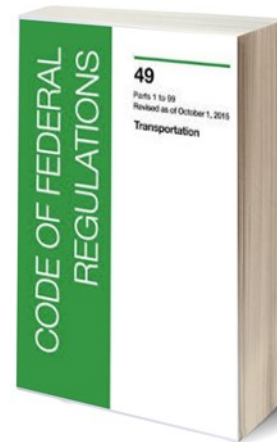
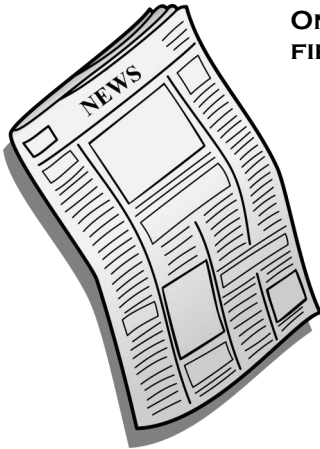


Are You Uncertain How New Gas Storage Regulations Will Impact Your Business?



Underground Injection and Storage **Engineers and Geologists**

Geostock Sandia, LLC, 8860 Fallbrook Dr., Houston, TX 77064
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North America • France • Germany • Singapore • Brazil • Mexico • Turkey



ON OCTOBER 23, 2015, A WELL FAILED IN A CALIFORNIA GAS STORAGE FIELD, CAUSING A SUSTAINED AND UNCONTROLLED NATURAL GAS LEAK...

ON AUGUST 19, 2004, A TEXAS NATURAL GAS STORAGE FACILITY HAD A WELL CONTROL INCIDENT AND NATURAL GAS FIRE ...

ON JANUARY 17, 2001, A WELLBORE FAILURE LED TO A SERIES OF GAS EXPLOSIONS IN HUTCHINSON, KANSAS ...

In response to these headlines...

On February 5, 2016 the US Department of Transportation's PHMSA issued an advisory bulletin to remind all owners and operators of underground storage facilities used for the storage of natural gas to consider the overall integrity of the facilities to ensure the safety of the public and operating personnel and to protect the environment.

PHMSA recommended that all operators have processes, procedures, mitigation measures, periodic assessments and reassessments, and emergency plans to maintain the safety and integrity of all wells and associated storage facilities whether operating, idled, or plugged.

PHMSA also recommended that operators have comprehensive and up-to-date processes, procedures, mitigation measures, periodic assessments and reassessments, and emergency plans in place to maintain the safety and integrity of all underground storage wells and associated facilities whether operating, idled, or plugged.

Geostock Sandia has developed the Asset Integrity Management System (AIMS) to help operators meet these recommendations and future regulatory requirements.

The tool provides an operator the means to:

- Conduct a screening level evaluation to identify gaps in your system.
- Organize and maintain *Well Files* and *Operating Records*.
- Define, analyze, and manage critical *Well Barrier Elements (WBEs)*, *Monitoring & Controls Requirements*, and *Preventative Maintenance* planning and prioritization.
- Understand operational risk to *Reservoir Integrity*.
- Assess and manage the risk of release through artificial penetrations in the *Area of Review*.
- Develop a *Risk Management Plan* for the entire storage facility.

