

Tech Session #	TS-01	TS-02	TS-03	TS-04
Title	Air Force CE Environmental Transformation <i>(NOTE: Session is offered two times only and is space available - leave questions at the AFCEE Booth or post on eDASH)</i>	Consolidating, Standardizing, and Improving the Quality of Air Quality Compliance Data in the Air Force	Demonstrating Compliance with CAA 118(d) in the Air Force Using a Web-based Enterprise Information Management Solution	Decision Support Tools for Sustainability and Asset Managers
Presenters:	Edlon Hix and Roger Wilkson	Brent Allred and Frank Castaneda	Brent Allred and Frank Castaneda	John Mogge
Organization:	AFCEE/TD	AFCEE and Northrop Grumman Information Systems	AFCEE and Northrop Grumman Information Systems	Environmental Services/CH2MHILL
Audience:	Civil Engineering Environmental Staff	Air Quality asset managers at every Air Force installation.	Air Quality Asset Managers at approximately 80 Air Force installations affected by the compliance requirements associated with CAA 118d.	Audience: Primary target audience includes project and program managers with asset management and environmental duties. Secondary target audience includes environmental engineers, scientists and technologists who support environmental programs and projects.
Description	This presentation will describe environmental reengineering, to include the proposed organization, IT solutions, processes, communications, etc.. Air Force leaders will answer many questions (grouped by topic) that are submitted to the AFCEE booth at the symposium and that were posted to eDash on the Environment, Civil Engineering's transformation initiative.	APIMS is the Air Force mandated information system for Air Quality compliance and Air Emissions inventories per AFI 32-7040. There is currently a lot of interest in APIMS and its capabilities due to current efforts to implement APIMS Air Force wide.	This paper will focus on a new capability of APIMS (the AF system for Air Quality information management) that will be implemented at approximately 80 AF installations in 2012 that are affected by Clean Air Act Section 118(d). Those affected are very curious about how this new capability will work and how it will affect their facility.	Decisions related to sustainability many times are based on objective and subjective data. This presentation provides best practices for evaluating alternatives and supporting complex decisions by sharing basic and advanced decision making support tools.

Tech Session #	TS-05	TS-06	TS-07	TS-08
Title	Wastewater Reuse at Holloman AFB, New Mexico-Saving Water Through the Energy Conservation Investment Program	Environmental Management Systems (EMS) and Green and Sustainable Remediation (GSR)-The Missing Link?	DLA Green Products and Services Available in the Federal Supply System	Educational Sources for Air Force Environmental Personnel
Presenters:	David Griffin	Erica Becvar and Paul Jurena	Stephen Perez	William Stobbe
Organization:	49 CES/CEA Holloman AFB, NM	AFCEE.TDB	Defense Logistics Agency	AFIT/CEV
Audience:	Water Managers, FSS personnel, CE, Asset Managers, WWTP personnel	Restoration program personnel as well as those supporting other environmental programs, including EMS program managers.	Design Engineers, Civil Engineers, Procurement Officers, specifiers, ESOH personnel, maintenance officers, and logisticians of every kind.	The target audience is anyone new working in the environmental arena or those with under 5 years of environmental experience with the Air Force.
Description	Experience of converting the base golf course to irrigation with treated effluent. This experience starts with improving the quality of the treated effluent to make it acceptable for irrigation. The process includes the environmental permitting and NEPA EA, preliminary design so that a cost estimate could be calculated, finding funding, (but once built, they are NAF operations, thus restricted in funding choices), contracting of the design/build system. Issues encountered during the design included installation in the clear zone of a runway, matching effluent generation rate to irrigation demand rate and designing the system to work with no electrical power available at a critical part of the system. Following commissioning of the system, the impact on water conservation has been significant and side benefits to the golf course have eliminated fertilizer needs and improved the looks of the course.	To date, the restoration program has not been fully integrated into the AF Environmental Management System (EMS). This has been due to a lack of familiarity and understanding in the AF Restoration program about EMS itself and the cross-functionality between the sustainable goals the Restoration program is trying to achieve and the same for the other environmental programs within the AF (Environmental Compliance). This presentation helps bridge that gap and identifies the missing link between the two programmatic areas.	The Defense Logistics Agency manages chemicals, industrial gases, packaged petroleum, oils & lubricants, batteries and other traditional hazardous materials in the federal supply system. DLA has instituted Green logistics services and added Green products to the federal catalog. these products and services can help Air Force customers meet their environmental purchasing goals. All products and services have national stock numbers assigned which makes ordering easy.	The proposed topic "Educational Sources for Air Force Environmental Personnel" presents sources of environmental education for personnel who are new to working an environmental program for the Air Force. It is estimated that approximately 80% of the symposium students are new attendees and are new to working in the environmental field. Many of these students may not know where they can go to take courses that will enhance their environmental knowledge. Several choices are presented to the audience which include the Air Force Institute of Technology (AFIT)Civil Engineer School (AFIT/CEV), the AFIT Environmental Education Center (EEC), the Navy Civil Engineer Corps Officer's School (CECOS), Environmental Protection Agency (EPA) and private and other educational sources.

Tech Session #	TS-09	TS-11	TS-12	TS-13
Title	Sustainable Remediation in Practice	Using the APIMS Inspection Module for TIER I and TIER II ESOHCAMP Assessments	Environmental Quality Funding for Water Compliance Requirements	EESOH-MIS Hazardous Waste Module Lab Interface and Data Processing
Presenters:	Jim Colmer	Brian Perry	Larry Isaacs and Jay Shah	Mitch Haight and Wayne Downs
Organization:	BB&E	EM-Assist	AFCEE/TDNQ	EM-Assist and Hill AFB
Audience:	Base Environmental Management Personnel	The target audience firstly is installation personnel who manage the ESOHCAMP program or the Air Quality Program at their installation. Secondly are compliance subject matter experts who conduct recurring assessments, and thirdly, shop professionals who conduct their internal recurring assessments.	All personnel that seek funding from the EQ funds to support water compliance requirements	Installations implementing the Enterprise EESOH-MIS Hazardous Waste (HW) module
Description	Sustainable remediation is still a fairly new concept (beginning formalization within the last 3-years. The goal of this presentation would be to briefly discuss Sustainable Remediation beginnings, Sustainable Remediation concepts, where it is the technology today, and how to capture metrics from Sustainable Remediation to set objectives and targets or reporting in your EMS.	This presentation is directly applicable to all environmental compliance topics covered at the symposium and especially EMS, ESOHCAMPs, and Air Quality management as the use of the APIMS data base and the requirement to conduct Tier I and Tier II ESOHCAMP assessments is mandated by AFIs. This presentation will address these issues and is therefore applicable to every installation that attends the symposium, as well as all career fields as they are responsible for conducting their internal shop-level assessments. This presentation will stand-out as it is a Case Study of the implementation of the inspection module at Hill AFB therefore the attendees will learn first-hand about the use of the APIMs inspection module tool.	Environmental Quality funding matrix for water programs	My topic relates to all of the Hazardous Waste Management topic. The topic stands out because the merging of these two relatively new technologies is the only way to electronically import analytical data into the new Environmental Safety and Occupational Health Management Information System (EESOH-MIS) making this valuable asset available to the installation. This approach complies with the data standards adopted by the US EPA. Also, proper validation and use of analytical data is a cornerstone of compliant hazardous waste management.

