

ESMS Institute

**Virginia Tech Center of Excellence for Environmental Management
The Hotel Roanoke & Conference Center
Roanoke, Virginia**

ESMS Institute

- ▶ *Environmental Management Systems (EMS)* address the needs of a broad range of interested parties and the evolving needs of society for environmental protection.
- ▶ In work with local, state, and federal government facilities, the Center has taught and assisted entities to implement ISO 14001 EMS. This standard is a set of management processes and procedures that allow an organization to analyze, control, and reduce the environmental impact of its activities, products, and services and operate with greater efficiency and control.
- ▶ EMS are appropriate for all kinds of organizations of varying sizes in public and private sectors and encourage an organization to continuously improve its environmental performance.

Keep these definitions in mind!

- ▶ **Malfeasance...or official misconduct... is the commission of an unlawful act, done in an official capacity. Willful neglect to perform duty**
- ▶ **Nonfeasance is to ignore and take no action**
- ▶ **Misfeasance is to intentionally take inappropriate action**

ESMS Institute - WHY WOULD WE/SHOULD WE DO THIS?

City of Roanoke Story (Violation of solid waste management regulations, delegation of responsibility and authority issues, training issues, “checking” issues?). City prosecuted, found guilty, fined.

City of Flint Michigan Story (Authority/delegation of responsibility issues, violation of water quality regulations, serious health implications (lead contaminated water supply), “checking” issues?). Staff indicted, investigation continues.

Smithfield Story (Violation of environmental regulations - wastewater discharges, record keeping issues, “checking” issues, lack of direction?) Staff incarcerated.

DC METRO Story (Loss of life - systems maintenance issues, training issues, delegation of authority and responsibility, “checking” issues?). Investigation continues - Safety responsibilities transferred.

You might be wondering...

Who can be **liable**?

- ▶ **9th Circuit:** *United States v. Weitzenhoff* ruled that just knowing that you are discharging waste, Not the knowledge that you are violating the permit exposes you to criminal liability...**Knowledge is enough!**
- ▶ **4th Circuit:** *United States v. Dee* convicted 3 high ranking federal civilian employees held liable. Court said *Anyone responsible for the control & maintenance of a facility can be liable.*
- ▶ **2nd Circuit:** *United States v. Carr* ruled that when a maintenance foreman directed crew to bury waste paint the foreman was held responsible for unauthorized release of hazardous paint, even though of “relatively low rank”!

U. S. District Court Plead Guilty to 1 Felony

- ▶ **\$125,000 fine to federal court**
- ▶ **\$475,000 Beneficial Community Projects**
 - ▶ **225,000 Virginia Tech training initiative**
 - ▶ **100,000 Greenway Construction**
 - ▶ **150,000 Household Hazardous Waste Disposal**

TOTAL \$600,000

VDEQ Consent Order

- ▶ **\$125,000 Civil Penalty**
- ▶ **\$375,000 Beneficial Community Projects**
 - ▶ **\$150,000 Greenway Construction**
 - ▶ **\$175,000 Household Hazardous Waste Disposal**
 - ▶ **\$50,000 Streambank Restoration**

TOTAL \$500,000

ESMS Institute

- ▶ A unique, in-depth, two-year training program for government and non- and for- profit organizations interested in developing and implementing an Environmental and Sustainability Management Systems (ESMS) using the ISO 14001:2015 standard. Integration of an ESMS by organizations has proven environmental and performance benefits and is based on a system of continual improvement. Organizations attending the Institute will be given all the tools necessary to develop and implement an ESMS specific to their organization - See more at: <http://www.cpe.vt.edu/esms/courses.html>

ESMS Institute

- ▶ Each participating agency will identify a Core Team of five members to attend the Institute. This team will consist of the following positions chosen as being crucial to your success:
 - ▶ Senior Executive
 - ▶ Management Representative
 - ▶ Environmental Champion
 - ▶ Operations Manager/Superintendent
 - ▶ Administrative/Executive Assistant.

ESMS Institute

▶ Baseline Environmental Review

Virginia Tech ESMS faculty will visit your facility for one day to observe environmental practices at your chosen facility. During the site visit, faculty will meet with your ESMS team to prepare them for the upcoming ESMS workshops. Faculty will also provide a debriefing of their observations at the end of the day and will prepare a written assessment of those environmental observations within two weeks of the baseline visit.

▶ Team Conference Calls

Virginia Tech ESMS faculty will schedule a one-hour conference call with your team to review progress and to offer coaching. These conference calls will be scheduled prior to workshops 2 and 3.

