



ISCO NEWSLETTER

The Newsletter of the International Spill Response Community
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<http://www.spillcontrol.org>



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 organisation.

ISCO COMMITTEE & COUNCIL

ISCO is managed by an elected executive committee members of which are **Mr David Usher** (President, USA), **Mr John McMurtrie** (Secretary, UK), **Mr Marc Shaye** (USA), **Mr Dan Sheehan** (USA), **M. Jean Claude Sainlos** (France), **Mr Kerem Kemerli** (Turkey), **Lord Peter Simon Rickaby** (UK), **Mr Li Guobin** (China), **Captain Bill Boyle** (UK) and **Mr Dennis van der Veen** (The Netherlands).

The Register of ISCO Members is maintained by **Ms Mary Ann Dalgleish** (Membership Director). She is also responsible for collecting membership dues.

The Executive Committee is assisted by the non-executive ISCO Council composed of the following national representatives – **Mr John Wardrop** (Australia), **Mr Osman Tarzumanov** (Azerbaijan), **Mr John Cantlie** (Brazil), **Dr Merv Fingas** (Canada), **Captain Davy T. S. Lau** (China, Hong Kong), **Mr Li Guobin** (China, Mainland), **Mr Darko Domovic** (Croatia), **Eng. Ashraf Sabet** (Egypt), **Mr Torbjorn Hedrenius** (Estonia), **Mr Pauli Einarsson** (Faroe Islands), **Prof. Harilaous Psarافتis** (Greece), **Captain D. C. Sekhar** (India), **Mr Dan Arbel** (Israel), **Mr Sanjay Gandhi** (Kenya), **Chief Kola Agboke** (Nigeria), **Mr Jan Allers** (Norway), **Capt. Chris Richards** (Singapore), **Mrs Fatima B. Shaik** (South Africa), **Dr Ali Saeed Al Ameri** (UAE), **Mr Kevin Miller** (UK) and **Dr Manik Sardessai** (USA).

For more info on Executive Committee and Council Members go to www.spillcontrol.org

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International news

For more information on the events featured below, click on the banner



The 5th Conference and Exhibition
Oil Spill Response Workshop (OSRW 2016)
December 8-9, 2016 Beijing China

a topco event



IOSC 2017
International Oil Spill Conference

OIL SPILL MANAGEMENT MARKET TO REACH \$125.62 BILLION BY 2022, GLOBALLY – HEXA REPORTS

November 2 - Global post-oil spill management market was valued at USD 14.19 billion in 2010. Pre-oil spill management market is expected to reach a net worth of USD 125.62 billion by 2022, growing at an estimated CAGR of 3.2% from 2015 to 2022.

The global oil spill management market size is expected to reach USD 125.62 billion by 2022, according to a new report by Grand View Research, Inc. Increasing oil spill incidents since the past five years coupled with stringent safety and environmental regulations are expected to remain key driving factor for global oil spill management market. In addition, increasing seaborne and pipeline transportation of crude oil and chemicals globally is also expected to have a positive impact on market growth.

Strict government regulations particularly in North America and Europe for employing safety devices and technologies during drilling and transportation of crude oil have contributed towards market development in these regions. Increasing offshore and pipeline tanker transportation of petroleum products is also expected to increase demand for various oil spill management technologies. Additionally, increasing R&D by key players for efficient and rapid oil spill cleaning is expected to create opportunities for the market over the forecast period. [Read more](#)

PAVING THE WAY FOR INTERNATIONAL OILED WILDLIFE RESPONSE ASSISTANCE

November 2 - The third meeting of experts involved in the Global Oiled Wildlife Response System (GOWRS) project took place last month in Delaware, USA. The project – a two-year initiative funded by the International Association of Oil and Gas Producers (IOGP) as part of the Oil Spill Response Joint Industry Project (OSR-JIP) – aims to design an international system for oiled wildlife response expertise that can be mobilised for assistance in complex oiled wildlife scenarios. [Sea Alarm Foundation](#) [Read more](#)

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International news (continued)

NORTHWEST PACIFIC ACTION PLAN (NOWPAP) REGIONAL CO-ORDINATING UNIT OFFICE HAS A NEW HOME IN BUSAN, REPUBLIC OF KOREA

The NOWPAP RCU Busan Office has moved in new offices offered generously by the Training Center for Aquatic Disease Control at the National Institute of Fisheries Science (NIFS) [<http://www.nifs.go.kr/en/>]. NIFS provides facilities and equipment for the NOWPAP Busan office.

Mr. Kang Joon-Suk, NIFS President and Mr. Liu Ning, Programme Officer of NOWPAP together with several senior officials from the Korean government agencies attended the opening ceremony in Busan on 3 November 2016. They have unveiled the nameplate of the training center, and planted a tree commemorating the opening of a new building and NOWPAP RCU office in Busan.

During the opening ceremony Mr. Liu Ning expressed NOWPAP appreciation for the support provided by NIFS and discussed with Mr. Kang further opportunities for cooperation between NIFS and NOWPAP.

The meeting follows consultations held earlier in October 2016 between Mr. Kang and Mr. Lev Neretin, NOWPAP Senior Coordinator, about the need to strengthen ties and joint activities between the two institutions.

