

Organised by Global Technology Forum

Wastewater treatment

29 September –
1 October 2010

London

gtforum.com/wastewateruk



Key topics:

- Legislative drivers
- Contaminant source and characterisation
- Oil removal technologies
- Emulsion breaking
- Biological COD removal
- Nitrogen removal technologies
- Filamentous bulking/foaming
- Sludge dewatering and disposal
- Effluent polishing and recycle



Introduction

The ERTC Wastewater treatment training course is a comprehensive core skills course for professionals dealing with all aspects of wastewater treatment in refineries and petrochemical plants, with an emphasis on biological contaminant removal.

The course will be highly valuable to all engineers involved in the operation, design and troubleshooting of wastewater treatment plants. Additionally, the course will be useful to any technical personnel wishing to understand the drivers, processes and biology behind wastewater treatment.

It will address practical issues, which will enable the participants to make a positive contribution towards optimising the performance of their effluent treatment plant.

Who should attend?

This programme was developed for a broad range of professionals in need of understanding the fundamentals of wastewater treatment as well as practical guidelines on how to manage a treatment plant.

It is ideal for refinery and petrochemical process and design engineers, unit operators and supervisors as well as operations engineers and maintenance personnel. Additionally, it is well suited for personnel from consulting companies, engineering firms and suppliers of services to the refining industry.

Learning objectives

Upon completion of the course participants will have gained a solid understanding of the key elements associated with the design, operation and troubleshooting of wastewater treatment unit operations. Especially understanding the fundamentals of biological treatment will be a focus.

Furthermore, they will have an overview of the changes in the legislative framework as well as in the characteristics of refinery effluent with changing feedstock.



Course description

This course provides an in-depth overview of wastewater treatment from the sources of wastewater and their associated chemistries to the legislation governing the discharge.

The core of the training comprises the design and operational aspects of the unit operations found in wastewater treatment:

- Primary treatment for free oil, emulsified oil and suspended solids removal
- Biological secondary treatment for removal of dissolved organics and ammonium
- Tertiary treatment, effluent polishing, recycling and odour control
- Sludge dewatering and disposal

The focus is on understanding and troubleshooting the various process steps. Throughout this training, participants are encouraged to share their specific challenges, which will then be discussed to serve as case histories and examples to benefit all the class.





Course programme (registration 8.30am, course starts 9.00am, course ends 5.00pm)

Wednesday 29 September

Overview of Wastewater Treatment

Sources of wastewater / Chemical composition / General plant overview / Link to process / Legislative drivers: IPPC, Water Framework Directive, EPER

Primary Treatment

Oil separation, emulsion breaking, solids removal / API&CPI separators, dissolved air flotation / Chemical treatment to aid separation

Thursday 30 September

Secondary Treatment

Biological treatment process overview / Design of treatment layout / Aeration options / Microbiology of wastewater treatment / Filamentous bulking and foaming / Microscopy as a troubleshooting tool / Respirometry

Biological Nitrogen Removal

Nitrification / Denitrification / Emerging technologies

Operational Parameters and Troubleshooting

Process control / Control of sludge age / Loading control / Mass balancing / High ammonia in the effluent / Bulking/ floating sludge remediation

Friday 1 October

Tertiary Treatment and Polishing

Metal removal / Odour control / Effluent polishing / Recycling options

Sludge Dewatering and Disposal

Sludge thickening / Oily sludge centrifugation / Belt and plate & frame presses

Training course fee (per delegate)

For bookings received before 23 August 2010 Course Fee = **£1999 +17.5% VAT**

A late booking supplement of £300 +17.5% VAT will be applied to all bookings received after 23 August 2010

Reservation form

Please make a reservation for the following delegate:

Title	First name
<hr/>	
Surname	
<hr/>	
Position	
<hr/>	
Company	
<hr/>	
Address	
<hr/>	
<hr/>	
Telephone	
<hr/>	
Fax	
<hr/>	
E-mail	
<hr/>	

5 easy ways to book

1
Register online at:
gtforum.com/
wastewateruk

2
Email us at:
training@gtforum.com

3
Complete and return
this form by fax to:
+44 (0)20 7504 3730

4
Complete and return
this form by mail to
the address overleaf

5
Simply call with
details on:
+44 (0)870 240 8859

Event code:
4521/10

Payment details

I wish to pay by:

Credit Card Cheque Bank Transfer

Please note: Card payments to be made at time of reservation

MASTERCARD VISA AMERICAN EXPRESS MAESTRO

Card holder's name

Card number

Start date

Expiry date

Security no

_____ Last 3 digits on back of card (AMEX – 4 digits on front of card)

Signature

Bank transfers/cheques only – not credit cards

Make cheque payable to: **Incisive Financial Publishing**

Transfers to: Incisive Financial Publishing

IBAN BIC: RBOSGB2L

Sterling IBAN: GB89 RBOS 15100021975543

Euro IBAN: GB96 RBOS 16107010064499

Dollar IBAN: GB67 RBOS 16630000269542

2010 Course listings

Blending

10 – 12 March 2010, London
www.gtforum.com/blending

Watertreating

17 – 19 March 2010, London
www.gtforum.com/watertreating

FCC

24 – 26 March 2010, London
www.gtforum.com/fcc

Introduction to refining

12 – 14 April 2010, London
www.gtforum.com/introrefining

Distillation

5 – 7 May 2010, London
www.gtforum.com/distillation

Improving refinery profit margins

5 – 7 May 2010, London
www.gtforum.com/refineryprofit

Hydrogen production by steam reforming

23 – 25 June 2010, London
www.gtforum.com/hydrogenprod

Refinery desalting

27 September 2010, London
www.gtforum.com/desaltinguk

Wastewater treatment

29 Sep – 1 Oct 2010, London
www.gtforum.com/wastewater

Hydrocracking

25 – 27 October 2010, London
www.gtforum.com/hydrocracking

Catalytic reforming

December 2010, London
www.gtforum.com/reforming

For more information, please visit
the individual website listed here
or send us an enquiry via
training@gtforum.com



Course presenters

Renate Ruitenber graduated with an MSc from Delft University of Technology and has over ten years of experience in designing, commissioning and troubleshooting industrial wastewater treatment plants. After 3 years in R&D, she currently is an Industry Development Manager for the refining and petrochemical industry for Nalco.

Jeffrey Gardenhire graduated with an Engineering BS degree from Texas A&M University. He has worked in the refining industry for over 20 years, with 16 years concentrating on industrial wastewater treatment for Nalco. Most recently, he has worked as global technical consultant for wastewater in the refining and petrochemical industry.





Mara Eusebiotti
 Global Technology Forum
 Incisive Media
 Haymarket House
 28-29 Haymarket
 London SW1Y 4RX



Training
 Meetings of minds

VAT reclaim

You may be able to recover this and other VAT using Vatax Reclaim ltd. Full details are available at vatax.net or telephone +44 (0)20 7831 5115



Online

For the latest information on all GTF Conferences and Training Courses visit our website at: gforum.com



Accommodation

For help with booking accommodation near the course venue, please contact Event Express via:

Telephone:
 +44 (0)1905 732737

Fax:
 +44 (0)1905 732738

Email:
reservations@eventexpressuk.com



Warning: ERTC is a registered trademark, and the titles, contents and style of this brochure are the copyright of Incisive Media. We will act on any infringement of our rights anywhere in the world.
 ©Incisive Media.

Cancellation: A refund (less 10% administration fee) will be made if notice of cancellation is received in writing three weeks before the training course. We regret that no refunds can be given after this period. A substitute delegate is always welcome at no extra charge.

Disclaimer: The programme may change due to unforeseen circumstances, and Incisive Media reserves the right to alter the venue and/or speakers. Incisive Media accepts no responsibility for any loss or damage to property belonging to, nor for any personal injury incurred by, attendees at our training courses, whether within the training course venue or otherwise.

Data Protection: By registering for the ERTC Training Course, Incisive Media will send you further information relating to this event. In addition we will send you information about our other relevant products and services which we believe will be of interest to you. If you do not wish to receive other relevant information from Incisive Media via a particular medium please tick the following relevant boxes: mail phone fax email.

Incisive Media will also allow carefully selected third parties to contact you about their products and services. If you do not wish to receive information from third parties via any of the following media please tick the relevant boxes: mail phone. Please tick if you are happy to receive relevant information from carefully selected third parties by email and fax .



incisivemedia
incisivemedia.com