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technology for life



Produced Water Workshop

Wednesday 23 & Thursday 24 April 2008

Training Course A - Oil-in-Produced Water
Measurement

Tuesday 22 April 2008

Training Course B - Oilfield Produced Water
Management Options and Legal/Regulatory Requirements
Friday 25 April 2008

Thistle Aberdeen Airport Hotel

Organised by

TUV NEL, United Kingdom

BOOKING HOTLINE: +44 (0) 1355 272858

ONLINE BOOKING: www.tuvnel.com/events.aspx

World Class Contributions from:

- Alderley plc
- Argonne National Laboratory
- BERR
- CETCO Oilfield Services Company
- Enerscope Systems Inc.
- Enviro Voraxial Technology, Inc.
- Fluid Imaging Technologies, Inc.
- GUPCO
- Maersk Oil North Sea UK Ltd
- NTNU
- Opus Maxim Ltd
- PETROBRAS
- Petroleum Development Oman LLC
- Shell Global Solutions
- Total
- Tracerco
- TUV NEL

Produced Water Workshop

23 - 24 April 2008

Thistle Aberdeen Airport Hotel



Introduction

Water production is now a major environmental, as well as an economic, issue for both operators and regulators from around the world.

Building on the success of its previous Produced Water Workshops, TUV NEL is planning its sixth Workshop on 23 and 24 April 2008 in Aberdeen.

This Workshop has invited leading experts in the field to help address the following questions:

- Where will legislation go from here and beyond year 2008?
- How are the UK OPPC Regulations being implemented?
- What is happening to the UK Produced Water Trading Scheme?
- What are the latest surface treatment technologies?
- How can new on-line monitoring techniques help characterise produced water?
- What challenges do we face in produced water treatments and monitoring?
- What experience do operators have in treating water from deepwater and heavy oil production operations?
- How can we minimise water production by using downhole technology?
- What is required in produced water quantification, how can we verify the discharge volume?
- How do we characterise produced water and its effect on the marine environment.

The Workshop will be accompanied by two optional training courses. Further details are overleaf.

Workshop Objectives

The objective of the Workshop 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.

The Workshop will allow delegates the opportunity to network, interact and cross-share experiences with operators, suppliers and contractors from around the globe.

Topics and Themes

The event will cover the following:

- Legislation update from UK and its implications
- New and emerging surface treatment technologies
- Operator field experience in deepwater, heavy oil operation environment
- Produced water flow measurement
- Downhole technologies
- Produced water characterisations and measurement
- Open discussion

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

Who Should Attend

The event is designed for those who are concerned with offshore oil and gas production processing, in particular produced water management, treatment and handling, as well as discharge and re-injection. It is also aimed at those who supply technologies and services to offshore oil and gas production.

Workshop Discussion Periods

There will be open discussion periods concentrating respectively on:

- Legislation and its implications
- Surface treatment technologies
- Downhole technologies
- Produced water characterisation and measurement

The discussion periods will provide delegates the opportunity to exchange knowledge and gain perspective in this growing industry sector.

TUV NEL

TUV 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 & heavy oil)
- Produced Water Systems
- Computation Fluid Dynamics Modelling and Interpretation
- Thermal Engineering & Heat Transfer
- Erosion Assessment and Validation
- Umbilical Acceleration Life Testing
- Calibration in National Flow Measurement Facility

TUV 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 TUV NEL can help your business, please visit our website: www.tuvnel.com or contact us directly.

Exhibition Opportunities

Suppliers of equipment and services who attend the Workshop are invited to sponsor and/or exhibit at the Workshop. This will give your company a profile in the final programme in addition to a stand at the Workshop. The cost to exhibit including a delegate place at the Workshop Sessions is £1350 plus VAT. Please contact the address on the booking form for further details.

Workshop Fees

The registration fee for the Workshop is £780 plus VAT. Registration fees cover delegate attendance, lunch, refreshments, and Workshop documentation comprising a bound set of all papers presented also a CD containing all the Workshop proceedings.

A networking dinner will be held on Wednesday 23 April at the hotel at a cost of £40 plus VAT.

The registration fee for Training Course A is £415 plus VAT and Training Course B is £280 plus VAT which incorporates attendance, refreshments and a set of course notes.

There are discounts for multiphase bookings and for TUV NEL Club Members. For further details see the booking form.

Accommodation is not included in the registration fee, please contact the hotel directly to book your accommodation.

