

Advanced Wastewater Management

Mastering the skills of developing advanced wastewater treatment by combining comprehensive, technical and in depth methods with practical problem solving knowledge for a sustainable and healthy environment

Four Points By Sheraton Shanghai
China

26th & 27th November 2009

“Water and air, the two essential fluids on which all life depends, have become global garbage cans”

Jacques Yves Cousteau

Developing the skills of engineering advanced wastewater treatment process and bring home critical problem solving toolset that leads to better treatment performance, sustaining limited water resource that would have previously been deemed difficult to achieve



Your two day workshop is expertly conducted by:

Michael H. Foster CET, President and Principal Consultant
Environmental Business Specialists, LLC. (EBS)

Attend this valuable and insightful training and gain benefits on the following:

- **Detailing** the treatment process of highly complex wastewater: The process, design, and technologies used for these
- **Presenting** the latest development and projects in the wastewater sector from the U.S.
- **Instituting** best solutions for wastewater recycling and reuse
- **Obtaining** practical knowledge on design evaluation and process selection for constructing treatment facilities
- **Developing** problem solving skills to your wastewater treatment problems
- In-depth **studying** and adopting various methods of treating hazardous wastewater
- **Diagnosing** sludge process operation and management in a variety of treatment systems
- **Balancing** cost for installation and maintenance to wastewater treatment facilities and equipment, gaining cost reduction ideas
- **Conducting** wastewater process monitoring to improve treatment efficiency
- **Problem solving** and effective trouble shooting session where participants have the opportunities to post questions and problems to trainer

marcus evans training courses are structured to provide intense and practical training. Our format:

- Combinations of educational presentations, productive in-session assignments and participant collaboration to provide actionable learning
- Strictly limited numbers to allow for greater interaction and one-on-one interaction with the trainer
- Detailed pre-course questionnaires to allow you to tailor the programme to address your individual concerns
- Hard copy of presentation materials and tools

Testimonials from trainer's past clients:

“The EBS Family has been an absolute pleasure to work with over the last few years. With Mike Foster's guidance and expertise, Bercen, Inc. has been able to reduce overall wastewater treatment expenses over 50%. His employees come in weekly to sample our activated sludge system and generate reports with their recommendations for optimum system operation in a very timely manner. Overall, EBS's performance has been excellent.”

Tracey F. Simmons Project Engineer
Bercen, Inc.

“Mr. Foster has a unique ability to understand and simplify complex treatment plant problems. He is a gifted instructor who is highly regarded for his understanding of industrial wastewater operations and his ability to communicate complicated concepts in practical terms. I give him the highest possible recommendation.”

Paul H. Klopping Principal Consultant
Callan & Brooks, Inc.

“We have found the wastewater classes presented by Mr. Foster to be the perfect combination of technical wastewater knowledge and day to day practical knowledge such that it appeals to both our wastewater treatment Operators and our Environmental Compliance staff”

Jacob Adcock Sr. Environmental Engineer
Clearwater Paper Corporation

“Mike has a tremendous amount of experience and knowledge about biological wastewater systems and their performance characteristics. Mike provided service to mills that I have been associated with for many years and I have grown to respect and rely on his expert opinions. In addition to his wealth of knowledge and experience on wastewater systems, Mike has also developed expertise in the area of environmental testing for parameters such as BOD5, TSS, and other conventional test parameters. Mike was instrumental in helping a laboratory in a mill that I worked in to improve its QA/QC performance around these environmental parameters.”

Kyle Moore EHS Manager
International Paper Company

“I was in charge of all of the utilities for Cognis Corporation in Kankakee ILL. Mike's company, EBS, has been our technical advisor on our Activated Sludge Plant for the past ten years. We have some very good years of wastewater management, with his help along with his analytical lab, not to mention the on site training sessions.”

Hermann Ohrt Utilities Manager, Retired
Cognis Corporation

Pre-course questionnaire

To ensure that you gain maximum benefit from the event, a detailed questionnaire will be sent to you to establish some of your background information and exactly which of the topics covered in the seminar are of major importance to you and major issues related to those topics. The course trainer will analyze your completed forms. Tailor the lecture to strategic, tactical solution to your issues. The comprehensive course material will enable you to digest the subject matter in your own time.

