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## Module III: Environmental Management Technology and Best Practices

Omni William Penn Hotel, Pittsburgh Pennsylvania

October 9-11, 2018 **7.27.18 version v9**

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### Monday, October 8, 2018

6:00-8:00 PM Hospitality Suite Meet and Greet

### Tuesday, October 9, 2018

7:15 AM Breakfast

7:30-8:00 AM Registration

8:00 AM Welcome to Pennsylvania (5 min)

Welcome Pennsylvania Department of Environmental Protection (10 min)  
John Ryder, Director of Oil and Gas Operation, PA DEP

TOPCORP Welcome, Announcements, and Logistics (15 min)

Mr. Jon Laughner, Extension Educator, Penn State University

Dr. Azra N. Tutuncu, Petroleum Engineering Dept., Colorado School of Mines

Dr. Hilary Clement Olson, Department of Petroleum & Geosystems Engineering,  
University of Texas at Austin

Mr. Larry Harlan, TOPCORP Executive Director

Meet and Greet – All Participants (15 min)

8:45 AM Appalachian Basin Overview -Jon Laughner

- 9:15 AM Life Cycle of Water with Shale Energy Development  
Dave Yoxtheimer, Hydrogeologist and Extension Associate, Marcellus Center for Outreach and Research, Penn State University
- 10:00 AM Networking Break
- 10:15 AM Water Testing and Interpretation and hands on activity with water test reports  
Bryan Swistock, Senior Extension Associate; Water Resources Coordinator, Penn State University
- 11:15 PM Deep Well Injection for Produced Fluids Disposal  
Dave Yoxtheimer
- 12:00 PM Lunch
- 1:00 PM Abandoned wells  
Seth Pelepko, P.G., Environmental Program Manager, Division of Well Plugging and Subsurface Activities, Bureau of Oil & Gas Planning and Program Management, Dept. of Environmental Protection  
Steve Hoband, Chairman Geosciences, Indiana University of Pennsylvania
- 2:00 PM Networking Break
- 2:15 PM Soil Management during Oil & Gas Operations and Hands on activity  
Joel Hunter, Penn State University
- 3:15 PM Source Water, Flowback and Produced Fluids Management  
Dave Yoxtheimer
- 4:00 PM Natural Gas Liquids from Wellhead to Cracker Plant  
Dan Brockett and Jon Laughner (*Overview of Wed tour and API Weights of Hydrocarbon Liquids Activity*)
- 4:45 PM Wrap-up and Evaluation
- 6:00-10:00 PM Southern Tier Brewery
- 7:15 AM Depart William Penn Omni Hotel – Box breakfast on bus  
Overview of Packet (info on well, background of area, etc.)  
Processing of Oil and Gas – Dan Brockett on bus
- 8:30 am Well site drilling and fracking (1.5 hours, XTO per Jon)
- 10:30 am Rape Farm Tour well pad, compressor, access road, water impoundments, 2 pipeline ROWs (*diff issues there; have Tim Rape, DEP, MarkWest give their story 1.5 hours 3 breakout groups; possibly have Meet U Van*)

- 12:00 am Depart
- 12:30 pm Lunch Spot – *vicinity of Rape Farm and Bluestone Fractionation Facility*
- 2:00 pm Travel to Bluestone
- 2:30 pm Bluestone Fractionation tour – Rob McHale, Coordinator, MarkWest Liberty Midstream & Resources, LLC (*Break into 2 groups ~ 1 hour; or, have Meet U Van here?*)
- 4:30 pm Shell Ethane Plant
- Dinner on your own
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## Thursday, October 11, 2018

- 7:15 am Breakfast
- 8:00 am Stakeholder Engagement and What It Means for Regulators  
Tom Murphy, Director, Marcellus Center for Research and Outreach, Penn State University
- 8:45 am Methane Migration  
Fred Baldassare, P.G., Owner/Principal Geoscientist Echelon Applied Geoscience Consulting
- 9:30 AM Naturally Occurring Radioactive Materials (NORM)  
Mike Arthur, Penn State University
- 10:15 AM Networking Break
- 10:30 AM UAVs (Drones) for Monitoring
- 11:15 AM DEP Enforcement Panel - Building an Enforcement Case  
Steve Wells, PA DEP Investigator, Department of Environmental Protection, Bureau of Investigation  
**OH and WV DEP Investigators**
- 12:15 PM Lunch
- 1:15 PM Cement Bond Logs Activity  
Mike Arthur, Penn State University
- 2:00 PM Geologic Options for Subsurface Storage

Dr. Brian Anderson, Director of the West Virginia Energy Institute

- 2:45 PM Refreshment Break
- 3:00 PM Pipeline siting activity  
Dan Brockett and Jon Laughner
- 3:45 PM Wrap up and evaluation
- 5:30 PM Bus/Connection for Gateway Clipper
- 6:00 pm **Gateway Clipper**
- 6:30 pm Recognition Dinner and Cap-Note Speaker

Covering negotiation process, special accommodations or considerations,  
industry access, pipeline routing, experiences so far