



2016 EPA International Decontamination Research and Development Conference



AGENDA

U.S. Environmental Protection Agency
Durham, NC
November 1-3, 2016

DAY 1: TUESDAY, NOVEMBER 1, 2016

7:00 AM **Registration**

General Session 1 - Program Overviews, Responses, and Field Studies
Auditorium, C-111. Presentations and Q&A moderated by Lukas Oudejans and Timothy Boe | *U.S. EPA*

8:00 AM **Opening Remarks**

Lukas Oudejans and Shawn Ryan | *U.S. Environmental Protection Agency*

8:15 AM **EPA's Homeland Security Research: From CBRNE to "All-Hazards"**

Gregory Sayles | *U.S. Environmental Protection Agency*

Jonathan Herrmann | *(Retired) U.S. Environmental Protection Agency*

8:50 AM **An Overview of the UK Government Decontamination Service's Science and Technology Program**

Dudley Hewlett | *Department for Environment, Food and Rural Affairs, United Kingdom*

9:30 AM **BREAK**

General Session 1 (cont.) - Program Overviews, Responses, and Field Studies
Auditorium, C-111. Presentations and Q&A moderated by Hiba Ernst and Mario Ierardi | *U.S. EPA*

10:00 AM **Current Status in Fukushima and Study on Volume Reduction and Recycling**

Kiyohiko Eino | *Japanese Ministry of the Environment*

10:45 AM **Research Supporting the Development of Capabilities for Environmental Remediation for Chemical, Biological, and Radiological Contamination**

Shawn Ryan | *U.S. Environmental Protection Agency*

11:15 AM **Jack Rabbit II Chlorine Release Field Experiments**

Shannon Fox | *Department of Homeland Security*

11:45 AM **LUNCH**

12:45 PM **Keynote Speaker: Perspectives from EPA's Leadership on Homeland Security Research**

Stan Meiburg, Acting Deputy Administrator | *U.S. Environmental Protection Agency*

General Session 1 (cont.) - Program Overviews, Responses, and Field Studies
Auditorium, C-111. Presentations and Q&A moderated by Matthew Magnuson and Christopher Gallo | *U.S. EPA*

1:00 PM **Demonstration of Radiological Decontamination and Mitigation Technologies for Building Structures and Vehicles**

Sang Don Lee | *U.S. Environmental Protection Agency*

1:25 PM	Water, Water Everywhere: Managing Contaminated Water from Chem-, Bio-, and Rad-Decontamination Hiba Ernst <i>U.S. Environmental Protection Agency</i>		
1:50 PM	Toward Cleanup and Recovery of Underground Transit Systems from a Biological Agent Event Don Bansleben <i>Department of Homeland Security</i>		
2:15 PM	Fumigation of a Subway Railcar Using Methyl Bromide to inactivate <i>Bacillus anthracis Sterne</i> Jasper (Joe) Hardesty <i>Sandia National Laboratories</i>		
2:40 PM	BREAK		
Concurrent Sessions 1			
Underground Transport Restoration Auditorium, C-111 Moderated by Shawn Ryan and Charlie Fitzsimmons <i>U.S. EPA</i>		Water Infrastructure Protection and Decontamination C-113 Moderated by Jim Goodrich <i>U.S. EPA</i>	
3:15 PM	Investigation of Sampling and Analysis Protocols for Underground Transport Restoration Staci Kane <i>Lawrence Livermore National Laboratory</i>	3:15 PM	Water Utility Decontamination Preparedness Tools Veronica Aponte-Morales <i>U.S. Environmental Protection Agency</i>
3:40 PM	Advances in Sampling and Situational Awareness Using Augmented and Virtual Reality Devices Robert Knowlton <i>Sandia National Laboratories</i>	3:40 PM	Assessing the Effectiveness of Coliform Decontamination in Aircraft Drinking Water Systems Jeffrey Szabo <i>U.S. Environmental Protection Agency</i>
4:05 PM	Spray Knockdown System for Rapid Containment and Neutralization of Airborne CBW Mark Tucker <i>Sandia National Laboratories</i>	4:05 PM	Field-Scale Water Infrastructure Decontamination and Wash Water Treatment Jim Goodrich <i>U.S. Environmental Protection Agency</i>
4:30 PM	Decontamination Options in a Subway Environment Following a Biological Release Lukas Oudejans and Shannon Serre <i>U.S. Environmental Protection Agency</i>	4:30 PM	Installation of Routine and Heightened Biosecurity Equipment and Protocols at Beef Cattle Feed Yard in the High Plains Robert DeOtte <i>West Texas A&M University</i>
4:55 PM	Developing Guidance for the Rapid Return to Service of Underground Transportation Systems Following a Biological Agent Attack Robert Fischer <i>Lawrence Livermore National Laboratory</i>	4:55 PM	Biocontaminants in Wastewater: Interactions Between <i>Bacillus Globigii</i> Spores and Mixed Cultures of Activated Sludge Willie Harper <i>Air Force Institute of Technology</i>
5:20 PM	DAY 1 ADJOURNS		



