

OCEAN ORBIT

THE NEWSLETTER OF THE INTERNATIONAL TANKER OWNERS POLLUTION FEDERATION LIMITED



Looking to the future

**Dr Karen Purnell,
ITOPF Managing Director**

ITOPF celebrated its 40th anniversary in 2008. The event was marked by a very successful and well attended dinner at Gibson Hall, London. Most significantly, the occasion heralded the evolution of the Federation from a small company providing what were primarily administrative services to one that is now relied upon for pollution-related technical services and 24/7 emergency response capabilities by the shipping industry on a global scale.

As we stand at the brink of a new decade, further important transitions are taking place. After 30 years with ITOPF, in May, Tosh Moller handed over the helm to me and in September, Richard Johnson took up the role of Technical Director. As has previously been the case, there is a chemist and marine biologist at the head of the Federation (albeit with roles reversed) and, with 15 years of experience at ITOPF

apiece, we are well equipped to take advantage of the opportunities and meet the challenges that lie ahead.

As any good biologist will tell you, the evolutionary process is a dynamic one. As a mature organisation, ITOPF has the benefit of a solid and very credible reputation underpinned by 'tried and tested' practices. To this extent, our biggest challenge is likely to be avoiding complacency and ensuring that the company continues to deliver the services that meet the evolving needs of our members and the spill community at large. Recognising this, we have recently reviewed our strategy, concluding that broadening our services is indeed worthwhile but not to the extent that it compromises our core activities of emergency response and claims assessment.

The task that lies with the new leadership at ITOPF is to identify ways to remain in-step with the needs of our shipowners while empowering our highly

skilled team to deliver the complementary and unique services upon which the maritime community has now come to rely.

One of the first steps that we have taken with this edition of *Ocean Orbit* is to respond to calls for our newsletter to be sent electronically and to enable ships' crews to have easy access to it on-line. Consequently, this publication will be sent by both mail and e-mail. As before, the newsletter is also available on our website. We hope that delivering an electronic version of *Ocean Orbit* will make our news more accessible and widespread as well as satisfying our readers who prefer to 'screen read'.

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▲ Dr Karen Purnell, ITOPF's new Managing Director

Looking to the future

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In this latest edition of *Ocean Orbit* we feature three new incidents, all involving non-tankers in stormy conditions. In fact, since the publication of our last issue in September 2008, we have attended only three incidents from tankers. This reduction in spills from tankers is a strong positive step towards the goal of zero tolerance to oil spills as expressed by many of the world's leading tanker-owning companies. Nevertheless, the scale of disruption caused by even a single large oil spill, such as the HEBEI SPIRIT, ensures that ITOPF is kept busy and we still have significant resources committed to helping the shipowner, his insurer and the IOPC Funds in assessing the numerous claims that have been submitted.

In other areas of our activity, positive and strong relationships with government agencies remain high on ITOPF's agenda. Similarly, developing our services in the areas of Hazardous and Noxious Substances (HNS) and environmental damage is making good progress. This work is now facilitated by dedicated internal working groups. We are also pleased to note that improvements to our Membership Database have been very successful.

I hope that you will enjoy reading this edition of *Ocean Orbit*. I believe that it reflects the fact that ITOPF, like the shipowning community that we serve, is an evolving organisation with an eye to the future.

Oil spills in stormy seas

ITOPF has attended on-site at 22 incidents in the last 12 months; one was from a shore-side tank farm, three were from tankers and the other 18 incidents involved spillages or potential spillages of bunker fuel from non-tank vessels. Here we highlight the case of two stricken vessels in the Bay of Gibraltar, the FEDRA and TAWE, and outline two other incidents where adverse weather conditions played a role, the PACIFIC ADVENTURER in Australia and MORNING SUN in Taiwan. Though tanker incidents barely feature in the year under review, we are still heavily involved with a number of previous tanker spills, most notably the HEBEI SPIRIT; a brief summary of our continuing role in past cases is provided on page 5.

FEDRA and TAWE: A tale of two stricken ships

On Friday 10th October 2008 the Andalucian coast of Spain was hit by a powerful storm that was the worst to affect the area for around 40 years, with winds gusting in excess of 65 knots ('Hurricane' Force 12) and huge breaking waves causing widespread damage. The busy ports of Algeciras and Gibraltar were among the worst affected places, and the focus of attention for maritime authorities in the area for the following days was on two ships that had become casualties of the storm within a few miles of each other.

