

Solution Mining Research Institute

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SMRI Technical Class Content
"Technical Aspects and Considerations for Cavern Abandonment"
Sunday, 26 April, 2020 - Detroit, Michigan

INSTRUCTOR	TITLE	OBJECTIVES
Fritz Wilke (SMRI Research Coordinator)	Class Introduction	
	INTRO	
Pierre Bérest	History of the Abandonment Problem through In-Situ Tests	Understand history of SMRI activities since the 90ies
Benoit Brouard	Overview of the Physical Phenomena involved in Salt Cavern Abandonment	Understand the phenomena involved and how they can be measured or calculated
Joe Ratigan	SMRI History & Research Subjects related to Cavern Abandonment	Understand history of SMRI activities since the 90ies
	LEGAL	
Heike Bernhardt (DEEP.KBB)	Regulatory and Technical Requirements for salt Cavern Abandonment – latest Discussion in Europe	Status of the discussion, factors and impacts on the technical and regulatory landscape, based on the abandonment workshops in the Netherlands and Germany.
Brandon Lampe (WSP)	Legal Aspects of P&A in the US	Outline the regulatory process of a cavern P&A in various US states (TX, LA, etc.) and Canada
	FIELDTESTS, SMRI-RESEARCH	
Dirk Zapf (IUB)	The Results of the Pressure Build-Up Test in a Brine Filled Cavern in Etzel	Overview of the test conditions and the test results
Arnaud Reveillere (Geostock)	Decommissioning and Abandonment of LPG Caverns at Carresse: Removing of Trapped Propane and Abandonment Tests on Shallow Caverns in France	Review of several case studies including a couple of abandonment tests supported by SMRI, and sharing of experiences after removing of trapped product
Andreas Bannach (ESK)	SMRI, Research Project (2004-2009): "The Staßfurt Abandonment Field Test"	Demonstrate the phenomena identified in previous research at a field scale for shallow bedded salt
Joe Ratigan	SMRI, Research Project (2005-2015): Enterprise, Deep Caverns	Demonstrate the phenomena identified in previous research at a field scale for deep domal salt
	ROCK MECHANICS, MODELING	
Joel Nieland (RESPEC)	Geomechanical Modeling of Gulf Coast Salt Cavern for Abandonment Alternatives	Conventional and unconventional plugging and abandonment options
Benoit Brouard (Brouard Consulting)	Numerical Simulation of Cavern Abandonment for Shallow and Deep Caverns	Show how cavern-pressure evolution on the long term can be predicted using simple and robust hypothesis
Dieter Brückner (IfG)	Rock mechanical concept and in-situ investigations for cavern abandonment	Providing evidence for a successful and safe abandonment; Securing evidence
	TECHNICAL	
Mike Olesko (Plains Midstream Canada)	Practical Aspects of Plugging – North America	Common and leading edge plugging techn., regulatory criteria in different regions, applicable standards and comparisons, suspension-prior-to-abandonment.
Allan Lennox (Atkins)	Practical considerations on cementing casing strings to surface and the consequences on well Integrity & abandonment	Alternative Cement Designs for the Production Casing. Review Pros and Cons of each option from construction, operations and abandonment view.
	CASES	
Alex van El (WEP), Robert Mastaler (Frisia), Rene Schneider (DEEP.KBB)	Case: Abandonment of the brine production cavern Frisia BAS#2 in Harlingen, The Netherlands	Abandonment case history of Frisia BAS2 (bedded salt, very deep) incl. history, pre-investigations, observation phase, permitting, abandonment preparation and execution, monitoring.
Marinus den Hartogh (Nouryon)	Things to consider for abandonment of shallow bedded caverns (Hengelo) and large domal caverns (Heiligerlee)	Which topics are to be considered when planning abandonment? And what are the differences between abandonment of shallow caverns in bedded salt and large caverns in domal salt?