Tech Session #	TS-14	TS-15	TS-16	TS-17
Title	Conducting ESOHCAMP Tier 2 Assessments and Tracking Findings at Beale AFB	LEED Gold Buildings- Do They Really Save Energy?	EPA-Funded Study Shows How to Reduce HVAC Consumption by 12%	Landfill Gas Assessments and Emerging Technologies on DOD Installations
Presenters:	Jamie Visinon and Russ Goff	Tom Lowery	Tom Lowery	Jeff Riegler
Organization:	Beale AFB ACC 9 CES/CEAN and EM-Assist	AMEC E&I	AMEC E&I	AMEC
Audience:	The target audience is Base personnel who participate in or manage ESOHCAMP compliance assessments.	Anyone who is considering energy audits and/or LEED building certification...it is also useful to anyone who wants to know more about LEED buildings.	Energy managers, facility managers, and anyone with air conditioning, whether at home or on the job.	Asset Management Flight Chiefs. MAJCOM and base energy managers. Resource Efficiency Managers. Landfill operators.
Description	This presentation is directly applicable to the ESOHCAMP technical session and the requirement to conduct Tier II ESOHCAMP assessments that is mandated by AFIs. This presentation therefore is applicable to every installation that attends the symposium. This presentation will stand-out as an example of establishing an effective, simple and efficient Tier 2 methodology while waiting for the Air Force ESOHCAMP online to roll out.	It is an integrated cross-spectrum look at LEED buildings...are they worth the effort? Is the process flawed? Much ado has been made about LEED buildings....do they really save energy? The session explores real-life energy audits of three federal LEED Gold Buildings and the findings are very interesting.	Global warming and increased energy consumption go hand in hand. One of the least known secrets in the HVAC industry is that air-cooled equipment, which makes up 90% of the HVAC in use today, loses 10-15% of its efficiency in the first 24 months. This is preventable and if reversed, could save the federal government millions of dollars in annual energy costs. This session is based on a comprehensive study of 150 HVAC units, funded by the USEPA. If implemented, the energy will not be lost	Air Force and Army installations are responding to renewable energy goals established in Executive Order to recover methane gas from existing landfills on base to produce electricity and enhance energy security and independence. The work is broad, covering multiple installations--22 AF, 31 Army--and groundbreaking.

Tech Session #	TS-18	TS-19	TS-20	TS-22
Title	Green IT for Data Centers: Efficiencies through modeling, hardware selection and virtualization	Aerobic Degradation vs Anaerobic Degradation and the Winner is - Innovative Solutions for the Aerobic Degradation of 1,1-Dichloroethene in Groundwater	Evolving Hazardous Waste Recycling Regulations and Potential Impact on Air Force Installations	Energy Efficient Lighting Upgrades and Lighting Technology
Presenters:	Jeff Riegler	Paula Bond	Kaye Sigmon	Binh Nguyen
Organization:	AMEC	AMEC Environmental & Infrastructure	URS Group, Inc.	AMEC E&I, Inc.
Audience:	Anyone who is concerned about energy conservation in data centers of any size. Also, those decision makers who may be expanding a data center either in a home base location or in a deployed region.	Base Environmental Managers, Air Force Environmental Project Managers	Hazardous waste and pollution prevention program managers	This is targeted for facility managers, energy managers, and building owners. It also offers insight for anyone looking to learn the basics of lighting and how it affects energy conservation in a building.
Description	This topic is directly related to the subject matter, through the use of current and relevant examples within the Federal Government. This presentation stands out, because it provides real-life information on a Federal project, presented by someone who was involved in the project and can speak to all project aspects: technically, economically, and politically. It is also a project and topic that has not been presented in past symposiums.	This presentation closely relates to the conference topic Site Remediation and Monitoring. The challenges with this particular cleanup site relate to the aquifer conditions and developing new and innovative ways to address low level constituent concentrations which is a problem at numerous Air Force Sites. This presentation should spark conversations with Base EM's and Air Force Environmental Staff to develop low cost closure solutions for low level constituent concentrations which plague many Sites and reach unrestricted use as this project did.	Hazardous waste and pollution prevention program managers should be aware of the evolving regulations related to the management of recyclable materials so that they can prepare for regulatory changes that will occur over the next several years as states adopt the federal provisions addressed in the proposed rule that is the topic of this presentation. Managers can determine whether this rule is one they should track. Being aware of the evolving regulation will also assist Environmental Management System (EMS) Coordinators in being aware of changing legal requirements that may need to be addressed within the installation EMS. The topic relates to courses on shop-level hazardous waste management and waste characterization.	Energy conservation is a driving force in our economy these days. Lighting upgrades for existing buildings is a simple and great way to realize instant savings and return on investment. This presentation will help facility managers, energy managers, and building owners learn more about what is involved in investing in and implementing a lighting project that will help them save energy, improve lighting conditions, and help the sustainability initiative that is in the forefront of our current economic conditions.

