



PERF Newsletter

September 2006

Environmental,
Health,
& Safety
Solutions for the
Petroleum Industry

72nd PERF Meeting
Remediation & 20th Anniversary
October 24 - 26, 2006 Naperville, IL

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Board of Directors

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Dave Fashimpaur, BP

Vice Chair:

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Secretary/Archivist/ Webmaster:

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John Wilkinson, ExxonMobil

Roland B. Borey, Chevron

Sung-I Johnson, ConocoPhillips

Legal Counsel:

F. Joseph Gormley, Esq.

The Fall 2006 PERF meeting is the 20th anniversary of PERF and special activities are planned to celebrate this event. A special invitation is being extended to past PERF chairpersons and founders of PERF. The theme of this meeting will focus on upstream and downstream remediation issues. Prior to the technical meeting, the PERF Board will meet on October 23.

The technical meeting will start on October 24 with a morning technical session at the BP Naperville Complex followed by an afternoon tour of the Argonne National Laboratory. The second day of technical presentations will feature a management discussion on the value of PERF and review of its past, present, and future. A third day (October 26 - morning only) will have additional technical presentations. A block of rooms are being held until October 3 at the Hilton Lisle/Naperville, 3003 Corporate West Drive, Lisle, Illinois, United States, 60532 (phone +1-630-505-0900).

For detailed information on the hotel as well as transportation to and from the airport, please see registration information at

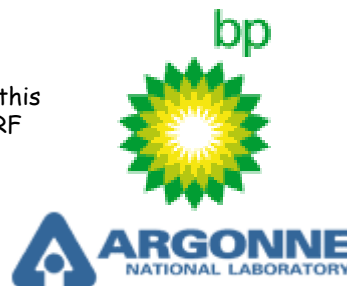
http://www.perf.org/index.php?act=meetings_upcoming

There will be no charge to attend this meeting but you must register to attend. For additional information and registration, please see the attached registration form.

Registration should be completed and emailed or faxed to Carol Dugan carol.dugan@bp.com, fax +1 630-420-4501, no later than Tuesday, October 3, 2006.

Nominations for presentations should be addressed to Dave Fashimpaur at dave.fashimpaur@bp.com or +1 630-420-5298.

For additional information, please contact Carol Dugan at +1 630-420-5285.



Hotel:

[Hilton Lisle/Naperville](#)
3003 Corporate West Drive
Lisle, Illinois, United States, 60532
1-630-505-0900
Group: BP-PERF Rate: \$124/night

PERF was established in 1986 to stimulate cooperative research and development of environmental control technologies for the petroleum industry. Although initially formed in the US, we have grown more international over the years. Our current 19 member companies, and 10 government and academic institutions with which we maintain liaison relationships, reflect this more global perspective.

PERF meetings have a multidisciplinary atmosphere with participation by scientists and engineers with backgrounds including: chemistry, microbiology, chemical and environmental engineering, and other fields. Meetings are hosted every 3-4 months by members on a rotational basis. To enhance technology exchange, each meeting has a specific topic theme, and we seek to co-host with an organization with expertise in that area. As an example, our first international meeting with a theme of Remediation was co-hosted by Elf and NICOLE (Network for Contaminated Land Europe) in Lyon in 1999.

Meetings serve as the platform for **PERF's main mission -- Joint Research**. Since its inception, PERF members have completed **81 projects with a value of 63 M\$**. There are also 13 projects currently underway valued at >2.2 M\$; and there are 11 projects under consideration.

We will celebrate our 20th anniversary at our fall meeting on October 25 & 26. It will be co-hosted by BP and Argonne National Laboratories in the Chicago area. We are inviting all past PERF Chairpersons, and are planning sessions on PERF's future direction, as well as current technology needs. The theme of the meeting will be Remediation Issues.

Please join us to celebrate PERF's 20 years! For more information on PERF, our projects and the fall meeting, visit our web site.



Completed Projects

	Number of Projects			TOTAL	M\$			TOTAL
	U/S	D/S	Both		U/S	D/S	Both	
Air		18	2	20		12.9	7.3	20.2
Water	4	13	2	19	0.7	2.4	1.7	4.8
Remediation	4	4	16	24	2.3	3.6	25.6	31.5
Waste	4	6	1	11	3.0	1.6	0.1	4.7
NDE		3		3		1.0		1.0
Oil Spill			4	4			0.8	0.8
TOTAL	12	44	25	81	6.0	21.5	35.5	63.0

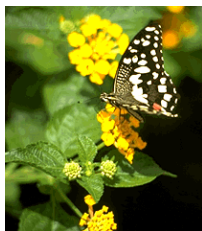
New Projects

New project proposals

2006-01 Whole Effluent Assessment (WEA)

proposed by **TOTAL**

The main goal of this project is to evaluate the relevance of ecological risk assessment with respect to WEA method in comparison with *in-situ* impact assessment. Does WEA predict a real ecosystem risk for the receiving waters? If WEA is a good indicator of ecosystem risk, it could be used to access difficult river or estuary segments, in place of *in-situ* impact assessments; or to predict ecosystem risk for future wastewater effluent.



The two alternatives to conduct this project to be discussed are:

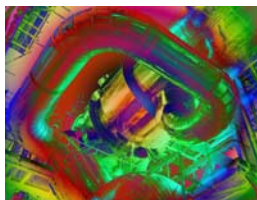
- "real world" river analysis, or
- the use of mesocosms called "Rivieres pilotes" (less variability).

For more information contact Anne Basseres (anne.basseres@total.com).

2006-05 Smart LDAR Best Practices Cooperative

proposed by **ExxonMobil**

ExxonMobil proposed a sharing project, "Smart LDAR Cooperative", involving infrared optical gas imaging cameras for leak detection in preparation for EPA's alternate work practice to Method 21. The project would include sharing: Best Practices, Procedures, Frequency of Monitoring, Calibration, Documentation, and Emission Quantification.