The course will be conducted in English only

Media Partners



Thursday 26th November 2009

Session One

The sources of industrial wastewater and the efficient treatment process of wastewater

Under the rapid industrialisation environment the country is going through, the contamination level in the wastewater produced is changing due to new chemical used and high water reclaim. This wastewater requires proper treatment to meet stringent reclaim and discharge regulations. It is therefore getting more and more important to treat wastewater and return it to the process.

- Overview of wastewater sources and types of contamination
- Oil refineries and petrochemical treatment processes
- Electronics manufacturing industries wastewater treatment process
- Paper and pulp, printing and packaging industry wastewater treatment process
- Metals treatment
- Flotation of food processing and oily wastes

Session Two

Advanced wastewater treatment in industrial process and treatment by unit process

Additional treatment steps have to be taken to provide for further desired treatment goals: 1. Additional organic and suspended solids removal, 2. Removal of nitrogenous oxygen demand (NOD), 3. Nutrient removal, 4. Removal of toxic materials

The knowledge gained in this session will be used in the subsequent Workshop Session. Advanced wastewater treatment process and treatment methods for improved and higher quality production of water:

- Biological and Chemical Phosphorus removal
- Integration with anaerobic pre-treatment
- Design and operation of MBR
- Biological aerobic processes: MBR, MBBR, UASB
- Dewatering of biological solids
- Residuals management of non-biological solids
- Operation and control of nitrogen removal system
- Chemical applications in industrial wastewater treatment
- Physical – chemical treatment
- Combined biological – physical – chemical treatment
- Putting it all together - Case histories of types of systems in the U.S.

Workshop One

Group Exercise: System Design and Upgrade Exercise

The class will be divided into several groups or teams and given either system design or upgrade challenges. The instructor will provide a problem definition with some basic data and the groups will develop a recommendation for either a basic treatment system design or system upgrade.

Session Three

Advanced treatment methods and water reuse strategies

This session will cover recent advances in some of the more advanced treatment technologies available, particularly in the context of producing water suitable for recycling and reuse. Case histories of successful water reuse applications in the US will be presented

- Overview of water reuse - Benefits and limitations
- Performing treatability studies for wastewater reuse
- Reuse treatment using MBR
- Advanced treatment technologies for wastewater recycling and reuse: Reverse Osmosis, Ultrafiltration, Nanofiltration, etc
- Case histories of closed systems in the U.S.

About your course facilitator

Michael Foster is the founder and principal consultant for EBS LLC, a Louisiana (US) based consulting, service providing and training firm. He possessed B.Sc. in Chemistry and Political Science, and Masters in Instructional Technology.

He has provided many consulting services for many different industries mainly refineries, petrochemical, chemical and pulp and paper for many leading corporations. He possesses extensive experience in the areas of wastewater management and has developed, conducted and presented numerous workshops and seminars for wastewater treatment and wastewater biological systems for wastewater and environmental professionals.

To add to his expertise, Mike is also a certified environmental trainer (CET) in Wastewater by the National Environmental Trainers Association. He also obtained Class IV Wastewater Operator License in Mississippi, Louisiana and Arkansas.

Mike was the Recipient of the Outstanding Award Laboratory Analyst for 2008 by the Mississippi Water Environment Federation; and before he was Recipient of the 2005 Roy F. Weston Award for Outstanding Technical Contributions to the environment by the Technical Association for the Pulp and Paper Industry (TAPPI).

Mike is a member for the Environmental Division Program Committee in the Technical Association of the Pulp and Paper Industry (TAPPI), and had previously held the position of Chairman of the Division Supplier Advisory Committee in TAPPI, he is currently a committee member of Water Quality for the Arkansas Environmental Federation (AEF), he is also the member for the Water Environment Federation, Mississippi and Louisiana Water Environment Associations (MWEA and LWEA), and of the National Environment Association (NETA).

Before Mike set up EBS, he held management positions in leading chemical companies where he has successfully managed a forty million-dollar wastewater product line and four marketers resulting in significant sales increases and being named Marketer-of-the-Year for 1990; coordinated and conducted technical seminars, managed the startup and operation of the company's Bioengineering Group, coordinated research and new product development of wastewater treatment polymers and bioaugmentation culture.

Mike has also written a series of publications on bioaugmentation, aerated stabilisation, nutrient control topics for wastewater treatment efficiency.

