

Odors and Air Pollutants Conference 2016

Milwaukee, Wisconsin, USA
21 – 24 March 2016

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TECHNICAL PROGRAM

Session 1: A Fresh Look At Odor Control

Tuesday, March 22, 2016
10:45AM – 11:45AM

Room: 101CD
PDHs: 1.0

Co-Moderators: Carla Dillon, Orange County Sanitation District
Bart Kraakman, CH2M

- 01A 10:45AM Looking Beyond Cover and Scrub: A Systematic, Operationally Focused Approach Controls Odors Economically**
Brian Porter, Janice Carroll, Kristen Smeby, Hazen and Sawyer; Michelle Simpson, Rivanna Water and Sewer Authority
- 01B 11:15AM The Latest In Odor Control Issues and Solutions For Wastewater Systems**
Philip Wolstenholme, Brown and Caldwell
- 11:45AM Session Adjourns**

TECHNICAL PROGRAM

Session 2: From Sewer Corrosion To Incinerator Emissions

Tuesday, March 22, 2016
10:45AM – 11:45AM

Room: 102AB
PDHs: 1.0

Co-Moderators: Vaughan Harshman, Evoqua
William Desing, CH2M

- 02A 10:45AM A Novel Test Method For Measurement of MIC In A Wastewater Collection System**
Tim Matheis, EvoquaWater Technologies
- 02B 11:15AM Air Emissions and Air Permitting For A New Fluid Bed Incinerator and Biogas Engines: NEW Water's R2E2 Project**
Thomas Henning, Short Elliott Hendrickson, Inc.;
Bill Angoli, Julie Maas, NEW Water
- Alternate Our 20-mile Long Sewer Stinks. Why Isn't There A Panacea For The Fix**
Mark Smith, Brown and Caldwell
(See associated poster in exhibit hall.)
- 11:45AM Session Adjourns**

TECHNICAL PROGRAM

Session 3: What Makes Technologies Tick – A Look Inside

Tuesday, March 22, 2016

1:30PM - 4:45PM

Room: 101CD

PDHs: 2.5

Co-Moderators: Richard Pope, Hazen and Sawyer
Bart Kraakman, CH2M

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|------------|---------------|--|
| 03A | 1:30PM | A Method For Choosing Between Carbon Media Alternatives For Wastewater Odor Control Dirk Apgar, King County Dept. of Natural Resources & Parks |
| 03B | 2:00PM | Packing and Its Role In Packed Tower Design Chester Morton, Clean Air & Water Engineering |
| 03C | 2:30PM | De-Mistifying Mist Elimination In Odor Control Applications Michael Lannan, Matthew Riegert, Jena Shaw, Tech Environmental |
| | 3:00PM | Networking Break |
| 03D | 3:45PM | Biofilter Media Review, Historical Discussion and Design Considerations Bruce Singleton, CDM Smith |
| 03E | 4:15PM | Bio-Trickling Filter Media Selection For City of Los Angeles Air Treatment Facilities Cyrus Gilani, City of Los Angeles |
| | 4:45PM | Session Adjourns |

TECHNICAL PROGRAM

Session 4: Tools For Estimating Offsite Impacts

Tuesday, March 22, 2016
1:30PM - 4:45PM

Room: 102AB
PDHs: 2.5

Co-Moderators: Robert Stallings, AECOM
William Hyland, RecyClean Services

- 04A 1:30PM Looking Beyond Odor In To Odor Chemistry**
Samantha Henningsen, ALS Environmental Air Quality Laboratory; Charles McGinley, St.Croix Sensory, Inc.
- 04B 2:00PM San Francisco's Southeast Plant Odor Characterization Study Identifies Odor Culprits**
Scott Cowden, CH2M; Nohemy Revilla, Meei-Lih Ahmad, San Francisco Public Utilities Commission; Susan Dennis, CH2M
- 04C 2:30PM Estimating Impact of Ammonia Emissions For A CAMBI Anaerobic Digester Filtrate Treatment Facility**
James Marx, Kevin Voit, Joseph Kwiatkowski, Gregory Bowden, AECOM Technical Services Inc.; Salil Kharkar, DC Water
- 3:00PM Networking Break**
- 04D 3:45PM A Comparative Study of AERMOD Low Wind Options On WWTP H²S Impacts**
Russell Jalbert, Arcadis; Phyllis Diosey, Hazen and Sawyer
- 04E 4:15PM Latest Update To Odor Modeling Protocols**
Raymond Porter, Porter Odor Science
- 4:45PM Session Adjourns**

