



PERF Newsletter

February 2002

Environmental, Health, & Safety Solutions for the Petroleum Industry

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Board of Directors

Chair:

Sara McMillen, ChevronTexaco

Vice Chair

Jill Kerr, ExxonMobil

Treasurer:

Davis Taggart, BP Amoco

Secretary/Archivist/

Webmaster:

Elisabeth Adam, TotalFinaElf

Former Chair:

Zara Khatib, Shell

At-Large Members:

Bruce Kennedy, Petro-Canada

John Wilkinson, ExxonMobil

Todd Ririe, Unocal

Legal Counsel:

**Joe Gormley, Hogan &
Hartson**

Welcome Petrobras!

We are pleased to announce that in 2001, **Petrobras** of Brazil joined PERF as a Member. Petrobras is an integrated company operating in exploration, production, refining, retailing and transportation of petroleum and its byproducts at home and abroad. Petrobras is also a power company, deeply concerned with the preservation of the environment. **Sergio Damasceno Soares of Petrobras/CENPES** is the new PERF representative.

CENPES is the Leopoldo Americo Miguez de Mello Research & Development Center for Petrobras.



Petrobras is headquartered in **Rio de Janeiro, Brazil**. We welcome representative **Sergio and Petrobras** to the PERF Family, which is listed in full on Page 4.

Next Quarterly Meeting in San Ramon, California, February 27-March 1, 2002

The 57th PERF Quarterly Meeting will be hosted by ChevronTexaco and Lawrence Livermore National Laboratory in San Ramon, California. There will be a reception the evening of February 27.

The theme of the meeting is "**International Waste Management.**" On February 27, there will be an International Waste Workshop in which oil company representatives will discuss their biggest challenges and opportunities in international waste management. **Dr. Fred Jones** of Marathon is the key note speaker and he is the Society of Petroleum Engineer's 2001/02 Distinguished Lecturer on the topic of Waste Management. Additional invited speakers are John Veil of Argonne National Laboratory, Wilson McGinn of Oak Ridge National Laboratory, and Joseph Rogers from the AIChE Center for Waste Reduction Technology.

On February 28, researchers from **Lawrence Livermore National Laboratory** will present their latest developments on the topics of waste treatment, remote sensing and ecological implications of waste facilities. On March 1, LLNL will host a **tour of their Site 300 facility**.



**San Ramon
Marriott Hotel**

PERF will also be holding our usual Upstream and Downstream Discussion Group Meetings on the afternoon of February 27, and our Business Meeting with new project proposals on February 28. Details of the meeting and a registration form are posted on our website: <http://www.perf.org>

See you in San Ramon!

Highlights of Fall Meeting in Brea, CA, October, 2001

Unocal hosted the 56th PERF Quarterly meeting (Oct. 4-5) in Brea, and in spite of the then recent events in September, the meeting was well attended. The minutes of the meeting and agenda are available on our web site at: <http://www.perf.org/>

The theme of the meeting on the first day was **Phytoremediation** including presentations on recent advances in better understanding microbial processes, uses of phytoremediation for metals and for landfill caps, use of constructed wetlands for petroleum hydrocarbons as well as a number of case studies. Guest speakers from **Equilon**, the **USEPA** Phytoremediation of Organics RTDF, **CalPoly** at San Luis



Obispo, and **Edenspace** gave exciting overviews of recent developments. A great deal of discussion took place that helped to clarify future needs including better long-term performance data and clearer understanding of the various phyto-enhanced degradation processes.

The second day's program was an **MTBE Workshop** organized by Chevron including updates on natural attenuation, in-situ remediation, and ex-situ remediation techniques. Currently there is a great deal of information coming out on MTBE with API being the lead industry group to consult on this topic.

New Project Proposals in 2001

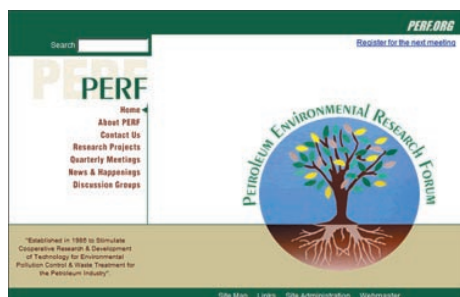
During 2001, the following projects were proposed and projects are in the planning phases:

2001-01	Dimpled Tube Technology	BP/GTI
2001-02	Flash Gas & VOC Emissions From Produced Water	SHELL
2001-04	Human Factors	EXXONMOBIL/ CHEVRONTEXACO
2001-05	E&P Sediment Impacts & Recovery	TNO
2001-06	FCC O ₂ Enrichment For NO _x Reduction	BOC
2001-07	Continuous Emissions Monitoring	BP/EXXONMOBIL
2001-08	Downstream Waste Management	EXXONMOBIL
2001-09	Emission Estimating Protocols & Tools	CPPI

Note that details of all of the projects performed under the PERF umbrella since our formation in 1986 are presented on our website. Also note that specific results of projects are generally not published, as these often remain proprietary to the participating companies.

"... details of all of the projects ... since our formation in 1986 are presented on the web site."

PERF Has a New Website!



The address remains

<http://www.perf.org>

The redesigned PERF website – an investment of \$15,000 – was launched in November 2001. The new website is **more user-friendly**: searching through projects has been made easier and a site administration section has been added to speed up member, contact information and project updates. The new website now also includes a database for all PERF projects and a bulletin board for on-line discussions.