The first of these two stricken ships was the unladen 36,000 GT bulk carrier M/V FEDRA which had been at anchor off the coast of Gibraltar. The master had reported engine problems and was unable to take shelter after the anchor began to drag in the strong winds and rough seas. The ship eventually grounded at the base of

the cliffs at Europa Point on the southern tip of Gibraltar. Fortunately, all 31 of the crew were brought to safety in a joint rescue operation by Spanish and Gibraltarian emergency services.

This was to be a challenging evening for the area's maritime response personnel when, a few hours later, just across the bay the similarly unladen 24,646 GT bulk carrier TAWE also ran into difficulties. She had been waiting to enter a dry dock in the Port of Algeciras but began dragging her anchor and drifting in the fierce winds and surging waves. Eventually, at approximately 5am, she ran aground at Punta de San Garcia, a rocky headland to the south of the port.

Shortly after the two groundings ITOPF was requested to respond by the vessels' insurers. Subsequently, two Technical Advisers arrived on site to provide advice on pollution-related issues, one stationed in Gibraltar for the FEDRA, and the other in Algeciras for the TAWE.

By midday on Saturday 11th October the FEDRA had succumbed to the forces from the intense wave action and split in two, resulting in the loss of about 200

▼ TAWE aground south of Algeciras Port





▲ Two sections of FEDRA aground at Europa Point, Gibraltar

tonnes of the 370 tonnes of bunker fuel onboard. Meanwhile, across the Bay of Gibraltar, the TAWA suffered extensive damage, but fortunately only a relatively small quantity of diesel oil was lost. By Sunday 12th October the severe weather had abated and salvors were able to begin preparing to re-float her. By Monday 20th October, just nine days after the grounding, the TAWA was successfully re-floated with minimal release of oil.

ITOPF remained on site in Algeciras throughout the lightering and refloating operation and liaised closely with the Spanish Maritime Safety and Rescue Agency (Salvamento Marítimo) and the Algeciras Port Captain to advise on the most effective way to respond in the event of any significant releases of oil. However, considering the comparatively stable condition of the TAWA, and the fact that she was not losing bunker fuel, the main focus of attention for both the Gibraltar and the Spanish maritime authorities at the time was the FEDRA.

Although the FEDRA was aground on the coast of Gibraltar, the releases of bunker oil from the vessel also threatened the Spanish coast, making the incident a transboundary matter with active responses initiated by both governments

from the outset. Since ITOPF had one adviser stationed in Gibraltar and a second in Algeciras, we were well-placed to provide consistent recommendations on effective pollution response actions for both the Gibraltar Port Authority and the Spanish Salvamento Marítimo.

Regular aerial surveillance flights were conducted by the Spanish authorities and ITOPF was invited to join the official observers on some of these flights to gather information on the movement of oil at sea and the extent of contamination. Initial surveys of this kind confirmed that the released oil was being carried both into the Strait of Gibraltar and also into the Bay of Gibraltar. Fortunately, within days, the quantities of oil observed at sea had declined considerably, and the shoreline impacts were fairly limited in extent and severity. Although there were some pockets of oiling in the vicinity of Algeciras and reports of tar-balls on beaches near to Tarifa, the bulk of the contamination remained on the west coast of Gibraltar affecting recreational areas and the main intakes for the desalination plant that supplies freshwater to the territory. The clean-up was tackled by contractors working on behalf of the Gibraltar authorities, with ITOPF providing advice

with regard to priorities, end-points and techniques.

After removal of the remaining fuel oil from the FEDRA, salvors were able to successfully re-float the forward section on 31st December. The heavily damaged stern section has remained an ongoing salvage issue, but the accommodation block was successfully cut away and removed in December 2008.

It is rare for ITOPF to attend two incidents so close to one another at the same time, and, in what might be considered a remarkable coincidence, the grounding locations of the FEDRA and TAWA were within metres of two incidents attended by ITOPF in 2007: namely that of the NEW FLAME and SIERRA NAVA respectively.

