

# SOLUTION MINING RESEARCH INSTITUTE

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## SITE GEOTECHNICAL CONSIDERATIONS FOR EXPANSION OF THE STRATEGIC PETROLEUM RESERVE (SPR) TO ONE BILLION BARRELS

by

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### ABSTRACT

Eight Gulf Coast salt domes have emerged as candidate sites for possible expansion of the Strategic Petroleum Reserve (SPR) to one billion barrels. Two existing SPR sites, Big Hill, TX, and Weeks Island, LA, are among the eight that are being considered. To achieve the billion barrel capacity, some 25 new leached caverns would be constructed, and would probably be established in two separate sites in Louisiana and Texas because of distribution requirements.

Geotechnical factors involved in siting studies have centered first and foremost on cavern integrity and environmental acceptability, once logistical suitability is realized. Other factors have involved subsidence and flooding potential, loss of coastal marshlands, seismicity, brine injection well utility, and co-use by multiple operators.

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