The address of the new NOWPAP RCU office is: 216 Gijanghaean-ro, Gijang-eup, Gijang-gun, Busan 619-705, Republic of Korea *NOWPAP*

Incident reports from around the world

NIGERIA: NDGJM BOMBS ANOTHER PIPELINE IN DELTA STATE: SAYS "WE WILL FULFIL OUR PROMISE OF UPROOTING YOUR ASSETS IN OUR LAND."



November 1 - There is a Heavy tension in the ongoing dialogue between the Federal Government and Niger Delta militants through the Pan-Niger Delta Forum (PANDEF). Niger Delta Greenland Justice Mandate (NDGJM),

A militant group operating in Niger delta Area said they have destroyed another oil pipeline in Delta and threatened to do more.

However, a new group, the Niger Delta Defence Corps

(NDDC), sworn it would launch many attacks as from tomorrow.

In a statement by its spokesperson Aldo Agbalaja, NDGJM said it brought down the 32-inch Effurun-Otor pipeline in Ughelli area of Delta State late Saturday night. The militants opposed the representatives of the region in PANDEF.

The statement said it did not object to a dialogue between the Federal Government and the region, adding that such dialogue should be held with reliable people from the region.

NDGJM said it was collating names from all parts of the region for the dialogue. *The Biafra Times* [Read more](#)

Incident reports from around the world (continued)

USA: ALABAMA - COLONIAL MAY OPEN KEY U.S. GASOLINE LINE BY SATURDAY AFTER FATAL BLAST



Photo: Flames shoot into the sky from a gas line explosion in western Shelby County, Alabama, U.S., October 31, 2016. REUTERS/Marvin Gentry

November 1 - A major gasoline pipeline that is a crucial supply source for the U.S. East Coast could reopen as early as Saturday after an explosion in Alabama killed one worker and injured five others, Colonial Pipeline Co [COLPI.UL] said on Tuesday.

The blast on Monday occurred several miles from its biggest gasoline spill in nearly two decades in September. That spill caused a 12-day interruption in the flow of about 1.3 million barrels per day of the fuel from the refining hub on the Gulf Coast to the Northeast. *Reuters* [Read more and watch video](#)

November 4 - What Happens When the Most Important Pipeline in the U.S. Explodes?

On Monday, a construction crew in Alabama triggered a massive explosion when a track-hoe struck the biggest fuel pipeline in the U.S. The blast killed one person, injured several, and sparked a wildfire that burned for nearly a day across 31 acres.

It also stopped the flow of millions of gallons of gasoline that move up the East Coast each day, from refineries in Houston to tanks in Linden, N.J., outside New York Harbor. The 5,500-mile Colonial Pipeline delivers about half of the refined products used on the East Coast. It consists of two lines—one that carries gasoline, the other that carries distillate fuels such as diesel and jet fuel. Think of it as the country's fuel aorta.

The consortium that owns Colonial includes private equity behemoth KKR, industrial conglomerate Koch Industries, and oil-and-gas supermajor Royal Dutch Shell. The fact that it's so little known, yet such a vital piece of infrastructure, is a testament to how well Colonial has been run over the years. *gCaptain* [Read more](#)

NIGERIA: OIL LEAK FROM AGIP'S FIELD POLLUTES OTUOKPOTI COMMUNITY IN BAYELSA

November 2 - Residents of Ekole Creek in Bayelsa on Wednesday reported a massive oil leak from an oil field operated by Nigeria Agip Oil Company, NAOC, in the state. The News Agency of Nigeria reports that Ekole Creek is around Agbura and Otuokpoti communities in Ogbia and Yenagoa local government areas respectively. They said the spill resulting from the leak destroyed farmlands and aquatic lives in the communities. The residents said that crude oil deposits from the spillage measured about five centimetre thick on the surface of the water. *Premium Times*

[Read more](#) Related reports in [The Eagle Online](#) [Guardian.ng](#)

CANADA: SALVORS PREPARE TO RAISE SUNKEN TUG IN B.C.

November 2 - A salvage barge has arrived at the site of the sinking of the ATB tug Nathan E Stewart near Bella Bella, B.C., but bad weather continues to frustrate salvors' response efforts.

Local Heiltsuk tribe members indicated in online posts that all response vessels were on stand-down due to poor conditions. The forecast for Wednesday called for winds of up to 50 knots.

Salvors have made progress pumping out the Stewart's fuel, bilge and lubricant tanks, but half of the diesel fuel and all of the oily bilge aboard the Stewart when she went down remain unaccounted for. *The Maritime Executive*

[Read more](#)

COSTA RICA: SHRIMPING BOAT SINKS IN GUANACASTE, SPILLING DIESEL ON PACIFIC COAST

November 3 - A Costa Rican shrimping boat sank earlier this week off the coast of Playa Brasilito on the country's northern Pacific coast, spilling large amounts of diesel fuel into the ocean. In the aftermath, community members have come out in force to help mitigate the damage. According to the Costa Rican Oceanology Institute, the spill happened Sunday night at approximately 8 pm, when it is believed that the boat hit a large cluster of rocks that ripped a large hole in the hull of the vessel. *Tico Times* [Read more](#) [Thanks to Don Johnston of ISCO Industry Partner, DG & Hazmat Group]

CANADA: B.C. OIL SPILL SHOWS WHAT CAN GO WRONG UNDER DIFFICULT CONDITIONS

October 30 - Crews fighting to contain fuel leaking from a sunken tug near Bella Bella, B.C., have had to deal with just the kind of conditions predicted in a spill response analysis filed with the National Energy Board in the Trans Mountain pipeline hearings.