Located where they are at the gateway to the Mediterranean, the neighbouring ports of Algeciras and Gibraltar provide a convenient stopping-off point for ships passing to and from the Atlantic, and have busy bunkering facilities as a result. Indeed, ITOPF also recently attended two oil spills from bunkering vessels within the Bay of Gibraltar: the sinking of the SPA BUNKER IV in January 2003 and an accidental oil release from the EILEEN in September 2005. Hence, we have attended a total



▲ Shoreline clean-up at Moreton Island, Queensland

MORNING SUN

On 10th November 2008, the unladen car carrier **MORNING SUN** (14,663GT) ran aground in heavy weather on the northern-most point of Taiwan. The crew were rescued and taken ashore by helicopter. An estimated 100 tonnes of the 493 tonnes of bunker fuel onboard were lost, resulting in contamination of approximately 3km of coastline, mostly along an 800m stretch of shoreline immediately adjacent to the ship. The extensive damage to the **MORNING SUN** meant that she had to be dismantled in-situ.

ITOPF was asked to work with the local team to support the shoreline clean-up activities and to provide assistance with the assessment of fisheries damages, as well as to develop a suitable environmental monitoring programme. Clean-up work initially focused on the manual removal of the bulk oil from the shoreline by a workforce of approximately 150 local villagers. Low pressure flushing and high pressure washing was then used to release and recover the remaining oil from rocky shores. The clean-up officially ceased on 9th March 2009 following a joint inspection by government and local village representatives. The oil spill resulted in some localised disruption to near-shore fishing activities and a joint monitoring programme was developed with the Taiwan Environmental Protection Administration (EPA) to assess levels of oil contamination and physical damage.

Previous incidents and training opportunities in recent years in Taiwan have enabled ITOPF to strengthen the relationship with the Taiwanese authorities. As a consequence, throughout the **MORNING SUN** incident, ITOPF, the P&I Club appointed surveyors, the clean-up contractor and the EPA worked closely together and reinforced the value of adopting a co-operative approach when dealing with oil spills.

of six shipping incidents within the Bay of Gibraltar in as many years. Looking further back, a quarter of the spills ITOPF has attended in Spain since 1970 were in Algeciras, and we have attended a total of four spills in Gibraltar.

Historically, the frequency of shipping accidents tends to be linked, in part, to traffic density and flow. Given that these factors are both reported to have increased within the Bay in recent years, it follows that the risks of an incident would also increase. Considering that operations within the ports of Algeciras and Gibraltar both contribute to the risk of oil pollution, and the respective governments share the risk of impacts from spills along their coastlines, a bi-lateral cooperative agreement might provide a practical and worthwhile mechanism to facilitate the response to future transboundary incidents. Recent groundbreaking talks between the governments of the UK, Spain and Gibraltar show promise in this respect.

PACIFIC ADVENTURER

On 11th March 2009, the general cargo ship **PACIFIC ADVENTURER** (GT 18,391) ran into difficulty off Moreton Island, South Queensland, Australia during Tropical Storm Hamish and lost 31 containers of granulated ammonium nitrate overboard. The dislodged containers caused a 1-metre tear above the water-line on the port side of the ship and about 20-30 tonnes of bunker fuel was spilled. It was later found that damage to the starboard side had also occurred and the estimate of the oil lost increased to between 230 and 270 tonnes, corresponding to a significant increase in the severity of the incident and its media profile.

ITOPF was notified by the ship's insurer and requested to attend on-site to provide advice to the authorities on the likely impacts of the spilled bunker oil and the sunken containers of ammonium nitrate, as well as to offer recommendations regarding the counter-pollution response.

Oil had come ashore in several locations along approximately 80km of the South Queensland coastline, but the worst affected area was Moreton Island, a national park and popular destination for camping, four-wheel driving and nature trails. Beaches at nearby Bribie Island and the Sunshine Coast to the north were also affected to a lesser degree. The at-sea response was hampered by bad weather but manual shoreline clean-up was carried out and mostly completed by late April, despite additional political and media pressure caused by the Queensland State Election.

The sunken containers were located in late March near the site of the incident by two Australian Navy minesweepers but it is not clear at this stage whether attempts will be made to recover them.

▼ Manual removal of bulk oil from the shoreline adjacent to the **MORNING SUN**



ITOPF's continuing involvement in past cases

The VLCC HEBEI SPIRIT was struck by a crane barge while at anchor 5 miles off Taean on the west coast of the Republic of Korea on 7th December 2007, spilling about 10,500 tonnes of crude oil. The oil contaminated coastlines as far as 400km away and caused severe damage to coastal communities and mariculture industries.

