



Risk Assessment Task Force

Technical Group Meeting (13 Oct 2009)

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Task Force Phase I Complete

(Report on Tab 20)

Phase I Charter (Initiated CSLF London 2006)

- **Examine risk-assessment standards, procedures, and research activities relevant to unique risks associated with the injection and long-term storage of CO₂**
 - **Risks associated with CO₂ near-term (injection) processes (including fracturing, fault re-activation, induced seismicity)**
 - **Risk associated with long-term processes related to impacts of CO₂ storage, including:**
 - **health, safety, and environmental risks**
 - **potential impact on natural resources (such as groundwater, mineral resources, etc.)**
 - **return to the atmosphere**

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Task Force Membership

(section 1.3)

- **Australia**
- **Canada**
- **France**
- **India**
- **Japan**
- **Netherlands**
- **Norway**
- **United Kingdom**
- **United States, chair**
- **IEA Greenhouse Gas Programme**

Open participation, including delegates and stakeholders.



Phase I Summary

- **Initiated at London (Nov 2006)**
- **Recommendations finalized at Oslo (Apr 2009)**
- **Final draft to Secretariat (May 2009);
circulated to TG for review/comments (summer 2009)**
- **Phase I report complete (tab 20)**



Phase I Goals

- **overview of risk assessment and related methodologies (section 1.6)**
- **review of the existing literature on risk assessment for geologic storage of CO₂ (section 2)**
- **summary of ongoing risk-assessment activities in various countries (section 3; appendix)**
- **highlight of critical issues (section 2.2)**
- **identification of areas where additional information is needed (throughout; recommendations in section 4)**



Potential Impacts Considered

(sections 1.5.1; 2.2)

- **impingement on pore space not covered under deed or agreement**
 - **impingement on other subsurface resources**
 - **change in local subsurface stress fields & geomechanical properties**
 - **impact on the groundwater and/or surface water**
 - **elevated soil-gas CO₂ in terrestrial ecosystems**
 - **accumulation in poorly ventilated spaces or in low lying areas subject to poor atmospheric circulation**
 - **CO₂ or other displaced gases (e.g., CH₄) return to the atmosphere**
- **Importance of direct impacts from CO₂ vs. indirect impacts (e.g., brines, pressure fronts)**
- **Importance of global impacts (e.g., return of CO₂ to atmosphere) vs. local/regional impacts**

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Summary of Ongoing Risk Assessment Activities/Projects (section 3; appendix)

Project Title: Include a short title or description of the project.
Lead Organization(s) and Point(s) of Contact (w/e-mail): Focus on lead; the intent is to provide a point of contact as opposed to be inclusive on participants.
Duration: State and completion dates (if applicable): ??? Injection and monitoring dates (if applicable): ??? Dates & short description of key risk assessment milestones: ???
Scale of Injection (if applicable): For example, XXX tons per year for YYY years. Please spell "million" as applicable.
Risk Assessment Methodology: Include a brief description of the approach and tools used for risk assessment.
Brief Summary: Include a short narrative on the project, discussing key goals and key milestones. If the project includes a field effort, include a brief site description (and/or reference).
Key Risk Assessment Findings (if applicable) Include a short description of key findings and publications/documents from the project, as they relate to risk assessment. Note any lessons learned. If there is a website link to project summary, please provide.

- Form circulated by Secretariat to TG
- Current Summaries
 - Australia
 - Canada
 - France
 - France-Germany
 - EU
 - Japan
 - USA
 - IEA



Recommendations for Technical Group to consider passing to the Policy Group

(section 4.1)

- ***The link between risk assessment and liability should be recognized and considered.***
 - ★ • *TG: Should this recommendation be passed to PG?*
- ***Storage integrity goals (e.g., acceptable risk levels) for sites should be discussed.***
 - ★ • *TG: Should this recommendation be passed to PG?*
- ***Risk assessment should be considered in the context of stakeholder outreach and communication.***
 - ★ • *This recommendation was passed to PG (communications task force led by US/Grasser)*



Recommendations for Technical Group to consider for further attention

(section 4.2)

- ***Gap assessment to identify CCS-specific tools and methodologies that will be needed to support risk assessment.***
 - Could be focus for phase II efforts of task force
 - ★ (TG: Should RATF proceed to phase II?)
(If yes, new participation is welcome. Also, resource needs.)

- ***Feasibility of developing general technical guidelines for risk assessment that could be adapted to specific sites and local needs.***
 - Overlap of interests with “Performance-Based Standards”
 - i. maintain distinct areas of focus
 - ★ ii. merge groups
 - iii. expand to include standards from plant to site