Mike has presented and conducted the below wastewater training courses and workshops:

- Developed and presented several Industrial Biological Systems Wastewater workshops held at the EBS laboratory and training center in Mandeville, LA.
- Participated as instructor for NCASI Webcast on nutrient Residual Monitoring and Control "attended" by over 100 pulp and paper wastewater and environmental professionals.
- Conducted an Online Wastewater Workshop for TAPPI "attended" by personnel from 16 pulp and paper mills throughout the United States and Canada (July 2002).
- Biological Wastewater Workshop at the TAPPI Environmental Conference – Annually since 2001.
- Wastewater Treatment Workshops in Pulp and Paper, Food Processing and General Industries – 2000 and 2001 AEF Regional Workshop.
- Made technical presentation and/or presented at the Operators Forum on Biological Wastewater Treatment at every Mississippi Water Environmental Association Annual Conference since 2001, and etc

Some of the key Wastewater Projects Mike has been involved with:

- Provided technical oversight and training for the start up of a Pulp Mill activated sludge treatment plant in Russia.
- Assisted numerous industrial clients in troubleshooting and resolving nitrification problems.
- Developed and implemented on-site wastewater training for operators and engineers at refineries, petrochemical facilities and twenty paper mills.
- Provided design and start up assistance for the expansion of two small wastewater facilities - a dairy and a specialty chemical manufacturer.
- Develop and implemented root cause identification and remediation plans to address filamentous bulking in activated sludge systems.
- Conducted numerous treatability and inhibition studies for industrial clients and engineering companies.
- Assisted clients in developing alternative operating strategies to address significant production decreases.
- Implemented nutrient addition and/or bioaugmentation programs to address poor BOD removal in industrial applications.
- Conducted laboratory audits for compliance testing procedures (Biochemical Oxygen Demand, Total Suspended Solids, Color, Ammonia, and Phosphorus.)

Mike's key clients include:

- TempleInland Corporation
- Georgia-Pacific Corporation
- Weyerhaeuser Company
- Potlatch Corporation
- Cognis Corporation
- International Paper Company
- Buckman Laboratories
- Alabama River Pulp
- Reichhold Chemical
- Graphic Packaging Incorporated
- RockTenn Corporation
- Hercules Incorporated, Pulp & Paper Division

Friday 27th November 2009

Session One

Effectively conducting activated sludge control, treatment and disposal methods

A comprehensive discussion of industrial activated sludge systems will be presented with an emphasis on effective process control and optimisation. The class will be encouraged to present actual situations from their systems for discussion.

- Fundamentals of biological wastewater treatment
- Overview of Activated Sludge, Sequencing Batch Reactors, and Aerated Lagoons
- Aeration control and optimisation
- Monitoring and controlling activated sludge systems
- Nitrification and nutrients control
- Activated sludge process control
- Dewatering, disposal methods and process
- Address treatment deficiencies and implementing upgrades
- The use of biological additives to improve activated sludge operation
- Presenting case histories, including discussion of attendee presented issues

Session Two

Conducting wastewater process monitoring and controlling biological systems

This session will focus on the laboratory techniques and online equipment available to monitor and control biological treatment systems. The goal will be to provide each attendee with the knowledge required to develop and implement a monitoring and testing strategy to ensure optimum treatment and compliance in a cost effective manner

- Developing an effective and cost effective monitoring plan
- Wastewater testing: Chemical Oxygen Demand (COD), Biochemical Oxygen Demand (BOD), Total Suspended Solids (TSS), Nutrient Analysis (Ammonia, Nitrate, Phosphate) and Oxygen Uptake Testing (Dour and Sour)
- Microscopic examination of activated sludge samples

Session Three

Improving treatment efficiency by performing Wastewater Treatability Studies

Biological treatment performance is simulated by continuously monitoring oxygen uptake level in a well mixed, fully aerated and temperature controlled environment of wastewater

- Developing an effective and cost effective monitoring plan
- Using Respirometry to evaluate and troubleshoot Biological Systems
- On-line Monitoring Equipment for Dissolved Oxygen, Solids, and Nutrients evaluations
- Toxicity and inhibition studies
- Biodegradability studies
- Nitrification studies

Workshop Two

Group Exercise: Interpreting Laboratory Information in Activated Sludge Systems

The class will be divided into groups and given an example wastewater analysis or microbiological assessment relevant to their industry. The groups will evaluate the information and present their findings to the instructor and the class for discussion

Session Four

Breakout Session by Industry to Pose Questions to Instructor

The training is concluded with a problem solving and trouble shooting to help attendees with their wastewater problems. This final session will consist of the class being divided into industry related groups to discuss challenges being faced by their particular industry. The groups will present their findings/questions to the instructor and the class for discussion and input.

