AMPLIFIED GEOCHEMICAL IMAGING LLC

The Strengths of Passive Ultrasensitive CO_2 Monitoring Technology

Amplified Geochemical Imaging's (AGI's) proprietary passive surface detection technology provides a unique ability to detect CO_2 and additional compounds at parts per million *(ppm*) levels which is 1,000 times more sensitive than traditional methods. The passive sampler contains a specially engineered polymeric adsorbent encased in a microporous membrane. These membrane pores are small enough to prevent soil particles and water from entering, but large enough to allow vapor molecules to pass through and concentrate on the adsorbent material. This proprietary technology presents many unique advantages over other CO_2 methods:

- AGI has worked in the CCUS space for over 20 years, leading the industry in research and development.
- AGI is likely the only company in the world to perform CO_2 monitoring on real world projects using passive geochemical detection since 2015.
- AGI can not only monitor CO_2 across a field, but can also detect and monitor CO_2 leakage up the injection well bore, as well as around wells that penetrate the sequestration reservoir (e.g., P&A'd wells and orphaned wells) which are one of the most common sources of leakage.
- AGI's passive method features extremely high sensitivity. Geophysical techniques measure CO_2 in tons, while AGI's method measures CO_2 at low parts per million (*ppm*) concentrations.
- The sensitivity of the AGI system provides the ability to detect nascent CO_2 leaks. This allows clients to take corrective actions before leaks become catastrophic.
- Measuring grab samples or probe samples provides a single measurement in time, which may have limited accuracy due to the variability of CO_2 flux to the surface. Given that AGI's modules are deployed *in situ* for multiple days, CO_2 concentrations on the sampler come into equilibrium with the surrounding soil. This provides time-averaged concentrations, which are more stable, more accurate and more reproducible.
- AGI passive modules also collect and measure CO_2 impurities which indicate whether the CO2 measurements are subsurface or ambient.
- AGI modules can also be used to evaluate sequestration reservoir seal integrity.
- AGI modules can be deployed onshore and offshore.
- For offshore projects, AGI module deployment is not constrained to monitoring or producing wells, but have the mobility to be placed anywhere potential leakage may occur.

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