



U.S. Department of Transportation
Pipeline and Hazardous Materials
Safety Administration



PHMSA
Your Safety
Our Mission

Underground Natural Gas Storage

**Louisiana Mid-Continent
Oil & Gas Association**
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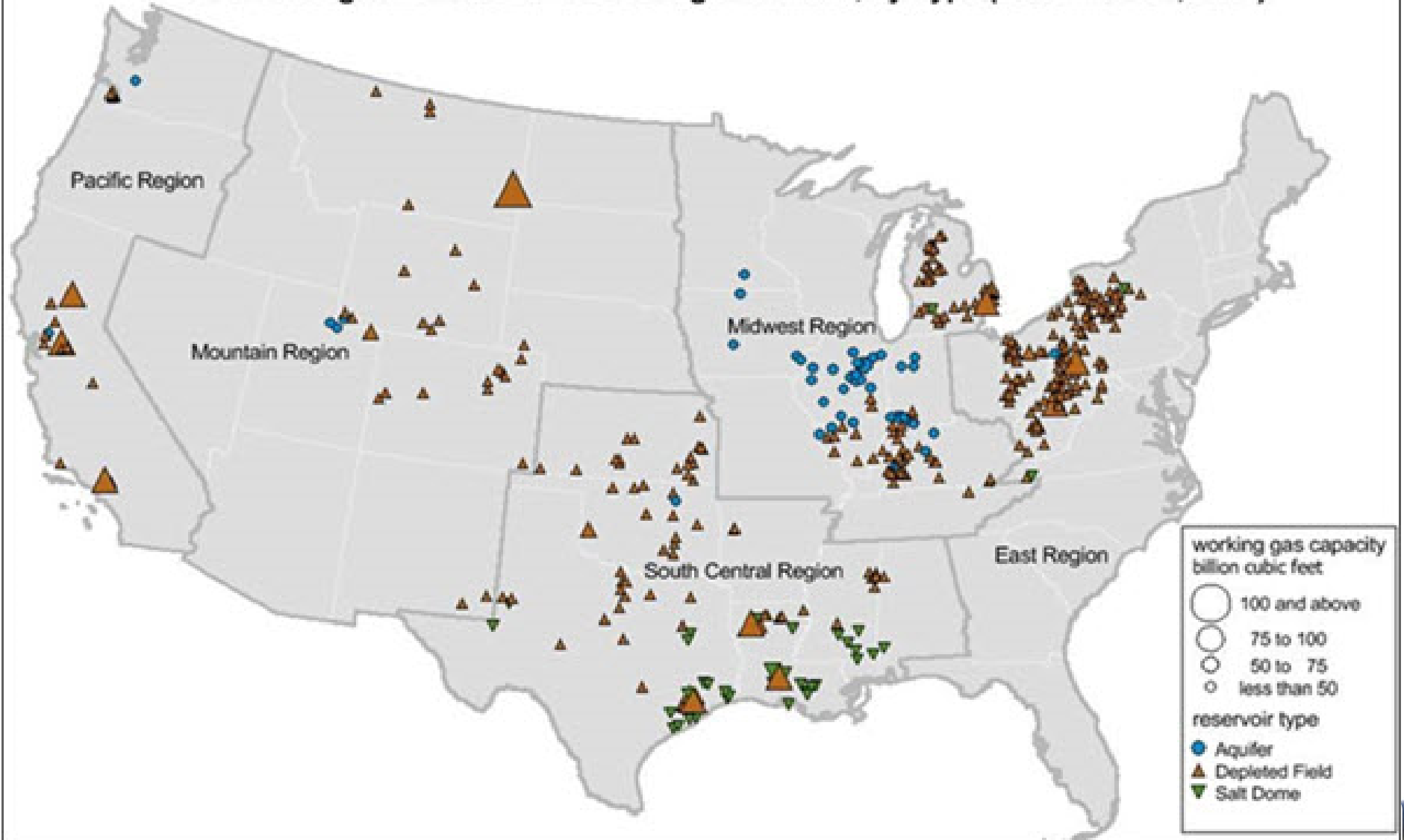


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“To protect people and the environment by advancing the safe transportation of energy and other hazardous materials that are essential to our daily lives.”