In-House Training Solutions

If you have a number of delegates with similar training needs, then you may wish to consider having an In-House Training solution delivered locally on-site. Course can be tailored to specific requirements.

Please contact **Sarah Faradilla** on +603 2723 6600 or email sarahf@marcusevanskl.com to discuss further possibilities.

Mike's publications

- Foster, M.H. & Klopping, P.K. (2003). Aerated Stabilization Basins for Pulp and Paper Mills. Callan & Brooks, Inc., Corvallis, OR.
- Foster, M.H. (2001). The BioWizard™ Nutrient Optimization Program for Aerated Stabilization Basins in Pulp and Paper Mills. TAPPI Environmental Conference Proceedings.
- Foster, M.H. (2000). Proprietary Nutrient Supplement Reduces Nutrient Requirements and Improves Treatment Efficiency in a Pulp and Paper Mill Aerated Stabilization Basin. TAPPI Environmental Conference Proceedings.
- Foster, M.H. (2000). Beyond N and P – The Impact of Micronutrient Formulations on Paper Mill Effluent Respirometry Studies. TAPPI Environmental Conference Proceedings.
- Foster, M.H. & Connors, J. (2000). On-site Cultivation Reduces Bioaugmentation Dosage. TAPPI Environmental Conference Proceedings.
- Foster, M.H., & Schuyler, R.G. (1997). Biomass Quality Management as a Process Control Tool for the Activated Sludge Process. TAPPI Environmental Conference Proceedings.

Why you cannot miss this event

China confronts some of the most serious environmental threats in the world. Untreated wastewater is still one of the biggest problems for their environmental protection scheme. The water pollution crisis in China has brought up an issue of negative impact on their environment, society, and agriculture. It is increasingly becoming a grim problem that seriously affects the lives of millions of people. Despite the greater abundance of water in China, the country is still facing major problem of water shortage due to extensive water pollution, thus proper methods of treating wastewater and recycling water, is the key goal in sustaining the limited water resource supply.

The 3rd wastewater training has been designed to bring you extensive and technical knowledge on the treatment process of how wastewater treatment system works, how to manage them effectively to maintain public health and minimise environmental impacts. This year the training will be focusing on the treatment process of various complex industrial wastewaters, along with case studies of technologies and methods which advanced countries are currently using. The advanced training program gives stakeholders and professionals in the China region the opportunity to develop your knowledge of efficient and sustainable wastewater management, treatment and reuse. Grab this opportunity to instil problem solving skills into your toolkit and immediately put to use in your treatment facilities.

Who should attend

Vice-presidents, Directors, General Managers, Senior Managers, Managers, Team Leads, Supervisors, Seniors, Engineers, Coordinators, Heads from departments of:

- EHS
- Chemical Engineering
- Operations
- Quality and environment/ Quality safety
- Environmental
- Process Management
- Plants and facilities
- Production

From the following industries:

- Petrochemicals
- Paper and Pulp
- Packaging and printing
- Electronic manufacturing
- Food and beverage
- Cosmetics
- Chemicals
- Oil and gas
- Steel and Metal
- Cement
- Semi-conductor
- Textile

Program schedule

0830	Registration and coffee
0900	Morning session begins
1030 - 1100	Refreshments and networking break
1230	Networking luncheons
1330	Afternoon session begins
1530 - 1550	Refreshments and networking break
1700	Workshop concludes

marcus evans would like to thank everyone who has helped with the research and organisation of this event, particularly the trainer, who has kindly committed and supported the event.