For more information contact: Jeff Siegell (jeffrey.h.siegell@exxonmobil.com) and Dave Fashimpaur (dave.fashimpaur@bp.com) were nominated as project coordinators.

2006-4 Evaluation of Novel Monitoring Techniques

proposed by **Chevron**

Chevron is proposing a PERF study to evaluate new and novel air quality monitoring techniques. New monitoring technologies that are inexpensive and have very low detection limits have become available or are in the process of being developed. One potential monitoring technique is the personal badge technology. These technologies are being used by various government and non-governmental

organizations to assess emissions and community exposure from oil and gas production, storage, refining, and marketing facilities. In some cases these organizations are conducting inaccurate analysis and presenting incorrect results.

The purpose of the study would be to evaluate one or more of the novel personal badge technologies in an industrial complex for a two to four week period. It would be desirable to conduct the field test in an area that has an existing monitoring network or an industrial complex that has ambient air quality monitors for comparison purposes.



Also, if a company has a location with some of the newer monitoring technology, the resulting monitoring results and analysis can be shared for inclusion and participation in this project.

For more information or to join the project, please contact Chris Rabideau at CRabideau@chevron.com or 713-954-6981.

2006-03 - WWTP - Fate & Effects of Pollutants -

proposed by **TOTAL**

This project consists of a "mass balance" evaluation to understand how and where pollutants transfers from liquid to gaseous and solid phases occur throughout the unit operations of the Waste Water Treatment Plant system.

It will lead to:

- The environmental impact assessment of each process (gas and solid phases)
- Optimization to reduce the environmental impact of each process

Some points have to be defined:

- The processes to consider (settler, flotation unit, biological process...)
- The chemicals to study (we propose 3 compounds : a BTEX, a HAP and a metal)

For more information please contact **Nicolas Lesage**

(nicolas.lesage@total.com).

PERF Summer Meeting

The PERF Summer Meeting was held July 12 and 13 in the San Francisco Bay Area. The first day of the meeting was hosted by Chevron at its Technology Research Center in Richmond, and Chevron sponsored the PERF dinner that night at the DoubleTree Berkeley Marina. The second day of the meeting was hosted by Lawrence Berkeley National Laboratory on the University of California's Berkeley campus. A highlight of the day was a tour of the laboratory that included the Advanced Light Source Synchrotron, built in a facility that held the original cyclotron invented by the Laboratory's founder, Ernest Orlando Lawrence, winner of the 1939 Nobel Prize in physics for that invention.



The meeting had more than 30 attendees representing industry, consulting, and the national lab. There were 16 presentations on air and monitoring issues, including greenhouse gas, climate modeling, aerosols, VOC recovery, NOx controls, and European regulations.

Two potential research projects were proposed during the last day of the meeting. John Wilkinson (703-846-3939) of Exxon Mobil proposed a study of smart leak detection equipment, and Chris Rabideau (713-954-6981) of Chevron proposed a study of novel air monitoring techniques. Please contact John or Chris to join these projects or obtain additional information.



Current PERF Projects

PERF currently has eight active projects underway. These projects include research on waste management, remediation, oil spill technologies, and VOC emissions. The total value of these projects in terms of costs to conduct the research is estimated to be >U.S. \$2million. To find out more about each of these projects, or to join a project, contact the project coordinator by visiting the PERF web site at PERF.org.

Current Projects

Project	Title	Sponsor	Number of Participants
2006-04	TPH 2DGC Methodology - Predicting Environmental Effects	ExxonMobil	2
2004-06	Reducing Desalter Environmental Impacts	BP	5
2004-05	Understanding the effects of time and energy on the effectiveness of dispersants	ExxonMobil	9
2003-07	Dispersant for viscous oil	ExxonMobil	3
2003-05	Chemical Herders to Increase in Situ Burning Window-of-Opportunity	ExxonMobil	6
2003-03	Managing Wastes in countries with little infrastructure	Chevron	7
2001-02	Flashed Gas / VOC Emission Estimation from Produced Water	Shell/Statoil	7
1999-05	Stability of Pressure Relief Devices	BP	12



Environmental, Health, & Safety
Solutions for the Petroleum Industry

Petroleum Environmental Research Forum
P.O. Box 425
Bellaire, Texas 77402-0425
United States of America

Chair:	Dave Fashimpaur
	Dave.fashimpaur@bp.com
	+1 (630) 420-5298
Vice Chair:	Bob Finley
	RW.Finley@aramcoservices.com
	+1 (713) 432-5358
Teamwork	Together we achieve the extraordinary!



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

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)

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.

Member Companies
& Representatives

- | | |
|---------------------|---------------------------|
| Amerada Hess Co. | Gerry Bresnick |
| Aramco Services Co. | Robert Finley |
| BP | Dave Fashimpaur |
| Chevron | Roland B. Borey |
| ConocoPhillips | Sung-I Johnson |
| EniTecnologie | Renzo Boni |
| ExxonMobil | Jill Kerr |
| INA-Naftaplin | Ivo Omrcen |
| Petro-Canada | David McIntyre |
| Repsol YPF | Fernando Temprano-Posadas |
| Shell | Karen G. Haynes |
| Statoil | Stale Johnsen |
| Suncor | Anthony Congram |
| Total | Pierre Scherrer |

Associate Members
& Representatives

- | | |
|--|------------------|
| BOC | Ram Ramachandran |
| Canadian Petroleum Products Institute (CPPI) | Adolfo Silva |
| Champion Technologies, Inc. | Mark Edwards |
| Pall | Tom Wines |