



Annual UIC Conference:  
**"Current Topics Related to Injection"**  
 January 25-27, 2010

**Conference Proceedings**

Monday, January 25<sup>th</sup>

10 AM-  
4 PM

**Class I UIC Operator Training Session**  
**Bob Whiteside, Texas World Operations**

- History of Injection and Overview of UIC Program
- Permitting
- Petitioning
- Siting Criteria, Geology, and Reservoir Properties
- New Class I Well Construction
- Well Repair and Workovers
- Operating Procedures
- Fluid Quality
- Inspections
- Mechanical Integrity Testing
- Reservoir Testing

This is an interactive course. Questions from the participants are encouraged. An integral part of the course is the exchange of information between participants.

Tuesday, January 26<sup>th</sup>

8 AM-  
9 AM

**Opening General Session : Introduction by Joe Lee, President, GWPC**  
**Ann Codrington**, Chief Prevention Program, USEPA, Office of Ground Water and Drinking Water  
**Gil Bujano**, Assistant Director, Railroad Commission of Texas  
**L'Oreal Stepney**, Deputy Director, TCEQ Office of Water  
**Scott Tinker**, Director, Bureau of Economic Geology & State Geologist of Texas

9 AM-  
10 AM

**The Basics of Hydraulic Fracturing:**  
 -The presentation will provide an overview of the technology and environmental protection measures of hydraulic fracturing shale gas reservoirs, **Jim Venditto**, Anadarko Petroleum

**Class V UIC: Aquifer Storage and Recovery:**  
**Kevin Frederick**, WY DEQ, Moderator

- Report on findings of GWPC Research on ASR state regulation,  
**Steve Musick**, Musick Groundwater Consulting
- Water quality of the Twin Oaks ASR in South- Central Texas,  
**Brian Petri**, USGS
- ASR Across the Country: (Short presentations by people from various states with ongoing ASR projects)  
**Tim Parker**, Parker Groundwater, California-  
**Kirk Hoeffner**, Kansas Department of Health and Environment,  
**Sanjeev Kalaswad**, Texas Water Development Board, and  
**Bill Bates**, Region 5 EPA