TECHNICAL PROGRAM

Session 5: Rotting Away – Corrosion Fundamentals

Wednesday, March 23, 2016
8:30AM - 11:45AM

Room: 101CD
PDHs: 2.5

Co-Moderators: Robert Bowker, Bowker and Associates
David McEwen, Brown and Caldwell

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| 05A | 8:30AM | Assessing The Extent of Biogenic Sulfide Corrosion In Concrete and Selecting Coatings To Prevent It: Inspection and Testing Principles Robert Nixon, Corrosion Probe |
| 05B | 9:00AM | Corrosion In Wastewater Facilities: Costs, Consequences, and Management Options Mark Perkins, Perkins Engineering Consultants |
| 05C | 9:30AM | Rehabilitation Alternatives For Manholes Damaged By Corrosion With Case Histories Gerry Muenchmeyer, Muenchmeyer Associates |
| | 10:00AM | Networking Break |
| 05D | 10:45AM | Selecting Materials of Construction To Resist and Control Biogenic Sewer Corrosion James Joyce, V&A Consulting |
| 05E | 11:15AM | Chemical Addition Alternatives For The Control of Biogenic Sewer Corrosion Robert Bowker, Bowker and Associates |
| | 11:45AM | Session Adjourns |

TECHNICAL PROGRAM

Session 6: Utility Odor Control, Management, and Planning

Wednesday, March 23, 2016
8:30AM - 11:45AM

Room: 102AB
PDHs: 2.5

Co-Moderators: Dirk Apgar, King County
Jay Witherspoon, CH2M

- 06A 8:30AM Design and Implementation of Air Extraction Using The Odor Capture Performance For The Containment of Odors**
Bart Kraakman, Josef Cesca, Graeme Hamer, Jay Witherspoon, CH2M
- 06B 9:00AM The City of Wichita, Kansas' Odor Control Program - Continuing Optimization With A Cost-Conscious Approach**
Rebecca Lewis, City of Wichita; Michael Nelson, USP Technologies
- 06C 9:30AM Blending Odor Control Into A City Gateway**
Neil Webster, Webster Environmental Associates
- 10:00AM Networking Break**
- 06D 10:45AM The Role of Process Modeling In Designing Odor Mitigation Solutions: Developing Emissions Ratings For Process Technologies and Structures Using Toxchem™**
Malcolm Fabiyi, Spencer Snowling, Ritika Goel, Hydromantis, Inc.
- 06E 11:15AM Review of Global Odor Control Strategies and Identifying A Suitable Approach For A WWTP**
Sock-hoon Koh, Andrew Shaw, Pat Coleman, James Currie, Tony Koodie, Black & Veatch
- Alternate The Science & Technology of The EPA Scentometer Ambient Odor Measurement Method**
Charles McGinley, St. Croix Sensory, Inc.
- 11:45AM Session Adjourns**

TECHNICAL PROGRAM

Session 7: Bugs Gone Wild: Biological Odor Control

Wednesday, March 23, 2016

8:30AM - 11:45AM

Room: 102C

PDHs: 2.5

Co-Moderators: Philip Wolstenholme, Brown and Caldwell
Don Apking, Purafil

- 07A 8:30AM Advances In Biological Odor Control - Why Science Matters**
Timur Dunaev, Matthew Johnson, Louis Le Roux, BioAir Solutions
- 07B 9:00AM City of Los Angeles Addresses Drought Condition in Starting New Air Treatment Facility**
Cyrus Gilani, Abdul Danishwar, City of Los Angeles
- 07C 9:30AM Biotower Performance At Various Empty Bed Contact Times With Elimination Capacity Curves Including High Rate Hydrogen Sulfide Systems**
Chris Easter, Greeley and Hansen; Bruce Singleton, CDSmith; Matthew Johnson, BioAir
- 10:00AM Networking Break**
- 07D 10:45AM Broomfield Water Reclamation Plant Engineered Media Biofilter After A Decade of Operation**
Derek Webb, Hidayat Husain, Biorem Technologies, Inc.; Ken Rutt, City of Broomfield, Co; Mark Maxwell, Tetra Tech
- 07E 11:15AM Davenport Compost Facility Odor Control Improvements**
Todd Williams, CH2M
- 11:45AM Session Adjourns**

