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Maximizing the Value of Risk Assessments: A Multi-purpose Engagement Tool

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Non-technical aspects of carbon storage and capture (CCS) projects are often touted as significant barriers to the commercial deployment of sequestration as a climate change mitigation technology. The need for active public engagement is recognized as key to building public understanding and, potentially, acceptance of a largely unknown technology. Yet, informing the public about a subject does not insure acceptance. A theory of social site characterization, a primary means of understanding the social dynamics in a project host community, will be discussed in the context of expert risk assessment processes. A major focus will be to show how they can be combined to build tools to engage communities in risk discussion and build public acceptance.

Social site characterization, like technical site characterization, seeks to improve processes for project selection and building public acceptance by understanding the social character of a potential sequestration site and by building increased engagement as a project moves toward deployment. Key to the successful deployment of CCS in a community is understanding the economic and social context, understanding the multiple “publics” present, and engaging with different groups within the public. In order to conduct outreach at this level, in-depth work must be undertaken to understand stakeholder groups and multiple public groups near where a project is planned. Concurrently, national and regional CCS general education is needed. Communication about CCS is inherently complicated because it draws on varied disciplines such as global climate change, geology, energy production, energy consumption, coal, clean coal technologies, environmental protection, and social issues. Legal, regulatory, and financial issues also come to bear in public understanding and acceptance of CCS.

Risk assessment processes are being used by several of the U.S. Department of Energy Regional Sequestration Partnerships to analyze and mitigate potential technical, social, and unexpected risks to projects. Expert panels are convened and an iterative process of ranking features, events, and processes (FEPs) takes place with multiple stakeholder groups. These ranked FEPs are then aggregated into scenarios which can be mitigated. Public opinion has been found to be a major risk for projects. Communicating with the public that risk assessments are taking place is important in helping them appreciate the depth to which safety and risks are being considered. However, communicating risk with non-technical audiences can be a challenge and is subject to misinterpretation, exaggeration, and media exploitation. How then do we bridge the gap

between conducting expert risk assessments and communicating the thorough consideration of risks to public health and safety in a meaningful way?

No easy answer exists, but we have to develop expertise and knowledge in communicating about risks in non-technical terms. Using social site characterization to understand a project community is the first step. A second step is to develop engagement tools that can be used with multiple audiences to replicate the risk assessment process while fostering discussion opportunities. Technical experts are potentially looking for one recipe that will work in all situations. No one recipe exists, but multiple ingredients or tools that have been deployed in projects can be used to address public concerns and address issues of risk perception. Risk assessments provide the raw material of a project. Effective risk communication can provide a bridge between technical and non-technical concerns. Learning how to effectively deploy the knowledge gained through the process to lay audiences is critical to communicating about projects and potentially building public acceptance. Yet, the risk assessment process has the potential to be a versatile tool for technical and non-technical audiences. This paper explores the possible adaptations and ways to employ information gained during traditional expert risk assessment processes for communicating and building capacity with non-technical audiences.