U.S. Underground Natural Gas Storage Facilities, by Type (December 31, 2015)



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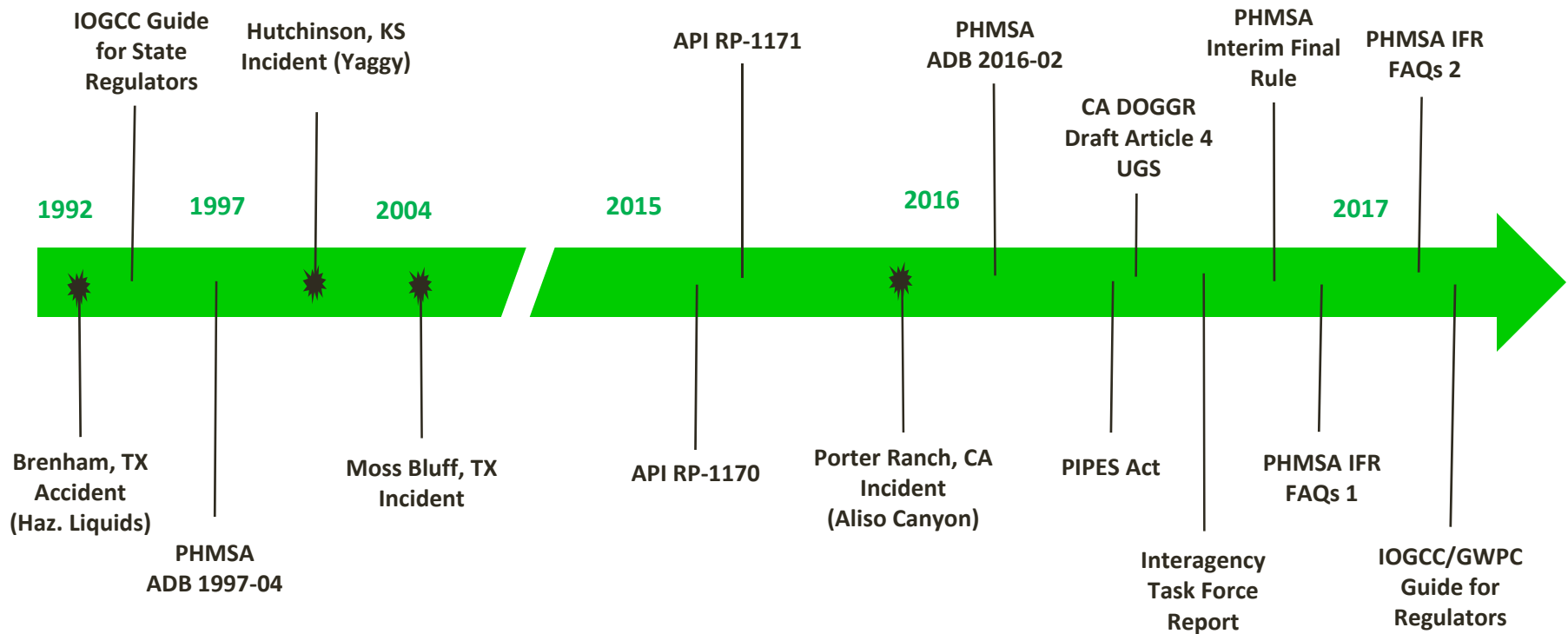


General Statistics

- 128 Operators
- 4800 BCF Working Capacity
- 406 Storage Fields, 50/50 Intra/Inter
- 85% Reservoir-Aquifer, 15% Salt Domes
- 17000 Wells
- Tally based on EIA Information
- ~12% increase in PHMSA inspection burden
- First Annual Reports will clarify Data



Timeline of Significant Events



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Pipes Act of 2016

- Protecting our Infrastructure of Pipelines and Enhancing Safety
- Establish regulations and inspection program for Underground Natural Gas Storage
- Develop inspection criteria and related training for both federal and state inspectors



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Interim Final Rule

Incident at the Aliso Canyon facility in California discovered on October 23, 2015

- Section 12 of the PIPES Act of 2016
- Docket No. PHMSA-2016-0016
- Published December 19, 2016
- Effective January 18, 2017



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49CFR 191.x

- 22(a) Obtain an Operator Identification Number (OPID)
- 15(c) Submit PHMSA Form F7100.2 as soon as practical, but not more than 30 days after detection of an incident, reported under 191.5
- 17(c) Submit PHMSA Form 7100.4-1 annual report by March 15 for the preceding calendar year
- 23(x) Reportable Safety-Related Condition



49CFR 192.12

- a New Salt Domes : API RP-1170
- b Existing Salt Domes : Sections 9-11 of API RP-1170
- c New Reservoirs/Aquif : API RP-1171
- d Existing Reservoirs/Aquif : Sections 8-11 of API RP-1171
- e Establish and follow Procedures
- f Provisions to justify Deviations → (Stay of Enfr.)