That analysis warned that if an oil spill occurred on the West Coast during winter months, high winds, turbulent seas and delays in response time could combine to make it impossible for crews to recover more than 15 per cent of spilled oil.

However, during the NEB inquiry, which concluded earlier this year, Trans Mountain presented a model that showed over half the oil would be recaptured because of proper planning and the rapid deployment of containment equipment. *The Globe and Mail* [Read more](#)

CANADA: STEPHEN HUME: EXISTING SHIPS ALREADY POSE MAJOR OIL SPILL HAZARD TO B.C.'S COAST



Photo: People clean up the shoreline near where the tugboat Nathan E. Stewart ran aground near Bella Bella. THE CANADIAN PRESS

October 31- Skeena-Bulkley Valley MP Nathan Cullen has renewed his call for a ban on oil tankers on B.C.'s north coast after the recent oil spill near Bella Bella.

The demand is predictable considering the fierce criticism levelled at Ottawa because of a slow and cumbersome response to the accident that revealed indisputable deficiencies in long-promised emergency environmental measures to contain such spills.

Premier Christy Clark has reiterated that world-leading coastal spill response technology is one of the province's preconditions for supporting pipeline expansion from Alberta to tidewater here. And Ottawa now says it's considering compensation to the

Heiltsuk First Nation to address lingering contamination of seafood resources upon which the community's economy depends. *Vancouver Sun* [Read more](#)

CANADA: CANADA TO IMPLEMENT NORTHERN B.C. TANKER BAN THIS YEAR – REPORT

November 4 - Canada's Liberal government will this year deliver on its pledge for a moratorium on oil tanker traffic along the northern coast of British Columbia, CBC News reported on Friday.

Transport Minister Marc Garneau confirmed the plan in an interview with CBC Radio's "The House," the broadcaster said on its website.

Canadian Prime Minister Justin Trudeau last year instructed Garneau to formalize the ban on oil tanker traffic, effectively slamming the door on a pipeline project that was already facing massive development hurdles. *gCaptain* [Read more](#)

November 4 - Moratorium on crude oil tanker traffic coming soon: Garneau

Federal Transportation Minister Marc Garneau is promising a moratorium on crude oil tanker traffic off British Columbia's North Coast by the end of this year, which would coincide with the government's cabinet decision on the Kinder Morgan Trans Mountain pipeline expansion project.

"That is a promise that we made. It's a mandate item for me and we are going to be delivering on that," Garneau told host Chris Hall in an interview airing on CBC Radio's The House on Saturday morning. *CBC News* [Read more](#)

GHANA IS READY TO HANDLE OIL SPILLS – EPA

October 31 - Ghana is ready to handle any oil spillage should such an incidence happen. This is the assertion by authorities of the Environmental Protection Agency (EPA). According to the agency, various governmental bodies have been set up with measures put in place to ensure any such occurrence is immediately taken care of.

Citifmonline [Read more](#)

News reports from around the world (continued)

NIGERIA: NIGERIAN COMMUNITIES THREATEN TO BLOCK CRUDE PIPELINE DUE TO OIL SPILL

October 30 - Nigerian communities affected by an oil spill in the Niger Delta hub have threatened to block access to a pipeline unless state oil producer NNPC provides a cleanup and compensation within one week, a statement said.

Spills from blown-up or faulty pipelines have triggered an insurgency in the Delta, where militants fight for a greater share of oil revenues and a cleaner environment. *Reuters*

People in the news

NEW CEO FOR THE NAUTICAL INSTITUTE



October 30 - The Nautical Institute is pleased to announce that it has selected a new Chief Executive Officer after interviewing a competitive shortlist of six candidates. Captain John Lloyd MBA AFNI, currently the Institute's Chief Operating Officer, will take over from Philip Wake OBE RD* MSc FNI, who is retiring in May 2017 after 14 years in post.

John took up the COO post in November 2015 in which he has had overall responsibility for the Institute's specialized training services, including the industry-standard Dynamic Positioning Operator (DPO) accreditation and certification scheme. *The Maritime Executive* [Read more](#)

ISCO News

ISCO DELEGATIONS AT IMO MEPC AND IOPC FUNDS MEETINGS, AND REPORTS RECEIVED FROM DR. DOUGLAS CORMACK.

As announced earlier, ISCO members Dr Douglas Cormack Hon.FISCO and Mr Matthew Sommerville represented ISCO at last month's meetings of the Marine Environment Protection Committee and IOPC Funds in London.

Dr Cormack has submitted the following reports.

IOPCF Meeting - Presentation of the ISCO document, Casualty Response - Announcement of a New Website, was recorded in the IOPCF meeting report as follows.

