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Disposal of NORM-Contaminated Oil Field Wastes in Salt Caverns – Legal, Economic and Risk Issues

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Disposal of NORM-Contaminated Oil Field Wastes in Salt Caverns -Legality, Technical Feasibility, Economics, and Risk

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Abstract

Some types of oil and gas production and processing wastes contain naturally occurring radioactive materials (NORM). If NORM is present at concentrations above regulatory levels in oil field waste, the waste requires special disposal practices. The existing disposal options for wastes containing NORM are limited and costly. This paper evaluates the legality, technical feasibility, economics, and human health risk of disposing of NORM-contaminated oil field wastes in salt caverns. Cavern disposal of NORM waste is technically feasible and poses a very low human health risk. From a legal perspective, there are no "fatal flaws" that would prevent a state regulatory agency from approving cavern disposal of NORM. On the basis of the costs charged by caverns currently used for disposal of nonhazardous oil field waste (NOW), NORM waste disposal caverns could be cost competitive with existing NORM waste disposal methods when regulatory agencies approve the practice.

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