高级废水管理培训

通过把实践性的问题解决知识和全面性, 技术性 & 深入的处理方法结合于一起, 获取研制先进的废水处理过程的技能, 以实现持续性和健康的环境

上海福鹏喜来登酒店, 中国

2009年11月26日-27日

“水和空气, 令生物得以生存的这两者最基本物质, 已经变成了全球的垃圾桶”

雅克·库斯托

研制先进的工业废水处理过程并把问题解决技巧带回家, 优化处理过程绩效, 以维持有限的水资源。



国际著名培训讲师:

Michael H. Foster 授权认证环境培训师, 总裁及首席顾问
Environmental Business Specialists, LLC. (EBS)

参加这两天培训获取专家意见:

- 培训师将会为高浓度及难降解的废水给予详细的处理过程: 过程, 设计和技术
- 呈现目前在美国的最新发展废水处理案例及项目
- 研制度水循环再利用的最佳解决对策
- 获取为建设废水处理设施的设计评估及流程选择的实践性知识
- 学习如何为您的废水处理研制解决方案
- 深入地研究并采取不同方法处理高难度和有害废水
- 为各类处理系统诊断污泥运作过程和管理
- 如何平衡废水处理设施的装置费用和处理工艺的成本减少计划, 实现成本效益
- 实施废水可处理研究, 持续性的监测, 以改善处理的绩效
- 获取研制解决方案的技能, 参加者将会有机会像培训师提出废水处理中所面对的挑战和难题

marcus evans的培训课程提供紧凑和实用的培训. 我们的模式:

- 结合陈述、作业及参与者协作, 提供交互学习
- 严格限制人数, 更多的互动和培训师一对一学习
- 详细的课前内容问卷, 参与课程方案的设计建议, 以最大化满足个人需求
- 演示文稿印刷版本和相关工具, 材料

课程将会以英语进行

Michael H. Foster 培训过的客户对他的评价:

“我们已和EBS合作了几年, Mike Foster的技术及领导能力, 帮助我们成功减少了废水处理的50%费用。EBS每一个星期都会为我们 测试我们的活性污泥系统并定期为我们提供建议以改善我们的系统以达到卓越效率。一句话, EBS的专业能力及绩效是最优秀的。”

Tracey F. Simmons 项目工程师
Bercen, Inc.

“Mike 有着理解及将复杂的处理系统问题简单化的独特才能。他是一位天才的技术指导师和演讲师, 在工业废水的处理和运作中非常被同行重视, 因为他有着以下能力, 他可以将复杂概念的废水处理方式以实践性的方法表达出去。我在这里给他最高的推荐。”

Paul H. Klopping 首席顾问
Callan & Brooks, Inc.

“Mike为我们提供及演讲的废水处理课程, 有着技术性的废水知识和每天实践性操作知识的完美结合, 这技术性和实践性结合的培训非常的吸引负责废水处理的操作师及环境工程师。”

Jacob Adcock 高级环境工程师
Clearwater Paper Corporation

“Mike有着丰富的生物废水处理经验和知识, 关于生物废水系统及它们的特征和绩效Mike都了如指掌。Mike 在这方面上提供了许多培训, 多年来我对他的知识很是尊敬并时常依靠他的专业意见。他在废水系统管理的丰富的知识及经验, 他也有着专业的技术能力在于环境测试的范围当中, 例如: 生化需氧量5, 总悬浮固体量及其他传统式的测试方法。Mike也曾为许多工厂的实验室改善它们环境参数的质量保障和控制。”

Kyle Moore 环境健康安全经理
国际纸业公司

“我负责掌管着科宁公司在Kankakee伊利诺斯州分行的所有设备和装置, Mike担任我们的活性污泥工厂的技术顾问已经十年了。这些年我们有着非常优秀的废水处理, 他不只是我们的顾问, 而且也是我们的现场培训师。”

Hermann Ohrt 设备经理, 退休
科宁公司

课前问卷调查

确保你从这次培训中获得最大好处, 详细的问卷将以确定你的培训需求. 完成后的表格将由培训师进行分析. 以确保培训在合适的范围上进行, 并强调相关重要问题. 完备的课程材料可使你在课后消化相关主题培训将以英文进行

Media Partners



第一场**工业废水及不同行业的有效处理的过程及工艺**

中国正经历着工业的快速度发展，被制造的工业废水当中的化学物变化已让环境污染程度更加变本加厉的上升。这些废水需要正当的处理以符合国家严重的回收及排放法规。有效并准确的废水处理及将它们回用便得越来越重要。

- 不同行业废水的来源及不同种类的污染物
- 炼油厂和石化行业的废水处理过程
- 电子制造行业的废水处理过程
- 纸浆造纸，印刷和包装行业的废水处理过程
- 金属废水处理
- 食品加工及含油废水的浮选处理法