The governing bodies recalled documents IOPCF/OCT14/4/6 and IOPCF APR15/4/5 previously submitted by ISCO which set out the benefits of knowledge acceptance/belief rejection in casualty response.

The governing bodies also recalled ISCO's intention to cover all aspects of casualty response with a knowledge repository, a contingency plan identifying the physicochemical parameters which control all aspects of release fates, effects and appropriate responses; and from which incident-specific plans are derivable by applying relevant values to the incident-specific parameters of the contingency plan. It was further recalled that ISCO had proposed that such a new contingency/incident-specific approach would help prevent the loss of knowledge arising from the frequency of staff changes in relation to the frequency of incidents.

The governing bodies noted that a website containing the knowledge repository and the new planning approach was now available at <http://knowledgeonly-marinepolicy.weebly.com>

The governing bodies thanked ISCO for the valuable information provided.

MEPC Meeting - Presentation of the ISCO document Casualty Response and Discharge/Emission Regulation - Announcement of a New Website, was made available to interpreters and to the MEPC secretariat in the usual way, as follows.

This document invites the Committee to recall the documents previously submitted to Technical Group meetings 10 - 16 and subsequently as documents MEPC67/19/INF.13 and MEPC68/20/INF.6, all of which set out the benefits of knowledge-acceptance/belief-rejection in casualty response and in the regulation of discharges and emissions.

The Committee is also invited to recall ISCO's intention to cover all aspects of casualty response with a knowledge repository, a contingency plan identifying the physicochemical parameters which control all aspects of release fates, effects, and appropriate responses; and from which incident-specific plans are derivable by applying relevant values to the incident-specific parameters of the contingency plan. The Committee is further invited to recall that ISCO had recognised that such a new contingency/incident-specific planning approach would help prevent loss of knowledge from the frequency of staff changes in relation to the frequency of incidents.

The Committee is now invited to note that a website containing the knowledge repository relevant to casualty response and to discharge and emission regulation is now available at <http://knowledgeonly-marinepolicy.weebly.com> and that ISCO is willing to assist individual States in applying it to their own contingency/incident-specific planning requirements should they so wish.

However, because of time constraints, the Chairman opted, as he did at three previous meetings, to take documents

* ISCO News (continued)

as read, if submitted prior to the thirteen week deadline. This ruling covers most of the documents unless discussion is needed prior to instruction of working groups. Accordingly, the ISCO document and many others will be referenced as having been noted without dissent in the Meeting Report.

Dissent is rife, however, over the entry into force of the Ballast Water Management Convention, all of the approved management systems having failed to meet the regulated requirements when voluntarily installed on ships, thus casting doubt on the performance of all systems thus far 'approved'. Again, there is dissent over the availability of low-sulphur fuels prior to and after 2020. Yet again, some 90 member States insist that the current investigation of the energy efficiency of engines and hulls is without any undertakings as to use of the results or dates of implementation. Indeed, dissenting States have agreed to these investigations only because there are no such pre-investigative undertakings. Douglas Cormack

CLEAN GULF – ISCO MEMBERSHIP DIRECTOR. MARY ANN DALGLEISH WRITES FROM TAMPA, FLORIDA



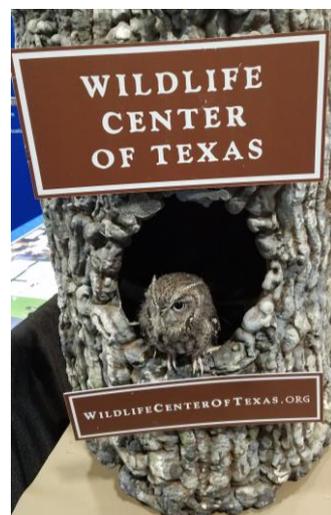
In the picture: ISCO President, David Usher with Sharon Schwarz, Executive Director of Wildlife Center of Texas.

“Good show. Made many contacts. Several interested in joining. Saw many old friends from ISCO members Lamor, Desmi, Elastec, Foru-Solution B. V., Imbiber Beads. as well as SCAA and Wu Yue from Hong Kong Oil Spill Response Technology.

Everyone seemed to be looking forward to IOSC in May in Long Beach. Overall, attendees seem upbeat about business.

The traditional draw for a bottle of fine Scotch Whisky was won by Sharon Schwarz, Executive Director of Wildlife Center of Texas”.

Wildlife Center of Texas mascot pictured on the right.



* Technical support

HOW DO YOU KEEP KILLER WHALES AWAY FROM AN OIL SPILL?



I sleep better at night knowing that we have a plan in place to keep endangered Southern Resident killer whales away from an oil spill. Preventing oil spills is key, but since killer whales, also known as orcas, spend much of their time in the busy waters around Seattle, the San Juan Islands, and Vancouver, British Columbia, there is always a chance a spill could happen. The Southern Residents are a small and social population of killer whales, so an oil spill could have major impacts on the entire population if they were in the wrong place at the wrong time.

We've learned from past experience with the 1989 Exxon Valdez oil spill that killer whales and other marine mammals don't avoid oiled areas on their own and exposure to oil likely can affect their populations. New information on impacts from the 2010 Deepwater Horizon oil spill on bottlenose dolphins (a close relative of killer whales) gives us a better idea of how oil exposure can affect the health and reproduction of marine mammals.