Almost two years after the incident we continue to be heavily involved in supporting the IOPC Funds and the vessel's insurer in the assessment of claims for clean-up and pollution damage. Our technical advisers have continued to make numerous trips to Korea this year. These have focused on fisheries assessments and assessments of the need for further clean-up in isolated areas.

It is anticipated that total losses arising from the incident will exceed the amount available for compensation under the 1992 CLC and Fund Conventions (approximately £160 million). The level of pro-ration currently stands at 35% and the Korean government has agreed to pay the remaining percentage of assessed claims.

Significant claims support is also continuing on other tanker incidents such as the SOLAR 1 (Philippines, August 2006) and VOLGONEFT 139 (Russia/Ukraine, November 2007).

We remain closely involved in the Natural Resource Damage Assessment (NRDA) taking place following the COSCO BUSAN incident (San Francisco, USA, November 2007) and have been working with the Trustees' and RPs' experts to facilitate prompt and amicable agreement of the damages arising from this incident, in accordance with the MoU between the International Group of P&I Clubs (IGP&I Clubs) and NOAA. Progress so far has been very good and the level of co-operation with ITOPF during the damage assessment for an incident of this complexity is unprecedented.



▲ ITOPF is developing its services in the field of HNS response

Understanding HNS

The entry into force of the OPRC-HNS Protocol and the drive to ratify the HNS Convention has focused attention on the potential dangers of hazardous and noxious substance (HNS) spills at sea. While the fate and effects of oil spills in the marine environment are well documented, there is limited information for chemical spills. Words such as 'carcinogenic', 'mutagenic' and 'neurotoxic', which appear on shipping documents, can be easily misinterpreted and extrapolated into alarmist worst-case scenarios.

Statistically, chemical spills at sea occur less frequently than oil spills, not least because the volume of oil transported by sea far exceeds the global chemical seaborne trade. HNS cargoes, however, have the potential to be more dangerous than oil, as the CASON incident (Spain, 1987) demonstrated. This ship was loaded with 1,100 tonnes of packaged HNS identified as toxic, flammable and corrosive. A fire broke out onboard after containers of sodium came into contact with seawater and killed 23 of the 31 crew members. Subsequent explosions destroyed the ship and resulted in the evacuation of some 15,000 people within a 5 mile radius. Fortunately, such major incidents are rare, but misdeclaration of HNS, poor packaging, labelling, weighing or incorrect stowage can all, directly or indirectly, lead to a casualty.

To date, investment in research and development for HNS spills has been limited, particularly when compared with oil spill R&D. This is largely because there are so many more substances potentially involved with widely differing properties and the frequency of incidents is relatively low. Nevertheless, the volume of chemicals transported by sea is forecast to rise and some increase in the number of HNS incidents may be expected. The IMO, EMSA and some flag states are supporting R&D measures to ensure an adequate level of preparedness for HNS incidents and to gain a better understanding of the advantages and limitations of the response techniques that are currently available. ITOPF has also expanded its capability in connection with HNS spills through an internal programme of HNS emergency response planning, training and exercises. In addition, ITOPF supported the IMO's 4th R&D Forum on HNS in the Marine Environment in May, at which Dr Karen Purnell delivered the White Paper "Are HNS spills more dangerous than oil spills?". This reviews the current arrangements for prevention, preparedness and response and evaluates these against the potential for serious harm from HNS and lessons learned from past incidents. The full text of the paper is available on ITOPF's website. At a recent meeting of the OPRC-HNS Technical Group, it was agreed that this paper would be used to assist the Group to scope its HNS work programme for the next period.

ITOPF outreach work in China during 2009

The Far East, and China in particular, is our main 'hot spot' for spills and since 2000 we have been involved in 18 cases in China. The number of spills in the region, coupled with the associated complexities, has provided the impetus for our investment in outreach work. In addition to our ongoing involvement in incidents in China, we have welcomed a number of different Chinese delegations to our office this year, hosted two interns, and taught at seminars and workshops in China. We have also provided comments and suggestions on regulatory developments in China. The following is a brief description of some of these activities.

