

Task force: Performance based standard site safety and integrity

CSLF meeting
13 October 2009
London

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Context

- conciliation meeting between the IEA, CSLF and GCCSI identifies, among the 24 recommendations suggested to the G8 in 2008, those which should need complementary information.
- Among the four recommendations addressed to the CSLF Technical group, one asks us to specify reasons adduced by the recommendation n°14: " Governments with stakeholders need to develop performance based standard site safety and integrity ".
- ➤ Technical group decided to create the task force during the last meeting in Oslo, 2 April 2009
- Members:
 - Canada, <u>France</u>, Japan, Netherland, South Africa, United States

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Mandate

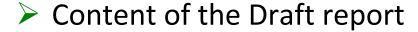
- Procedure reviewing
- Guidelines
- > Temporary and less formal task-force

Agenda

- Mid April 2009: detailed scope of work proposed to task-force members
- > Proposal of a practical agenda in order to achieve the report
 - 1. Producing of a first draft (France, end of August)
 - 2. Circular exchanges and discussions (September)
 - 3. Final report (end of October)

Only the first item is achieved

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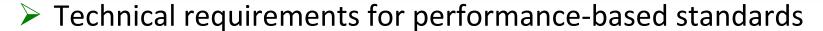
- state of the technical requests necessary for the establishment of performance and safety standards.
- various regulation approaches to be used possibly to guarantee the safety and integrity of the storage sites on the basis of technical criteria described previously.
- In conclusion, main knowledge gaps which will need to be covered in order to make this technology acceptable to the various stakeholders.

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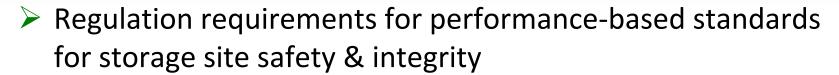
- Exposure effects
 - Review of exposure effects on human health, ecosystems and groundwater
 - Acceptable concentration limits
 - Except for human, too few data available
- Risk level
 - Computation of risk level
 - Uncertainties to high, no real computation possibilities
 - Notion of "acceptable risk level"
 - f. i. expressed in term of number of fatalities per year

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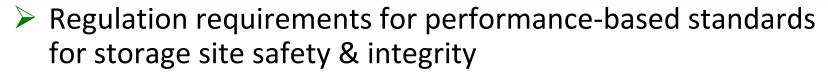
- Monitoring for performance quantification
 - Number of solution for short term monitoring (operation phase)
 - Less solutions for long term monitoring (post-closure phase)
- Conclusion
 - Performance standards are loosely connected to safety standards
 - Safety assessments have to be based on potential exposure
 - Need to know the conditions of exposure of vulnerable assets

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- Two options:
 - Performance-based approach
 - Prescriptive-based approach
- Review of existing regulation
 - From IEA roadmap
 - From EU funded project (STRACO₂)

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- Conclusion
 - Regulatory documents assign goals rather than means to achieve them
 - Lack of experience makes difficult the establishment of criteria
 ⇒ Need flexibility at the development stage
 - S&I performance will depend on the capacity of monitoring techniques
 - to locate and quantify the volume of stored CO2
 - to detect and quantify leaks

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Follow-up

Contribution for task-force members

Future of the task-force

- Overlaps are identified with the RA task-force
- Issues addressed to the Technical Group
 - Must we merge the RA TF and the SI TF and extend its goals
 - Must we precise the limits of the SI (perf. except RA)
 - Must we create a new TF (performance for all the CCS value chain