Tuesday, January 26 <sup>th</sup> Continued		
10:30 AM-12 PM	<p><b>State Updates on Hydraulic Fracturing Regulatory Development:</b>  <b>Mike Nickolaus</b>, GWPC, Moderator</p> <ul style="list-style-type: none"> <li>• <b>Don Drazan</b>, New York Department of Environmental Conservation</li> <li>• <b>Scott Kell</b>, Ohio Department of Natural Resources</li> <li>• <b>Lori Wrotenbery</b>, Oklahoma Corporation Commission</li> <li>• Results of the GWPC/ USDOE Study: "State Oil and Natural Gas Regulations Designed to Protect Water Resources", <b>Mike Nickolaus</b>, GWPC</li> </ul>	<p><b>Class V UIC, Stormwater, Edwards Aquifer:</b>  <b>Mary Musick</b>, Musick Groundwater Consulting, Moderator</p> <ul style="list-style-type: none"> <li>• Public -supply well vulnerability in the Edward Aquifer, <b>Lynne Fahlquist</b>, USGS Shallow recharge:</li> <li>• Infiltration basins as UIC wells, <b>Jeff Jollie</b>, USEPA</li> <li>• Enhanced Recharge Project for the Edwards Aquifer, Central Texas, <b>Brian Smith</b>, Barton Springs Edwards Aquifer Conservation District</li> <li>• Class V Permitting Requirements in Alabama, <b>Sonja Massey</b>, Alabama Department of Environmental Management</li> </ul>
12 PM- 1:30 PM Supporter Recognition Lunch Speaker: <b>Dr. Carey King</b> , Center for International Energy and Environmental Policy, Jackson School of Geosciences, University of Texas at Austin, "Water and Energy Nexus: Strategic Thinking"		
1:30 PM-3 PM	<p><b>RBDMS Hydraulic Fracturing Module Development for States:</b>  <b>Paul Jehn</b>, GWPC</p> <ul style="list-style-type: none"> <li>-electronic transfer of data from industry to state regulatory agencies.</li> <li>-water quality</li> <li>-public access to information</li> </ul> <p><b>National UIC Database Implementation at States and Regions:</b> A Panel Discussion  <b>Roy Simon</b> USEPA, Moderator  Panelists: Texas Commission on Environmental Quality, Railroad Commission of Texas, North Dakota Department of Health, and USEPA Region 6 UIC DI Program</p>	<p><b>IMPLEMENTATION APPROACH FOR COMMERCIAL SCALE CCS (TECHNICAL, REGULATORY AND COMMERCIAL CONSIDERATIONS)</b></p> <p><b>Presented By:</b>  Subsurface Technology, Inc. &amp; Blue Source  Presenters: <b>Jerry Taylor</b> (Subsurface), <b>Russell Martin</b> (Blue Source), <b>Mike Moore</b> (Blue Source)</p> <p>1:30 – 1:45 Welcome &amp; Introductions  1:45 – 2:45 Technical Consideration  2:45 – 3:00 Regulatory Considerations</p>
3:30 PM-5 PM	<p><b>Flow Back Fluid Reuse and Disposal:</b>  <b>John Veil</b>, Argonne National Laboratory, Moderator</p> <ul style="list-style-type: none"> <li>• Shale Gas Development Issues: <b>Dan Arthur</b>, ALL Consulting</li> <li>• Barriers to water reuse: <b>Matt Mantel</b>, Chesapeake Energy, Inc.</li> </ul>	<p><b>CCS TECHNICAL Session (cont.)</b></p> <p>3:30 – 3:45 Regulatory Considerations (cont.)  3:45 – 4:15 Commercial Considerations  4:15 – 5:00 Open Forum  (discussion on related CCS Issues)</p>
5 PM-6 PM	<p><b>Class II UIC Ground Water Protection Issues:</b>  <b>Mark Bohrer</b>, ND Industrial Commission, Moderator  (An open forum on issues related to Class II UIC Wells)</p>	<p><b>Class III and V UIC Ground Water Protection Issues:</b>  <b>Ben Knape</b>, TCEQ, Moderator  Presentations by <b>Ben Knape</b> and <b>Bryan Smith</b>, TCEQ  (An open forum on issues related to Class III and V UIC Wells)</p>