第二场**先进的废水处理过程及单元操作工艺的流程**

探讨外加的处理步骤以提供所期望更进一步的处理目标：1. 外加的有机和总悬浮固体去除方式，2. 氮质需氧的去除，3. 营养物去除，4. 有毒物质的去除

- 在此场所获取的知识将被用于紧接着的短训班中。通过先进的废水处理过程及处理方法以改进和制造高质量的水：
- 生物及化学除磷技术和过程
- 废水厌氧预处理的整合法
- 膜生物反应器的设计和操作技术
- 生物好氧工艺：膜生物反应器，移动床生物膜反应器，上流式厌氧污泥床
- 生物固体脱水
- 非生物固体的残渣管理
- 氮质需氧系统的运作及控制
- 工业废水处理的化学应用
- 物化处理
- 物化-生化-物化结合的处理过程
- 整合在一起 - 美国的系统种类案例分析

短训班 1**分组练习：系统设计和系统升级练习**

这实际练习课程将会涉及组员被分配至不同小组，每一对小组将会被给予一项系统设计或升级的任务。培训师将会提出一些废水处理及处理系统的问题综述，并同时提供一些基本数据，参加者将根据这些处理系统问题研制解决方案，改善系统的设计质量或升级。

第三场**先进的废水处理方法和水回用战略**

次场将探讨一些最新及最先进的处理技术，尤其是制造适合废水循环再利用的过程当中。培训师将会提供几项在美国的水回收再利用的成功案例。

- 水回收的经济效益及限制性
- 废水可回用性的实验性研究
- 废水回用处理技术：膜生物反应器
- 废水循环和再利用的先进处理技术：反渗透，超滤法，纳滤，和其它
- 美国废水处理的闭路系统案例

Mike的著名作品：

- Foster, M.H. & Klopping, P.K. (2003). 纸浆造纸的曝气稳定池实施, Callan & Brooks, Inc., Corvallis, OR.
- Foster, M.H. (2001). BioWizard™纸浆造纸的曝气稳定池的养分高效优化项目. TAPPI 环保峰会会刊
- Foster, M.H. (2000). 合适的养分补充减少过量的养分需求, 提高纸浆造纸曝气稳定池的处理效率. TAPPI 环保峰会会刊
- Foster, M.H. (2000). 超越N and P - 微量营养素 对造纸厂废水“Respirometry”研究的影响. TAPPI 环保峰会会刊
- Foster, M.H. & Connors, J. (2000). 现场培养技术以减少生物强化用量剂. TAPPI 环保峰会会刊
- Foster, M.H., & Schuyler, R.G. (1997). 对生物质量管理的技术过程控制, 活性污泥过程. TAPPI 环保峰会会刊

关于培训导师

Michael H. Foster 授权认证环境培训师，总裁及首席顾问
Environmental Business Specialists, LLC. (EBS)

Michael Foster是位被认证的环境培训师，拥有教育科学学的硕士学位，化学及政治学学位。同时也现任为 Environmental Business Specialists 公司的创始人，总裁和首席顾问，专门提供工业废水处理的服务与培训课程。

Mike累积了丰富的废水处理经验，多年的经验当中他曾经为众多不同行业提供过咨询服务，主要为Fortune500强的炼油厂，石油化学，化学，纸浆造纸的公司。他拥有全面性的废水管理知识和技术，过去到目前为止Mike积极活跃于对专业人士进行培训工作，他曾经研制，进行并指导了一系列的废水处理与废水生物系统的培训课程和研讨班。

Mike的经验与知识还不仅如此，他还是一位被“National Environmental Trainers Association”授权的认证环境培训师。他也曾经在密西西比州，路易斯安那州和阿肯色州各自获得第四级的废水处理员执照。

在2008年Mike还获得了密西西比州水体环保联合会所颁发的杰出奖项“Recipient of the Outstanding Award Laboratory Analyst”；在2005年他也曾在纸浆与造纸工业技术协会上获得Roy F. Weston Award所颁发的杰出环境技术贡献奖项“Outstanding Technical Contributions to The environment”。

Mike现任为纸浆与造纸工业技术协会的环境项目委员会的一员，也曾经担任过环境供应部门委员会的主席之职位。除此，他也是阿肯色州环境联合会的水体质量部门委员之一，密西西比州和路易斯安那州环境联合会的会员，同时也是国家环保协会的委员。