Produced Water Workshop

23 - 24 April 2008

Thistle Aberdeen Airport Hotel

Technical Programme

Day 1 – Wednesday 23 April

- | | | | |
|---------------|---|---------------|--|
| 09:00 – 09:30 | Registration and Coffee | 14:00 – 14:10 | Chairman's Introduction
David Lloyd, Alderley – UK |
| 09:30 – 09:40 | Chairman's Introduction
Gordon Graham, Maersk Oil North Sea
UK Limited - UK | 14:10 – 14:40 | An Overview of Produced Water Treatment
Technologies
John Veil, Argonne National Laboratory
– USA |
| 09:40 – 10:10 | Aspects of Regulatory and Environmental
Performance Associated with the Offshore
Petroleum Activities (Oil Pollution
Prevention and Control) Regulations 2005
Erik Leslie and Stephen Fraser, BERR – UK | 14:40 – 15:10 | Produced Water Treating, Utilising Active
Flow Flotation and Advanced Media
Technologies for the Removal of
Environmentally Harmful Components
Brian Johnstone, CETCO Oilfield Services
Company – UK |
| 10:10 – 10:55 | Shell's 12 Years of Experience in Water
Treating in the Deepwater Gulf of Mexico
John Walsh, Shell / PDO Oman -
Sultanate of Oman | 15:10 – 15:40 | Coffee and Exhibition |
| 10:55 – 11:30 | Coffee and Exhibition | 15:40 – 16:10 | A Technology Update on the Voraxial
Separator for Separation of Oil and Solids
from Produced Water
Dan Samela and John A. DiBella,
Enviro Voraxial Technology, Inc. – USA |
| 11:30 – 12:00 | Produced Water Treatment and Monitoring
– Facing Future Challenges
Paul Verbeek, Shell Global Solutions –
The Netherlands
Simon Davies, Shell Technology Norway –
Norway | 16:10 – 16:40 | Research Into New Strategies In Removing
Dispersed Oil and Dissolved Compounds
From Produced Water
Sumihar H.D. Silalahi, Ciprian T. Scurtu
and TorOve Leiknes, Norwegian University
of Science and Technology Trondheim –
Norway
Herman Helness, SINTEF, Water and
Environment – Norway |
| 12:00 – 12:30 | Heavy Oil Water Treatment Management –
TOTAL's Approach
Pierre Pedenaud, TOTAL – France | 16:40 – 17:10 | Open Discussion Period |
| 12:30 – 13:00 | Open Discussion Period | 17.10 | Chairman's Closing Remarks |
| 13:00 – 14:00 | Lunch and Exhibition | | |

Who Should Attend

- Production engineers and chemists
- Environmental engineers/advisers/ officers
- Produced water management, treatment, handling specialists
- Process engineers and chemists
- Regulators
- Consultants and researchers

Technical Programme

Day 2 – Thursday 24 April

08:45 – 09:00	Coffee and Exhibition	13:30 – 13:40	Chairman's Introduction Angus Laurie, BERR – UK
09:00 – 09:10	Chairman's Introduction Paul Verbeek, Shell Global Solutions, The Netherlands - UK	13:40 – 14:10	Produced Water Characterization from Brazilian Offshore Platforms and Dispersion Studies Irene Gabardo, PETROBRAS – Brazil
09:10 – 09:40	Tools and Technology Applied to Improve the Performance of Produced Water Treatment Systems James Carnell, Nigel Weir and Tim Newton, Opus Maxim – UK	14:10 – 14:40	Field Test Results of Optical-Based Oil in Water and Particle Analysis Instrumentation Technology Kent Petersen and Mason Ide, Fluid Imaging Technologies, Inc. – USA
09:40 – 10:10	Application of Volumetric Decline Method to Reservoirs Under Injection of Both Water and Gas Antonio Cláudio de França Corrêa, PETROBRAS – Brazil	14:40 – 15:10	Coffee and Exhibition
10:10 – 10:40	Coffee and Exhibition	15:10 – 15:40	Understanding the Requirements for Produced Water Discharge Volume Verification and Potential Methodologies Alick MacGillivray and Ming Yang, TUV NEL – UK
10:40 – 11:10	Downhole Technologies in Minimising Water Production Mamdouh Mostafa Ibrahim and Yasser Mohamed Abd Elazziz, Gulf of Suez Petroleum Company (Gupco) – Egypt	15:40 – 16:10	Using Tracers to Calibrate / Verify Produced Water Flow Rates and Diagnose Process Problems with Produced Water Systems Dan Benson and Barry Firby, Tracerco Precision Diagnostics – UK
11:10 – 11:40	Downhole Pump Protection & Desanding Steve Coffee, Enerscope Systems Inc. – USA	16:10 – 16:40	Open Discussion Period
11:40 – 12:10	Open Discussion Period	16:40	Chairman's Closing Remarks
12:10 – 13:30	Lunch and Exhibition		

Training Course (A) – Oil-in-Produced Water Measurement

Tuesday 22 April
09:00 - 16:30

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?
- Where and how should we take samples?
- 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?
- 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, sampling and acceptance of non reference methods, 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 and researchers

Course Instructor

Dr Ming Yang is a Principal Technical Consultant at TUV NEL. Ming has 16 years experience working on oil-in-water analysis, produced water handling and multiphase separation subject areas since he gained his PhD in Chemical Engineering. He has established and currently manages TUV NEL's two renowned Clubs: Oil-in-Water Monitoring and Produced Water. Both Clubs have members from government bodies, oil and gas operators, equipment suppliers, and service and R&D organisations. He has also been technically responsible for 20 Oil-in-Water and Produced Water Workshops, Conferences and Seminars.