CMS / MSA Internship – February, 2009 (London)

From 7th February to 7th March, ITOPF was pleased to host two Chinese interns. Mr Zhang Jian, from China Marine Services (CMS), and Mr Dong Leyi, from China Maritime Safety Administration (MSA), joined us to learn more about ITOPF and our work, particularly how we apply the criteria of the international Conventions during our attendance on-site. We arranged a series of presentations on oil spill response methodology, fisheries impacts, wildlife rehabilitation, claims assessment, environmental damage, HNS response, remote sensing, reasonable use of models and GIS technology. We also arranged visits to various international organisations, oil spill response contractors and authorities, such as the IMO, BMT, the UK Maritime & Coastguard Agency, IOPC Funds, IPIECA and the International Group of P&I Clubs.

The interns gave presentations on the roles of their organisations and the most recent developments in the Chinese oil spill response sector. Of most value were the many opportunities for informal discussion

▼ Shoreline clean-up in Guangdong Province following the spill from container ship *AGIOS DIMITRIOS 1*, September 2009



▲ Chinese delegation of lawyers and ITOPF discussing environmental damage

and sharing of experiences over the course of their time with us.

ITOPF/ NCSEMC Seminar – April, 2009 (Qingdao)

In April, Helen Chapman, Alex Hunt and Michael O'Brien participated in a joint seminar hosted by the North China Sea Environmental Monitoring Centre of the State Oceanic Administration (NCSEMC) in Qingdao, China. The 2-day seminar attracted an audience of 60-70 participants from a number of governmental, academic, industry, and legal organisations in China and covered topics such as contingency planning, at-sea and shoreline response techniques and environmental impacts. Particular emphasis was placed on ecological damage assessment practices worldwide and best practice in oil spill sampling and analysis. The seminar provided an excellent opportunity for ITOPF to promote good science and international practice to a dynamic and interested audience.

Oil Spill Damage Assessment Seminar – May 2009 (London)

In May, ITOPF took advantage of a visit by five Chinese engineers to host a one-day seminar on post-spill damage assessment. The visitors came from the MSA headquarters in Beijing, Shenzhen MSA, the Waterborne Transportation Institute (Beijing), and the National Marine Environmental Monitoring Center (NMEMC) in Dalian.

In addition to presentations and explanations of the respective roles of the various organisations present, there was discussion on topics such as liability and compensation, best practice in claims formulation and assessment, and ITOPF's experience with methods used to quantify and assess environmental damage worldwide.

Environmental Damage Seminar – June 2009 (London)

In June, we were pleased to receive a delegation of five Chinese judges from the Dalian and Beihai Maritime Courts, the Tianjin and Guangdong Courts of Appeal and the Beijing Supreme Court.

Again, the key topics of interest to our visitors were the role of ITOPF, practical application of the international compensation Conventions, international approaches to environmental damage and fisheries claims assessment. Over the course of several hours, experiences were shared and questions asked about the regimes operating both in China and internationally. Our visitors explained that China has a growing awareness of environmental issues and is seeking to gain knowledge of 'best practice'.

New Membership Database

ITOPF launched a new version of its Membership Database in December 2008, which has improved the speed and ease of membership and vessel renewals. The new procedures offer increased flexibility and are better attuned to the needs of our members, their brokers and P&I Clubs. Additional view-only functionality allows Clubs to print their own ITOPF Membership Record Forms from a password-protected area of the ITOPF website, and to view and download tanker/membership details. A similar facility also exists for members and their agents and brokers. Users who prefer to work directly with the ITOPF Membership Secretary, Karen Spencer, are still very welcome to do so.

ITOPF's membership currently comprises over 5,700 tanker owners and bareboat charterers, who between them own or operate about 10,000 tankers, barges and combination carriers with a total gross tonnage of 297 million GT.

IMO/UNEP Guidance Manual, 2009

Several members of the ITOPF technical team contributed towards the development of the new "Guidance Manual on the Assessment and Restoration of Environmental Damage following Marine Oil Spills", a joint publication by the IMO and UNEP (United Nations Environment Programme). The Manual provides guidance on strategies that may be used to assess the damage and subsequent recovery of the environment following an oil spill. It emphasises the importance of pre-spill planning measures and discusses the international regime that provides compensation for pollution damage caused by tankers. Practical examples of damage assessment and restoration measures are provided in a series of case histories.

The Manual, published in April 2009, is available from IMO Publishing (www.imo.org), priced £13.



ITOPF support on environmental damage issues

For many years ITOPF has been closely involved in environmental damage issues following incidents around the world and we use our practical experience to assist local experts to minimise environmental injury, assess any damage, offer advice on claims for compensation and, on occasion, to evaluate the technical merit of restoration options where this might be feasible. Our advice and experience is also sought in various forums, such as the IMO and the IOPC Funds, when dealing with environmental damage and the many and varied perceptions that surround this topic.

