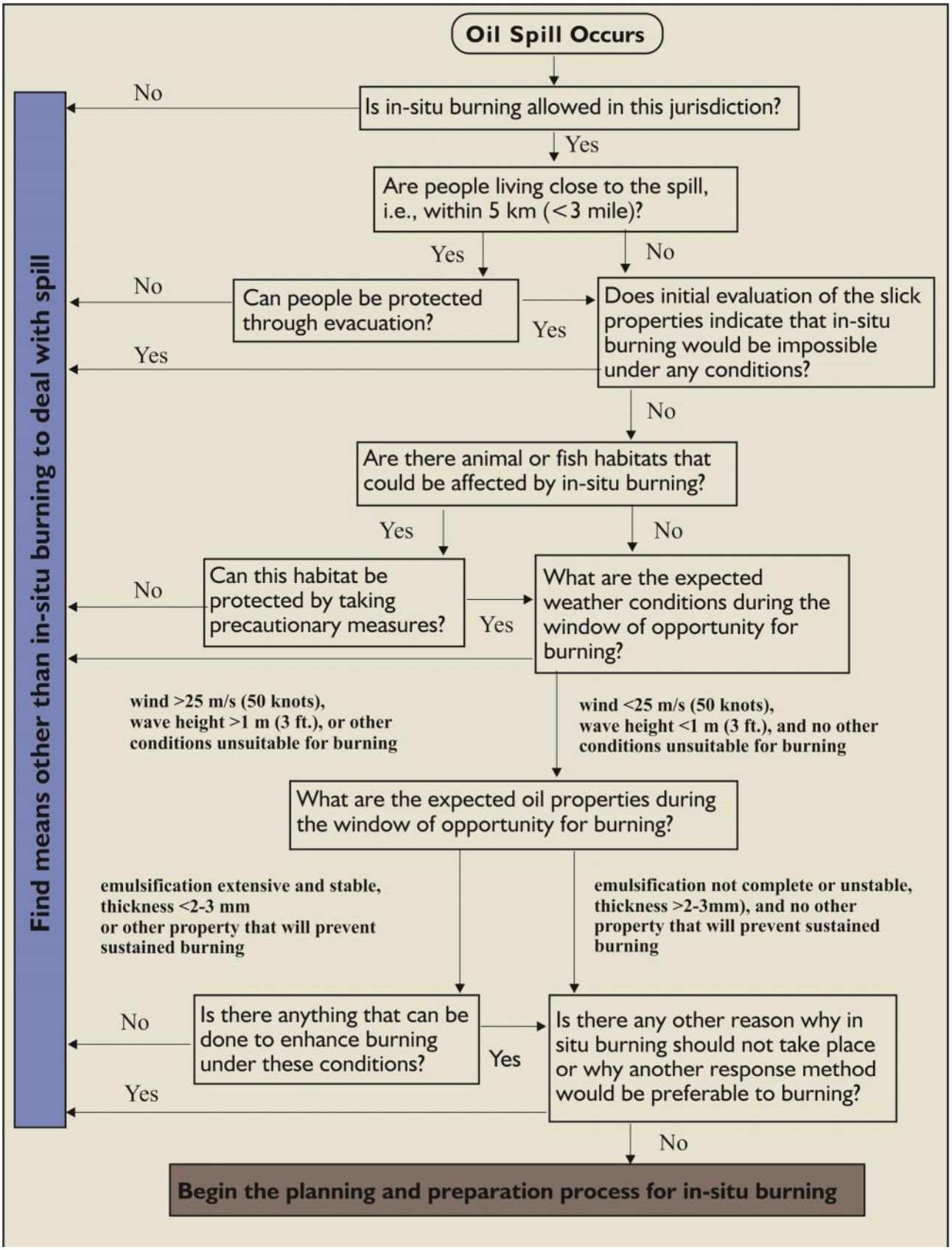


Figure 12 Logical decision-making process for an in-situ burn

Burning may be prohibited within a specified distance of human habitation, e.g., within 1 km and within a specified distance of the shoreline, of petroleum-loading, production, or exploration facilities, or of a nature preserve, bird colony, or national or state/provincial parks. Burning may also be prohibited over a marine park or preservation area and over areas designated as military target areas or former areas of munitions dumping.

Special feature – In situ burning (continued)

Regulatory approvals

The regulatory approvals required for in-situ burning vary among different jurisdictions. In general, the legal constraints and liabilities associated with in-situ burning are not well defined. The public must be provided with information about the issues associated with in-situ burning in order to accept regulations allowing it. This information must include a comparison of the risks of burning with the risks associated with other cleanup options, and the results of simply leaving the spilled oil and not treating it at all.

In general, regulatory agencies are most concerned with how the burn will affect air quality. Most jurisdictions stipulate air quality levels that cannot be exceeded no matter what is being burned. Some jurisdictions have modified the air quality limits for special cases, such as in-situ burning of oil during an emergency.