Oil spills are a significant threat to the Southern Resident population, which totals less than 90 animals, and the 2008 recovery plan [PDF] calls for a response plan to protect them. We brought experts together in 2007 to help us identify tools and techniques to deter killer whales from oil and develop a response plan so that we'd be prepared in case a major oil spill does happen. NOAA Office of Response & Restoration [Read the complete text of this article](#)

EVALUATION

A new 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 25 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.

Part 4

The Bonn Agreement Oil Appearance Code (continued)

Code 3 Metallic 5.0 to 50 μm - 5000 – 50,000 Litres per km^2

The appearance of the oil in this region cannot be described as a general colour.

The true colour of the oil will not be present because the oil does not have sufficient optical density to block out all the light.

Some of the light will pass through the oil and be reflected off the water surface.

The oil will therefore act as a filter to the light (fig 5).

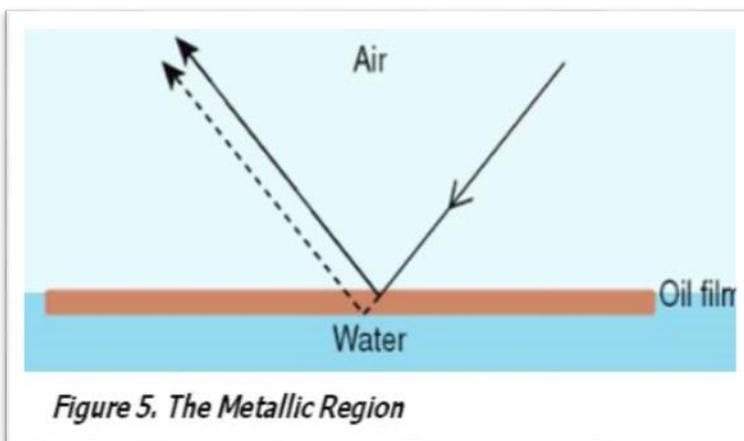


Figure 5. The Metallic Region



The extent of filtering will depend on the optical density of the oil and the thickness of the oil film.

The oil appearance in this region will depend on oil colour as well as optical density and oil film thickness.

Where a range of colours can be observed within a rainbow area, metallic will appear as a quite homogeneous colour that can be blue, brown, purple or another colour.

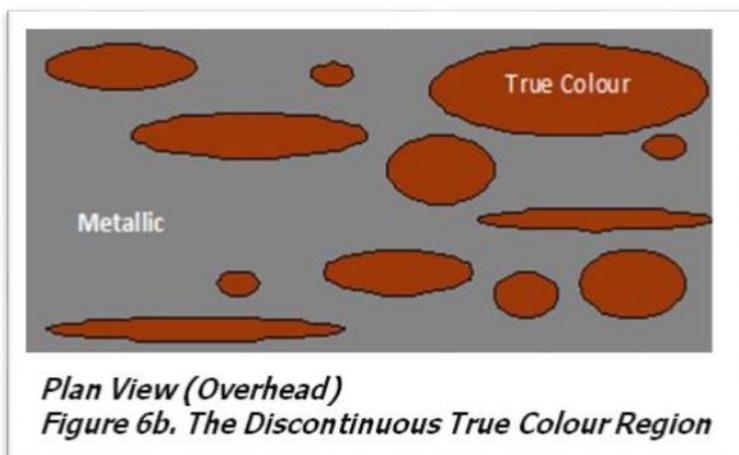
The 'metallic' appearance is the common factor and has been identified as a mirror effect, dependent on light and sky conditions. For example blue can be observed in blue-sky.

Code 4 Discontinuous

True Oil Colour 50 to 200 μm - 50,000 – 200,000 Litres per km^2

Code 4 is intermediate between Code 3 and Code 5, and consists of small areas, or patches, of Code 5, Continuous True Oil Colour in a background of Code 3, Metallic.

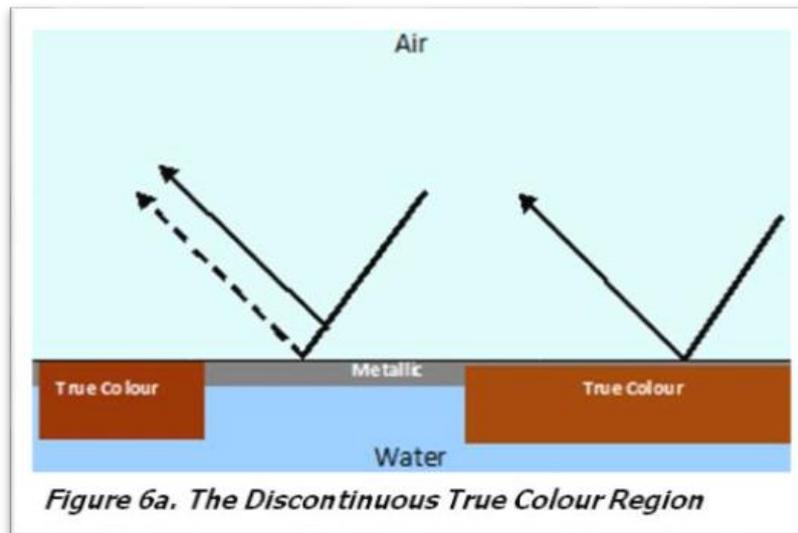
This is an accurate description of the behaviour of the oil layer – it does not spread as an even thickness layer, but consists of thicker patches in a thinner layer.



