



**NETL Well Integrity Workshop:
Identifying well integrity research needs
for subsurface energy infrastructure**

May 18, May 25, and June 1, 2021

AGENDA (note all times Eastern Daylight Time or UTC-5)

Day 1 – Tuesday, May 18, 2021

Topic: Characterization and monitoring to constrain uncertainty

TIME	TOPIC		Speaker(s)
9:30 – 9:45 AM	Workshop scope and goals		Bob Dilmore (NETL)
9:45 – 10:00 AM	DOE FE Sponsor Remarks		TBD (DOE FE)
10:00 – 12:00 PM	<i>What are the best methods for characterizing the integrity of legacy wells?</i>		
	10:00 – 10:10 AM	Introduction and Session Charge	Owain Tucker (Shell)
	10:10 – 10:30 AM	Characterizing well leakage in British Columbia	Aaron Cahill (Heriot-Watt University)
	10:30 – 10:50 AM	Methane emissions from orphaned wells in Pennsylvania	Mary Kang (McGill)
	10:50 – 11:10 AM	Gathering well integrity data in Ohio and Michigan	Joel Sminchak (Battelle)
	11:10 – 11:15 AM	Introduce breakout discussion and move to rooms	
	11:15 – 12:00 PM	Guided breakout discussions	Moderators: TBD
	12:00 – 12:10 PM	Break	



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12:10 – 2:10 PM	<i>What is the current status of non-invasive well integrity monitoring techniques; are they up to the task?</i>		
	12:10 – 12:20 PM	Introduction and Session Charge	Rick Chalaturnyk (University of Alberta)
	12:20 – 12:40 PM	CO ₂ storage / depleted gas field monitoring – practical aspects/overview of current status	Charles Jenkins (CSIRO)
	12:40 – 1:00 PM	Imbedded sensors or wireless sensors in well cement	Ruishu Wright (NETL-LRST)
	1:00 – 1:20 PM	Value of monitoring information	Whitney Trainor-Guitton (CSM)
	1:20 – 1:25 PM	Introduce discussion and move to breakout rooms	
	1:25 – 2:10 PM	Guided breakout discussions	TBD
2:10 – 2:20 PM	Closing remarks with Advertisement for Day 2, Virtual poster session		Bob Dilmore (NETL)



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Day 2 – Tuesday, May 25, 2021

***Topic:** Well dynamics, modeling, and considerations for challenging environments*

TIME	TOPIC	Speaker(s)
9:45 – 10:00 AM	Welcome and recap previous day	Bob Dilmore (NETL) /Greg Lackey (NETL/LRST)
10:00 – 12:00 PM	<i>What is the current state of well integrity modeling and experimental work? Is it sufficient to capture relevant processes?</i>	
10:00 – 10:10 AM	Introduction and Session Charge	Nik Huerta (PNNL)
10:10 – 10:30 AM	Reactive transport modeling in well cements	Tim Wolterbeek (Utrecht)
10:30 – 10:50 AM	State of experimental and modeling work for well integrity	Bill Carey (LANL)
10:50 – 11:10 AM	Summary of experimental well integrity research	Barb Kutchko (NETL)
11:10 – 11:15 AM	Introduce discussion and move to breakout rooms	
11:15 – 12:00 PM	Guided breakout discussions	
12:00 – 12:10 PM	Break	



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12:10 -2:10 PM	<i>What are unique concerns for well integrity in challenging environments?</i>		
	12:10 – 12:20 PM	Introduction and Session Charge	Doug Blankenship (DOE/GTO)
	12:20 – 12:40 PM	Well cement performance in high-temperature environments	Tatiana Pyatina (Brookhaven National Laboratory)
	12:40 – 1:00 PM	Hydrogen storage – embrittlement MOC	TBD
	1:00 – 1:20 PM	Salt cavern storage	TBD
	1:20 – 1:25 PM	Introduce discussion and move to breakout rooms	TBD
	1:25 – 2:10 PM	Moderated group discussion	
2:10 – 2:20 PM	Closing remarks with Advertisement for Day 2, Virtual poster session		Bob Dilmore (NETL)



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AGENDA (note all times Eastern Daylight Time or UTC-5)

Day 3 – Tuesday, June 1, 2021

Topic: Synthesizing physics-based and data-driven approaches for gaining new insights into well integrity

TIME	TOPIC		Speaker(s)
9:45 – 10:00 AM	Welcome and recap previous day		Bob Dilmore (NETL) /Greg Lackey (NETL-LRST)
10:00 -11:10 PM	<i>Can data-driven models give us confidence in well integrity?</i>		
10:00 -10:50 AM	10:00 -10:10 AM	Introduction and Session Charge	Preston Jordan (LBNL)
	10:10 -10:30 AM	Regulator perspective on well integrity data collection	TBD
	10:30 – 10:50 AM	Well integrity data in the United States	Greg Lackey (NETL-LRST)
	10:50 – 11:10 AM	Statistical/machine learning analyses of well integrity datasets	TBD
11:10 AM – 12:20 PM	<i>How do we best manage well integrity and how do we understand and guarantee the long-term integrity of a well?</i>		
11:10 – 12:00 PM	11:10 – 11:20 PM	Introduction and Session Charge	Jaisree Iyer (LLNL)
	11:20 – 11:40 PM	Practical aspects of field-scale well integrity management	TBD (Occidental Petroleum)
	11:40 – 12:00 PM	Aliso Canyon – long operational life (gas storage)	Curt Oldenburg (LBNL)



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TIME	TOPIC		Speaker(s)
12:00 – 12:20 PM		Long-term liability of abandoned wells	Theresa Watson (TL Watson & Assoc.)
12:20 – 12:30 PM	Break (10 minutes)		
12:30 – 12:45 PM		Introduce final group discussion	TBD
12:45 – 1:55 PM		Moderated group discussion	All
1:55 – 2:00 PM		Closing remarks and adjourn	Bob Dilmore (NETL)