Topics Covered

- Definition of oil in produced water, discharge limits
- Standard measurement methods
- Sampling and sample handling
- Field measurement methods
- Calibration, acceptance of alternative methods
- Future trend

Course Fee: £415 plus VAT

Discounts:	Main Event + Training Course A	- £65
	Main Event + Training Course B	- £50
	Main Event + Training Courses A & B	- £85

Training Course (B) – Oilfield Produced Water Management Options and Legal/Regulatory Requirements

Friday 25 April
09:00 - 12:00

Introduction & Objectives

Produced water is the largest volume by-product stream generated by the oil and gas industry. Proper management of produced water can be costly; failure to correctly manage produced water can create serious liability for companies.

This training course will focus on approaches, techniques and tools for managing produced water at offshore and onshore wells. The management options are presented in a pollution prevention framework that first looks at options that can minimise the volume of water that must be managed. A second tier considers options that recycle or reuse produced water. In a third tier, options for produced water treatment and disposal are considered. A second portion of the course will review regulatory requirements governing produced water discharge and injection. Because the instructor works in the United States, most of the regulatory information relates to U.S. requirements. However, part of this section will be devoted to regulatory requirements in the North Sea and other parts of the world.

Who Should Attend?

The course is intended for persons who need to make decisions concerning regulatory compliance for produced water, and who play a role in selecting treatment equipment for controlling producing water. Those who have environmental management oversight for their companies would also benefit from this course. Examples include:

- Government regulators and policy makers
- HSE staff and managers
- Consultants and researchers
- Environmental engineers/advisers/officers

Course Instructor

The instructor is John Veil, Manager of the Water Policy Program for the Argonne National Laboratory in Washington, DC, USA. Mr. Veil has lectured throughout North and South America and Europe on produced water subjects for the past 10 years, including several times before at TUV NEL's Produced Water Workshops. He has 28 years of experience working with water quality and water pollution control issues, and has worked with produced water for 18 of those years. He was recently selected as a Distinguished Lecturer by the Society of Petroleum Engineers (SPE). Beginning in September 2008, he will travel around the world giving his lecture on produced water management. This course will include detailed information based on John Veil's SPE Lecture.

Topics Covered

- Produced water management technologies, practices, and options
- Regulatory requirements relating to produced water discharge and injection
- Introduction to online resources for more detailed information on produced water management

Course Fee: £280 plus VAT

Please tick the event(s) you will be attending

- Training Course A Training Course B
- Produced Water Workshop

22 April 2008 / 25 April 2008
23-24 April 2008

Full name (inc. title) _____	
Preferred Name for Badge _____	
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. Under UK excise regulations delegates from all countries are required to pay VAT at 17.5% on any conference/course taking place in the UK. Your place will be confirmed upon receipt of a completed booking form. If you do not receive within five working days please contact TUV NEL.

Method of Payment (Payment must be received no later than the event date)

Workshop £780+VAT Training Course A £415+VAT Training Course B £280+VAT Workshop Dinner £40+VAT

Workshop & Training Course Booking Discount (Details of discounts - see previous page) Club Member Discount (10%)

Total Payable (including discounts) _____ plus VAT

Invoice to company named above. Purchase Order No _____

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 No: 11300175, Sort Code: 52-41-32, Swift Code: NWBKGB2L, IBAN Number: GB26NWBK52413211300175
Account Name: TUV NEL Limited. Please advise your bank to include the event code COF214 and the delegate's surname in the transfer instructions.

Company VAT number (EC member states only - COMPULSORY) _____

Visa Mastercard Amex Diners Card Start Date _____ Expiry Date _____

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? _____

<p>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.</p> <p>Venue Details Thistle Aberdeen Airport Hotel, Argyll Road, Aberdeen, AB21 0AF Tel: +44 0870 333 9149 Fax: +44 0870 333 9249 Email: AberdeenAirport@Thistle.co.uk</p>	<p>Please complete and return this form to the Events Team Fax back on: +44 (0) 1355 272999</p> <p>TUV NEL Ltd East Kilbride, Glasgow G75 0QF, UK</p> <p>Booking Hotline: +44 (0) 1355 272858 Email: events@tuvnel.com Online Booking: www.tuvnel.com/events.aspx</p>
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Signed: _____ Date: _____