Plan View (Overhead)

Figure 6b. The Discontinuous True Colour Region

Special feature (continued)

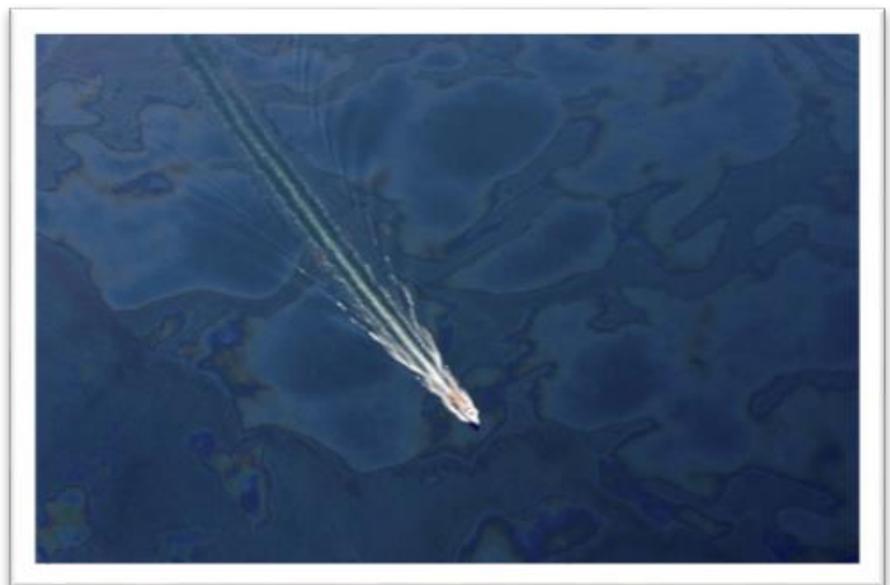


Observation of Code 4

Code 4 is intermediate between Code 3 and Code 5; it is a hybrid of Codes 3 and 5. "Discontinuous" refers to the Code being used to describe patches of Code 5 - Continuous True Oil Colour against a background of Code 3 - Metallic.

The size of the thicker oil (Code 5 - Continuous True Oil Colour) patches that can be seen will depend on the distance from which they are observed and the visual acuity of the observer.

Observers in boats, looking at the spilled oil from a distance of a metre or so, are able to easily see small patches of Code 5 in a background of Code 3 and should report this appearance as Code 4 - Discontinuous True Oil Colour.



Observers in aircraft, operating at altitudes of 500 ft, 1500 ft or 2500 ft will not be able to see small patches of Code 5 in a background of Code 3, but should be able to see much larger patches of Code 5, perhaps 0.5 to 1 metre across, in a background of Code 3.

From an aircraft, the appearance of a slick containing a large area of Code 4 - Discontinuous True Oil Colour, composed of individually small areas of Code 5 - Continuous True Oil Colour against a background of Code 3 - Metallic, will be a function of the concentration of the Code 5 patches.

At low concentrations (5 to 10% of the total area) they will probably be invisible and the area will be observed as Code 3 - Metallic. At some increased concentration (perhaps 40 or 50% of the total area), the appearance of that area of the slick will probably 'flip' from being all Code 3 - Metallic to being all Code 5 - Continuous True Oil Colour.'

In addition, to the issue of visual acuity, the human brain needs sufficient time to register and interpret what the eye sees; going lower to solve the height/distance (visual acuity) difficulty will only reduce the time available due to the increase in the relative speed of the aircraft to the object.

Special feature (continued)

Code 5 Continuous True Oil Colour 200 to More than 200 µm - More than 200,000 Litres per km²

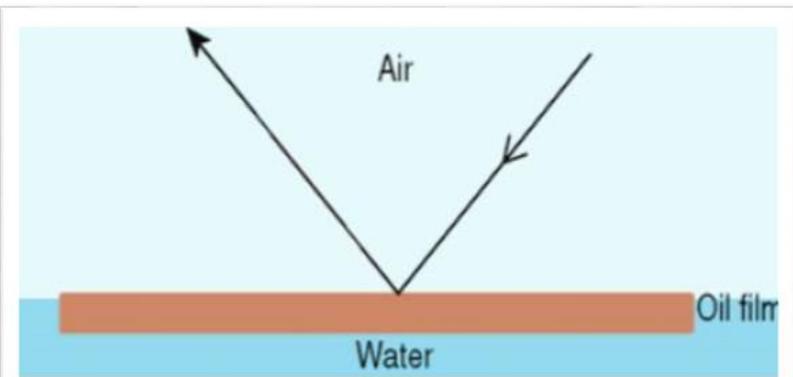


Figure 7. Thick Oil Films

For oil thicker than 50 µm the light is being reflected from the oil surface rather than the sea surface (fig 7).

