

## **Gas Storage in Solution Excavated Caverns; Engineering, Environmental and Safety Issues**



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### **ABSTRACT**

Louisiana hosts numerous salt domes that provide economic benefit to the State and its people. The exploitation of these salt domes must be done in a reasonable, profitable and safe manner. The LDEQ provides an oversight function in issuing permits for certain operations involving the installation and operation of the salt storage cavern including discharge of produced brine and associated environmental evaluations.

The Henry Gas Storage Facility proposed Cote Blanche Island operation is one of a number of storage facilities that have come to the attention of LDEQ in the past few years. It is the only facility proposed that is slated to co-exist with an operating salt mine within the same salt stock.

Both Henry Gas (HG) and the North American Salt Company (NASC) have provided comments and concerns over the proposed installation and operation as they must account for the difficulties inherent in mining and solution mining the unique geological salt body in a safe and protective manner.

The geological staff at LDEQ has been asked to review and comment on the HG permit application which lead to a deeper study of the proposed facility. This presentation will provide a discussion of the basic geology of the salt dome, anomalous zones and conditions in the active mine, construction methodology of salt storage caverns, environmental impacts expected to result from brine disposal, worker safety issues, and alternatives for siting gas storage facilities.

## **BIOGRAPHY**

William H. Schramm is a 20 year veteran of the Louisiana Department of Environmental Quality. As a Geologist III he has worked closely with industry, consultants and private citizens to investigate and/or remediated over 3000 contaminated sites. His main focus is on groundwater issues throughout Louisiana. Since 2005 he has been an Adjunct Instructor on the staff of the Department of Geology at the University of Louisiana-Lafayette and served on five Graduate Thesis Committees. Mr. Schramm holds a BA and MS in Geology and a Teaching Certification for K-12 in Science and Earth Science. He is a member and past Director, twice past Vice-President and President of the Baton Rouge Geological Society. He also serves on the Board of Directors of the Louisiana Environmental Health Association, and ComForCare Senior Services. Mr. Schramm is also completing his first term as Delegate to the AAPG, representing the Baton Rouge Geological Society AAPG members. He has participated in numerous conferences, conventions and seminars as organizer, committee chair, session chair, judge, presenter and author/coauthor with over 35 papers or abstracts in publication. His off time is spent raising foster children, doing carpentry and trying to find time to travel with his wife Mary.