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Petroleum Environmental Research Forum
WWW.PERF.ORG
The 82nd PERF General Meeting will be hosted by Chevron in their offices in downtown Houston, Texas on November 2, 3 and 4, 2010. The theme of the meeting is Marine Oil Spill Environmental Research Needs.

The objectives of the meeting are to:

- Understand the current state of marine oil spill response
- Review learnings from the Deepwater spill and current research efforts to address
- Agree on areas of common interest for future oil spill response
- Identify and flesh out collaborative research projects and next steps

We are anticipating a large crowd, consisting of oil industry oil spill technical staff, as well as researchers in universities, national labs, government agencies, response cooperatives and other industry organizations. The meeting agenda, registration and logistics information is available on the PERF Web Site: www.perf.org. Please register by October 15th. For more information contact Veronica Blackwell at vblackwell@chevron.com.

**Logistical Information**

Each person is responsible for making his or her own hotel reservations.

There is a large city wide event coinciding with the PERF meeting and rooms are limited, so please make your reservations at your earliest convenience. The following properties are located within walking distance to Chevron. Information on the hotels, including maps and directions, may be obtained by clicking on any of the attached links.

**Doubletree Hotel Houston Downtown (free shuttle service to Chevron)**
400 Dallas Street, Houston, TX 77002, 713-759-

**Hyatt Regency Downtown Houston (free shuttle service to Chevron)**
1200 Louisiana Street, Houston, TX 77002, 713-654-1234
www.hyattregencyhouston.com

**Crown Plaza Houston Downtown (free shuttle service to Chevron)**
1700 Smith Street, Houston, TX 77002, 713-739-8800
www.cpdowntown.com
Logistical Information cont.

Transportation:
Taxis and rental cars are available at the airports. Here are two suggestions:
Liberty Cab: 713-695-6700
Yellow Cab: 713-236-1111
Town car and or airport transfer service is available from the airports to the hotels. Please contact any of the vendors suggested below for service:

Driving Directions:
The 1600 Smith facility is located in the heart of downtown Houston’s business district. See the map for location of the meeting location at 1600 Smith.

Visitors’ Parking
1600 Smith Garage which is attached to the building
Cost: $25.00 per person per day

Hyatt Regency Garage which is one block away from 1600 Smith
1200 Louisiana Street
Cost: $15.00 per person per day

Houston Weather in November
Avg. high 72°F - 22.5°C
Avg. low 46°F - 8.1°C
Avg. rain 4.5 in. - 115 mm
PERF 2010-07: Understanding Biodiesel in Total Petroleum Hydrocarbon (TPH). Proposal by Chevron

This proposed PERF project will be the first approach to understanding the impact of biodiesel to EPA analytical methods for TPH-D measurement. This project will evaluate the different extraction techniques and chromatography to determine method modification. Project will work closed with commercial labs for the method development as well as all interested petroleum industrial parties. The Project has received the interests from ExxonMobil, Shell, BP, TestAmerica(USA) and Total. Project proposes to submit a modified analytical method to EPA under 40CFR136.4 and 40CFR210.21 to share findings with Agency. The first project kick off meeting had been held on Sept. 22, 2010. Further scoping of the work and contracting are underway, to join the discussion, please contact Chevron’s Deyuan(Kitty) Kong at deyk@chevron.com for details.

PROJECT PROPOSAL 2010-06: Air Emissions Cooperative
Proposed by BP

The objective of this proposed project is to improve emission factors and emissions inventory data by initiating a gap analysis for petroleum refinery VOCs and air toxics and subsequent determination of the best approaches to fill gaps identified. A Request for Proposal (RFP) has been distributed to potential vendors. The RFP suggests a phased approach to the project. Phase I would include: comparing data from SARA 313 reports to identify inconsistencies, areas for improvement, existence of emission factor data, quality of emission factor data, and coordination with ongoing API and CONCAWE workgroups on emission factors. Specific sources for investigation: crude tanks - flashing losses, wastewater treatment plants, delayed coker unit emissions, combustion emissions, fugitive emissions, startup / shutdown /malfunction (SSM) emissions, and air toxics (formaldehyde, and benzene). Phase II - rank order the gaps for developing estimating procedures and determine the best approach to fill gaps in the emission factors and emission inventory database. For more information contact Dave Fashimpaur (dave.fashimpaur@bp.com)
PROJECT PROPOSAL 2010-05: Sensor System for Detection and Prediction of Floating Roof Failure in Petroleum Storage Tanks
Proposed by BP

To increase the safety of floating-roof tanks, the project aims to develop and test a wireless sensor system that can be installed permanently on the floating roof of an open top AST to alert the tank operator when accident warning signs are detected. This system will be comprised of intelligent distributed sensors that will simultaneously report data from various points on a roof thereby creating an overall representation of the structure and its behaviour. Because the sensor will be operating on a remote, constantly moving structure, the device will communicate wirelessly. For more information contact Dave Fashimpaur

dave.fashimpaur@bp.com

PERF project 2010-03: “Drilling waste best practice/guidance”
Proposal by Saudi Aramco

Following PERF meeting which took place in London on April, 2010, (15) PERF members and consultants have shown interest in participating in the proposed PERF project 2010-03 “Drilling waste best practice/guidance”. The objective of the project is to develop comprehensive guidelines, helpful to all international drilling operators, for the management of Drilling and Workover wastes. These guidelines should build upon existing guidance documents from API, UNEP, etc.