Frequently Asked Questions

- 7 initially issued in December, 2016
- Expanded set of 21 issued in April, 2017
- Refine and expand in concurrence with Final Rule



Stay of Enforcement

- Federal Register Notice, June 20, 2017
- In the interim, and for one year after the final rule, PHMSA will not issue enforcement citations for:
 - Failure to meet provisions that are non-mandatory in API RPs 1170 and 1171
 - Non-compliance with the requirement to justify and document deviations from the non-mandatory provisions



Final Rule in Development

- Take broad assortment of comments into consideration
- Will account for the final disposition of non-mandatory aspects of the RPs
- Interim Final Rule in play until the content and effective dates of the Final Rule are issued



Local or State Permits and Licenses

- UGS Operators interact with local, state and other federal agencies
- The new regulations do not supersede permits, certifications or licenses for UGS facilities that are required by local, state or other federal agencies



States Statistics

- UGS facilities in 31 States
 - 25 with intrastate assets
- Top 10 States with largest number of Storage Facilities:
 - PA, MI, TX, IL, WV, NY, KY, OH, IN, LA
- Top 10 States with largest Working Gas Capacity:
 - MI, TX, LA, PA, CA, IL, WV, OH, MS, MT



States Participation

- State Regulators for UGS mostly not the agencies responsible for topside horizontal pipelines
- Similar, but separate Program, for State Reimbursement
- States in 2018 Program
 - Certification : AR, MN, PA-PUC
 - Agreement : AK, CA, IL, KS



Initial Regulatory Inspections

- Initial inspections by PHMSA or States
- Based on Interim Final Rule, less Stay of Enfr.
- Focus on written procedures and implementation plans
- General Compliance Date : January 18, 2018
- Inspections to start in March-2018





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How will Operators demonstrate compliance?

- Question set will guide inspection thoroughness in each topical area
- Inspections will be a blend of traditional OM&E and integrity management
- Discussion between Inspectors and Operator personnel is expected, but those discussions need to be supported by procedures, documented analysis and records
- Some time will be spent on field observations



Potential Inspection Questions

- Direct Regulation
- Requirement through IBR (incorporation by reference)
 - Procedure : existence & thoroughness
 - Training : thoroughness
 - Training : recipients
 - Records : following procedure
 - Records : thoroughness
 - Performance Outcome : procedures & safety practice
 - Validation of Process
 - Substantiation of Conclusions



Access to Inspection Questions

- Inspection Questions will be established and published for the start of regulatory inspections
- Inspection Questions will be sorted into topical areas
- An inspection :
 - Would include those questions appropriate for the type and characteristics of the specific facility
 - May be specialized, focusing on only certain topical areas of the Regulations.
 - By example : construction – emergency preparedness



Operator Qualification for UGS ?

FAQ-28

- In lieu of OQ, Operators must comply with the training requirements in the associated RPs
 - API RP 1170, Section 9.7.5
 - API RP 1171, Section 11.12
- Both describe general training parameters and specifically identify the need to train personnel for normal, abnormal, and emergency conditions



Substance Abuse Program for UGS ?

FAQ-27

- Yes....Because the API RPs do not address drug and alcohol testing
- Covered Employees include:
 - Persons employed by Operators
 - Contractors engaged by Operators
 - Persons employed by Contractors
- Covered functions include operations, maintenance, and emergency-response functions
- Individuals within the responsibility of the Operator



Wide variability of operating practices in the storage industry

- Regulations are objectives to be achieved by the Operator for their Storage Facility
- These regulations are generally performance-based requirements
- Operators are expected to “personalize” their programs to site-specific equipment, history, operating and environmental conditions



Risk Assessment

Qualitative or Quantitative models

- Neither the regulations or the RPs prescribe how an operator is to perform risk analysis
- The Operator should be able to substantiate the specific site data and process used to conduct risk assessments, analysis and resulting conclusions



Maintenance or Construction

- Replacement in kind is maintenance
- If an SSSV is being replaced, then notification is not required
- If this is a new SSSV application, then notification is required



Prior Integrity Assessments

FAQ-25

- Prior integrity assessment is acceptable, if a technically adequate justification is documented in facility records
- Must be valid for the current operating conditions and operating environment
- Must account for the growth and effects of indicated defects since the assessment was performed
- May be necessary to supplement a prior assessment to establish a thorough basis for inclusion in risk analysis



PHMSA : Web Links

- <http://opsweb.phmsa.dot.gov>
 - Operator Notifications
 - Event Reporting
- <https://primis.phmsa.dot.gov/ung/index.htm>
 - Major Incidents
 - Key Documents
 - FAQs
 - Locations Map