Wednesday, January 27 <sup>th</sup>			
8 AM-9 AM	<p><b>Class I UIC Ground Water Protection Issues:</b>  <b>Ben Knappe</b>, Texas Commission on Environmental Quality, Moderator  Presentation by <b>Robert Van Voorhees</b>, Bryan Cave  (An open forum on issues related to Class I UIC Wells)</p>		
9 AM-10:30 AM	<table border="1"> <tr> <td> <p><b>Underground Injection and Shale Gas Development:</b></p> <p><b>Joe Lee</b>, Pennsylvania Department of Environmental Protection, Moderator (Invited)</p> <p>Regulatory implications to states if the FRAC Act passes: <b>Robert Van Voorhees</b>, Bryan Cave &amp; Associates (Presentation with audience discussion)</p> <p>“The 2008-2009 Earthquakes near Dallas/ Ft. Worth”, <b>Cliff Frohlich</b>, University of Texas</p> </td> <td> <p><b>Status of Geosequestration Rulemaking:</b></p> <p><b>Scott Anderson</b>, Environmental Defense Fund, Moderator</p> <p>Status of Federal CO<sub>2</sub> Rule Making</p> <ul style="list-style-type: none"> <li>• Key elements of the proposed EPA rule and status of federal rulemaking, <b>Scott Kell</b>, Ohio Department of Natural Resources</li> <li>• Efforts of “Multi-Stakeholder Discussions”, <b>Robert Van Voorhees</b>, Carbon Sequestration Council</li> </ul> <p>Status of State CO<sub>2</sub> Rulemaking</p> <ul style="list-style-type: none"> <li>• Texas,</li> <li>• Montana,</li> <li>• North Dakota,</li> <li>• Wyoming</li> </ul> </td> </tr> </table>	<p><b>Underground Injection and Shale Gas Development:</b></p> <p><b>Joe Lee</b>, Pennsylvania Department of Environmental Protection, Moderator (Invited)</p> <p>Regulatory implications to states if the FRAC Act passes: <b>Robert Van Voorhees</b>, Bryan Cave &amp; Associates (Presentation with audience discussion)</p> <p>“The 2008-2009 Earthquakes near Dallas/ Ft. Worth”, <b>Cliff Frohlich</b>, University of Texas</p>	<p><b>Status of Geosequestration Rulemaking:</b></p> <p><b>Scott Anderson</b>, Environmental Defense Fund, Moderator</p> <p>Status of Federal CO<sub>2</sub> Rule Making</p> <ul style="list-style-type: none"> <li>• Key elements of the proposed EPA rule and status of federal rulemaking, <b>Scott Kell</b>, Ohio Department of Natural Resources</li> <li>• Efforts of “Multi-Stakeholder Discussions”, <b>Robert Van Voorhees</b>, Carbon Sequestration Council</li> </ul> <p>Status of State CO<sub>2</sub> Rulemaking</p> <ul style="list-style-type: none"> <li>• Texas,</li> <li>• Montana,</li> <li>• North Dakota,</li> <li>• Wyoming</li> </ul>
<p><b>Underground Injection and Shale Gas Development:</b></p> <p><b>Joe Lee</b>, Pennsylvania Department of Environmental Protection, Moderator (Invited)</p> <p>Regulatory implications to states if the FRAC Act passes: <b>Robert Van Voorhees</b>, Bryan Cave &amp; Associates (Presentation with audience discussion)</p> <p>“The 2008-2009 Earthquakes near Dallas/ Ft. Worth”, <b>Cliff Frohlich</b>, University of Texas</p>	<p><b>Status of Geosequestration Rulemaking:</b></p> <p><b>Scott Anderson</b>, Environmental Defense Fund, Moderator</p> <p>Status of Federal CO<sub>2</sub> Rule Making</p> <ul style="list-style-type: none"> <li>• Key elements of the proposed EPA rule and status of federal rulemaking, <b>Scott Kell</b>, Ohio Department of Natural Resources</li> <li>• Efforts of “Multi-Stakeholder Discussions”, <b>Robert Van Voorhees</b>, Carbon Sequestration Council</li> </ul> <p>Status of State CO<sub>2</sub> Rulemaking</p> <ul style="list-style-type: none"> <li>• Texas,</li> <li>• Montana,</li> <li>• North Dakota,</li> <li>• Wyoming</li> </ul>		
10:45 AM-11:45 AM	<p><b>CO2 Geosequestration Activities:</b></p> <p>Activities of the regional DOE geosequestration partnerships: General Presentation  <b>Susan Hovorka</b> and <b>Rebecca Smyth</b>, Texas Bureau of Economic Geology,  <b>Charles Gorecki</b>, Energy and Environmental Research Center, University of North Dakota</p>		
12:00 PM-3 PM	<p><b>State/EPA Roundtable Discussion (STATE &amp; EPA EMPLOYEES ONLY, PLEASE)</b></p> <ol style="list-style-type: none"> <li>1. UIC program priorities – <b>Ann Codrington</b>, USEPA</li> <li>2. GS permitting and implementation- <b>Lee Whitehurst</b>, USEPA</li> <li>3. Financial Responsibility Instruments for Geologic Sequestration Wells – <b>Joe Tiago</b>, USEPA</li> <li>4. UIC grant allocation model – <b>Jeff Jollie</b>, USEPA</li> <li>5. Primacy Programs: 40 CFR 147 - <b>Bob Smith</b>, USEPA</li> </ol>		