In recognition of the ever-growing public and political interest in this issue, ITOPF has recently formed an internal working group with an initial focus on hosting in-house seminars on damage assessment techniques and recent developments, participating in external specialist research groups and developing best-practice, for example, on damage assessment methods.

Many of the important environmental damage issues that we are involved in originate from incidents that have occurred in the United States, China, Egypt and the European Union. In the United States, there are large cases with Natural Resource Damage Assessment (NRDA) components such as the SELENDANG AYU (2004) and the COSCO BUSAN (2007). In these, and in other cases, ITOPF is working together with the Federal and State Trustees under the umbrella of the recently renewed MoU between the National Oceanic and Atmospheric Administration (NOAA) and the International Group of P&I Clubs (IGP&I). A similar MoU is currently being finalised between the US Department of Interior (DOI) and the IGP&I. We are also part of a US government/industry working group charged with evaluating models used during damage assessment and identifying protocols for gathering 'short-lived' environmental data during the first few hours of an incident.

ITOPF has been involved in several oil and HNS incidents in China that have environmental damage components. Working together with the relevant P&I Clubs and Chinese authorities, we have been able to provide valuable technical support, both on site and within the Chinese court system, to evaluate any damage and ensure that claims are formulated in ways that conform to internationally accepted standards. As mentioned in more detail on page 6, we have had encouraging discussions with senior representatives from the Chinese enforcement, regulatory and judicial agencies on scientific best-practice during incidents and during the formulation of subsequent claims. It is expected that this dialogue will continue and benefit all parties involved.

In Europe, recent work on implementing the 2004 EU Environmental Liability Directive (ELD) has shown that there is a considerable amount of groundwork still to be done to encourage all parties potentially involved in ELD cases to understand and properly apply the concepts used to assess environmental damage. While signatories to the CLC, Fund, Bunker and HNS Conventions should use these international instruments rather than the Directive for cases that qualify, scenarios are foreseeable where the ELD might apply to marine shipping incidents. This is especially the case for spills of bunker fuel or HNS in a European country where the international Conventions covering such cases are not in force.

Staff changes

In May 2009, we recruited two new technical advisers: Dr Paul Vorwerk and Dr Hendrik Renken. Paul is an environmental scientist, who recently completed a PhD in coastal and inshore marine ecology. Hendrik (Henk) is a marine ecologist, with expertise in mangroves and corals. On the administration side, we were joined by Karen Spencer in August 2008 as Membership Secretary and Carla Smith in May 2009 as Technical Group Secretary. Karen previously worked in a membership role at the Institute of Marine Engineering, Science and Technology (IMarEst) and Carla was formerly PA to the directors of a global consultancy firm.

In September 2009, Richard Johnson took over the position of Technical Director from Hugh Parker, who has now moved to a part-time role as Principal Technical Adviser. Richard is a marine biologist with a Masters degree in Radiation and Environmental Protection. He has been with ITOPF for almost 15 years and was formerly a Technical Team Manager. Also in September, Dr Michael O'Brien was promoted to Technical Team Manager. Michael joined ITOPF in 2001 and has previously worked in the United States for the NOAA Damage Assessment Center and also in Austria as Assistant Professor for Environmental Economics.



▲ Presentation of an ammonite to Dr Tosh Moller on his retirement (courtesy of: © Dianna Bonner (<http://worldvisionphotos.co.uk>))

Dr Tosh Moller retires as Managing Director

In March, friends and former colleagues joined Tosh Moller at 30 St Mary Axe ("the Gherkin") in the City of London to celebrate his retirement from ITOPF after 30 years' service.

Tosh, a marine biologist, joined ITOPF in 1979 and became Managing Director in 2003. He attended over

90 spills worldwide and played a major part in building, maintaining and promoting the Federation's reputation for consistent and sound technical advice on ship-source pollution and related matters. We are grateful to him for his many years of dedicated service to ITOPF and to the marine industry.



▲ New staff: Karen Spencer, Henk Renken, Carla Smith and Paul Vorwerk

Mailing List

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We are aware that there have been difficulties using our 24hr emergency pager number from some countries. An alternative number to try if this should occur is: +44 20 7566 6998.

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