Produced Water - Best Management Practices
Wednesday 29 & Thursday 30 November 2006

Training Courses - Tuesday 28 November 2006:
(A) Produced Water Re-Injection (PWRI)
(B) Measurement of Oil-in-Produced Water

Sheraton Imperial, Kuala Lumpur, Malaysia

Organised by
TUV NEL, United Kingdom
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Introduction
Increasing water production is now a major environmental, as well as an economic, issue for the oil and gas producers. It’s also an issue for the regulators who are responsible for setting up produced water discharge requirements around the globe.

Following the success of previous Produced Water and Oil-in-Water Monitoring Workshops, TÜV NEL is planning its first Malaysian Produced Water - Best Management Practices event on 29 and 30 November 2006 in Kuala Lumpur.

Leading experts in the field have been invited to help address the following questions:

- What are regulatory requirements for discharge of produced water?
- How should we manage increasing water production?
- What are the latest surface treatment technologies and experiences?
- Should we treat and discharge produced water or do we treat and re-inject it?
- What are the benefits of using an integrated approach?
- How should we go about produced water re-injection (PWRI)?
- What are the options to reduce water production?
- What is oil-in-produced water and how should we measure it?
- What new online oil-in-water monitoring technologies are available?

The main event will be preceded by two optional training courses. Further details are overleaf.

Objectives
The objective of the main event is for interested parties to find out and to keep abreast of the latest technological and legislative developments as well as current practices and trends in produced water management, treatment and handling.

Delegates will be given the opportunity to network, interact and cross-share experiences with operators, technology and equipment suppliers and contractors from around the globe.

Topics and Themes
The event will cover the following:

- Regulatory requirements and implications
- Integrated water management
- New and emerging surface treatment technologies and field experiences
- Produced Water Re-Injection
- Oil in produced water measurement
- Environment risk assessment and monitoring
- Open discussion

Speakers from government bodies, offshore operators, service companies, technology and equipment suppliers as well as consultancy and R&D organisations have been invited.

Who Should Attend
The event is designed for those who are concerned with oil and gas production processing, in particular produced water management, treatment and handling. It is also designed for those who supply technologies and services to offshore oil and gas production.

Discussion Periods
There will be open discussion periods concentrating respectively on:

- Legislation and its implications
- Surface treatment technologies
- PWRI
- Produced water oil concentration measurement

The discussion periods are geared to allow delegates to share their knowledge and gain perspective in this growing industry sector.

TUV NEL
TÜV NEL is a leading provider of pipeline fluid management services to the global petroleum industry. We have an impressive track record in the development, design and application of leading-edge technology in order to reduce production costs and increase profitability, whilst maintaining safety.

We provide consulting, training, R&D and laboratory testing services in the following areas:

- Flow Measurement (oil, gas, water, wet gas & multiphase)
- Produced Water Systems
- Computation Fluid Dynamics Modelling and Interpretation
- Thermal Engineering & Heat Transfer
- Erosion Assessment and Validation
- Umbilical Acceleration Life Testing
- Calibration in National Test Facility

TÜV NEL is part of the TÜV SÜD Group, the leading global technical services organisation for test, certification and consulting in industry with over 10,000 employees at 60 locations around the globe.

For further details on how TÜV NEL can help your business, please visit our website: www.tuvnel.com or contact us directly.

Exhibition Opportunities
Suppliers of equipment and services are invited to sponsor and exhibit at the main event. This will give your company a profile in the final programme in addition to a stand at the exhibition. Please contact the address on the back page for further details.

Fees
The registration fee for the main event is £695 including taxes. This covers delegate attendance, lunches, refreshments, and the main event documentation comprising a printed set of all papers presented and a CD containing all the main event proceedings.

The registration fee for each Training Course is £275 including taxes which incorporates attendance, refreshments and a printed set of course notes.

Accommodation is not included in the fees.