Tech Session #	TS-23	TS-24	TS-25	TS-26
Title	This presentation will describe: PBC use at Munitions Response Sites and Lessons learned using PBC and Value Provided (client and contractor) by using PBC	Conversion to a HEF Fire Suppression System in an Aging Infrastructure	Introduction to ISO 50001 Energy Management Standard	In Situ Treatment of a Chlorinated Solvents Groundwater Plume Using Anaerobic Reductive Dechlorination
Presenters:	Roger Azar	Pamela Waisanen	James Colmer	Matthew Vest
Organization:	URS Corporation	19 CES/CEAN, LRAFB	BB&E	SAIC
Audience:	Industry, Contracting, Government	Stormwater Managers, Environmental Coordinators, Spill Response Managers, and Wastewater Managers	Environmental Managers Energy Managers	The target/recommended audience are base environmental managers, environmental engineers, and project managers who have sites with contaminated groundwater requiring restoration.
Description	Increasingly performance-based contracts are becoming the norm for conducting business. Federal, State, and private agencies are increasingly relying on contractors to perform key projects on a PBC-basis, and that trend is not likely to change any time soon. Firm-Fixed Price (FFP) Performance-based contracts (PBC) acquisitions are structured in a manner that focuses on a projects performance objectives rather than how a project is executed. PBCs are designed to allow contractors the freedom to determine how to meet a projects performance objectives while meeting and achieving the Governments performance quality for the projects. PBCs are also designed to include payment milestones that are directly tied to, and payment is made only for, milestones that meet the Governments performance quality for said milestone.	Two high-expansion fire suppression foam releases have been released into waters of the U.S.at LRAFB within three months, resulting in a fish kill that was monitored by ADEQ, and a lesser foam release that was also reported to the regulator. The purpose of this presentation is to 1) describe the challenges of controlling foam from fire suppression systems in hangars built circa 1953 that have converted from deluge and AFFF to HEF that other installations may also be encountering, 2) share observations regarding the behavior of the HEF concentrate in the water and describe the remediation, 3) share the Operating Instruction that has been developed by LRAFB, and lastly 4) describe measures taken and proposed to prevent any future foam releases.	ISO 50001 Energy Management System standard was released in mid-2011. The standard will aid in providing a framework for creating an energy performance policy at any organization. This will enable the organization to implement a plan for energy and carbon emission reductions. This can be integrated with existing environmental management standards (EMS) already in use by governmental agencies.	The relevant 2012 topic for this presentation is a Site Remediation and Monitoring. What makes this presentation stand out is that this ANG groundwater restoration site consisting of a large chlorinated solvent groundwater plume which has been remediated from levels on the order of 10,000 ppb down to necessary regulatory cleanup criteria through the use of an in situ treatment approach. This approach was initially the most appropriate as it did not impact the installation mission and later the most appropriate given the change of ANG property to a commercial entity at the Memphis International Airport which required site redevelopment concurrent with ongoing groundwater restoration activities.

Tech Session #	TS-27	TS-28	TSP-29	TS-30
Title	Changes in the Stormwater World Planning and Compliance Requirements	Complying with Clean Air Act Section 118(D) on Air Force Installations	Using APIMS to Document Compliance with Title VI of the Clean Air Act	Air Emission Inventory Data Collection Training
Presenters:	Luis Diaz and Anne Rowe	James Chapman and David Hansell	James Chapman and David Hansell	Mark Wade and Frank Castaneda
Organization:	SAIC and National Guard Bureau (NGB/A7AM)	Hill AFB and EM-Assist	Hill AFB and EM-Assist	Prudent Technologies, Inc./AFCEE
Audience:	Installation Environmental Managers and Civil Engineering personnel	Air Force and other DoD personnel interested in how the Air Force plans to comply with CAA Section 118(d)--the rule which regulates emissions from privately-owned vehicles driven on installations.	Air Force and other DoD personnel interested in the comprehensive and automated management of Ozone Depleting Substances data in accordance with Title VI of the Clean Air Act.	New air quality managers
Description	Projects involving land disturbing activities can result in uncertainties regarding the requirements for stormwater management. Recent changes to these requirements have resulted in a renewed focus on both stormwater planning and compliance. This presentation will provide the results of recent lessons learned in this area and is designed to assist Federal Facilities to comply with stormwater management requirements throughout a projects life. It will address the need to consider recent stormwater management guidance as part of NEPA planning and will discuss typical stormwater-related regulatory violations, as well as recommend steps to mitigate these potential violations.	The topic addresses complying with Clean Air Act Section 118(d) on Air Force installations. It covers the new Air Force compliance method in detail, and relates Hill AFB's involvement in the process.	The topic addresses new refrigerant management functionality within the Air Program Information Management System--the official air quality data system of the Air Force. It covers valuable features of the new module as well as Hill AFB's involvement in the development process.	Air Emission Inventory Data Collection is part of the basics training for all new air quality managers

Tech Session #	TS-31	TS-32	TS-33	TS-34
Title	Antimony Mobility and Small Arms Ranges: What's the Deal?	Engineering Guidance for Biogeochemical Transformation	Bioreactor Performance Update and Sustainable and Innovative CVOC Removal	Petroleum Odors Spark Basement Cleanup Under Town Houses
Presenters:	Darlene Abbott	Patrick Evans	Doug Downe	Melissa Helton
Organization:	AMEC Environment & Infrastructure	CDM	CH2M Hill	AMEC Environment & Infrastructure, Inc.
Audience:	Base Environmental Managers/Project Managers	The target audience includes remedial project managers, scientists and engineers, and anyone interested in learning about innovative and sustainable remediation technologies.	Restoration engineers and managers. Those interested in sustainable remediation projects.	Base Environmental Coordinators and contractor/military/civilian personnel involved with delineation and remediation projects that involve private property owners.
Description	The presentation falls under the MMRP category and relates to antimony in small arms range (SAR) soils and cleanup activities. While the primary focus of SAR cleanup efforts continues to be based on lead concentrations in soil, the mobility of antimony is often overlooked and misunderstood. While antimony in soils is not a RCRA-regulated constituent for offsite disposal, environmental regulators may have a heightened concern regarding antimony in SAR soils, especially when amended/remediated soil affects one or more of the factors influencing antimony mobility.	The topic of biogeochemical transformation is directly related to the 2012 topics 1) Site Remediation and Monitoring, and 2) Emerging Technologies. This presentation was invited by Drs. Paul Jurena and Adria Bodour of AFCEE. AFCEE and the DoD ESTCP are currently funding the demonstration of this innovative remediation technology. The technology involves a synergistic combination of physical, chemical, and biological mechanisms resulting in sustainable remediation of contaminants such as trichloroethene in groundwater. The presentation will give an overview of the technology along with advantages and disadvantages. It will provide the sound scientific basis for the technology along with practical engineering guidance for technology implementation.	This topic was requested by Dr. Paul Jurena of AFCEE TDV. Solar-powered, in situ bioreactors provide a sustainable and effective way to reduce chlorinated solvent hot spots and source areas. AFCEE TDV has sponsored the development and demonstration of four solar powered bioreactors and CH2M-Hill has transferred this technology to three additional locations. The performance of these systems after 2-3 years of operation will be of interest to the restoration and sustainability audience.	This presentation is about property transferred through the BRAC process and petroleum impacts were found post-transfer in the basements and backyard of townhouses. The presentation deals with the difficulties implementing delineation and interim remediation activities with MULTIPLE stakeholders in a complex environment. Many challenges were conquered during project implementation and include (but not limited to): logistics, access, schedule, communications, multiple document submittals, and regulatory approval.