Past Participants

- ▶ **City of Alexandria**
- ▶ **City of Dubuque, IOWA**
- ▶ **City of Fort Lauderdale, Florida (Public Works)**
- ▶ **City of Hopewell (Wastewater Treatment Plant)**
- ▶ **City of Newport News**
- ▶ **City of Oak Ridge TN**

Past Participants

- ▶ **City of Petersburg**
- ▶ **City of Richmond (multiple departments - Water and Wastewater Treatment)**
- ▶ **City of Roanoke (Public Works, fleet Management)**
- ▶ **City of Tacoma, Washington - Center for Urban Waters**
- ▶ **Albemarle County Service Authority**
- ▶ **Chesterfield county (multiple departments)**
- ▶ **Henrico County (Multiple Departments)**
- ▶ **Virginia Tech**

Past Participants

- ▶ **45 transit Operations across the Country including:**
 - ▶ **SEPTA (Philadelphia, PA)**
 - ▶ **MARTA (Atlanta GA)**
 - ▶ **BART (San Francisco, CA)**
 - ▶ **LA METRO (Los Angeles, CA)**

Virginia Tech Contact Information

Faculty Contacts

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Staff Contacts

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- ▶ Martha Franklin, (540) 853-8279
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Location

The Hotel Roanoke & Conference Center



Cost Responsibilities

Team Responsibilities

Not covered :

- ▶ Round trip travel (airfare, rentals) to 3 workshops
- ▶ One evening meal on your own

Facility Responsibilities

- ▶ Cost of 3 site visits by Virginia Tech (baseline, gap and final audit)
- ▶ Three, 3-day workshops and all meals, with the exception of one dinner, and lodging for each team
- ▶ ESMS tool kit of information and materials
- ▶ ESMS web-based library

ESMS Institute Dates

▶ **Workshop 1 - November 8-10, 2016**

Arrive: Monday, November 7

Depart: Thursday, November 10, after 1 p.m.

▶ **Workshop 2 - January 17-19, 2017**

▶ Arrive: Monday, January 16

Depart: Thursday, January 19, after 1 p.m.

▶ **Workshop 3 - March 7-9, 2017**

Arrive: Monday, March 6

Depart: Thursday, March 9, after 1 p.m.



Workshop 1 - November 8-10, 2016

The ISO 14001 elements taught and practiced include:

- ▶ Context of the organization
- ▶ Leadership
- ▶ Organizational roles, responsibilities and authorities
- ▶ Aspects, risks and opportunities
- ▶ Environmental objectives

The ESMS team is provided multiple opportunities during the workshop to begin development of tools during course “labs” and an "action plan" for implementation of the homework assignment to be completed prior to Workshop # 2.

Workshop 1 - November 8-10, 2016

- ▶ Your five member ESMS team will begin learning how ISO 14001:2015 can help you manage your organization's environmental aspects and impacts efficiently and improve environmental stewardship across your entire organization. During Workshop 1 your team will be given a complete overview of the new ISO 14001:2015 standard and will then focus on the following ISO 14001:2015 clauses:
 - ▶ Context of the Organization - understanding the organization and its context; understanding the needs and expectations of interested parties; and determining the scope of the environmental management system;
 - ▶ Leadership - leadership and commitment; environmental policy; and organizational roles, responsibilities and authorities.

Workshop 1 - November 8-10, 2016

- ▶ Planning - actions to address risks and opportunities; environmental aspects; compliance obligations; planning action; and environmental objectives and planning to achieve them.
- ▶ Teams will be provided opportunities during the workshop to begin work on the scope of their ESMS and complete assignments for each clause. Teams will also be quizzed on each clause to ensure they understand the material being taught.

Workshop 2 - January 17-19, 2017

During the second workshop, your team receives training on the following ISO 14001 elements:

- ▶ Support
- ▶ Documented information
- ▶ Communication
- ▶ Operational planning and control
- ▶ Control of outsourced processes
- ▶ Emergency preparedness

As with Workshop 1, the ESMS team is provided multiple opportunities during the workshop to begin development of tools during course “labs” and an “action plan” for implementation of the homework assignment to be completed prior to Workshop # 3.

Workshop 2 - January 17-19, 2017

▶ Your ESMS team will focus on two more ISO 14001:2015 clauses during Workshop

2. Teams will continue to be given opportunities to complete homework assignments during the workshop and also be quizzed on the clauses after they are taught. Teams will also be instructed on how to prepare a case study for the facility. Focus of workshop 2 will be on the following ISO 14001:2015 clauses:

- ▶ Support - resources; competence; awareness; communication (both internal and external); creating and updating documented information; and control of documented information.
- ▶ Operation - operational planning and control and emergency preparedness and response.