TECHNICAL PROGRAM

Session 8: Odor Control Troubles and Solutions

Wednesday, March 23, 2016
1:30PM - 4:45PM

Room: 101CD
PDHs: 2.5

Co-Moderators: Matthew Johnson, BioAir Solutions, LLC
Timur Dunaev, BioAir Solutions, LLC

- 08A 1:30AM Upgrading Odor Control - and a Plant - In a Shoreline Community**
Richard Pope, Hazen and Sawyer; Thomas Lauro, Westchester County
- 08B 2:00PM How Does A Dynamic Olfactometer Really Work?**
Mel Suffet, Yubin Zhou, University of California, Los Angeles; Tadeo Vitko, Orange County Sanitation District
(See M.Suffet additional poster in exhibit hall.)
- 08C 2:30PM Invisible Odor Control: Combining Public Athletic Fields With Nutrient Equalization Basins and Hidden Odor Control Systems**
Chris Easter, Greeley and Hansen; Rich Voit, CH2M; Janelle Okorie, Alexandria Renew Enterprises
- 3:00PM Networking Break**
- 08D 3:45AM DMS CSI: A Multi-pronged Investigation For Comprehensive Odor Control**
Ryan McKenna, ARCADIS; Richard Pope, Hazen; Jonathan Reeves, District of Columbia Water and Sewer Authority
- 08E 4:15PM Value Added - An Odor Analysis For A Deep Tunnel Ventilation Issue**
Rachel Revis, Brown and Caldwell
- 4:45PM Session Adjourns**

TECHNICAL PROGRAM

Session 9: Outside The Box Technology

Wednesday, March 23, 2016
1:30PM - 4:45PM

Room: 102AB
PDHs: 2.5

Moderator: Ray Porter, Porter Odor Science

- 09A 1:30PM Design and Validation of An Odor Reduction Facility For An Organic Waste/Slurry Processing Plant**
Anders Wistrom, Centriair USA; Jack Delin, Per Kaijser, Scandinavian Centriair
- 09B 2:00PM In-Situ Atomized Mist Chemical Scrubbing – A Pilot Test Approach**
David McEwen, Brown and Caldwell
- 09C 2:30PM Water Usage Optimization in Biofiltration Odor Systems**
Yunjie Zhang, Evoqua Water Technologies LLC.
- 3:00PM Networking Break**
- 09D 3:45PM Biological Removal of Chloroform In A Controlled Trickle Bed Air Biofilter**
Keerthisaranya Palanisamy, Bineyam Mezgebe, George Sorial, University of Cincinnati; Endalkachew Sahle-Demessie, U.S. EPA
- 09E 4:15PM Innovative Odor Mapping and Management Method Sets The Stage For Targetted Foul Air Treatment**
Tadeo Vitko, Orange County Sanitation District; Scott Cowden, Zeynep Erdal, Jay Witherspoon, CH2M
- Alternate Preventing Odor Emissions By Integrated Activated Sludge and Oxidized Ammonium Recycling**
Bart Kraakman, CH2M; Jose Estrada, University of Valladolid; Scott Cowden, CH2M; Rachel Lebrero, Raul Munoz, University of Valladolid
(See associated poster in exhibit hall.)
- 4:45PM Session Adjourns**

TECHNICAL PROGRAM

Session 10: Underground Conveyance Odor Issues

Wednesday, March 23, 2016
1:30PM - 4:45PM

Room: 102C
PDHs: 2.5

Co-Moderators: Chris Hunniford, V&A Consulting
Bruce Koetter, Webster Environmental Associates, Inc.