Tech Session #	TS-35	TS-36	TS-37	TS-38
Title	The Air Force Guide to Uni-Directional Flushing of Water Distribution Systems	Bat Management in a Post-White Nose Syndrome World	Post-Construction Stormwater BMP Inventory and Maintenance Program Development	NPDES Pesticide General Permit Implications for Air Force Installations
Presenters:	Tom Degen	Brad Steffen and Karen Tyrell	Ben Recker	Ben Recker
Organization:	AECOM	BHE Environmental, Inc.	Tetra Tech Inc.	Tetra Tech Inc.
Audience:	Civil Engineering Water shop personnel, Biomedical engineers, operations managers, asset managers responsible for water system regulatory compliance, and utility engineers responsible for the drinking water infrastructure.	Air Force and contractor natural resource managers	Air Force Water Managers, Stormwater System Maintenance Personnel, Construction Project Managers, GeoBase Managers	Water Managers, Entomologists, Operations Flight Managers
Description	UFC 3-230-02, Section 7.3.2.2 required Uni-Directional Flushing of water mains on an annual basis. Uni-Directional Flushing is a relatively new concept and is much more complicated than routine flushing previously practiced for maintaining water systems. It is likely that most Civil Engineering technicians have not been trained in this practice, and little documentation is available to help them practically plan a UDF flushing event.	White Nose Syndrome (WNS) in bats is currently causing one of the most precipitous wildlife declines in North America in the past century. Mortality rates in affected hibernacula can reach 90 to 100% post-WNS infection. This disease has been documented in 19 states to date and could affect up to 57 Air Force Bases. As the disease continues to spread from its origin in the northeast toward the western US, additional Air Force bases and bat species will in all likelihood be affected by WNS. AFD 32-70 and AFI 32-7064 require all Air Force Facilities to conserve listed species covered under the Endangered Species Act and to comply with state regulations regarding state-listed species. Pursuant to these requirements, bases must manage natural resources while ensuring no net loss to military readiness.	Regulations governing post-construction stormwater discharges from Air Force installations continue to become more stringent. Recent permits issued by EPA Region 8 and the MS4 Permit Improvement Guide issued by US EPA Water Permits Division require a program which ensures the long-term operation and maintenance of post-construction stormwater best management practices (BMPs). This technical session will provide the methodology and results from a recent project that developed a comprehensive inventory and maintenance program for post-construction BMPs at the Air Force Academy. The methods used for this project can be utilized by Air Force ESOH Training Symposium attendees to develop an inventory and maintenance program for post-construction stormwater at their home station.	On 31 October 2011, EPA published the final NPDES Pesticide General Permit that applies to point source discharges from pesticide application. This new Clean Water Act permit can potentially impact pesticide application on Air Force installations. This technical session will review the permit requirements and discuss compliance strategies for Air Force installations.

Tech Session #	TS-39	TS-40	TS-42	TS-43
Title	Developing an LID Program That Works	Conducting an Occupational and Environmental Health Site Assessment (OEHSA): Key Concepts and Best Practices	A Practical Approach to Steel Tank Institute SP001 Standard for Inspection of Aboveground Storage Tank Systems	Archaeological Test Excavations and NRHP Evaluation of Sixteen Prehistoric and Historic Sites, Eglin Air Force Base, Florida
Presenters:	Chad Helmle	Bob Campbell	Vincent DeCianne	Marc Wampler
Organization:	Tetra Tech, Inc.	Alliance Solutions Group, Inc.	URS Group, Inc.	AMEC Earth & Infrastructure, Inc.
Audience:	Engineers, Planners, Water Managers, Engineering Leadership	The target audience for this technical session is the bioenvironmental engineering community.	The target audience includes all personnel who maintain or inspect aboveground storage tanks and tank systems.	Air Force Natural and Cultural Resource Managers and associated personnel.
Description	Emerging federal, state, and local stormwater regulations are increasingly requiring low-impact development measures to be adopted at the site or installation scale. This requires a fundamental shift in the engineering mindset to design, construct, and maintain stormwater control facilities intended to meet water quality requirements. To meet this challenge, civil engineering leadership at Air Force bases must develop a comprehensive and reliable program that successfully implements such facilities that comply with these requirements in a cost effective manner. This technical session will provide a template for engineering leadership to develop a program that cost-effectively put LID facilities in the ground.	This presentation supports the Occupational Health and Deployment categories for the 2012 training symposium. Since there are no other presentations offering training, lessons learned and best practices for implementation of OEHSA, this presentation is unique in that it summarizes key OEHSA principles that will enable BEs to understand and conduct OEHSA with success. It also shares lessons learned and best practices captured at 20 installations in the past year. The OEHSA principles are not well-understood across the USAF (based on surveys conducted at 20+ installations in the past year). This presentation will offer solutions and effective training for those required to conduct OEHSAs.	This technical session will supplement ESOH Training Symposium Course Number 112 (UST and AST Compliance, Inspections, and NOV's). The session will be presented by a Steel Tank Institute (STI) certified tank inspector and will describe specific inspection requirements outlined in the STI SP001 inspection standard, dated July 2006 and proposed changes to the draft 5th Edition. This technical session will provide practical guidance for conducting inspections to meet the SP001 standard for aboveground tanks common to Air Force installations.	Our paper focuses on impacts to the surrounding environment at Eglin Air Force Base, FL. In this case we evaluated a number of cultural resources in an effort to avoid potential impacts to their deposits. Potential impacts could be associated with various training and development activities relating to the 2005 BRAC. By evaluating the potential significance to said cultural resources the Eglin Cultural Resource Staff are better equipped to make informed decisions towards protecting vital historic properties and resources for future research and education.