Example - Stormwater

- ▶ **Stormwater BMPs**
- ▶ Post - Construction BMP's
- ▶ Construction BMP's (To be included when E&S regs and handbook are updated)
- ▶ Public Education and Outreach
- ▶ Public Involvement/ Participation
- ▶ Illicit Discharge Detection and Elimination
- ▶ Municipal Pollution Prevention/ Good House Keeping
- ▶ Industrial / commercial activities and facilities

Example - Stormwater

- ▶ Use spill kits in areas to contain spills before they reach storm drains.
- ▶ Use Gutterbuddies to prevent debris from entering storm drains.
- ▶ Stormceptors help to prevent sediment discharge.
- ▶ Inspect roll off boxes and trailers to reduce the likelihood of leaks.
- ▶ Store recycling and construction debris under roof to reduce stormwater contamination.
- ▶ Use vacuum truck to vacuum out storm drains.

Workshop 3 - March 7-9, 2017

During Workshop # 3 your team works on the following ISO 14001 elements:

- ▶ **Monitoring and measurement**
- ▶ **Evaluation of compliance**
- ▶ **Internal audit**
- ▶ **Management review**
- ▶ **Nonconformity and corrective action**
- ▶ **Continual Improvement**

You will then develop a schedule for achieving full implementation of the ESMS and commit to dates for the Gap Audit and Final Audit at your facility. Two-three weeks prior to the GAP Audit you will send to Virginia Tech a complete set of your ESMS documents.

Workshop 3 - March 7-9, 2017

- ▶ The final workshop covers the two remaining ISO 14001:2015 clauses. Teams will be given opportunities to prepare various documents that will be part of their ESMS and will be quizzed on the final two clauses. Clauses taught during Workshop 3 are:
 - ▶ Performance evaluation - monitoring, measurement, analysis and evaluation; evaluation of compliance; internal audit, and management review.
 - ▶ Improvement - nonconformity and corrective action; and continual improvement.
 - ▶ Teams will be briefed on what they need to do to prepare for the gap and final audit portions of the Institute. Gap audit dates will also be selected.
- ▶ - See more at: <http://www.cpe.vt.edu/ems-i.html>

GAP AUDIT

▶ Gap Audit

Approximately three months after Workshop 3, Virginia Tech faculty will conduct a one-day, on-site gap audit by a trained ISO auditor.

FINAL AUDIT

► Final Audit

Approximately three months after the gap audit, Virginia Tech faculty will conduct a final audit consisting of one-day site review and one-half day document review by a trained ISO auditor.

Institute Cost

- ▶ **Fee:**
\$22,000 per 5 person team
\$4,800 for each additional team member or per person for teams of less than 5
- ▶ The fee may be paid in two installments
- ▶ Registration fee includes group meals, refreshment breaks, single occupancy lodging, parking, taxes, gratuities, a printed copy of the ISO 14001:2015 Standard for each team member, and all workshop materials.
- ▶ Registration Deadline: September 1, 2016
- See more at:
- <http://www.cpe.vt.edu/esms/ems-i.html>

ESMS Registration

- ▶ Registration Options: Download the registration PDF - <http://www.cpe.vt.edu/esms/ems-i-registration.pdf>
- ▶ Refund Policy: Due to the unique nature of this course, no refunds will be made. Substitutions can be accepted, however it's not recommended to make a substitution after the first workshop. In the unlikely event that this program is cancelled due to insufficient enrollment or other unforeseen circumstances, the University will full refund registration fees but cannot be held responsible for any other expenses, including cancellation or change charges assessed by airlines, hotels, travel agencies or other organizations

ESMS Registration

- ▶ If you need assistance, please call COTA at 540-853-8279.
- ▶ If you are an individual with a disability and desire an accommodation, please contact Martha Franklin at 540-853-8279 or email mpfrankl@vt.edu during regular business hours at least 10 business days prior to an event.
- ▶ Virginia Tech's Equal Opportunity/Affirmative Action Statement: www.vt.edu/about/equal-opportunity.html

Lodging

The Hotel Roanoke and Conference Center

- ✓ All team members will have a **single occupancy**, non-smoking room reserved for 3 nights for each of the 3 workshops
- ✓ All **lodging reservations** will be handled by **Virginia Tech** for all 3 workshops



Meals

Monday - Arrival Day - All meals on your own

Tuesday - Breakfast break station, group lunch, group dinner, and continuous break station all provided at The Hotel Roanoke & Conference Center as part of your registration package

Wednesday - Breakfast break station, group lunch, and continuous break station all provided.