Mike还未成立EBS之前，他曾经担任过领先化学公司的管理职位，在这里他成功的管理一项超越40万的废水处理设备和产品，为公司带来了大量的销售量也因此被称为当年的最佳销售员；他也曾经在他之前的公司里执导过废水技术的研讨班，管理公司的生物工程团队之运营，为废水处理聚合物及生物强化协调一系列的研制和新产品开发的工作。

Mike也曾经在如何利用生物强化，曝气稳定性，营养物控制以有效的处理废水上写了一系列的出版物。

Mike 曾担任过众多培训课程及研讨班的培训讲师：

- 在路易斯安那州曾为众行业的工业生物系统研制并指导多项废水培训课程
- 曾担任National Council for Air and Stream Improvement的指导导师，为超过100名环保专家与纸浆造纸废水工程师进行营养物质残渣监测及控制
- 为TAPPI指导一项在美国及加拿大网上的废水培训课程
- 于2001年开始为TAPPI进行一年一次的生物废水处理培训课程
- 为密西西比州水环协一年一度的峰会进行生物废水处理培训班及提供技术型讲座

Mike以往所负责的废水处理项目：

- 俄罗斯：为一间起步的纸浆厂提供活性污泥处理的技术监管和培训
- 帮助众多工业客户解决故障和硝化作用难题
- 为炼油厂，石油化工设施及二十间纸浆厂的工程师和操作人员研制，发展和实施现场废水培训
- 为两所小型的废水设施 - 乳制品厂和特殊化学制造厂提供设计及起步的协助
- 研制及实施根源坚定及修复计划，以防止活性污泥里的丝状菌膨胀
- 为工业客户和工程公司在废水上提供众多可处理及抑制研
- 协助客户研制可替代的操作战略以解决生产下降
- 实施养分添加和生物强化项目以解决在工业应用中的差劲BOD去处方法
- 实施实验室审计符合性程序（生化需氧量，总悬浮固体量，色素，氮及磷素）

Mike曾经提供服务的公司：

- TempleInland Corporation
- Georgia-Pacific Corporation
- Weyerhaeuser Company
- Potlatch Corporation
- RockTenn Corporation
- AshlandHercules Specialty Chemicals
- Graphic Packaging Incorporated
- Buckman Laboratories
- Alabama River Pulp
- Reichhold Chemical
- Cognis Corporation
- International Paper Company

第一场**有效的执行活性污泥控制，处理及处置**

此讲将提供全面性的讨论 - 工业活性污泥系统的操作及处理将会被探讨并强调有效的工艺控制和优化方法。

参加者将被鼓励提供他们的污泥系统的一些现状及问题，培训师将分析这些系统的状况及为大家解答。

- 生物废水处理的原理
- 活性污泥，定序间歇反应器，曝气塘
- 曝气控制及优化
- 监测及控制活性污泥系统
- 亚硝酸盐硝化及物化控制
- 活性污泥工艺控制
- 水脱干和处置的方法和过程
- 活性污泥处理方法的不足与改进
- 利用生物添加剂以改善活性污泥运作
- 案例的呈现，包括解答参加者所提供的问题

第二场**实施废水过程的监测和控制生物系统**

此讲将强调实验室及在线的技术以监测并控制生物处理系统。目的是要为参加者提供研制并实施监测和测试策略的知识以实现不只是最佳的处理系统，也同时实现成本效益的状况

- 研制有效并达到成本效益的监测计划
- 废水测试：化学需氧量，生化需氧量，总悬浮固体量，生物分析（氨，硝酸盐，磷酸盐），摄氧量测试
- 活性污泥样本的显微镜检测

第三场**实施废水可处理研究以改善处理的效率**

持续性的监测在经过混合，曝气及温度控制之下的废水中的摄氧含量及浓度，以改善生物处理的绩效

- 研制一项有效及富成本效益的监测计划
- 利用“Respirometry”评估并定期寻找生物系统故障的原因
- 在线监测设备和器材以溶解氧份，固体及生物营养素
- 毒性和抗菌性研究
- 微生物降解性研究
- 硝化过程的测定研究

短训班 2**分组练习：讲解活性污泥系统的实验室信息**

这实际练习课程也将会涉及组员被分配至不同小组，根据每一对小组的行业参加者将会被给予一项废水分析的实例或者是微生物考核的任务。小组们将会评估及分析这些信息并向培训师呈现他们所挖掘的研究结果，而培训师也将为参加者们提出建议和一起探讨这些任务的结果。