The **PERF projects database** allows easy and quick searches on projects by:

- year of initiation,
- type (funded, in-kind, both),
- category (upstream, downstream, both),
- scope (air, water, soil & groundwater, ...),

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Announcing New DOE/PERF Book!

A new book entitled "**Risk-Based Decision-Making for Assessing Petroleum Impacts at Exploration and Production Sites**" is now available from PERF or DOE. The book contains the results of PERF project 97-08, plus additional work funded by the American Petroleum Institute, Chevron, and the New Mexico Oil and Gas Association Total Petroleum Hydrocarbon Working Group. The editors of the book are S. J. McMillen, R. I. Magaw and R. L. Carovillano. There are 22 authors from 14 different companies and universities.

Professor Ray Loehr from the University of Texas authored the preface for the book which is excerpted here:

"From the initial efforts in the 1980's, risk-based evaluations and decisions have become an important component

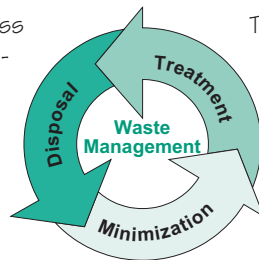
*of efforts to protect human health and the environment. ...this document provides an excellent summary of the development of the **risk-based decision-making (RBDM) process** and the current state of its use, particularly for sites with contaminated soils."*



Funding for this book was provided through a grant from **DOE/National Energy Technology Laboratory**, under the direction of **Nancy Comstock of the National Petroleum Technology Office**. Copies may be obtained by contacting Nancy at ncomstoc@npto.doe.gov.

Please Join the Downstream Waste Management Cooperative!

2001-08 is a proposed **sharing project** to address the full spectrum of downstream waste management practices. The project is open to all potential waste management areas including oily sludge, spent caustic, waste activated sludge, contaminated soil, tank sludges, spent catalyst, slop oil emulsions, industrial debris, turnaround process cleanout waste, etc.



To date, several companies have expressed interest: **BP, Marathon-Ashland, Petrozyme Technologies Inc., and ExxonMobil**; and possible contributions include crude tank cleaning and oil recovery, centrifugation technologies, oil and solids source control, and biotreatment of caustic.

The project proposal and current status may be found at www.perf.org/ppt/DownstreamWaste.ppt and www.perf.org/index.php?act=research&prj_id=164. If you would like more information please contact Jason Neff of ExxonMobil at jason.neff@exxonmobil.com.

As with all PERF projects, this project will be open to all participants (whether or not a PERF member) who agree to the requirements of the contract for this particular project.

New Board of Directors Elected

New officers and directors of PERF were elected for the 2002 – 2004 term, and the 2 new at large seats created by the November 8 Charter amendments.

PERF officers and directors for 2002 – 2004 are:

- Sara McMillen, ChevronTexaco, Chair
- Jill Kerr, ExxonMobil Vice Chair
- Davis Taggart, BP Treasurer
- Elisabeth Adam, TotalFinaElf, Secretary/Web Master
- Zara Khatib, Shell, Former chair
- Bruce Kennedy, PetroCanada, at-Large member
- Colin Grieves, BP, at-Large member
- John Wilkinson, ExxonMobil, at-Large member
- Todd Ririe, Unocal, at-Large member
- Mona Hjelsvold, Statoil, at-Large member

The PERF membership voted to **amend the Charter** on November 8, 2001 so that:

- (1) At-large members have been increased from 3 to 5.
- (2) Two employees or representatives of any member company may now serve concurrently as directors of PERF.



Unfortunately, **Colin Grieves** of BP resigned from the Board in January, 2002. We will all miss him! Colin was a founding member of PERF and a long-time Board member. Please join us in wishing Colin well on his new endeavors. The Board hopes to appoint a successor to fill Colin's seat at the February meeting.

Environmental, Health, & Safety
Solutions for the Petroleum Industry

Petroleum Environmental Research Forum
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Vice Chair: Jill Kerr
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TEAMWORK: Together we achieve the extraordinary!



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 Has a New Website!

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- status (proposal, active, complete, withdrawn),
- sponsor company
- or simply entering a keyword.



Project coordinators can now update their project status reports directly on-line. Coordinators have been assigned a username and password to access their own administration area where they can edit and update their project status reports. If you are a project coordinator and you need more information on how to update your status reports on-line, please contact Elisabeth Adam (215-419-7692 or elisabeth.adam@totalfinaelf.com).

The bulletin board on the PERF website is for the purpose of the existing PERF discussion groups (E&P, downstream and human factors). After signing up, one can post messages in either one of the discussion groups. Each discussion group is monitored by the discussion group chair.

Member Companies & Representatives

Amerada Hess
Aramco Services Co.
BHP Research
BP Amoco
ChevronTexaco
Conoco, Inc.
EniTechnologie
ExxonMobil
Marathon Oil
Petrobras
PetroCanada
Phillips Petroleum Company
Shell International E&P
Satoil
TotalFinaElf
Unocal

Gerry Bresnick
Robert Finley
Edward Pinceratto
Davis Taggart
Sara McMillen
Stephen Jester
Renzo Boni
John Wilkinson
Jenny Yang
Sergio Soares
Bruce Kennedy
Sung-I Johnson
Zara Khatib
Per Gerhard Grini
Elisabeth Adam
Todd Ririe

Associate Members & Representatives

BOC Gases Technology
Canadian Petroleum Products
Institute (CPPI)
Petrozyme Technologies

Ram Ramachandran
Adolfo Silva
Bill Mullin