The true colour of the oil will gradually dominate the colour that is observed.

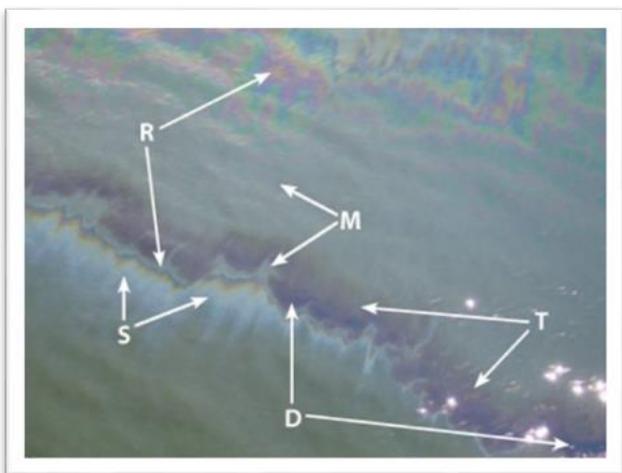
Brown oils will appear brown, black oils will appear black.

The true colour of the specific oil is the dominant effect in this category and the area will be generally homogenous (continuous).

It is strongly oil type dependent and colours may be more diffuse in overcast conditions.

There is no maximum thickness value for True Colours since it is not possible by visual observation from above to estimate the thickness of oil layers above 200 microns.

A spilled oil layer on water that is 0.5 mm thick will look, from the top, exactly the same as an oil layer that is several millimetres thick.



The light is reflected from the top surface of the oil; this gives information about the colour and texture of the surface of the oil, but cannot give any direct information about the thickness of the oil layer.

The photo right shows the different colours according to the BONN Agreement codes.

It needs to be said that calculating each colour while flying across the oil requires a lot of practice.

This scale below also converts the amounts into inches and gallons per square mile.

OIL THICKNESS ESTIMATIONS-				
Standard Term	Approx. Film Thickness		Approx. Quantity of Oil in Film	
	Inches	Mm		
Barely Visible	0.0000015	0.00004	25 gals/mile ²	44 liters/km ²
Silvery	0.000003	0.00008	50 gals/mile ²	88 liters/km ²
Slight Color	0.000006	0.00015	100 gals/mile ²	176 liters/km ²
Bright Color	0.000012	0.0003	200 gals/mile ²	351 liters/km ²
Dull	0.00004	0.001	666 gals/mile ²	1,168 liters/km ²
Dark	0.00008	0.002	1,332 gals/mile ²	2,237 liters/km ²

Thickness of light oils: 0.0010 inches to 0.00010 inches.
 Thickness of heavy oils: 0.10 inches to 0.010 inches.

To be continued

Publications

GUIDANCE FOR REMEDIATION OF PETROLEUM CONTAMINATED SITES (2016)

This publication (10-09-057) from the Washington State Department of Ecology, is intended to provide persons conducting studies and cleanups of petroleum contamination, and Ecology staff reviewing this work, with guidance on how to comply with these and other statutory and rule requirements.

This guidance is generally applicable to all types of petroleum contaminated sites and media, including petroleum releases from regulated underground storage tank systems to soils.

View or download at <https://fortress.wa.gov/ecy/publications/documents/1009057.pdf>

SAFEMED III BULLETIN – OCTOBER 2016

The technical seminars, workshops and training courses organised during this period contributed to the further enhancement of the expertise of the SAFEMED III beneficiary countries as well as to the fruitful exchange of knowledge between the maritime administration officials from the beneficiary countries and the EU Member States.

[Download the October 2016 issue of the Safemed III Bulletin](#)

IMO PUBLISHING NEWSLETTER – OCTOBER 2016

The International Maritime Dangerous Goods (IMDG) Code, 2016 Edition Amendment 38-16 (2 volumes) and the IMDG Code for Windows (V13), 2016 are now available for purchase. The French and Spanish printed versions will be available later this month.

[Read more about this and other new and forthcoming IMO publications](#)

GUIDANCE FROM CEDRE - UNDERSTANDING CHEMICAL POLLUTION AT SEA

Find out all about chemical spills caused by ships, improve your understanding of response to chemical spills at sea. An educational website.

<http://wwz.cedre.fr/en/Breaking-News/Understanding-Chemical-Pollution-at-Sea>

EMSA: MARITIME INFORMATION SERVICES CATALOGUE

The EMSA Maritime Information Services Catalogue provides a central source of information on the ICT-based maritime services delivered by EMSA to external users, their features, and present status.