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| 10A | 1:30PM | Smell Ya Later Theresa Muller, Brown and Caldwell |
| 10B | 2:00PM | Untangling Complex Collection System With A System-Wide Odor Evaluation Brian Huang, James Joyce, Chris Hunniford, V&A Consulting Engineers; Robert Bowker, Bowker and Associates |
| 10C | 2:30PM | City of Scottsdale Collection System Odor Control Evaluation Study Inken Mello, ECO2; Teresa Valentine, Valentine Engineering |
| | 3:00PM | Networking Break |
| 10D | 3:45PM | A Conceptual Sewer Process Model As A Tool For Odor and Corrosion Management Nohemy Revilla, Guo Ji Chiu, San Francisco Public Utilities Commission (SFPUC); Asbjørn Nielsen, Jes Vollertsen, Aalborg University |
| 10E | 4:15PM | Vortex Drop - Field Study and Design Considerations Edward Lamb, LambTech, Inc.; Mark Holstad, Albuquerque Water Utility Authority |
| Alternate | | Assessment of Hydrogen Sulfide Generation At The S-10 Lift Station and Potential Mitigation Measures Robert Stallings, Mark Riley, Chris Jones, AECOM; Richard Robillard, Long Beach Water Department |
| | 4:45PM | Session Adjourns |

TECHNICAL PROGRAM

Session 11: Odor Monitoring and System Performance

Thursday, March 24, 2016
8:30AM - 11:15AM

Room: 101CD
PDHs: 2.5

Moderator: Bart Kraakman, CH2M

- 11A 8:30AM Odorous VOCs From Biosolids Detected By GC-MS/O**
Radoslaw Barczak, Warsaw University of Technology, Poland; Ruth Fisher, Xinguang Wang, Richard Stuetz, The University of New South Wales, Australia
- 11B 9:00AM How OCSD Identified The Most Detectable Odorants At Its Plant Process Areas**
Tadeo Vitko, Orange County Sanitation District; Irwin (Mel) Suffet, Yubin Zhou, UCLA
- 11C 9:30AM Forced-Air Ventilation For Sanitary Sewer Odor Control: What's My Zone Of Influence Going To Be?**
Mark Smith, Brown and Caldwell
- 10:00AM Networking Break**
- 11D 10:15AM Testing The Limits; Measuring A Biofilter's Response To Spike-Loading**
Karl Bohn, Bohn Biofilter Corp; Ed Lamb, Lamb Technical Services
- 11E 10:45AM Performance Results For Photoionization From Odor Sensitive Locations**
Calvin Pride, Ambio Biofiltration Ltd.; Oliver Augustin, Neutralox Umwelttechnik GmbH; Balasubramaniam Shanchayan, Ambio Biofiltration Ltd.
- 11:15AM Conference Adjourns**

TECHNICAL PROGRAM

Session 12: Local Market Odor Control Trends

Thursday, March 24, 2016
8:30AM - 11:15AM

Room: 102AB
PDHs: 2.5

Co-Moderators: Neil Webster, Webster Environmental Associates, Inc.
Sharon Miller, Perkins Consultants

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| 12A | 8:30AM | Odor and Corrosion Control In Deep Sewers: A Sewershed Approach Micki Klappa-Sullivan, Milwaukee Metropolitan Sewer District |
| 12B | 9:00AM | NEW Water's (Green Bay) Experience Addressing Paper Mill Collection System and Biosolids Odors Bill Angoli, NEW Water |
| 12C | 9:30AM | Science & Technology of EPA's Scentometer Ambient Odor Measurement Method Charles McGinley, St Croix Sensory |
| | 10:00AM | Networking Break |
| 12D | 10:15AM | MWRD Odor Control Strategy Brent Bedell, Jonathan Grabowy, Metropolitan Water Reclamation District of Greater Chicago |
| 12E | 10:45AM | An Adaptive Odor Management Plan To Mitigate Future Odor Concerns At The Stickney Water Reclamation Plant William Nichols, Ted Bluver, Ryan Christopher, Greeley and Hansen; Paul O'Brien, Metropolitan Water Reclamation District of Greater Chicago |
| | 11:15AM | Conference Adjourns |