



Society of Petroleum Engineers

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BP

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BP

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Petrotrin

James C. Robinson
BP

John Hall
Halliburton

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Produced Water Handling and Disposal

Workshop Description

The Water Pollution Rules are now enforceable law in Trinidad and Tobago. These rules govern the registration and permitting of water pollutants in Trinidad and Tobago, and under these rules, companies (or persons) releasing water pollutants into the environment are required by law to register with the Environment Management Authority.

The Water Pollution Rules directly affect five general groupings of business activity. They include industrial (e.g., oil and gas, petrochemicals, and quarries), commercial (e.g., hotels and restaurants), agricultural (e.g., sugar refineries), institutional (e.g., hospitals and laboratories), and sewage treatment plants.

This SPE Applied Technology Workshop is designed for petroleum and petrochemical industry professionals whose business operations are necessarily categorized as a significant source of water pollution and for whom compliance with the law implies a material change in normal operating systems and procedures (typically at material cost).

The focus of the workshop will be on

- Understanding the Water Pollution Rules and the requirements for compliance in Trinidad and Tobago, including substances classified as pollutants, what are the rules, who should register, what happens after registration, implications of noncompliance, and exemptions and dispensations
- Industry best practices for produced water handling and disposal, with emphasis on large oil and gas production and processing operations
- Successful and cost-effective strategies for handling and disposal of produced water for the small- and medium-sized oil and gas operator

Who Should Attend

Persons or companies should plan to attend this workshop if they release into the environment liquids or waste water containing water pollutants and/or if they are required to comply with local water pollution legislation in the territories in which they operate.

Produced Water Handling and Disposal

Registration Fee

Registration costs are **USD 600 for members until 4 May and USD 700 after 4 May. Nonmembers USD 700 until 4 May and USD 800 after 4 May.** The registration fee does not include hotel accommodations. After SPE receives your registration, we will send you a housing form authorizing a discounted SPE rate at the event's official hotel. The deadline for registration is **1 June 2008.**

Hotel Accommodations

Crowne Plaza Hotel
Wrightson Road and London Street
Port-of-Spain
Trinidad and Tobago
Tel: +1.868.625.3366

Sponsorship Support

Sponsorship support helps offset the cost of producing workshops and allows SPE to keep the attendance price within reach of those who benefit most from these technical workshops—operations-level individuals. Sponsors benefit both directly and indirectly by having their name associated with a specific workshop. The **2008 SPE Produced Water Handling and Disposal** workshop offers the sponsor unique access to a focused group of key decision makers in the operating community. This is an informed audience discussing state-of-the-art technology and best practices. While SPE prohibits any type of commercialism within the conference hall itself, the society recognizes that sponsorship companies offer valuable information to attendees outside the technical sessions.

For more information on sponsorship opportunities in Latin America and the Caribbean, including benefits and pricing, please contact LAC@spe.org.

For detailed agenda updates, please visit www.spe.org, and click on meetings/events.

Documentation

Proceedings from the workshop will not be published. Therefore, formal papers and handouts are not requested of speakers or panel members. Note taking by individual attendees is encouraged, but should be limited to ensure participation in the open discussion. A URL containing released copies of the workshop presentations will be available to attendees after the workshop. This documentation will not be prepared in the form of SPE papers.

Commercialism

To remain consistent with SPE objectives and guidelines, excessive commercialism in presentations will not be permitted. Company logos must be limited to the title slide and used only to indicate the affiliation of the presenter and others involved in the work.

Continuing Education Units

The Society of Petroleum Engineers, through SPE Professional Development, will award continuing education units (CEUs) for participation and completion of SPE short courses, distance learning programs, joint workshops, applied technology workshops, and sanctioned learning activities. One SPE CEU equals 10 contact hours of participation in SPE continuing education activities. A permanent record of a participant's involvement and awarding of CEUs will be maintained by SPE. SPE will provide a copy of the participant's record upon request to LAC@spe.org.

Technical Agenda

Tuesday, 3 June 2008

1400–1600 Registration

Wednesday, 4 June 2008

0930–0945 Opening Comments, Garvin Phillip, Chairperson

0945–1045 **Session I—Water Pollution Rules and Implications for Industry**

Session Chairperson John Hall

Description: A review of basic water pollution laws and regulations and the impact they have had on petroleum and downstream petrochemical Industries globally; and a discussion specific to Trinidad's recently enacted Water Pollution Rules and their potential impact on the operations of small, medium, and large players in Trinidad's petrochemical sector

1045–1100 Break

1100–1200 **Session II—Treatment/Remediation Methods for Produced Water**

Session Chairperson Garvin Phillip

Description: A review of common produced water treatment technologies employed to meet the effluent water-quality specifications for discharge as well as reinjection

1200–1330 Lunch

1330–1445 **Session III—Effective Methods for Produced Water Disposal**

Session Chairperson Deonarine D.J. Jaggernaut

Description: A review of common options for disposal, including reinjection and discharge to sea; the process by which to evaluate disposal options, including the best practicable environmental option (BPEO) analysis; other regulatory régimes for produced water management, including the environmental impact factor (EIF); and DREAM modeling

1445–1545 **Session IV—Low-Cost Methods for Produced Water Handling and Disposal**

Session Chairperson Jamaludin Khan

Description: Economic analyses of produced water treatment and disposal options, including examples of the best available technology not entailing excessive cost (BATNEEC) analyses

Dinner upon sponsorship

Thursday, 5 June 2008

0845–0900 Continental Breakfast

0900–1000 **Session V—Best Practices in Produced Water Handling and Disposal: Case Studies**

Session Chairperson James C. Robinson

Description: A brief review of successful applications of methods and technologies for produced water disposal, including treatment for discharge, with lessons learned

1000–1100 **Session VI—Recent Developments in Produced Water Treatment Technology**

Session Chairperson Nigel Sookdeo

Description: A discussion on recent developments and improvements in technologies for produced water treatment for discharge

1115–1130 Break

1145–1245 **Session VII—Oil in Produced Water Monitoring Technologies**

Session Chairperson

Description: A discussion of the various common methods used for oil-in-water measurement, such as infrared, UV fluorescence, gas chromatography, and gravimetric

1245–1400 Lunch

1400–1515 **Session VIII—Produced Water Environmental Impact Assessment**

Session Chairperson Tyrone P. Kalpee

Description: A discussion on the process for planning and conducting an environmental impact assessment (EIA), with specific regard to environmental aspects associated with produced water discharge