第四场**分组讨论班：根据行业分组向培训师提出废水处理所面临的难题**

此讲将为参加者设立一个问题解决的一个小时讨论班，在此为参加者们排除他们废水处理中所面对的障碍。这最后一讲将会根据行业分派参加者致不同的小组，然后探讨在他们行业的废水处理中所面对的挑战及种种困难。参加者们将提出他们平时的处理结果和难题，培训师将带领全班探讨并给出解决方案。

日程安排

0830	签到及早点
0900	培训开始
1030	早茶及联络
1100	培训开始
1245	午餐
1345	培训开始
1500	下午茶
1520	培训开始
1700	培训结束

为什么不能错过此会议？

中国目前正面临着最严重的环境污染问题。未被处理的废水是国内其中最大的环保问题之一。水体污染危机为中国的经济、社会及农业都带来负面影响。这问题严重的影响到国内亿万人民的生活。中国城市工业废水污染严重，其主要原因是长期以来工业生产过程中高投入、低产出、高消耗、低效率的状况未得到根本改变，资源浪费严重。虽然中国拥有良好的水资源，目前国家也为水严重污染而导致水资源紧张状况的问题而烦恼。随着多年来我国迅速的工业发展，国内正面临水短缺的重大问题，适当和有效的废水处理并循环再利用，是维持有限的水资源方法。

这第三届的废水管理培训是特意为您而设计的全面性培训，深入并富技术性知识的培训，为您带来废水处理的工艺和深入的过程讲解，废水处理系统的运作和升级方法，同时也包括有效的管理技能以保持公共卫生与健康并减少环境污染。今年的培训将会强调处理不同高浓度与难降解废水的深入过程和工艺，同时提供美国的废水案例，他们的技术运用和最新的方法及发展趋势。这中高级致高级的培训将会为专家们提供一个可以建立持续性废水管理及有效处理后再利用的知识平台。不要错过此机会，参加此培训以获取研制问题解决方案的技巧，并立刻采取所学习过的知识改善您废水处理的绩效。

谁有必要参加

副总裁，总监，总经理，高级经理，经理，组长，主管，顾问，工程，技术人员：

- | | |
|------------|----------|
| • 环境健康安全部门 | • 环境部门 |
| • 化学工程 | • 流程管理 |
| • 操作/运营 | • 工程部 |
| • 工厂 | • 质量环境部门 |
| • 生产部门 | • 环境审计部门 |

来自以下行业：

- | | |
|---------|--------|
| • 石油化学 | • 化学 |
| • 纸浆造纸 | • 石油 |
| • 包装和印刷 | • 钢铁金属 |
| • 电子制造 | • 水泥 |
| • 食品 | • 半导体 |
| • 化妆品 | • 纺织 |

About the Media Partners

建设部《水工业市场》杂志是中华人民共和国建设部主管、建设部信息中心主办的国家级优秀期刊。《水工业市场》杂志依托建设部资源优势，为水工业领域企事业单位、行政管理部门及广大读者提供权威、准确、深入、及时的信息。本杂志全方位报道水工业行业宏观政策走向分析，水工业市场热点深度报道，与企业经营发展息息相关的业内最新动态信息，行业发展的重大突破，重大行业及公司新闻，专项研究成果，国际与国内先进经验等。

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中国水网 (<http://www.h2o-china.com>, www.chinawater.net) 创办于2000年5月，以资讯为本，是中国水行业的第一专业网络媒体，水业权威信息内容提供商，水业系列品牌活动策划组织者。中国水网把握行业脉搏，跟踪行业热点问题，内容深入、系统、快捷、准确，是水业认识掌握行业动态、获取行业资讯的首选媒体。《水业投资资讯》、《水业E刊》及《中国城市水业市场研究》系列年度研究报告等权威专业信息资讯，并组织每年一度的“城市水业战略论坛”水业大会、“城市水业高级技术论坛”“水业高级战略沙龙”和“水业高级技术沙龙”、系列专业培训、水业年度评选、水业万里行公益活动等品牌活动，得到水行业人士的广泛认可和青睐。截止到2009年03月，拥有23万多名注册会员的专业读者群，5万4千多注册企业，权威国际排名网站中所属行业网站中国排名第一。