DAY 2: WEDNESDAY, NOVEMBER 2, 2016

7:00 AM **Registration**

General Session 2 - Chemical, Biological, and Radiological Research Efforts
Auditorium C-111. Presentations and Q&A moderated by Timothy Boe and Lawrence Kaelin | *U.S. EPA*

8:15 AM **EPA's Selected Analytical Methods for Environmental Remediation and Recovery**
Romy Campisano | *U.S. Environmental Protection Agency*

8:40 AM **Basic Research for Next-Generation Decontamination Technologies**
Stephen Lee | *U.S. Army Research Office*

9:05 AM **Hazard Mitigation Science and Technology Program for the DoD Chemical and Biological Defense Program**
Charles Bass | *Defense Threat Reduction Agency*

9:30 AM **BREAK**

Concurrent Sessions 2

Biological Agent Detection
Auditorium, C-111
Moderated by Brendan Doyle | *U.S. EPA*

Chemical Agent Research
C-113
Moderated by David Bright | *U.S. EPA*

9:50 AM **Bioluminescent Reporter Phage System for *Bacillus Anthracis* Detection and Clearance Monitoring Following Environmental Release**
David Schofield | *Guild BioSciences*

9:50 AM **The Chemical Terrorism Risk Assessment**
David Bradley | *Department of Homeland Security / Leidos Contract Support*

10:15 AM **Rapid, Quantitative Biological Indicator System with *Bacillus Thuringiensis* Al *Hakam* Spores**
Yoojeong Kim | *Triton Systems, Inc.*

10:15 AM **The Chemical Agent Reactions Database (CARD)**
David Morton | *Department of Homeland Security / Battelle Contract Support*

10:40 AM **Detection and Identification of Environmental Microbes Contamination Using Novel LC-ESI-MS/MS Method**
Rabih Jabbour | *U.S. Army, Edgewood Chemical Biological Center*

10:40 AM **Chemical Hot Air Decontamination of CWA-Contaminated Materials**
Joseph Myers | *U.S. Army, Edgewood Chemical Biological Center*

11:05 AM **Development of Standards and Testing of Portable Biodetection Equipment for the Screening of Biothreat Agents**
Rachel Bartholomew | *Pacific Northwest National Laboratory*

11:05 AM **Natural Attenuation of VX following Application onto Nonporous and Porous Materials**
David See | *Battelle Memorial Institute*