Environmental and health concerns

The primary environmental and health concern related to in-situ burning is the emissions produced by the fire. The measurement of emissions and calculations from emission data has revealed several facts about the quantity, fate, and behavior of the basic emissions from burning. Overall, emissions are now understood to the extent that emission levels and safe distances downwind can be calculated for fires of various sizes and types. A typical crude oil burn (500 m^2) would not exceed health limits for emissions beyond about 500 m from the fire. The emissions produced by in-situ burns are discussed below. People and the environment can be protected by ensuring that the burn is kept the minimum distances away from populated and sensitive areas. Procedures for calculating these safe distances are given later in this series.

Safety of response personnel

During in-situ burn operations, all response personnel must be fully trained in the operational and health and safety procedures associated with any equipment or operation being used. Personnel involved in the planning stage of the operation and for the deployment of vessels, barriers, and ignition devices must also be well trained. General health and safety guidelines will be discussed in future episodes. These guidelines should be used to develop site-specific plans once it has been decided that in-situ burning will take place.

Public health

In general, depending on weather conditions, in-situ burning should not be carried out within 5 km of heavily populated areas. Weather conditions to be considered include the presence or absence of an inversion and the wind direction. Monitoring of oil fires, ground-level emissions from crude oil fires have never exceeded 25% of established human health concern levels more than 1 km away from the fire.[1] Therefore, if no significant air turbulence or ground-level atmospheric inversions occur, burning can be conducted close to populated areas. In sparsely populated areas, it may be best to evacuate residents close to the burn site. Methods are now available for calculating emission concentrations and safe distances downwind from in-situ oil burns and these are described in later episodes.

What will burn

Most oils will burn and burn quantitatively. Oils that are thick (>2 to 4 mm) will burn effectively. Oil emulsified with water will burn, once started. Therefore it is important to have some un-emulsified or unstable-emulsions to start the fire. Heavy oils will burn well and with lesser soot than light oils or fuels. The burn rate for heavy oils is lesser than that for fuels as is oil mixed with ice.

References

1 Fingas, M., "In-situ Burning", Chapter 23, in Oil Spill Science and Technology, M. Fingas, Editor, Gulf Publishing Company, NY, NY, pp. 737-903, 2011

To be continued

Publications

FOR YOUR INTEREST – LINKS FOR RECENT ISSUES OF PERIODICALS

ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	April 1 issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	March 18 issue
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	March 4 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	March 1 issue
Intertanko Weekly News	International news for the oil tanker community	No 13, 2013
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	March 2013 issue
Soil & Groundwater Product Alert	From Environmental Expert	March 18 issue
Soil & Groundwater Ezine	Articles, papers and reports	April 2013 issue
Soil & Groundwater Newsletter	From Environmental Expert	March 28 issue
Soil & Groundwater Events	Upcoming events compiled by Environmental Expert	March 2013 issue
Technology Innovation News Survey	From US EPA - Contaminated site decontamination	February 1-15 issue
IMO Publshing News	New and forthcoming IMO publications	March 2013 issue
Pollution Online Newsletter	News for prevention & control professionals	March 27 issue

Publications (continued)

NEW IOPC FUNDS PUBLICATION - NOUVELLE PUBLICATION DES FIPOL - NUEVA PUBLICACIÓN DE LOS FIDAC

The Annual Report 2012 is now available to download at http://www.iopcfunds.org/publications/. Hard copies of the publication are available on request and will, in any event, be posted to our mailing list as usual within the next three weeks.

Le Rapport annuel de 2012 peut désormais être téléchargée sur http://www.iopcfunds.org/fr/publications/. Une version papier de la publication est disponible sur demande et sera, dans tous les cas, envoyée par la poste à nos contacts habituels dans les deux prochaines semaines.

El Informe Anual 2012 se puede ya descargar desde http://www.iopcfunds.org/es/publicaciones/. Se pueden obtener ejemplares impresos de la publicación previa solicitud; en cualquier caso, como de costumbre, se enviarán por correo postal a nuestra lista de contactos en las próximas dos semanas.

OILED WILDLIFE RESPONSE MANUAL NOW AVAILABLE

The Oiled Wildlife Response Manual, developed under the Task C.4 of the POSOW project is now available for download. The manual has been prepared by Sea Alarm Foundation in collaboration with all project partners, and with the cooperation of CVFSE (Centre Vétérinaire de la Faune Sauvage et des Écosystèmes) and WWF (World Wildlife Fund) Finland.

The manual is designed for volunteers and all wildlife responders who are working at onshore wildlife response operational sites; have little or no previous knowledge of wildlife response and may undertake certain wildlife response activities on land and on the shoreline.

This manual is one of 4 manuals produced in the framework of the POSOW project. The others address Oiled Shoreline Assessment, Oiled Shoreline Cleanup and Oil Spill Volunteer Management. The Oiled Wildlife Manual can be downloaded in POSOW's website. [Thanks to REMPEC]

Events

IRELAND: ISAA SEMINAR TO BE HELD IN DUBLIN

A date for your diary – The International Spill Accreditation Association (ISAA) will be holding an Oil Spill Response Seminar in Dublin on Thursday 9th May 2013

Watch out for more information about this event in next week's ISCO Newsletter.

