



PERF Newsletter

February 2006

Environmental,
Health,
& Safety
Solutions for the
Petroleum Industry

Spring 2006 PERF Meeting
March 20-22, Paris La Défense, France

Hosted by:



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The spring 2006 PERF meeting will focus on "**Environmental Risk Assessment Methodologies: Biological and Analytical Aspects**". Analytical and biological approaches are complementary to describe alterations of the ecosystem: the analytical approach is necessary to characterize the nature of pollution and the biological approach is necessary to evaluate the bioavailability and the real effects on live organisms. Data generated have to be used for relevant risk assessment studies.

Board of Directors

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Topics such as environmental management of emissions, the whole effluent assessment and the control of risk from produced water discharge will be presented. The optical technologies for air monitoring and the health effects of soil after treatment will be explained. The Network for Contaminated Land in Europe (NICOLE) and the Oil Companies' European Association for Environment, Health and Safety in refining distribution (CONCAWE) will give some presentations on ecological assessment and environmental risk assessment related to petroleum products and groundwater.



The meeting will be held in Paris (France) on Tuesday 21st and Wednesday 22nd of March 2006. The meeting will be structured as follows: half day for water, half day for air, and half day for soil/waste. Some presentations will also be made on petroleum products. The Upstream and Downstream discussion groups and the PERF business meeting will be on Wednesday afternoon. The board meeting, followed by the board dinner, will be on Monday, March 20. The meeting will be held in the TOTAL building "Tour Coupole" in the meeting room "salle des congrés A and B" on the 1st floor.

Attendees should return a completed registration form by March 6, 2006 to: Veronique Versepuy at veronique.versepuy@total.com or Fax +33 (0) 147 442 590.

There is no charge to attend PERF meetings; however, attendees are responsible for making their own hotel reservations.

A block of rooms has been reserved at two hotels near the TOTAL building:

Spring Meeting (Continued)

HOTEL MERCURE - 35 Cours Michelet - 92060 PARIS LA DÉFENSE

15 single rooms

Phone: +33 (0) 147 739 090
Fax: +33 (0) 147 764 436
Email: H2816@accor.com
Price: 124€
Location: 10 minute walk from the Coupole Tower
Additional Info: www.mercure.com

HOTEL NOVOTEL - 2 Boulevard de Neuilly - 92081 PARIS LA DÉFENSE

15 single rooms

Phone: +33 (0) 141 452 424
Fax: +33 (0) 141 452 425
Email: H0747@accor.com
Price: 153€
Location: 20 minute walk from the Coupole Tower
Additional Info: www.novotel.com



These rooms are guaranteed only until FEBRUARY 20; participants are encouraged to reserve rooms as early as possible. When making your reservation, it is necessary to indicate that you are attending the PERF Meeting.

Charles de Gaulle and Orly are the main airports into Paris. If you're not familiar with Paris, the easiest way to get to Paris La Défense is to take a taxi. It will cost you about 55€. Shuttles are also available at the airport at approximately 25€/pers. You can make your reservation online: www.netcapricom.com. Another alternative is the metro (RER), at approximately 10€.

Agenda, registration forms, maps, and additional information are available on the PERF website: www.perf.org.

Cooperative Projects

PERF Project 2004-05 - Understanding the Effects of Time and Energy on the Effectiveness of Dispersants

The Norwegian research institute SINTEF and the French research institute CEDRE jointly began testing for Phase I of this study in May 2005. The project objective is to determine if chemical dispersants used for marine oil spills can remain effective after extended contact times with spilled oil in calm sea conditions. Phase I testing includes performing lab-scale IFP dispersant effectiveness tests after applying dispersant to different types of crude oil for time periods of one minute to two weeks. Positive results from this research would provide data supporting early application of chemical dispersants to marine oil spills even in calm sea conditions. Dispersants are currently considered an ineffective response option in calm seas because the mixing energy is not available to generate and disperse oil droplets. If dispersants can remain effective over time, then early application will allow them to act when sea states increase. A paper describing preliminary findings will be presented at Interspill 2006 in London, March 22.

Project participants include ExxonMobil, Total, Statoil, Sakhalin Energy Investment Company, the U.S. Minerals Management Service, Alaska Clean Seas, and the Fisheries and Oceans Canada - Centre for Offshore Oil and Gas Environmental Research. Please contact Tim Nedwed (tim.j.nedwed@exxonmobil.com) for additional information.