Tech Session #	TS-44	TS-45	TS-47	TS-48
Title	Advance Metering Initiative Lessons Learned	In Situ Generation of Iron Sulfide Minerals Using Soluble Substrates to Enhance Biogeochemical Degradation of Chlorinated Organics	ESOH CAMP Trend Analysis and Solutions	One Federal Agency's Effort to Develop a Risk-based Analysis and Prioritization of Asset Vulnerability to Climate Change Threats to Meet EO 13514 Requirements
Presenters:	Calvin Gilley	Dan Leigh	Bob Campbell and Paul Lorenz	Mick Bilney
Organization:	TEC Inc.	Shaw Environmental & Infrastructure, Inc.	Alliance Solutions Group, Inc. and URS Group, Inc.	TEC, Inc.
Audience:	Command and base level energy managers, engineers and maintenance personnel responsible for drafting statements of work for advance metering installation, project managers/COTRs responsible for executing the work and management personnel responsible for meeting energy reduction goals.	This technical presentation is directed to Air Force Technical Staff responsible for remediation of sites affected primarily with chlorinated organics. Also, Air Force technical staff responsible for evaluating which technologies should be applied should attend. Technical staff evaluating sustainable remediation practices should attend.	The target audience for this technical session is environmental managers, bioenvironmental engineers, and unit environmental coordinators.	Agency decision-makers, Asset Managers, and professionals who will be involved in determining the risks to their assets and people related to potential climate change effects and the adaptation and resiliency changes and planning that may be needed to mitigate the effects of climate change threats and risk. Also, attendees interested in meeting the requirements of E.O. 13514, i.e. for agencies to evaluate climate change risks and manage the effects of climate change on the agency's mission and operations.
Description	The topic is directly related to implementation of E.O. 13514, Federal Leadership in Environmental, Energy, and Economic Performance and E.O. 13423, Strengthening Federal Environmental, Energy, and Transportation Management. The presentation is focused on practical lessons learned in the design and installation of advanced metering systems. The desired outcome is to help organizations approach advanced metering implementation with a more informed (contractor's) perspective which will allow them to avoid unnecessary costs upfront and minimize changes after contract award. Reduced installation costs will help maximize the return on an organization's energy conservation investments.	This BAA funded project very successfully demonstrated an innovative remedial approach that combines chemical and biological processes to destroy chlorinated organics in groundwater. This technique uses sustainable processes to increase the effectiveness of in situ groundwater treatment of chlorinated organics and dissolved phase metals. This presentation will present the basic chemical concepts of biogeochemical degradation as well as present the results of a series of lab and field tests that demonstrate how these processes worked together to degrade chlorinated organics and precipitate metals. The presentation will describe how these chemical and biological processes can be applied in engineered in situ remediation systems.	While there are some topics related to ESOHCAMP structure and format, there are no presentations that explore common findings, trends across the USAF, root cause analysis and solutions to common issues which address root causes. Course #34 titled, Preparing for, Managing, and Reporting Regulatory Environmental Inspections will include some data related to recent enforcement actions that the Air Force has received. This technical session will utilize some of this same data but will correlate it to ESOHCAMP finding trends and root causes and provide recommended solutions.	The presentation describes an initiative by a US federal agency to use a risk-based approach to prioritize its facility assets according to their vulnerability to the threat-effects of potential climate change and to meet the requirements of E.O. 13514 for agencies to evaluate climate change risks and manage the effects of climate change on the agency's mission and operations.

Tech Session #	TS-49	TS-50	TS-51	TS-52
Title	Maximum Risk Reduction for your Fall Protection Investment	Fall Protection Training: Get What you Need	How to Implement the ISO 50001 Energy Management System (EnMS) in a (well, almost) Painless Manner	NexGen IT: Civil Engineering's transformation initiative that will improve its capabilities and support to ESOH.
Presenters:	Bart Craven	Bart Craven	Mick Bilney	Alexander Earle and Steve Moore
Organization:	LJB Inc.	LJB Inc.	TEC, Inc.	HQ USAF/A7CRT and IBM
Audience:	Safety specialists, aircraft maintenance groups	Safety specialists, aircraft maintenance groups	Any attendees involved in managing or implementing existing integrated environmental and safety management systems and those who are interested in or may be involved in implementing an ISO 50001 EnMS.	As Civil Engineering's NexGen IT project will impact all facets of Civil Engineering operations and its support for ESOH-related initiatives and its team members. As a platform and set of solutions, NexGen IT will have a far-reaching impact on the ESOH community and will be of great interest to ESOH Training Symposium attendees.
Description	This presentation topic relates to a number of the listed general technical session topics. Elements of our proposed presentation will cover safety products, personal protective equipment, legal aspects of ESOH and regulatory enforcement, and information management and training. Our firm has been integrally involved in the AFOSH 91-100 Interim Change for Fall Protection, as well as the most recent releases of the ANSI Fall Protection Standards. We can share the latest relevant information on changes to standards and the impact that has on fall protection equipment purchased now and in the future.	This presentation topic relates to a number of the general technical session topics listed. Elements of our presentation would cover information management and training, safety products, and personal protective equipment. Our firm has been integrally involved in the AFOSH 91-100 Interim Change for Fall Protection, as well as the most recent releases of the ANSI Fall Protection Standards. Based on the resulting changes to fall protection, understanding appropriate fall protection training will be critical for achieving safety and compliance.	The presentation describes the essential elements of ISO 50001:2011(E) with a brief compare and contrast with ISO 14001, and how it can be implemented or integrated in the most efficient manner into existing integrated or stand-alone environmental, safety and sustainability management systems.	The NexGen IT project is an 'Emerging Technology' topic that is expected to significantly improve Air Force Civil Engineering's capabilities and its support to the ESOH mission. This presentation will describe Civil Engineering's transformation initiative and the state-of-the-art platform and solution--specifically IBM's "Tririga" solution suite. The presentation will provide an overview of the transformation initiative and give specific descriptions of the functional components to be deployed in the initial phases.

