Next Quarterly Meeting to be Hosted by ConocoPhillips in Houston, Texas – November 5 and 6

ConocoPhillips will host the Fall meeting in Houston, Texas November 5–6, 2003. Details of the meeting, registration and accommodation forms are posted on our web site: http://www.perf.org/. The two themes for the meeting are Deepwater and the Impacts of Treating Chemicals with presentations on the topics of deepwater challenges, synthetic drilling muds, and the impacts of treatment chemicals on the oil industry. There will also be sessions of the Downstream and Upstream Discussion groups, a full complement of technical presentations, as well as new project proposals. During the Business Meeting, we will be electing new PERF officers and reviewing the progress of existing PERF projects. See you in Houston!!!

Our Spring, 2004 Meeting will be hosted by PetroCanada in Toronto.

PERF Welcomes New Member Company

INA Industrija naftne d.d., Croatia’s oil and gas company has recently joined PERF. INA’s Exploration and Production Division, known also as INA Naftaplin, is active in onshore and offshore operations in Croatia and has interests in Angola, Algeria, Egypt, Libya and Syria. In carrying out its activities, INA is committed to health and safety of people and protection of the environment. PERF welcomes INA and their new representative Zdravko Spiric!
Update on PERF Project 02-13 – Water Management Cooperative

ExxonMobil is coordinating a PERF sharing project (02-13) on water management practices. The objective of the program is to exchange research, technology, and experience in the area of water usage minimization, optimization, and reuse at operating facilities and in exploration and production. Potential areas for sharing may include: water reuse solutions in practice, rejected reuse solutions, case studies in the area of water reuse/minimization/optimization, produced water reclamation, wastewater recovery, or tools used to develop these solutions. Argonne National Laboratory, ChevronTexaco, USFilter, Unocal, ExxonMobil, UNDEERC, and ConocoPhillips have submitted contributions that touch on many of the topics mentioned above. Contracts are being drafted for both Participants and Consociate members (non-profits) but the project is still open to interested parties. Please contact Meredith Gustafsson (meredith.b.gustafsson@exxonmobil.com) for more information.

New Flaring Project Proposal 2003-01

The goals of this project are to share experiences and Best Practices regarding monitoring, measurements, speciation of flare emissions, and future strategies to cost effectively reduce greenhouse gas (GHG) and other air pollutant emissions.

- Developing a trusted active partnership with all concerned parties is the way to go forward.

Scope of Project:

- Share existing data regarding:
  - Flare inlet gas volumetric measurement
  - Flare inlet gas chemical specification
  - Flare destruction efficiencies
  - Flare emission specification
    (e.g., NOx, SOx, CO, VOC, CH4, HAPs)
  - New technologies/process units to reduce routine flaring
  - Improved modeling techniques for estimating flare emissions and plume dispersion impacts
  - Develop a best practice guideline for flaring operations

Participants are welcome to join. If you would like more information please contact: Karl Loos at karl.loos@shell.com
New Mercury Cooperative Project 03-01

The goal is to share information related to the management of mercury contained in crude oils and condensates that are produced and refined by the petroleum industry. The project focus is both upstream and downstream. The goal will be accomplished in a multi-day interdisciplinary workshop designed to address the operational, environmental, analytical, removal, and other various aspects related to mercury in the petroleum industry. Focus areas where additional leveraged research may be valuable will also be identified.

The scope of the work will be defined when the participants are finalized.

Potential focus areas include:
- Predicting the occurrence/levels of mercury in petroleum deposits
- Levels/fate of mercury in petroleum resource development and transport
- Material balances/fate of mercury within the refinery
- Models for predicting mercury partitioning in products and residuals
- Metallurgical and operational impacts of mercury
- Environmental impacts of mercury in production and refining residuals
- Mercury removal technologies and management strategies
- Advances in mercury sampling/analytical/speciation methodologies
- Industrial health/worker protection learnings

Participants may still join the project. The project proposal and current status may be found at: http://www.perf.org/index.php?act=research&prj_id=195. If you would like more information please contact david.a.masciola@exxonmobil.com

Current PERF Research Proposals

Proposals are presented at each quarterly meeting and e-mailed to all PERF representatives. The project coordinator then generates a project contract specific to the proposal and e-mails it to all representatives who have expressed an interest in the proposal. It typically takes 6 to 12 months for contracts to be signed and the project to kick-off.

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<thead>
<tr>
<th>Proposal</th>
<th>Title</th>
<th>Sponsor</th>
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<tr>
<td>2003-04</td>
<td>Recovered Value Wastewater Treatment</td>
<td>BP/UMIST</td>
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<tr>
<td>2003-03</td>
<td>Managing wastes in countries with little infrastructure</td>
<td>ExxonMobil</td>
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<td>2003-02</td>
<td>Flaring Cooperative Project</td>
<td>Shell</td>
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<tr>
<td>2003-01</td>
<td>Hg Cooperative</td>
<td>ExxonMobil</td>
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<tr>
<td>2002-14</td>
<td>NAF cuttings cleaning with supercritical carbon dioxide</td>
<td>ExxonMobil</td>
</tr>
<tr>
<td>2002-13</td>
<td>Water management cooperative</td>
<td>ExxonMobil</td>
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<td>2002-09</td>
<td>Crude oil filtration</td>
<td>PetroCanada</td>
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<td>2002-08</td>
<td>Water reuse – Water as resource for irrigation</td>
<td>Shell</td>
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<tr>
<td>2002-07</td>
<td>Remote Leak Detection using Alternative Technologies</td>
<td>BP/API</td>
</tr>
<tr>
<td>2001-01</td>
<td>Dimpled Tube Technology For Process Heaters</td>
<td>BP</td>
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“… details of all of the projects … since our formation in 1986 are presented on the web site.”
Highlights of the 2003 Summer Meeting

