GWPC’S CLASS VI WORKGROUP - CURRENT ACTIVITIES: DATA MANAGEMENT AND CLASS VI/CCS: REGULATORY TRAINING CURRICULUM

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DATA MANAGEMENT: RBDMS CLASS VI
RBDMS technology is a 75% fit with Class VI

Initial Requirements gathering complete for North Dakota and Wyoming

Pilot installed in North Dakota pilot program

Available to all states regardless of current data management systems

Connects with non-RBDMS systems to share information

Pilot meets initial data needs, additional work needed to fully run a Class VI program
» Facility based system
» Electronic permitting and reporting
» Interfaces with EPA
» Electronically accepts monitoring data
» Displays trend monitoring analysis
» Dashboards present data in user friendly format to aid in Issue Identification and decision making
» Collects and displays AOR data
» Interfaces with existing RBDMS systems and/or other State legacy systems
» Provides a GIS Interface
» Ability to import modeling data from other programs
» Field inspection
RBDMS CLASS VI

Pilot (ND - Current)
- Utilize existing RBDMS 3.0 Technology and Installation in ND
- Class VI project application
  - Electronic Permitting
  - Review
  - Approval
  - Denial
- Upload and associate documents
- Integrate existing RBDMS Data into Class VI project, where appropriate

Future
- Integrate with other RBDMS functionality/modules
  - Bond
  - Compliance
  - Incidents
  - Hearings
  - Transactions
  - Transfer
  - CO₂ injection reporting
  - Monitoring
  - Testing
- GIS interface
- EPA interface
- Interfacing with non-RBDMS systems
CLASS VI CURRICULUM FOR REGULATORS
CURRENT STATUS

The information in this presentation represents a current iteration of a curriculum. The curriculum outline has been completed by the CCS Task Force and will be distributed to full Class VI Workgroup for next step development.
<table>
<thead>
<tr>
<th>1. Programs Overview</th>
</tr>
</thead>
<tbody>
<tr>
<td>2. The Annotated &quot;Bookshelf&quot;</td>
</tr>
<tr>
<td>3. Properties and Characteristics of CO₂</td>
</tr>
<tr>
<td>4. Storage Site Characterization</td>
</tr>
<tr>
<td>5. Fluid Flow Modelling</td>
</tr>
<tr>
<td>6. Site Specific Risk Analysis</td>
</tr>
<tr>
<td>7. Monitoring Plans</td>
</tr>
<tr>
<td>8. Well Construction and Pre-injection Testing</td>
</tr>
<tr>
<td>9. Evaluating monitoring and Testing During Injection</td>
</tr>
<tr>
<td>10. Leakage and Corrective Action/Remediation Plans</td>
</tr>
<tr>
<td>11. Closure and Post Injection Site Care (PISC)</td>
</tr>
<tr>
<td>12. Class II EOR vs. Class VI Storage of CO₂</td>
</tr>
<tr>
<td>13. Financial Assurance</td>
</tr>
</tbody>
</table>
Module 1 is a high-level overview of the intersection between the GreenHouse Gas (GHG) and the Underground Injection Control (UIC) programs.

1. GREENHOUSE GAS (GHG) AND UNDERGROUND INJECTION CONTROL (UIC) PROGRAMS
Module 2 covers a “Bookshelf” of reference materials from introductory to advanced, students can use during permit review.

2. THE ANNOTATED “BOOKSHELF”
Module 3 covers specific properties and characteristics of CO$_2$ as they relate to permitting.
Module 4 covers the characterization of sites.
5. FLUID FLOW MODELLING

Module 5 covers the principals of fluid flow modelling from the standpoint of permit review and contractor oversight.
Module 6 provides a framework for assessing risk at a specific site.
Module 7 covers the design of monitoring plans
Module 8 covers data collected before and following permitting such as well construction and pre-injection testing.
Module 9 covers what to do with monitoring and testing results.

9. EVALUATING MONITORING AND TESTING DURING INJECTION
Module 10 discusses how a successful project will prevent CO$_2$ leakage outside of the injection zone and avoid triggering remediation and induced seismicity.
Module 11 covers the closure and post injection site care (PISC) period. This involves the long-term retention of CO$_2$.
Module 12 compares CO$_2$ storage in an Enhanced Oil Recovery (EOR) and a saline aquifer project.
Module 13 covers financial assurance elements of Class VI projects.

The Basics of Surety Bonds

A surety bond is a legally binding agreement between three parties:

- **Principal**: The party required to obtain the surety bond
- **Obligee**: The party requiring the principal to obtain the surety bond
- **Surety**: A neutral party that guarantees the principal's obligation

13. FINANCIAL ASSURANCE
PATH FORWARD

- Distribute to Full Class VI Workgroup to Review the curriculum for corrections (May 2022)
- Finalize curriculum (GWPC Annual Forum)
- Evaluate training formats
- Develop training materials based on the curriculum and chosen training format(s)
- Develop training schedules
- Deploy training program(s)
CURRICULUM TASK FORCE

- Alabama Geologic Survey
- Bureau of Economic Geology
- Environmental Defense Fund
- US Department of Energy
- US Environmental Protection Agency
- Underground Injection Technology Council
- Railroad Commission of Texas
- LA Department of Natural Resources
- Wyoming DEQ
- University North Dakota
- Stanford Center for Carbon Storage
- Industry Representatives
- Consulting Community
- Ground Water Protection Council
CLASS VI WORKGROUP – FUTURE EFFORTS
NEW TASK FORCE GROUPS

Call on Workgroup to set up additional Task Forces for continued development on Class VI implementation.

Potential Groups:
- Curriculum Implementation
- Primacy Support/Assistance
Implementing the Path Forward on the efforts being managed at GWPC depends on our ability to obtain sufficient funding and assistance from those involved in deployment of the Class VI program.
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