There are discounts available for multiple bookings. For further details see the booking form.
Produced Water - Best Management Practices

Wednesday 29 & Thursday 30
November 2006
Sheraton Imperial Hotel,
Kuala Lumpur, Malaysia

Technical Programme
Day 1 - Wednesday 29 November

08:20 - 08:50  Registration and Coffee

08:50 - 09:00  Chairperson’s Welcome and Introduction
Gabrielyn Lee, Shell EP Asia Pacific - Malaysia
Paul Jones, Chevron Energy Technology Co. - USA

09:00 - 09:30  The Discharge of Produced Water from Oil and Gas Production: Legislation Requirement in Malaysia
Ismail Ithnin, Department of Environment Sarawak - Malaysia

09:30 – 10:00  Produced Water: Its Characteristics, Distribution and Fate in the Marine Environment Around the Malaysia Seas
Mohamad Pauzi Zakaria, Universiti Putra Malaysia - Malaysia
Hideshige Takada, Tokyo University of Agriculture and Technology - Japan

10:00 – 10:30  Identifying the Best Management Strategy for Dealing with Sangu Produced Water Challenges
Babur Khan and Philip Dolan, Cairn Energy Sangu Field Ltd - Bangladesh
Paul Barron, Cairn Energy plc - Bangladesh

10:30 – 11:00  Coffee and Exhibition

11:00 – 11:30  Produced Water - Best Management Practices
Wally Georgie and Brian McErlain, Maxoil Asset Management - UK

11:30 – 12:00  Integrated Produced Water Management
Giles Davies, Oil Plus Ltd - UK

12:00 – 12:30  Open Discussion

12:30 – 13:30  Lunch

13:30 – 14:00  Complete Turbidity Removal Using Ultrafiltration in Produced Water Treatment for Re-Injection
I Gede Wenten, Institut Teknologi Bandung - Indonesia

14:00 – 14:30  Solving the Impact of High Toxic Loads in the Produced Water at the Kollsnes Gas Terminal by Applying the MPPE Technology
Lars Bergersen and Jesper Jacobsson, Statoil - Norway
Dick Meijer, Akzo Nobel MPP Systems BV - The Netherlands

14:30 – 15:00  Updates and Further Results in the Advances in Total Oil Remedian and Recovery Technology for Produced Water De-Oiling in Offshore Upstream Oil & Gas Environments
Marc Saad, Antti Valikangas and MJ Plebon, TORR Canada Inc. - Canada

15:00 – 15:30  Coffee and Exhibition

15:30 – 16:00  Treatment of Produced Water (for Re-Injection) at SAFAH Using Skim Tanks
Hassan Al Beloushi, Occidental of Oman Inc. - Sultanate of Oman

16:00 – 16:30  Produced Water Re-Injection Treatment Basis - Sweet or Sour or Both?
Norman McLeod, Chevron Energy Technology Co. - USA

16:30 – 17:00  Open Discussion

17:00  Chairperson’s Closing Remarks
Who Should Attend

• Production engineers and chemists
• Environmental engineers/advisers/officers
• Produced water management, treatment, handling specialists
• Process engineers and chemists
• Consultants
• Researchers

Technical Programme

Day 2 - Thursday 30 November

08:45 - 09:00 Coffee and Exhibition

09:00 - 09:10 Chairperson's Welcome and Introduction
Paul Jones, Chevron Energy Technology Co. - USA
Gabrielyn Lee, Shell EP Asia Pacific - Malaysia

09:10 - 09:40 Effluent Water Disposal Experiences in the Burgan/Magwa Fields in South & East Kuwait
Hamad Al-Ajmi, Issa Al-Jadi, Feras Al-Ruhaime and Budiarto Wahyu, Kuwait Oil Company - Kuwait

09:40 - 10:10 Optimising the Selection of Corrosion Inhibitors at TATUN Field as an Alternative to Improve Produced Water Quality for Discharge
Sigit Wibisono and Desy Santhyani, Total E&P Indonesia - Indonesia