11:30 AM **LUNCH**



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Concurrent Sessions 3

Environmental Resilience / Biological Agent Sampling & Methods Auditorium, C-111 Moderated by Sarah Taft and Leroy Mickelsen <i>U.S. EPA</i>		Radiological Agent Research C-113 Moderated by Sang Don Lee <i>U.S. EPA</i>	
12:30 PM	Environmental Resilience: Exploring Scientific Concepts for Strengthening Community Resilience to Disasters Brendan Doyle <i>U.S. Environmental Protection Agency</i>	12:30 PM	Modeling Decontamination Strategies in the Aftermath of a Nuclear Detonation Matthew Clay <i>U.S. Department of Health and Human Services / Leidos Contract Support</i>
12:55 PM	The Application of Biological Agent Sampling Methods to a Wide-Area Incident Colin Hayes <i>ERG</i>	12:55 PM	In Half a Half-Life of Cesium-137: NHSRC Research for Radiological Remediation Matthew Magnuson <i>U.S. Environmental Protection Agency</i>
1:20 PM	Novel Methods for the Characterization of Viable <i>Bacillus</i> Spores from Wastewater and Landfill Leachate Douglas Hamilton <i>ORISE Research Participant with U.S. EPA</i>	1:20 PM	RN Decontamination of Military Sensitive Equipment Marc Desrosiers <i>Defence Research and Development Canada</i>
1:45 PM	Comparative Efficacy of Decon Technologies for <i>Bacillus anthracis</i> and <i>Bacillus Atrophaeus</i> Vipin Rastogi <i>U.S. Army, Edgewood Chemical Biological Center</i>	1:45 PM	A Novel Approach for Evaluating Cost Effective Decontamination Options for Remediating a Radiologically Contaminated Site Jim Mitchell <i>U.S. Environmental Protection Agency</i>

Poster Session Building B Atrium

2:10–3:40 PM

Poster Session of the Decontamination R&D Conference

Join us in the Building B Atrium to view posters and interact with poster presenters.

1	Impact of Fumigation Using Methyl Bromide with Chloropicrin on Electronic Equipment Alden Adrion <i>U.S. Environmental Protection Agency</i>
2	Updates and Developments to EPA's Water Contaminant Information Tool (WCIT) John Bain <i>U.S. Environmental Protection Agency</i>
3	Exposure and Pathways Analysis of Infectious Livestock Carcass Management Options During Emergency Situations Sandip Chattopadhyay <i>U.S. Environmental Protection Agency</i>
4	Outdoor Biological Simulant Release in an Operationally Relevant Environment Amanda Clark <i>Naval Surface Warfare Center - Dahlgren Division</i>
5	Response Guidance Development Tod Companion <i>U.S. Department of Homeland Security</i>
6	EPA's Dual Use Research of Concern Policy and Order Brendan Doyle <i>U.S. Environmental Protection Agency</i>



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7	Advanced Decontamination Concepts and National Security Product Development Brian France <i>TDA Research, Inc.</i>
8	A Surfactant Blend Designed Specifically for Decontamination with Multiple Uses Brian France <i>TDA Research, Inc.</i>
9	Relative Susceptibility of Foot and Mouth Disease Virus (FMDV), Feline Calicivirus, and Bacteriophage MS2, to Five Disinfectants Lindsay Gabbert <i>U.S. Department of Homeland Security</i>
10	Characterization of Anthrax Surrogates by Chromogenic Media Douglas Hamilton <i>U.S. Environmental Protection Agency</i>
11	Radiological Contaminant Persistence and Decontamination in Drinking Water Pipes Ryan James <i>Battelle Memorial Institute</i>
12	Two Recent Examples of EPA's Response Capabilities for CWA Analysis Lawrence Kaelin <i>U.S. Environmental Protection Agency</i>
13	Vapor Hydrogen Peroxide For Biological Decontamination – Process Optimization Marek Kuzma <i>Institute of Microbiology</i>
14	Broad-Spectrum Enzymatic Decontamination of CWAs Anna Leech <i>FLIR Detection, Inc.</i>
15	Pre-Treatment Technologies to Facilitate Management of Animal Carcasses from Animal Health Emergencies Paul Lemieux <i>U.S. Environmental Protection Agency</i>
16	Provisional Advisory Levels (PALs): A Tiered System of Exposure Evaluations John Lipscomb <i>U.S. Environmental Protection Agency</i>
17	A Responsible Solution for Animal Disease Events Tony Nazal <i>InVivo Reclamation Bioservice</i>
18	Improving Temperatures for Subway Surface Decontamination Malik Oliver <i>MIT Lincoln Laboratory</i>
19	Underground Transport Restoration Program. Lab to Field Studies by EPA Researchers Lukas Oudejans <i>U.S. Environmental Protection Agency</i>
20	Quantitative Method for the Detection of Sodium Fluoroacetate (Compound 1080) in Water by Direct Injection LC-MS/MS Emily Parry <i>U.S. Environmental Protection Agency</i>
21	Boron Doped Diamond Electrochemical Advanced Oxidative Process Treatment of Heavily Contaminated Water for Drain Disposal and PO Rebecca Phillips <i>ORISE Research Participant with U.S. EPA</i>
22	Disinfection Efficacy of COTS Against Ebola Virus and Possible Surrogate Vipin Rastogi <i>U.S. Army, Edgewood Chemical Biological Center</i>
23	Preparing and Protecting Workers Through Training and Education in a Biohazard Environment Jim Remington <i>National Institute of Environmental Health Sciences</i>
24	Environmental Hazard Prediction Modeling of Low Volatility Agents for Mitigation of Contact Hazards and Vapor Hazards Marc Roberts <i>SRC, Inc.</i>