Cooperative Projects (Continued)

PERF Project 2003-07 - Dispersant for Viscous Oil



The objective of this project is to evaluate a new chemical dispersant formulation developed by ExxonMobil that is capable of treating oils currently considered too viscous for conventional dispersants. Marine spills of oil can quickly weather by evaporation of light ends or emulsification to become too viscous for effective application of conventional chemical dispersants. In polar regions, low temperatures can also quickly raise spilled oil viscosities. The dispersant window can be very short depending on the oil properties and environmental conditions. A dispersant for viscous oil will allow an increase in the amount of time the dispersant response option can be utilized.

This project was selected by PERF members to receive funding through grant money provided by the U.S. Department of Energy. SL Ross Environmental Research Limited in Ottawa, Canada was selected as the project manager. The scope of the project is to complete large-scale testing of the effectiveness of the new dispersant formulation using the U.S. Minerals Management Service OHMSETT oil-spill test basin in Leonardo, NJ. These tests are scheduled for October 2006.

Please contact Tim Nedwed (tim.j.nedwed@exxonmobil.com) for additional information.

PERF Project 2003-05 - Chemical Herders to Increase *In Situ* Burning Window-of-Opportunity



The objective of this study is to demonstrate that *in situ* burning of marine oil spills in ice can be enhanced by

applying chemical herders. Chemical herders are surface active compounds that act to thicken spilled oil by "herding" it into a smaller area. Thicker oil is more amenable to *in situ* burning. *In situ* burning is a proven response option for oil spills in concentrated ice because the ice acts as a barrier to limit spreading, keeping the oil thick. In lower concentrations of ice, spilled oil can quickly spread too thin to sustain combustion. In open water, fire resistant booms can be used to maintain thick, burnable oil. In a dynamic ice environment, booms are impractical. Chemical herders may be an alternative to allow *in situ* burning in lower concentrations of ice.

Phase I (small-scale lab tests) and Phase II (somewhat larger-scale lab tests) for this project were completed with positive findings. The Phases I and II findings were presented at the 2005 Arctic and Marine Oil Spill Conference held in Calgary, Canada in June. Currently SL Ross Environmental Research Limited in Ottawa, Canada is conducting Phase III (basin-scale testing). In November 2005, Phase III testing began at the U.S. Army Cold Regions Research and Environmental (CRREL) arctic capable basin. In February 2006, larger-scale basin tests using the U.S. Mineral Management Service OHMSETT oil-spill test basin in Leonardo, NJ will be completed. Final Phase III testing is planned for fall 2006 using the Prudhoe Bay Fire Training Grounds managed by Alaska Clean Seas.

Project participants include Agif Kashagan North Caspian Operating Company, ExxonMobil, Sakhalin Energy Investment Company, Statoil, and the U.S. Minerals Management Service. Please contact Tim Nedwed (tim.j.nedwed@exxonmobil.com) for additional information.

New Project 04-06: Reducing Desalter Environmental Impacts

BP is coordinating Project 2004-06 "Reducing Desalter Environmental Impacts". The objective of this project is to assess the performance of refining desalter systems when running various slates of Heavy Crude Oil, determine effects on desalter effluent characteristics, and evaluate desalter effluent treatment options.

Contracts are expected to be finalized in 1Q06. The total project cost is projected to be at least \$250,000 based on five participating companies (BP, ExxonMobil, ConocoPhillips, Repsol YPF, and Total). KBW Process Consultants will be the primary contractor for the project. The project utilizes a phased approach to survey issues relating to desalters, technology options to address



issues and then progress to a subsequent field test phase of promising technologies. Chemical vendors and equipment suppliers are potential project participants.

The project will build upon the PERF 91-14 knowledge base, increased understanding of emulsion and rag layer fundamentals, new hardware technology, new emulsion breaking chemistries, and adding 12+ years more operating experience. This project is especially relevant as the current trends are toward heavier crude slates, including bitumen, more asphaltenes, resins and emulsion precursors, and higher solids content in crude. Tighter environmental and product specifications are other issues to be addressed.

Other companies or organizations can still join this project. For more information contact Dave Fashimpaur (fashimdn@bp.com).

Highlights of Fall Meeting

Meeting Theme: **WATER QUALITY**

The fall 2005 PERF Meeting was hosted by Argonne National Laboratory at The Historic Inns of Annapolis. About 80 people attended the meeting. Most of them were representatives from the oil industry, DOE, research institutes, or laboratories.

The meeting focused on Upstream and Downstream water issues. Because of the importance of this topic and the U.S. Department of Energy's (DOE's) interest in water research, the PERF meeting was held in conjunction with a Program Review of DOE-funded water projects affecting the oil and gas industry.