10:10 - 10:40 Coffee and Exhibition

10:40 - 11:10 Use of the PROTEUS System for the Management of the Environmental Impact of Industrial Offshore Discharges in the West Java Sea
Ben Ridley, BMT Cordah Asia, Hong Kong - China
Zoheir Sabeur, BMT Cordah Ltd - UK

11:10 - 11:40 Assessing the Risk from Discharging Produced Water to the Marine Environment
Rob Phillips, Rob Phillips Consulting Pty Ltd - Australia
Anita Rios, Sustainable Solutions Services - Singapore
Arphee Caymo, Shell Philippines Exploration B.V. - Philippines

11:40 - 12:10 Open Discussion

12:10 - 13:10 Lunch

13:10 - 13:40 Natural Occurred Radioactive Material in Produced Water - Dose Rate Calculations and Comparison with Dose Rates in the Nuclear Industry
Peter Michael Hamel, TÜV SÜD Philippines Inc. - Philippines
Paul Grant, Shell Philippines Exploration - Philippines

Ming Yang, TUV NEL - UK

14:10 - 14:40 Coffee and Exhibition

14:40 - 15:10 Produced Water Characterisation Using Ultrasonic Oil-in-Water Monitoring,
Geir Aanensen and Thor Ole Gulsrud, Roxar Flow Measurement - Norway

15:10 - 15:40 Field Experiences with the Jorin ViPA Online Oil-in-Water Monitor
Augustin Coppey, Ipedex (SEA) Sdn Bhd - Malaysia
Nick Roth and Gayathri Ariaratnam, Jorin Limited - UK

15:40 - 16:10 Open Discussion

16:10 Chairperson's Closing Remarks
Introduction & Objectives
Increasing water cuts hence increased produced water volume and capacity constraints are often key drivers in the decision to implement Produced Water Re-Injection (PWRI). Whilst relatively common practice in the North Sea and Middle East it is still in its infancy in the Asia Pacific region. Although Water Injection (WI) is well established as a secondary or enhanced recovery technique, common practice is to treat produced water for disposal rather than re-injection.

Environmental policy and discharge constraints set the fallback standard for Produced Water Treatment (PWT). The reservoir characteristics dictate the basis for the injection water quality specifications, with the utilisation of natural fractures and the control of induced fractures helping to define the level of treatment to be considered by engineering and water specialists.

Successful PWRI requires the integration of many disciplines, taking into account:
- Corporate policy and environmental regulations
- Reservoir and petroleum engineering
- Process engineering
- Production chemistry

This training course will consider the different source waters available (seawater, aquifer water and produced water) and highlight the specific challenges faced for PWRI. Worked field examples will discuss the disposal options available and the equipment choices for Produced Water Treatment for disposal and/or re-injection.

Operational examples will be used to illustrate the challenges presented by real PWT and PWRI systems.

Who Should Attend?
Production engineers and chemists
Reservoir engineers
Water management and water injection specialists
Process engineers and chemists

Course Instructor
Giles Davies is the Regional Sales Manager of Oil Plus Limited. Although based in the UK he works extensively in the Asia Pacific region. With a long history in solid/liquid and liquid/liquid separation Giles has spent much of the last five years understanding water management issues and developing solutions with major clients in the region. With well established long term relationships, Oil Plus works on a huge variety of water management and production issues ranging from initial data gathering through to full implementation and operational support.

Topics Covered
- Introduction to PWRI
- Source Water Characteristics
- Reservoir Requirements
- Water Quality Specifications
- Equipment Options and Selection
- PWT Process Technology
- Achieving value through sustained performance

Training Course (B) - Measurement of Oil-in-Produced Water
Tuesday 28 November
09:00 - 12:30

Introduction & Objectives
Oil in produced water measurement is important both for process control and reporting to the regulatory authorities.
- What is oil-in-produced water?
- Why is measurement of oil-in-produced water important?
- What standard analysis methods are available?
- What field measurement techniques are there?
- How can we accept a method that is different from the officially approved reference method?
- What are the things that we need to be careful of when we do a calibration?
- How should produced water samples be taken and handled?
- What is the future trend in oil-in-produced water analysis and measurement?