A power point presentation describing the project idea, type, objective and scope was prepared and emailed to potential project members. After consolidating all of the members’ comments, a conference call was conducted on September 20th, 2010. The level of interest and the type of contribution whether cost, information or hybrid were discussed through several emails. A second conference call will follow once the type of contribution of all interested companies is determined. Other interested companies should contact Ramzi Hejazi, Saudi Aramco

ramzi.hejazi@aramco.com
Membrane Bioreactor Demonstration, proposal by ExxonMobil

Nine PERF Members took part in the PERF Membrane Bioreactor (MBR) Demonstration Project. ExxonMobil coordinated the project, which had participation from BP, Chevron, ConocoPhillips, Petrobras, Repsol, Saudi Aramco, Shell, and Total. The project began in December 2009 and was completed in August 2010.

The project evaluated a commercial membrane module and tested its performance on a refinery wastewater stream. In addition to regular wastewater treatment, a series of tests were performed, increasing the loading to the system to see how it would respond to upset conditions. The effluent of the MBR system was processed with a reverse osmosis unit to see if the effluent quality would affect the RO membranes. The results of the project indicate the technology can be applied successfully for treating refinery wastewater, and can handle various contaminants at increased loading. The final report is in the progress of being completed. For more information contact: James M. Phelan (703-846-3611). james.m.phelan@exxonmobil.com

For a complete listing of proposals and projects, go to www.perf.org
PERF FALL 2010 REMEDIATION WORKSHOP

The third annual Fall Remediation Workshop was hosted by BP at their facilities in La Palma, CA on September 8 and 9. A total of 47 people were registered for the workshop which included a full day on TBA issues and a second half day session on Biofuels. A complete agenda for the meeting can be found on the PERF website (perf.org). Participants included company representatives from many of the PERF member companies as well as from academic, consulting and regulatory agencies.

The purpose of the meeting was to encourage networking amongst the member companies, consultants, academics, and regulators to facilitate joint research on remediation issues. Highlights from Day 1 included: 1. presentation of a number of case studies that illustrated the behaviour of TBA at service station sites studied in California, 2. evaluation of TBA plume behaviour over time with respect to MtBE and Benzene, 3. consideration of the source, or sources beside MtBE, for TBA found at sites, 4. an overview of API sponsored research on fuel oxygenates and biofuels, and 5. a regulatory update for anticipated changes in California.

Day 2 was a half day session on Biofuels where a great deal of new information was presented and discussed. Highlights included: 1. an update on recent research on alternative biofuels being developed by BP including work done at UC Berkley and Univ of Illinois, 2. results from a number of controlled release experiments done by Petrobras at their field lab in Brazil, and 3. an update on biobutanol research and efforts being undertaken by the ITRC for development of biofuels guidance document.

In addition, a proposed PERF research project was presented by Chevron to develop better analytical tools to evaluate biodiesel in the total petroleum hydrocarbon analysis. A sign up sheet was distributed which resulted in many companies expressing interest in possibly participating in this project. More information about this project is available on the PERF website.
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 research information relating to practical and theoretical science and technology concerning the petroleum industry and a mechanism to establish joint research projects in the field.

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

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**Member Companies & Representatives**

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<th>Representative</th>
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<tr>
<td>Amerada Hess Co.</td>
<td>Gerry Bresnick</td>
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<td>Saudi Aramco</td>
<td>Ramzi F. Hejazi</td>
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<td>BP</td>
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<td>Chevron</td>
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<td>EniTecnologie</td>
<td>Patrizia Buttini</td>
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<td>ExxonMobil</td>
<td>Jill Kerr</td>
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<td>INA-Naftaplin</td>
<td>Domagoj Zelic</td>
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<td>Petro-Canada</td>
<td>Doug Evans</td>
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<td>Petrobras</td>
<td>Paulo Negrais Seabra</td>
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<tr>
<td>Repsol YPF</td>
<td>Marta García Ariza</td>
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<td>Shell</td>
<td>Karen G. Haynes</td>
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<td>Statoil</td>
<td>Stale Johnsen</td>
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<td>Suncor</td>
<td>Anthony Congram</td>
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<td>Total</td>
<td>Frederic Perie</td>
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**Associate Members & Representatives**

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<tr>
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<th>Representative</th>
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<tr>
<td>Canadian Petroleum Products Institute (CPPI)</td>
<td>Adolfo Silva</td>
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<tr>
<td>Champion Technologies, Inc.</td>
<td>Ashley Dunham</td>
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<td>Questor</td>
<td>Wilson McGarel</td>
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<td>Veolia Water</td>
<td>Karim Essemianie</td>
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**PERF External Group Liaisons**

PERF encourages external groups such as trade associations, national laboratories, and research institutions 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 and 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)
Energy & Environmental Research Center (EERC)
VITO - Flemish institute for technological research

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**Chair:** Todd Ririe  
**todd.ririe@bp.com**  
**+1-(714)-670-3062**

**Vice Chair:** Chad Shockley  
**chad.e.shockley@exxonmobil.com**  
**+1 (703)-846-7378**

**Teamwork**  
Together we achieve the extraordinary!