Tech Session #	TS-53	TS-54	TS-55	TS-57
Title	The Pesticide General Permit for Discharges from the Application of Pesticides. When is it Required and What do I Need to do to Comply?	Retro-Commissioning Energy Savings at Two Air National Guard Facilities	Green House Gas and Air Quality Guidance	Underground Injection Control, Identification and Registration
Presenters:	Annette Barndt	Kurt Blemel	Daniel Robinson	John Costell and Tim Tringali
Organization:	URS Group, Inc.	ARCADIS - Malcolm Pirnie	Wyle	Tetra Tech, Inc.
Audience:	The target audience includes all personnel who manage or have job responsibilities related to the application of pesticides at an Air Force installation, including Environmental, Entomology, and personnel overseeing contractors for pesticide applications.	Military civil engineer commanders and energy managers. Contractors who provide this service may also be interested.	Air Quality, Environmental and NEPA managers from installations and MAJCOMs.	Water and Storm water program managers, Utilities and Pavements & Grounds Foreman
Description	The session will provide information on the National Pollutant Discharge Elimination System (NPDES) general permit for point source discharges from the application of pesticides to waters of the United States issued by the EPA on October 31, 2011. This new permit will be applicable to many Air Force installations and the goal of this proposed technical session will be to provide an overview of these new requirements, describe the types of pesticide application activities requiring the new general permit, and detail integrated pesticide management procedures, monitoring, and reporting requirements associated with the general permit. This technical session will provide practical guidance for determining when the general permit applies to an Air Force installation and on measures required to be taken to comply with the general permit.	This presentation on retro-commissioning relates directly to energy management, addressing key mandates (i.e., Executive Order 13423 Energy Independence and Security Act of 2007), which direct all federal agencies to improve energy efficiency and reduce greenhouse gas emissions through a reduction in energy use by three percent annually, and 30 percent by the end of 2015. In accordance with these directives, the United States Air National Guard (ANG) Civil Engineer Technical Service Center (CETSC) has initiated a retro-commissioning program at ANG bases nation-wide. Retro-commissioning is the systematic process by which owners ensure that their buildings and their systems are optimized to perform interactively to meet the current facility requirements as closely as possible.	The USEPA is adding additional air emissions reporting requirements. This presentation provides lessons learned from successful development of air quality (AQ) compliance guidance at civilian airports. AQ and green house gas (GHG) inventories affect USEPA compliance, NEPA actions and encroachment management at Air Force installations. The studies presented represent the state-of-the-art guidance for civilian airports through the Airport Cooperative Research Program (ACRP) which is administered by the Transportation Research Board (TRB) of the National Academy of Engineers (NAE). Lessons learned can be applied to the Air Force to save time, effort and cost to prepare installations for compliance requirements.	The EPA estimates that 650,000 Class V Underground Injection Control (UIC) wells have been installed nationwide. Interest in EPA and State Regulations governing UIC construction, use, maintenance and registration on Air Force Installations has increased recently. UIC wells that have gone un-reported and un-maintained present a liability to the Air Force. This technical session will provide the methodology and results from a recent project that developed a comprehensive inventory, registration and maintenance program for UIC wells at Fairchild AFB, Washington. The methods used for this project can be utilized by Air Force ESOH Training Symposium attendees to develop an inventory, registration and maintenance program for UIC Class V wells at their home station.

Tech Session #	TS-58	TS-59	TS-60	TS-61
Title	Noise Impacts and Community Relations	Description of a Solar Powered SVE Pilot Study at Hill AFB, Utah	J100-10: The National Standard for Water & Wastewater Vulnerability Assessments	New Chemical Security Regulations and How They May Affect You
Presenters:	Joe Czech and Daniel Robinson	John Tunks	Shannon Spence	Corinne Tuozzol
Organization:	Wyle	CH2M Hill	ARCADIS Malcolm Pirnie	ARCADIS Malcolm Pirnie
Audience:	CPLO, Environmental and NEPA managers at installations and MAJCOMs. Create awareness of DoD guidance, resources and upcoming noise analysis tools.	DoD environmental remediation program managers	Installation and Command Compliance Staff, Civil Engineering, Asset Managers, Installation Commanders	Base Environmental, HazMat Staff, Compliance Staff
Description	Noise impacts from aircraft operations create significant conflicts with communities surrounding installations. These impacts may encroach on the current mission or preclude potential actions considered under NEPA. DoD policy guidance established the DNL 65 as the level of significance. Supplementing DNL with additional noise exposure metrics and addressing noise exposure at levels beyond DNL 65 can go a long way to improve public understanding and acceptance of noise exposure, and increase decision makers ability to make better informed decisions in maintaining compatible land uses around installations. To this end, DoD has recently developed new tools for noise assessment.	This paper will describe a solar-powered soil vapor extraction (SVE) pilot test being conducted at Hill AFB. Use of renewable energy in remediation is gaining attention throughout the industry as the DoD continues to implement policy directives related to sustainability. Additionally, the increasing availability of renewable energy resources through decreasing pricing makes use of more aggressive remedial technologies possible at remote sites where grid-based power is not available.	Recent events such as the tornadoes in Missouri, Alabama and across the south, and the earthquake in Japan have raised the stakes on how we manage the vulnerabilities of our critical infrastructure. In 2010 ANSI/ASME-ITI/AWWA published the ANSI/ASME-ITI/AWWA J-100-10 Risk Analysis and Management for Critical Asset Protection (RAMCAP®) Standard for Risk and Resilience Management of Water and Wastewater Systems (J100-10 Standard). This standard now is the benchmark for how water and wastewater utilities should execute vulnerability assessments (VAs).	In recent years, increased attention has been paid to water and wastewater utilities using hazardous chemicals, particularly chlorine gas. In April 2007, the Department of Homeland Security (DHS) issued a Final Rule for Chemical Facilities Anti-Terrorism Standards (CFATS) that required high-risk chemical facilities to identify and assess their vulnerabilities and implement security measures. It is critical that water and wastewater utilities understand how these regulations could affect them. This presentation will provide an overview of the status of the pending security regulations, probable regulatory requirements and the potential impacts of these regulations on water and wastewater utilities. In addition, ideas for proactively planning for these regulations will be presented.