25	Full Spectrum CBRNE and Drug Sampling of Aerosols / Vapors to Support Safe Entry and Decontamination Assurance of Clandestine Laboratories Marc Roberts <i>SRC, Inc.</i>
26	Surface Sampling for Improved On-Site Detection with Raman Spectroscopy Marc Roberts <i>SRC, Inc.</i>
27	Employing Microbial Surrogates to Evaluate Chlorine Dioxide Fumigation & Heat Treatment of Poultry Barns Under Field Conditions Julian Rosenberg <i>The Sabre Companies</i>
28	Rapid Detection of Abrin by Fluorescent-Microsphere Array Multiplex Assay (FAMA): Development and Validation Jawad Sarwar <i>Omni Array Biotechnology</i>
29	Fate and Transport of VX and Sulfur Mustard Across a Permeable Layer into Porous Subsurfaces David See <i>Battelle Memorial Institute</i>
30	Potential Environmental Impacts While Processing Contaminated Personnel Markham Smith <i>Defense Threat Reduction Agency</i>
31	Gelled Formulations for Subway Decontamination Mark Tucker <i>Sandia National Laboratories</i>
32	Assessment of the Use of Sodium Hydroxide for the Destruction of Ricin Nicola Walker <i>Defence Science and Technology Laboratory</i>
33	Enzyme-Based Disclosure Sprays for Nerve and Blister Chemical Warfare Agents Jeremy Walker <i>FLIR Detection, Inc.</i>
34	Lewisite and VX Degradation By-Product Analysis for Environmental Remediation by Liquid Chromatography/Tandem Mass Spectrometry Stuart Willison <i>U.S. Environmental Protection Agency</i>
35	Chemical Hazard Mitigation Efficacy of Dahlgren Decontaminant George Wrenn <i>Battelle Memorial Institute</i>

Concurrent Sessions 4

Biological Agent Research Auditorium, C-111 Moderated by Worth Calfee and Shannon Serre <i>U.S. EPA</i>		Radiological Agent Research C-113 Moderated by Terry Stilman <i>U.S. EPA</i>	
3:40 PM	Fate and Transport of Spores in Urban Environments: Understanding the Impact of Precipitation on Decontamination Anne Mikelonis <i>U.S. Environmental Protection Agency</i>	3:40 PM	A Water-Based Formulation for Rapid Response after a Radiological Incident Wenxing Kuang <i>Environment and Climate Change Canada</i>
4:05 PM	Composite Sampling Efficiency for Clean and Grime Coated Surfaces Brett Amidan <i>Pacific Northwest National Laboratory</i>	4:05 PM	Irreversible Wash-Aid, Treatment, and Emergency Reuse System (IWATERS) for Strontium Contaminations Michael Kaminski <i>Argonne National Laboratory</i>



4:30 PM	Streamlining Documentation of Sampling and Analysis Plans and Data Quality Objectives for Biological Contamination Events Erin Silvestri <i>U.S. Environmental Protection Agency</i>	4:30 PM	Current and Emerging Post-Fukushima Technologies and Techniques for Wide Area Radiological Survey and Remediation Mark Sutton <i>Lawrence Livermore National Laboratory</i>
4:55 PM	Environmental Impact of Synthetic Biology Chris Warner <i>U.S. Army Corps of Engineers</i>	4:55 PM	Evaluation of Low-Tech Remediation Methods Following Wide Area Rad/Nuc Incidents Ryan James <i>Battelle Memorial Institute</i>
5:20 PM	DAY 2 ADJOURNS		