TOGO: NATIONAL WORKSHOP ON CONTINGENCY PLANNING

Lomé, Togo, on 27-30 May, 2013. More info

Training

USA: FEMA COFFEE-BREAK TRAINING -INCIDENT COMMANDER'S RESPONSIBILITIES

There are many issues that confront the Incident Commander when responding to an incident that is expanding in complexity. The low frequency of this type of incident can put a great deal of pressure on any IC not only because of the tactical complexity but also the added pressure of managing the communications, resources, planning and support functions needed to react to the growing emergency.

The early introduction of the Incident Command System into a complex incident is designed to assist the Initial Response IC in the transition from the reactive mode to the proactive mode of incident management and set up a smooth transfer of command to a superior officer or an incoming Incident Management Team. Read more

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HAZARDOUS MATERIALS: VIDEOS FOR TRAINING OF INCIDENT COMMANDERS

In a hazmat or WMD incident, the decisions and actions of the Incident Commander are crucial to a successful outcome. This best selling training program, based on the highly-regarded text of the same name, is a valuable resource for Incident Commander training and for other emergency personnel who may deal with unplanned hazmat leaks, spills or fire during the course of their work. Each one of the films follows the guidelines of Hazwoper and NFPA 472. The films - which are also useful for Technician Level training - are narrated by Greg Noll & Mike Hildebrand, authors of the text Hazardous Materials: Managing the Incident and well known consultants in the hazardous materials community. More info

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Training (continued)

USFA COFFEE BREAK TRAINING - "GETTING READY FOR THE UNIMAGINED:" LOOKING AT THE EMERGENCY OPERATIONS PLAN

On a daily basis we respond to a variety of emergencies, most of which have become fairly routine. Most first response organizations can do their work on those events by rote. Of course, reaching that level of competence takes a lot of training, exercises and actual events. We have to constantly guard against complacency to ensure safe and effective operations. However, the extraordinary events — such as tornados, earthquakes, hurricanes and conflagrations — can overwhelm the best organizations, and catastrophic losses can stretch anyone's capacity to the breaking point. So how do we get ready for these "unimaginable events"? Learn More… [Thanks to Kevin D. Westwood, JOIFF]

Company news

ISCO MEMBER, FAST ENGINEERING LTD. WINS ALL-IRELAND INNOVATION AWARD

Better known to our readers as manufacturers of the well-known Fastank, with their new invention, FASTAP, Fast Engineering is the winner of the All-Ireland Social Innovation Award presented at a gala ceremony in the Titanic building in Belfast on Friday 22 March.

FASTAP is the world's first 1 minute emergency water distribution system. It enables Aid Relief Agencies to deliver water to disaster affected communities more efficiently and hygienically. The heart of the system is a new design of tap stand based on a tripod concept which is assembled and factory tested before despatch. Currently tap stands are delivered as plumbing kits which require assembly on site. This is time consuming and requires technical skill plus tools. The end result is often the leaking of valuable drinking water.

Natural disasters are increasing at an unparalleled rate due to climatic change and other uncontrolled factors. Currently 1 in 6 of the world's population does not have access to clean drinking water. This results in disease and death, primarily among the young. With FASTAP more people survive. The Aid Agencies are presented with a more efficient and cost effective solution.

"As a team we are delighted to be among the best Innovators in Ireland. Our work and experience is shared for the betterment and wellbeing of others less fortunate – what could be better for the soul!" concludes Seamus who is a Chartered Water Engineer.

For further information contact: Seamus Connolly – Managing Director, Fast Engineering Ltd., 5 Windmill Court, Antrim BT41 2TX UK. T: +44 28 9442 8686 M: +44 7989 384215 E: seamus@fastank.com

ISCO MEMBER, CHUKAR WATERJET EXHIBITING AT OCEANS 13, JUNE 10-13, BERGEN, NORWAY

Deepwater subsea water jet technology manufacturer Chukar Waterjet, Inc. is exhibiting at Oceans 13, June 10-13 at the Grieghallen in Bergen, Norway. Look for Chukar Waterjet in Stand 37.

Chukar Waterjet manufactures underwater ultra-high pressure water jet cutting and blasting equipment capable of operating at depths in excess of 3000 meters. Effective at cutting steel up to 250 mm thick or waterjet blasting at pressures up to 3800 bar, Chukar's subsea water jet equipment has numerous applications for deepwater emergency response operations, salvage operations, and rapid de-mobilization operations. It can be used to blast away coatings and marine growth to inspect welds, or as a cutting tool in emergency response and salvage operations. Waterjetting equipment also may be used to provide turbulence in a stream of methanol for hydrate remediation, an application Chukar developed in emergency response to the Gulf oil spill, when the company was asked to rapidly manufacture a system to clear a clogged containment system 1500 meters underwater.

Waterjet technology has numerous advantages over conventional subsea cutting and cleaning tools. Unlike conventional tools, the tools used in a waterjet system cannot bind in the cut, jeopardizing asset integrity. Waterjet cutting also reduces the hazard of igniting trapped pockets of gas during cutting.

For more information about Chukar Waterjet, visit www.chukarwaterjet.com, e-mail subsea@chukarwaterjet.com or call +1-763-497-8749.