The PERF 2003 Summer Meeting was held in Paris, France, on June 2, 3 and 4. It was hosted by TOTAL in the “Tour Coupole” located in the Paris business district called La Défense.

The usual Board Meeting was held on Monday. The general session, whose theme was Air Quality, took place the day after. There were about thirty attendees, coming from Europe, the USA and the Middle East.

Miscellaneous subjects related to air quality were discussed, starting with an overview of regulatory aspects in Europe with the CAFE program and the EU White Paper. This was followed by presentations about environmental modeling programs.

The next session was about Emissions Reductions and Monitoring with a couple of very interesting presentations to update our knowledge on technologies regarding VOx, NOx, burners, laser camera, etc. The following day was dedicated to flaring with overviews of regulations and related issues. The PERF business meeting was held on the Wednesday afternoon, and three new proposals were presented to the PERF meeting attendance. You can download the vast majority of the presentations on the PERF web site at the following URL: http://www.perf.org/index.php?act=meeting_2003-06_overview

New PERF project proposals can be downloaded at http://www.perf.org/index.php?act=research_proposals

Announcing Election for New PERF Board

The PERF Nominating Committee (John Wilkinson, Sara McMillen, and Mona Hjelsvold) has reported back to the Board with its slate of nominees for PERF Officers and Directors to serve in the 2004 & 2005 term. These nominees are:

- Jill Kerr, ExxonMobil, Chair
- Todd Ririe, Unocal, Vice Chair
- Davis Taggert, BP, Treasurer
- Marine Julliand, Total, Secretary/Web Master
- Bruce Kennedy, PetroCanada, at Large member
- Dave Fashimpaur, BP, at Large member
- John Wilkinson, ExxonMobil, at Large member
- Sara McMillen of ChevronTexaco, the current PERF Chair, will also serve as a Director in the position of Former Chair.

The election will be held during the business meeting from 10:15–11:45 AM on November 6 at the upcoming PERF meeting in Houston. As always, nominations will be accepted from the floor for any position listed on the slate (with the exception of the immediate past chair slot) during the business meeting prior to the vote. There are two newly vacated At-large Member positions open. Please contact one of the PERF Board members if you are interested in serving on the Board.
New PERF Waste Project Proposal “Managing Waste in Countries With Little Infrastructure”

Our industry is receiving more and more scrutiny regarding international waste management methods, and yet many countries where we operate do not have waste regulations or 3rd party/government waste management facilities.

PERF proposal 2003–03, is aimed at addressing both upstream and downstream waste management in countries with little infrastructure. Proposed deliverables include but are not limited to; a list of landfill design specifications, English translations of industrialized countries’ waste requirements, and the development of “model” regulations.

This project has had one conference call, and interested parties to date are Total, INA-Naftaplin Croatian, ExxonMobil, ChevronTexaco, BP, Shell, ConocoPhillips and Unocal. The goal is to “fast-track” this project with a final deliverable slated for July, 2003.

The project proposal and current status may be found at: http://www.perf.org/index.php?act=research&prj_id=197. If you would like more information please contact Jill Kerr of ExxonMobil at jill.m.kerr@exxonmobil.com.

PERF Success Story – Risk-Based Screening Levels and Phytoremediation Workshop Held in Indonesia

Unocal and ChevronTexaco hosted a two-day Environmental Workshop on Risk Based Screening Levels (RBSLs) and Phytoremediation August 7 and 8 in Bandung, Indonesia. The purpose of the workshop was to present technical information on using risk-based approaches for establishing site cleanup levels, and to share approaches for implementing bioremediation and phytoremediation. To help accomplish this, some of the results from two completed PERF projects, 97-08 and 97-06 were shared. The workshop was attended by over 30 people from industry, the Indonesian regulatory community, and universities. The workshop was particularly timely as many new regulations are being considered for approval by Indonesian regulators regarding clean up levels and treatment options for hydrocarbon-impacted soils. Good discussions were held throughout both days, and at the end of the workshop the attendees agreed to form a RBSL working group to explore how best to integrate risk-based approaches in Indonesia. Mr. Tri Wisono (Unocal) and Mr. Maryuswan Marsid (ChevronTexaco) are the industry leaders for this group.

The recently published PERF summary of the Bioremediation Workshop was handed out as well as the DOE/PERRF publication Risk Based Decision-Making for Assessing Petroleum Impacts at Exploration and Production Sites. For more information about this event contact either Todd Ririe (gtririe@unocal.com) or Sara McMillen (sajm@chevron.com).
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.