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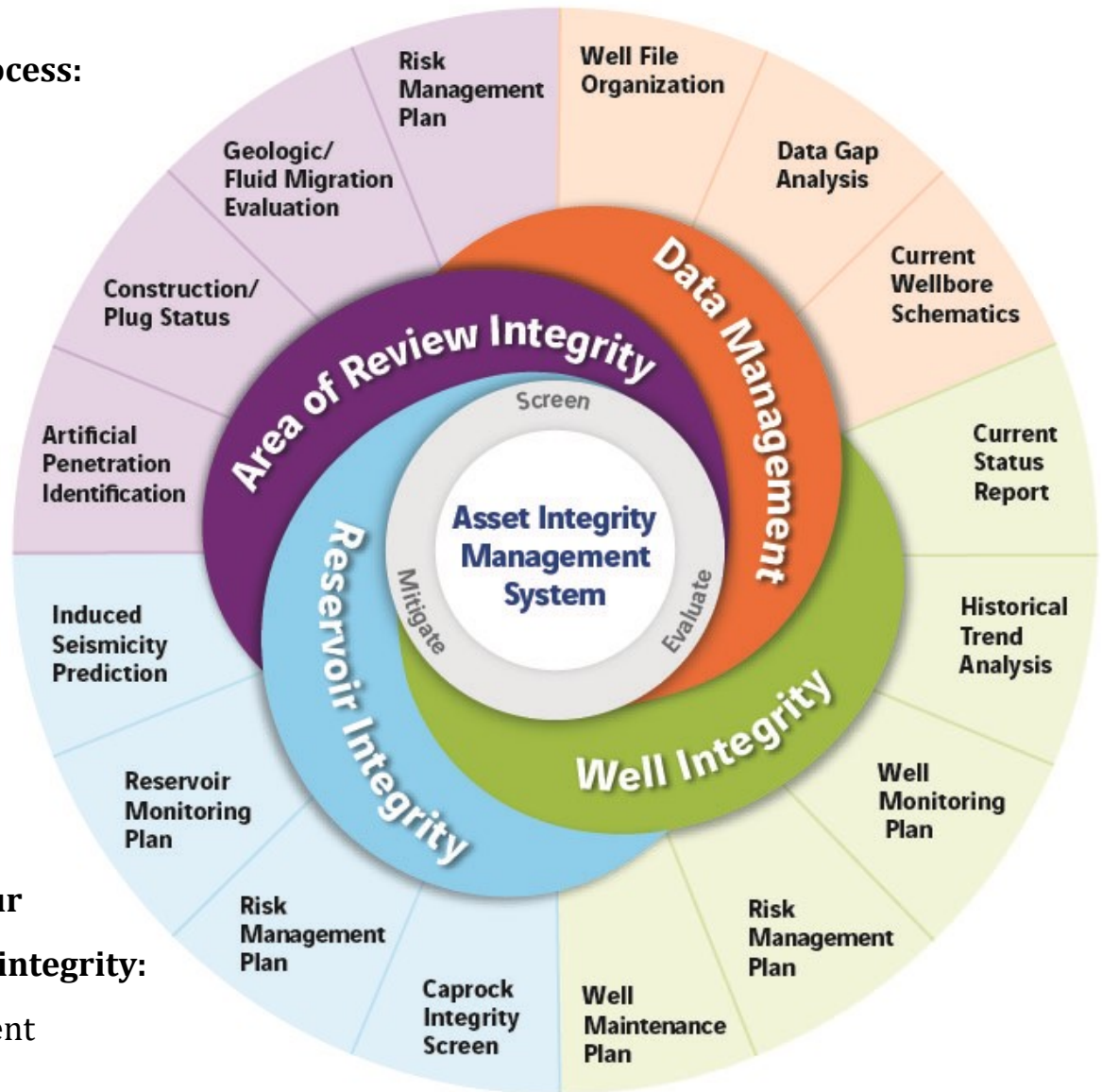
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Our modular Asset Integrity Management System can fill in any holes that you might have in your current integrity management process. This tool is the solution you need to meet PHMSA's new gas storage regulations! Call us today!

A three step process:

- Screen
- Evaluate
- Mitigate



Covering the four components of integrity:

- Data Management
- Well Integrity
- Reservoir/Cavern Integrity
- Area of Review Integrity

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We use a phased project structure to create long-term solutions for our clients.



**Research & Development and Innovative Solutions
 Improving Underground Asset Performance, Integrity, Reliability, and Safety**

Geostock Group Research and Development

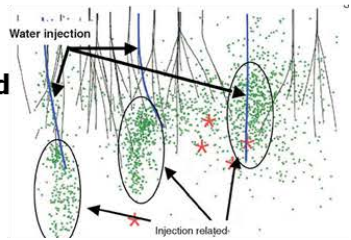
As an operator of storage facilities, Geostock continues to develop new tools and processes to meet changing demands and improve operational effectiveness. Our clients can benefit from our experience by using these tools/processes in their operations.

AIMS – Asset Integrity Management System. A tool to assess and monitor the integrity of storage and injection facilities from the wellhead to the limits of your Area of Review and everything in between.



GEOSCOPE - Data management system for underground storage sites. With Geoscope, all geological, hydrogeological, geotechnical or operational information can be stored in a single platform, facilitating real time data acquisition and overall monitoring, cross-data analysis, data interpretation and decision making.

A-MINDS – Analysis and Mitigation of Induced Seismicity. A tool based upon cutting-edge earthquake science to analyze and mitigate the potential for injection induced seismic events.



GUST - Simulation of Gas Thermodynamics in Salt Caverns. The GUST software simulates thermodynamic exchanges between gas, brine and rock mass in salt caverns, allowing the operator to keep an accurate accounting of gas storage inventory and to analyze movements of gas into and out of the storage cavern.

Regulatory Advocacy - Geostock Sandia’s experience and relationships are leveraged to minimize technical review time, as well as offering valuable advantages during well operations improvement and development projects.

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