This training course aims to answer these questions. It will enable delegates to gain a good understanding of the definition of oil-in-produced water, analysis and measurement methods available, issues related to method calibration and acceptance of non reference methods, sample taking and sample handling, as well as future oil-in-produced water measurement trend.

Who Should Attend?
Production engineers and chemists
Environmental engineers/advisers/officers
Produced water management, treatment, handling specialists
Process engineers and chemists
Regulators
Consultants
Researchers

Course Instructor
Ming Yang is a consultant at TUV NEL. He has established and run TUV NEL's two well known Oil-in-Water Monitoring and Produced Water Clubs. Both Clubs have some 35 international members, which include government bodies, oil and gas operators, equipment suppliers, and service and R&D organisations. Ming has also been technically responsible for 15 Oil-in-Water and Produced Water Workshops, Conferences and Seminars. Ming has been carrying out many projects on the subject of oil-in-water and produced water and is one of two authors in drafting UK Government guidance notes on sampling and analysis of produced water and other hydrocarbon discharges. Ming has 15 years experience working on oil-in-water measurement, produced water handling and multiphase separation subject areas since he gained his PhD in Chemical Engineering.

Topics Covered
- Definition of oil-in-produced water
- Legislation and discharge limits
- Sample taking and sample handling
- Standard measurement methods
- Field measurement methods (bench top and on-line)
- Calibration, acceptance of alternative methods
- Future trend
Please tick the event(s) you will be attending

- Training Course A
- Training Course B
- Produced Water - Best Management Practices

Full name (inc. title) 

Preferred Name for Badge (eg KLAUS LINGS) 

Job title 

Company 

Address 

Postcode Country 

Telephone 

E-mail 

We expect the event to be heavily subscribed. Places are strictly limited and are allocated on a first come, first served basis. Your place will be confirmed upon receipt of a completed booking form. If you do not receive confirmation within five working days please contact TUV NEL.

Method of Payment

- Main Event: £695
- Training Course A: £275
- Training Course B: £275
- Main Event & Training Courses A & B: £1155
- Main Event & Training Course A: £910
- Main Event & Training Course B: £910
- Training Courses A & B: £520

- Invoice to company named above
- Cheque, made payable to TUV NEL Ltd, enclosed with this form
- Bank Transfer to National Westminster Bank Plc, 52 West Street, Fareham PO16 0JX.
  - Account Name: TUV NEL Limited.

  Please advise your bank to include the event code COF197 and the delegate's surname in the transfer instructions.

  Company VAT number (EC member states only- COMPULSORY) 

- Visa
- Mastercard
- Amex
- Diners Card

Card No 

Security Code (on back of card) 

Card Holder's Name 

Signature 

Invoicing address (if different from above) 

Where did you hear about this event? 

Cancellation Policy

Any cancellations must be received in writing at least 14 days prior to the commencement of the event. A cancellation fee of 25% will be incurred. Once within this period the booking cannot be cancelled or any fees refunded, but a substitute delegate can be named at any time before the programme begins, provided that TUV NEL Ltd is notified in advance. TUV NEL Ltd reserves the right to cancel the event due to unforeseen circumstances. TUV NEL Ltd is not liable for any expenses incurred by the delegate. This programme may be subject to change due to circumstances beyond the control of the organisers.

Venue Details

Sheraton Imperial Hotel, Jalan Sultan Ismail, Kuala Lumpur 50250, Malaysia.

Tel: +603 2717 9900 Fax: +603 2717 9955 Web: www.luxurycollection.com/kualalumpur

Please complete and return this form to the Events Team

Fax back on: +44 (0) 1355 272999

TUV NEL

East Kilbride, Glasgow G75 0QF, UK

Booking Hotline: +44 (0) 1355 272858

E-mail: events@tuvnel.com

Online Booking: www.tuvnel.com/events.aspx

Signed: ____________________________ Date: ____________________________