<http://www.emsa.europa.eu/news-a-press-centre/external-news/item/2845-maritime-information-service-catalogue.html>

Links for recent issues of other publications (in alphabetical order)

AMSA Aboard	News from the Australian Maritime Safety Authority	August 2016
ASME EED EHS Newsletter	News and commentary on HSE issues from George Holliday	Most recent issue
Bow Wave	Sam Ignarski's Ezine on Marine & Transport Matters	Current issue
Cedre Newsletter	News from Cedre in Brittany, France	July 2016
Celtic and Biogenie enGlobe Newsletter	Technical Information on Polluted Site Remediation	Spring 2016
CROIERG Enews	Canberra & Regions Oil Industry Emergency Response Group	Current issue
EMSA Newsletter	News from the European Maritime Safety Agency	October 2016 issue
Environmental Technology Online	Environmental Monitoring, Testing & Analysis	October 2016 issue
IMO News Magazine	News from the International Maritime Organization	No 3, 2016
IMO Publishing News	New and forthcoming IMO publications	October 2016
Intertanko Weekly News	International news for the oil tanker community	November 4, 2016
JOIFF "The Catalyst"	Int'l Organisation for Industrial Hazard Management	October 2016 issue
MOIG Newsletter	News from the Mediterranean Oil Industry Group	October 2016 issue
NOWPAP Quarterly	News from the North West Pacific Action Plan	Quarter 1, 2016 issue
Ocean Orbit	Newsletter from the International Tanker Owners Pollution Federation	May 2016
OCIMF Newsletter	News from the Oil Companies International Marine Forum	October 2016 issue
Pollution Online Newsletter	News for prevention & control professionals	October 26 2016
Sea Alarm Foundation Newsletter	Oiled wildlife Preparedness and Response news from Sea Alarm	Autumn 2015 issue
Technology Innovation News Survey	News from US EPA – Contaminated site decontamination	Sept 16-30, 2016
The Essential Hazmat News	Alliance of Hazardous Materials Professionals	Feb 29, 2016 issue
Transport Canada Newsletter	News and articles re transport of dangerous goods in Canada	Winter 2014 issue
USA EPA Tech Direct	Remediation of contaminated soil and groundwater	November 1, 2016
USA EPA Tech News & Trends	Contaminated site clean-up information	Spring 2016 issue
WMU Newsletter	News from the World Maritime University	July 2016 issue

Your editor depends on regular receipt of updated links for listed publications. If these are not received, relevant entries may be discontinued.

Events

AZERBAIJAN: ONSHORE AND OFFSHORE OIL SPILLS: HSE IN OIL AND GAS

21 - 22 November, Baku, Azerbaijan –

Conference Overview: Against a backdrop of rising production and oil and gas megaprojects, issues of environmental protection and industry safety are becoming a regional priority.

Environmental control, reduction of the environmental cost of industrial activity, oil spill prevention and response and the rehabilitation of oil contaminated land undoubtedly rank among the most important issues that the industry now faces.

State authorities and oil and gas companies are today aware of the vital necessity of preparing and implementing a series of measures aimed at minimising the environmental risks incurred during the development of oil and gas fields.

Equipment Exhibition: Experts should not only hear about advances in equipment, but should see them “live”. For this reason, conference attendees will be able to visit a mini exhibition, at which leading suppliers will discuss and demonstrate their innovative technological solutions.

More information: http://www.ccapital.co.uk/en/info/conference/oil_spills_2016/obzor/

UPCOMING EVENTS SUMMARY

COUNTRY	2016	TITLE OF EVENT	LOCATION
For more information click on Title of Event			
UAE	November 7-10	Abu Dhabi Int'l Petroleum Exhibition & Conference	Abu Dhabi
LATVIA	November 8-10	HELCOM: 22nd Mtg of the Response Working Group	Riga
THAILAND	November 8	W'shop on Int'l Liability & Compensation Regime	Bangkok
CHINA	November 8-9	5th Oil Spill Response Workshop Conf. & Exhibition	Beijing
AZERBAIJAN	Nov. 21-22	4th Conf. & Exhib'n Offshore and Onshore Oil Spills	Baku
COTE D'IVOIRE	Nov. 21-24	GIWACF W'shop on Cont'y Planning & Compensat'n	Abidjan
KENYA	December 4	3rd Session of UN Environment Assembly (UNEA-3)	Nairobi
SENEGAL	December 5-7	GIWACAF Workshop on Dispersants and NEBA	Dakar
UK	December 7-8	19th Annual Salvage & Wreck Removal Conference	London
IRELAND	December 9	ISAA Meeting and Christmas Luncheon	Dublin
2017			
USA	January 4-6	27th Annual, No-Spills Conference	Acme, Michigan
KUWAIT	January 10-12	Kuwait 2nd Oil Spill Conference	Kuwait
USA	March 28-30	2017 SCAA Annual Meeting & Conference	Washington DC
UAE	April 10-12	RECSO EnviroSpill 2017	Abu Dhabi
SINGAPORE	April 25-28	10th Intl Chemical and Oil Pollution (ICOPCE)	Singapore
USA	May 15-18	International Oil Spill Conference	Long Beach CA
2018			
UK	March 13-15	2018 INTERSPILL Conference and Exhibition	London

To request posting of an event of interest to the Spill Response Community please send details to the Editor

Company news

UK & IRELAND: BRAEMAR HOWELLS' BELFAST BASE WINS SUCCESSFUL ACCREDITATION

Braemar Howells' Belfast response base has successfully completed an oil spill response re-accreditation assessment and has been awarded International Spill Accreditation Association (ISAA) Certification in the following oil spill response disciplines – Freshwater Level 3, Marine Level 3 and Shoreline Level 3. <http://www.braemarhowells.com/>

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