DAY 3: THURSDAY, November 3, 2016

7:00 AM Registration

Concurrent Sessions 5

Biological Agent Decontamination Auditorium, C-111 Moderated by Sanjiv Shah and Benjamin Franco <i>U.S. EPA</i>		Livestock Remediation Options C-113 Moderated by Joseph Wood <i>U.S. EPA</i>	
8:00 AM	Hot, Humid Air Decontamination of a C-130 Aircraft Contaminated with Spores Tony Buhr <i>Naval Surface Warfare Center - Dahlgren Division</i>	8:00 AM	Field Demonstration of Aboveground Burial as a Tool for Managing Animal Carcasses Following a Disease Outbreak Gary Flory <i>Virginia Department of Environmental Quality</i>
8:25 AM	Domestic Self-Help Clean-up of Biological Material in the Indoor Environment Howard Walls <i>RTI International</i>	8:25 AM	Viral Bio-Threat Agent Persistence in U.S. Landfill Leachate Megan W. Howard <i>Battelle Memorial Institute</i>
8:50 AM	Effects of High Intensity Blue Light on <i>Bacillus</i> Spores Joanne Thwaite <i>Defence Science & Technology Laboratory, United Kingdom</i>	8:50 AM	Current Operational and Economic Considerations Comparing Chlorine Dioxide Fumigation to Heat Treatment for Poultry Barns John Mason <i>The Sabre Companies</i>
9:15 AM	Use of the OECD Quantitative Method to Demonstrate the Susceptibility of Bacteria and Bacterial Spores to Sodium Hypochlorite Jordan Zambrana <i>ASPPH Research Participant with U.S. EPA</i>	9:15 AM	Validation of Mobile Autoclave Using Temperature and Pressure Variables for Potential Use for Domestic Agricultural Emergencies Craig Ramsey <i>U.S. Department of Agriculture</i>
9:40 AM	BREAK		



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Concurrent Sessions 6

Biological [Ricin] Agent Research Auditorium, C-111 Moderated by Eric Rhodes and Elise Jakabhazy <i>U.S. EPA</i>		Waste Management Practices C-113 Moderated by Paul Lemieux <i>U.S. EPA</i>	
10:00 AM	Developing an EPA-Registered Anthrax Decontamination Product Brian France <i>TDA Research, Inc.</i>	10:00 AM	The Future of the Waste Estimation Support Tool Timothy Boe <i>U.S. Environmental Protection Agency</i>
10:25 AM	Development of a Sample Processing Approach for Ricin Detection in Environmental Samples Sanjiv Shah <i>U.S. Environmental Protection Agency</i> and Staci Kane <i>Lawrence Livermore National Laboratories</i>	10:25 AM	Evaluation of Porous Materials for Testing Antimicrobial Products Using the OECD Quantitative Method Stephen Tomasino <i>U.S. Environmental Protection Agency</i>
10:50 AM	Detailed Validation of a Laboratory Biosensor Test for Rapid Detection of Ricin Toxin Kodumudi Venkateswaran <i>Omni Array Biotechnology, LLC</i>	10:50 AM	Treatment of CBRN Decontamination Effluent – A Research Project Exploring Feasibility Victor Medina <i>U.S. Army Engineer Research and Development Center</i>
11:15 AM	Attenuation of Ricin Toxin Under Ambient Conditions and Elevated Temperature and Humidity Joseph Wood <i>U.S. Environmental Protection Agency</i>	11:15 AM	Carcass Management and Pathogen Transport During HPAI 2015 Lori Miller <i>U.S. Department of Agriculture</i>
General Session 3 – Closing Auditorium, C-111			
11:40 PM	Closing Remarks <i>NHSRC</i>		
12:00 PM	CONFERENCE ADJOURNS		