Tech Session #	TS-62	TS-65	TS-66	TS-67
Title	Hazard Mitigation Planning and Operational Resiliency	Military Munitions Response Program Risk Management Visual Presentation	Innovative Remedial Approaches to Accelerated Site Closure Under Performance-Based Contracts	Stormwater: The No-exposure Exemption for Industrial Activity
Presenters:	Carly Cermak	Mark Albe	Rula Deeb	Dennis Kirsch
Organization:	ARCADIS Malcolm Pirnie	ARCADIS Malcolm Pirnie	ARCADIS	Prudent Technologies, Inc.
Audience:	Base Civil Engineering, Base Commanders	Civil Engineering, Environmental, Base Commander, Base EOD	Anyone working on environmental restoration projects Beginner, intermediate or advanced technical staff All environmental personnel: Managerial, supervisory, engineers or technicians	All USAF environmental personnel involved in compliance to either EPA or state Phase II industrial stormwater regulations
Description	Hazard mitigation planning for critical infrastructure is the process of analyzing a systems risk from natural hazards and its capability to handle them, identifying methods to address risk and capability weaknesses, coordinating available resources, and implementing actions to reduce identified risks. This is also a vital stage in the disaster management cycle. Through hazard mitigation planning, we can harden the provision of water and wastewater service against disasters. In short, attendees will be introduced to tools, programs, and resources that facilitate hazard mitigation planning, as well as those which will help navigate through the labyrinth of legislation and programs as possible sources of implementation.	ARCADIS Malcolm Pirnie developed a web-based interactive visual presentation which outlines the Army's risk management approach for addressing potential explosive safety hazards at munitions response sites (MRSs) for the USACE-Baltimore. The presentation was developed as an educational and demonstration tool to be utilized primarily by Military Munitions Response Program project teams, installation personnel, etc. during Technical Project Planning and Restoration Advisory Board meetings that may include the Regulatory community, stakeholders, and the public. The presentation walks users through the Comprehensive Environmental Response, Compensation, and Liability Act (CERCLA) cleanup process at five unique MRS scenarios.	The focus of the proposed presentation is innovative remedial approaches to achieve accelerated site closure under performance-based contracts. To achieve fence-to-fence site closure, the Air Force is emphasizing the use of performance-based cleanup contracts as a platform to dictate a clear performance objective, and to incentivize contractors to propose technical solutions and regulatory strategies that focus on getting results as quickly and cost-effectively as possible. Based on our successful completion of numerous performance-based cleanups at numerous federal sites, we've observed that innovation plays an important role in successfully achieving site closure.	The topic will cover the background and application of all EPA rules governing the requirements for the conditional exemption of Air Force facilities from EPA Phase II industrial stormwater regulations, including examples. Some Air Force facilities may be eligible for exemption, but have not filed for it. This presentation will go into detail regarding the determination of eligibility of a facility for submitting filing this exemption

Tech Session #	TS-69	TS-70	TS-71	TS-72
Title	ESOHTN - Minimizing the Risk, Maximizing the Mission	Financial Improvement and Audit Readiness Guidance	The HAF Consolidation/Demolition Toolkit. An objective, defensible data solution to the consolidation/demolition problem.	Importance of Data Accuracy and Data Collection
Presenters:	Nina Arcaro and Sarah Spalding	Andrew Clewet	Crissie Fitzgerald	Marc Meckle
Organization:	ICLD, Inc.	Innovative Executions, LLC.	Innovative Executions LLC	Innovative Executions, LLC.
Audience:	Anyone who has to take mandatory environmental and/or safety training.	Asset Management Flight and Resources Flight personnel	Asset Management Flight Chiefs, Asset Optimization Element Chiefs, Real Property Officers, Community Planners, Programmers, Operations Flight Chiefs and any other parties interested in facility performance and long-term planning.	Anyone involved with Asset Management/Real Property.
Description	While military budget cuts are a continual concern, ESOHTN provides mandatory training (ie GPP) in a very cost-effective manner. ESOHTN is being used by the military around the world to provide environmental and safety training to a wide, ever-changing audience who must comply with regulatory demands. Every service has cited ESOHTN/ECATTS as an approved system for delivering mandatory training.	The USAF Civil Engineer Asset Management movement and transformation has produced nothing short of an internal audit process. This is in part because of the newly realized benefits of the USAF CE legacy database systems. With that said, while the impetus behind the rejuvenated focus on the legacy database systems can be attributed to the AM transformation, the need for clean data goes far beyond any internal USAF Civil Engineer needs. Specifically, the USAF and DOD as a whole is facing an internal audit and the Civil Engineers play a significant part in its success. The FIAR guidance provides the groundwork each CE organization can build upon for ultimate success and is a must see presentation for any CEA member.	Consolidation/Demolition is a key component of the 20/20 by 2020 strategic goal. Square Footage reduction (demolition) is the sole measure of progress and success in achieving this goal; however, installations have not had the data available, in a consistent, synthesized manner, to allow them to make smart, tactical facility disposition decisions. This presentation details the Consolidation Demolition Toolkit (CD Toolkit) that delivers the data that enables installations to make and defend those facility disposition decisions, and walks through the process of how to use the data to create a consolidation/demolition master plan, and ideally, a long-range facility investment program.	The USAF Civil Engineer Asset Management movement and transformation has produced nothing short of an internal audit process. Part of this is because of the recently realized benefits of the USAF CE legacy database systems (IWIMS, ACES-PM, etc.). While the focus on the legacy database systems can be attributed to the AM transformation, the need for clean data goes far beyond any internal USAF CE needs. This presentation will focus on the importance of accurate data and the benefits of standardized data collection techniques.