Dinner is on your own at a restaurant of your choice

Thursday - Breakfast break station and group lunch



Dress



Dress is business casual dress for meetings and dining so please dress comfortably. The Hotel Roanoke & Conference Center maintains an average temperature of 70° so you may wish to bring a sweater or jacket.

Team Registration Costs

- ▶ All ESMS Institute costs for a five person team - **excluding transportation and one evening meal** - will be covered by registration fee.
- ▶ Cost per person for additional team members over five: \$4,800.00
- ▶ Cost per person for teams with fewer than five members: \$4,800.00

VA DEPARTMENT of ENVIRONMENTAL QUALITY

- ▶ **Virginia Environmental
Excellence Program (VEEP)**
- ▶ <http://www.deq.virginia.gov/Programs/PollutionPrevention/PollutionPreventionCaseStudies.aspx>

▶ **WA DEQ – Office of Pollution Prevention** do?

- ▶ **Motivate Virginians to minimize their environmental footprint through actions that exceed what is required while enhancing their bottom line.**
- ▶ **How?**
 - ▶ **Non-regulatory programs**
 - ▶ **Public recognition**
 - ▶ **Technical assistance**
 - ▶ **Web-based information resources**
 - ▶ **Training & workshops**
 - ▶ **Onsite pollution prevention assistance**

Recognition Programs

Governor's Environmental Excellence Awards

Virginia Green

- ▶ Awarded annually to acknowledge successful and innovative efforts that improve Virginia's environment
- ▶ Award categories:
 - ▶ Environmental Project
 - ▶ Sustainability Program
 - ▶ Land Conservation Project
 - ▶ Land Conservation Program
 - ▶ Virginia Outdoors Plan
- ▶ Statewide program that works to reduce the environmental impacts of Virginia's tourism industry.
- ▶ Regional Chapter Partners - Your CVB or tourism department can join to promote green tourism locally.



VEEP Virginia Environmental Excellence Program

Sustainability Partners

Environmental Management System (EMS) Track

- ▶ Facility Based
- ▶ Promotes the use of environmental management systems (EMS) and pollution prevention.
- ▶ Tiered Levels E2 / E3 / E4
- ▶ Requires record of sustained compliance.
- ▶ Benefits:
 - ▶ Recognition
 - ▶ Annual permit fee discounts
 - ▶ Alternative Compliance Methods

- ▶ Organization Based
- ▶ For organizations that demonstrate commitment to environmental sustainability through leadership, innovation, and continual improvement.
- ▶ Benefits:
 - ▶ Recognition



Webinar: Environmental Management: Taking Control of Your Environmental Risks

- ▶ Wednesday, September 21, 2016 1:00 pm EST
- ▶ Registration is free! [Click here](#) or email VEEP@deq.virginia.gov
- ▶ Are you interested in learning more about how you can manage your environmental risks and add value to your business? Join us to learn about environmental management systems (EMS) and what it takes to implement a strong environmental program at any facility. DEQ's Morgan Goodman will provide an EMS overview, with a focus on the early stages of implementation, and discuss strategies for developing a successful environmental program at any level. Smithfield's Corporate EMS Coordinator, Ruth DeBrito, will discuss their environmental management system and its benefits.
- ▶ If you don't have an EMS, but are interested in implementing one, we can help! This webinar will introduce you to the basics and show you what a successful EMS can do. If you're interested in implementing an EMS at your facility and you want assistance, contact us at VEEP@deq.virginia.gov to set up a free site visit or request more information.

Report P2 Retrospective - DEQ Section

P2-Retrospective_25-Year_Final-Draft_20151.pdf

- ▶ In 2014 the 400-plus facilities participating in the program submitted annual reports that showed the following environmental improvement totals:
 - ▶ • Recycled Water Use: Increased by 97,741, 468 gallons
 - ▶ • Water Use: Reduced by 566,083, 852 gallons
 - ▶ • Total Energy Use: Reduced by 1,291,647 MMBTUs
 - ▶ • Hazardous Waste Disposed: Reduced by 187,216 tons
 - ▶ • Non- hazardous Waste Disposed: Reduced by 1,461,505.6 tons
- ▶ Participating facilities also reported savings of over \$41 million through pollution prevention, recycling and energy efficiency efforts in 2014.

For more information contact:

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www.deq.virginia.gov/Programs/PollutionPrevention.aspx