Prior to the technical meeting, the PERF Board met on November 1. The technical meeting included one day of presentations from contractors that received DOE funds for water projects (November 2) and a second day of presentations from industry representatives, government officials, and other speakers who described key water issues and research topics that affect the industry (November 3).

Upstream and Downstream discussion groups took place.

During the morning of the third day (November 4), all participants had an open discussion of the significance of ongoing research, gaps in current research, and areas in which more research might be conducted by industry or government. PERF business items (status report and project proposals) took place the same day.

You can now download most of the presentations from the PERF website.

PERF Organization News

Farewell, Todd Ririe! We all will miss you...



The fall PERF meeting held in Annapolis, Maryland on November 1-4, 2005 was Todd Ririe's last as a PERF officer. Todd has been a member of the PERF board since 2000, and most recently was the 2004-2005 PERF Vice Chair. Todd worked 24 years for Unocal, and his office was located in Brea, California. When Chevron acquired Unocal this year, Todd decided that, rather than move his family to San Francisco or Houston, he would start his own consulting company, Ririe & Associates. We wish Todd all the best in his new career and we will miss you at our meetings.

2006-2007 PERF Board Members

Jill Kerr, ExxonMobil; Todd Ririe, formerly with Unocal; Davis Taggart, BP; and Sara McMillen, Chevron have completed their terms on the Board of Directors as Chair, Vice Chair, At-Large Member, and former Chair, respectively. Jill will remain on the Board, as Former Chair, while Todd retired from Unocal and PERF in December to start his own consulting company. Davis will remain as BP's PERF representative and Sara will remain the Chevron PERF representative.

The PERF members voted to elect Dave Fashimpaur (BP), formerly At-Large Member, as Chair and Robert Finley (Aramco), former At-Large Member, was elected Vice Chair. Karen Haynes (Shell) will be Treasurer and Virginie Vitiello (Total) is the Secretary/Archivist/Webmaster. Our At-Large Members are John Wilkinson (ExxonMobil), Roland Borey (Chevron), and Sung-I Johnson (ConocoPhillips).

Thank you to Jill, Todd, Davis, and Sara for giving your valuable time to PERF.

Environmental, Health, & Safety
Solutions for the Petroleum Industry

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TEAMWORK: Together we achieve the extraordinary!



PERF

We're on the web:
<http://www.perf.org/>

The Petroleum Environmental Research Forum (PERF)* is a research and development joint venture, formed to provide a stimulus to and forum for the collection, exchange, and analysis of research information relating to the development of technology for health, environment & safety, waste reduction and system security in the petroleum industry. PERF is a non-profit organization of Members which are corporations engaged in the petroleum industry that recognize the importance of a clean, healthy environment and are committed to support cooperative research and development. PERF does not itself participate in research projects but provides a forum for Members to collect, exchange, and analyze research information relating to practical and theoretical science and technology concerning the petroleum industry, and a mechanism to establish joint research projects in that field.

*The name Petroleum Environmental Research Forum and its acronym PERF are registered service marks.

PERF External Group Liaisons

PERF encourages external groups such as trade associations, national laboratories, and research institutes to join as Liaison members. PERF values the partnerships that we have with these external groups and they frequently join PERF projects and contribute valuable research.

Liaison members appoint Representatives that have the right to attend and participate in meetings of PERF and its committees, but they do not have the right to vote or to serve as an officer of PERF. Liaisons are not required to pay the fee paid by Members.

American Petroleum Institute (API)
Department of Energy (USDOE)
Gas Technology Institute (GTI)
Lawrence Berkeley National Laboratory (LBNL)
Water Environmental Research Foundation (WERF)
Argonne National Laboratory (ANL)
Electronic Power Research Institute (EPRI)
International Association of Oil and Gas Producers (OGP)
Oak Ridge National Laboratory (ORNL)
University of Manchester Institute of Science and Technology (UMIST)

Member Companies & Representatives

Amerada Hess	Gerry Bresnick
Aramco Services Co.	Robert Finley
BP	Dave Fashimpaur
Champion Tech.	Mark Edwards
Chevron	Roland Borey
ConocoPhillips	Sung-I Johnson
EniTechnologie	Renzo Boni
ExxonMobil	John Wilkinson
INA-Naftaplin	Ivo Omrcen
Pall Corp.	Tom Wines
PetroCanada	Dave McIntyre
Repsol YPF	Fernando Temprano-Posadas
Shell	Pete Robinson
Statoil	Stale Johnsen
Suncor	Tony Congram
Total	Virginie Vitello

Associate Members & Representatives

BOC Gases Technology	Ram Ramachandran
Canadian Petroleum Products Institute (CPPI)	Adolfo Silva