Tech Session #	TS-73	TS-74	TS-75	TS-76
Title	Facility Life Cycle Management	Selling EMS	Keeping Your Head Above Water- Managing Wetlands on a Florida Air Force Installation	Risk-Based Cleanup of Residual Chlorinated Solvent Vapors Using a Low Maintenance, Cost-Effective Approach in Hawaii
Presenters:	Brian MacDonald	Lori Crump	Kristal Walsh	Marietta Canty and Daniel Ford
Organization:	Tetra Tech	377 MSG/ CEANC Kirtland Air Force Base	Booz Allen Hamilton	Bureau Veritas North America, Inc.
Audience:	Asset Management personnel, Sustainability Professionals, CE Operations personnel	EMS program managers/ leadership/ UEC's	natural resource managers, environmental program managers, base legal, element chiefs, planners, threatened and endangered species managers, NEPA specialists	The target/recommended audience includes Environment, Safety, and Occupational Health personnel, Facility Restoration/Remediation Managers, and Compliance personnel and managers.
Description	As the USAF embarks on Sustainability Infrastructure Assessments focused on facility assets, it is important to understand the methodologies, tools, and product capabilities regarding facility life cycle assessments and management so CE personnel can leverage these efforts for enhanced Civil Engineering operations. Implementing the Sustainment Management System, BUILDER, provides a bottom-up approach for sustaining facilities and targeting where to allocate scarce resources such as funds and manpower. Also, this tool will significantly add to the strong foundation of Civil Engineering Asset Management Program by integrating proven life cycle management practices with existing planning and programming processes.	EMS Selling Techniques to leadership, organizations and to general base personnel. Many EMS program managers have a difficult time gaining support for the EMS program at the installation level. This presentation will provide some basic selling techniques on presentation, other alternatives for EMS, EMS as a tool for leaders and organizations and how to gain and maintain momentum with the EMS program,	This topic is specific to challenging issues involved with wetland permitting, compensatory mitigation and protection of wetlands which are tasks routinely faced by the Natural Resources manager. This topic is unique in that it presents a creative approach to planning for wetland impacts which can be challenged by NEPA and regulatory compliance issues. A technical look into valuation of a wetland and innovative management techniques for protecting sensitive areas are also reviewed. The presentation also describes the pre-application process and development of a mitigation plan that includes regulators and experts from federal and state agencies.	The presentation will discuss a low maintenance, cost-effective and state-of-the-art approach to the remediation of chlorinated solvent vapors. Chlorinated solvents are one of the most common contaminants at impacted sites and, because of their persistence, often require long-term and expensive restoration options. The presentation will provide ESOH students with practical knowledge to apply at the numerous Air Force sites requiring chlorinated solvent vapor remediation and mitigation. The presentation will compare the results of conventional treatment, namely air sparging and soil vapor extraction, to the low-maintenance, cost-effective system described in the presentation.

Tech Session #	TS-77	TS-78	TS-79	TS-80
Title	TMDL Survival Training: Installation Stormwater Planning to Achieve the Chesapeake Bay TMDL	Air Force Perchlorate Data Collection and Reporting to Fulfill Emerging & Future Requirements	EMS Tech Session: Strategically Communicating EMS	EMS Tech Session: EMS Synergy - EMS/ESOH/CAMP/NIA/AMP
Presenters:	Jane McDonough	Rick Cox	Erica Becvar and Krista Gooddale	Lori Crump and Karen Kivela
Organization:	AECOM Technical Services, Inc	URS/AFCEE/TDV	AFCEE/TDN	Kirtland AFB
Audience:	Installation managers, environmental compliance managers, environmental and civil engineers involved in stormwater management	All Environmental professionals to include those working compliance (Drinking water, etc.), water/wastewater treatment plants, restoration (DERP), and other programs (e.g., Operational ranges - ORAP) where perchlorate sampling is required or must be reported.	EMS and environmental media specialists; CFT members; shop personnel	EMS and environmental media specialists; CFT members; shop personnel
Description	The presentation addresses planning and compliance issues that DOD installations will face related to the Chesapeake Bay TMDL. Each federal installation within the Bay watershed is expected to receive allocations requiring load reductions from urban stormwater and other sources. Executive Order 13508, Chesapeake Bay Protection and Restoration, identified the Department of Defense as the lead on stormwater management for federal properties in the Chesapeake Bay Watershed, and numerous changes in installation stormwater management will be required as a result of these two actions.	The session discusses the methodology "past and present" for perchlorate data reporting and outlines the effectiveness of efforts taken to document sampling compliance, and compliance and remediation efforts. It also expresses the role of AFCEE and others in these efforts. Emerging contaminants (including perchlorate) has gained significant Congressional and regulatory interest. The results of the GAO audit and the successes of the program DoD-wide will be highlighted.	An Environmental Management System (EMS) is not a separate environmental program an installation needs to manage. It is a systematic framework which can be used to manage all of your environmental programs. This session will define what you need to know in order to establish and maintain an installation EMS including effectively leveraging your Cross-Functional Team (cft) and communicating with senior leadership. All installation personnel should understand defined roles and responsibilities, installation-wide EMS concepts, applicable guidance, and EMS integration with other Air Force initiatives. This session will provide some tips and tools for EMS strategic communications.	This presentation demonstrates some techniques that can be used to shape an EMS program at the base level. Demonstrate how to integrate the EMS program with different organizations and agencies on a base. Different techniques to use to overcome some of the base level challenges when strengthening an EMS program. Synergize the EMS program through Public Affairs, Energy Steering group and aligning EMS significant aspects with Activity Management Plans. Using the EMS program as a tool to create sustainable and consistent environmental, safety and occupational health programs. Streamlining corrective actions with management plans created by the cross functional team. EMS can maintain and duplicate bench mark programs to be used in similar processes. Showing how to use effective web training tools on line and with videos.

Tech Session #	TS-81	TS-82
Title	EMS Tech Session: How EMS Auditing Relates to Compliance Assessments	EMS Tech Session: EMS Best Practices
Presenters:	Connie Strobbe and Karen Winnie	Renae Fischer
Organization:	AFIT and AFCEE/TDN	Columbus AFB
Audience:	EMS and environmental media specialists; CFT members; shop personnel	EMS and environmental media managers; CFT members; UEC reps
Description	<p>EMS audits are central to Tier 3 ESOHCAMPs, and are also a critical component of Tier 2 and 1 assessments as well. How does EMS auditing relate to the rest of the people on the assessment team? How do compliance auditors identify system weaknesses that resulted in the compliance findings they're identifying? This presentation will provide tips to help compliance assessors identify system weaknesses when they're conducting their compliance assessments.</p>	<p>Does an Environmental Management System (EMS) really work? The answer is yes! The benefits of an EMS can be seen at the installation as well as the organizational levels. The EMS, as a systematic framework, can be used to manage all your environmental programs, and thus its benefits can be experienced across all environmental media - and beyond. This technical session will evaluate best practices from applying an EMS as well as highlight installation achievements resulting from an effective EMS. Examples of best management practices (BMPs) gleaned from environmental awards, Environment, Safety, and Occupational Health Compliance and Assessment Management Program (ESOHCAMP) audits, and EMS audits will be highlighted.</p>