




UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
Washington, DC 20460

OFFICE OF
WATER

OCT 5 1999

MEMORANDUM

Subject: Concurrence on the Classification of Wells in an *In-situ* Nahcolite Leaching Facility in Colorado - AmerAlia, Inc.

From:  Connie M. Bosma, Chief
Regulatory Implementation Branch
Implementation Assistance Division (4606)
OGWDW

To: D. Edwin Hogle, Director
Ground Water Program 8P-W-GW
Region VIII

This memorandum is in response to your request for concurrence on the classification of injection wells at a proposed facility which will be conducting solution mining of the mineral nahcolite. The Underground Injection Control (UIC) permit applicant and operator for this facility is AmerAlia, Inc. and the site will be located in the Piceance Basin near Meeker, Colorado. The applicant has applied to Region VIII for a Class V injection well permit, asserting these wells to be experimental. AmerAlia believes that the operational parameters require some experimentation to accommodate slightly differing geologic conditions between the location of the proposed wells, and injection wells at a similar facility which have proven commercially feasible in the same basin.

We have completed a careful review of the supplemental material that the Region has provided us, including the White River and Yankee Gulch project descriptions as well as the original request by AmerAlia. We have reviewed a letter dated August 9, 1999, from AmerAlia which provided additional details on the mining operation. We believe that the information provided by AmerAlia indicates that they will be using solution mining techniques developed by other companies, which are currently operating economically feasible sites. Specifically, the Yankee Gulch nahcolite *in-situ* leaching project, very similar to the AmerAlia proposal, was proven commercially sound just recently. We are aware that some of American Soda's operational information at Yankee Gulch is proprietary and AmerAlia does not have access to it. However, AmerAlia will be proceeding with the knowledge that the process is commercially feasible, which is less risky than not having this information at all.

After conferring with your regional staff, we agree that the solution mining wells to be used in the operation proposed by AmerAlia belong in the Class III injection well category and not as a Class V experimental technology well. The definition of experimental technology in §146.3, and farther ratified in UIC Program Guidance #28 (UICPG #28), indicates that this classification can only be applied to a "... *technology which has not been proven feasible under the conditions in which it is being tested.*" We further believe, as indicated above, that this solution mining technology has been proven feasible, and that the conditions under which it was proven so by the operator at Yankee Gulch, one-cavern mining for discrete lenses within an oil shale, are not significantly different from those in the AmerAlia project.

It can be argued that all new in-situ leaching projects, currently classified as Class III operations, need to fine-tune their operational parameters to be effective. Such fine-tuning is not ordinarily considered to be "experimental" for the purposes of classification as a Class V experimental injection well. Furthermore, we also took into consideration that a current effort in this office is the evaluation of specific Class V injection wells for additional regulation. One type of well being evaluated is the Class V experimental sub-class. Information recently obtained appears to indicate that a number of injection wells are classified as experimental although they clearly fall into one of the other types and the technology under which they operate has been demonstrated elsewhere.

Additionally, past experience in Region VIII indicates that some of these *experimental* technologies can potentially threaten underground sources of drinking water and have warranted the requirement of a permit, as authorized in §144.25(a)(3) and (b). One of the primary reasons for allowing the experimental Class V well category was the relative low risk these wells were supposed to present. Their operation in the field has indicated otherwise for some facilities.

In our recent discussions with AmerAlia, their representatives indicated that one of their biggest concerns is the timing and possible delays in obtaining authorization or permit reviews and approvals for significant changes in the operating parameters. We recommend that you provide flexibility, within the law, to the applicant in this area. If you have any questions concerning this concurrence memorandum, please call Mario Salazar of my UIC staff at (202) 260-2363, or Bruce Kobelski at (202) 260-7275.

cc: Jim Curtin, OGC
Don Olson, OECA