

SECRET NUMBER

PROPOSED RULE

PR-19,20,21 et al (80)
(50 FR 13797)38120
NRC

UTAH INTERNATIONAL INC.

550 CALIFORNIA STREET • SAN FRANCISCO, CALIFORNIA 94104

CABLE ADDRESS: UTAHINTL • (415) 981-1515

30 July 1985

Attention: Docketing and Service Branch
 Secretary of the Commission
 U.S. Nuclear Regulatory Commission
 Washington, D.C. 20555

DOCKETED
USNRC

'85 AUG -1 A11:36

RE: Proposed rules concerning well logging operations

DEPT. OF SEC.
DOCKETING & SERVICE
BRANCH

Dear Sirs:

Thank you for this opportunity to comment on the proposed rules concerning licenses and radiation safety requirements for well-logging operations published in the Federal Register on April 8, 1985. Because of the effect these regulations will have outside the nuclear industry, we appreciate the extended period provided for commenting.

Utah International Inc. (UII) is involved in mineral extraction and exploration throughout the U.S. and much of the world. We have been licensed to operate radioactive logging equipment for over ten years. Our vast experience with well logging operations throughout the world makes us particularly sensitive to the cost implications of the proposed rule.

We are concerned for several reasons with the proposal that all holes be cased prior to logging. First, while gamma and density logs can be run in a cased hole, resistivity and caliper logs cannot. The costs of running these logs prior to casing would be significant since logging would have to occur while the drill waits to place casing. Unless resistivity and caliper logs are essential it is more likely that they will be eliminated thereby decreasing our geologic understanding.

Second, the cost of casing holes that will be logged for density would greatly increase the cost of drilling and reclamation. Not only would there be the additional cost for casing but larger diameter holes would have to be drilled. There would also be more "down time" for the drill while it waited on the hole to both place the casing and to pull it prior to reclamation.

Following is an example of the kind of cost increases we can anticipate if casing is required. In 1983-84 UII conducted drilling and logging of a prospect in which we had to set casing through unconsolidated strata. These holes were 500 to 1200 feet deep. The six-inch steel casing cost \$5/ft. and the eight-inch steel casing cost \$7.50/ft. an additional amount of \$150/hour was charged by the driller for setting the casing. This compares with normal drilling costs of \$4 to \$10/ft. for 4-3/4 inch and 5-1/2 inch rotary holes and no casing. We conclude that costs would more than double for most mineral and coal exploration if these rules were implemented.

8508020411 850730
 PDR PR
 19 50FR13797 PDR

Acknowledged by card.....

AUG - 1 1985

DS 10 add: Steven McGuire, 113055
 Bruce Cardillo, 39655
 1/0

Third, the proposed rules define casing as a "metal pipe or tube". This would disallow the use of PVC pipe as a casing alternative. Besides the additional cost of metal pipe, a higher energy source and wider spacing between source and detector would have to be used. This configuration and the dampening effect of the steel significantly reduces the resolution of the log. The last twenty years of technical progress in providing the coal industry with accurate, sophisticated density surveys would effectively be lost.

Currently we commonly use Cesium 137 sources of 125 millicuries and Americium 241 sources of 25 millicuries rather than the stronger sources used by oil and gas drillers. The stronger sources that would have to be used in steel cased holes would pose a greater health risk to the operators.

The proposed rules would eliminate the use of geophysical logging of lower-cost air rotary holes. Air rotary drilling followed by geophysical logging represents a fast and lower-cost method of generating needed exploration data. Since the logging tool will not fit inside rotary drill steel, there is no way to run a density log. Installation of a special casing for density logging would eliminate rotary drilling's cost and time saving advantages. Elimination of the coal industry's rotary drilling option would cost the industry millions of extra dollars per year to generate the same amount of exploration data.

The proposed rules would also eliminate the logging of uncased coal zones in gas wells. Geophysical logging of gas wells before casing is set through the coal zones represents one of the coal industry's cheapest methods of obtaining borehole exploration data. Since the gas well operator pays for the drilling costs, the coal operator pays only for geophysical logging and for downtime on the drilling rig while the log is being run. Again, logging through the drilling tools or installation of special casings for logging are impossible or impractical. Once the permanent, grouted casing is set in the gas well, the chance for obtaining a useful density log is nearly non-existent. Loss of this low-cost exploration option would again represent a severe blow to the coal industry's exploration activities.

The proposed rules appear to be an overaction by the Commission in response to an isolated case where a sealed source was ruptured. Because the proposed rules would significantly affect the cost of exploration and development drilling as previously described, we recommend that a thorough economic evaluation and risk analysis be completed prior to rule promulgation. The coal industry would be particularly hard hit since density logs are critical to accurately locating the depth and extent of coal seams.

The proposed rules were written with the oil and gas industry in mind. Unlike the coal and mineral industry, the oil and gas industry routinely cases its holes, uses higher energy sources and is commonly developing deeper, larger holes. We urge the NRC to exclude mineral and coal logging activities from the casing requirement and substitute strict procedures to be used during lost tool retrieval activities. These strict procedures would minimize the risk of a lost sealed source being ruptured in the drill hole by careless retrieval methods such as trying to loosen a stuck tool by drilling on top of it.

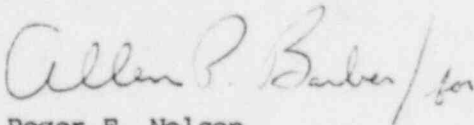
30 July 1985
Page 3

UTAH INTERNATIONAL INC.

Finally, the proposed rules achieve their stated purpose of providing uniform safety requirements in NRC and Agreement States regulations. We have noted however, that with the preponderance of independent training courses have come courses of questionable worth. We suggest that NRC conduct training courses and certify personnel much like the Mine Safety and Health Administration does for technicians who collect noise and dust data samples. This would eliminate or at least standardize the quality of these training courses.

Again, thank you for the opportunity to comment. We would be happy to provide additional information or ideas concerning appropriate source retrieval methods upon request.

Sincerely,

Handwritten signature of Allen P. Barber, with a slash and the word "for" written after it.

Roger E. Nelson
Manager, Corporate Environmental Quality

REN:prm

cc: G. E. Conrad - AMC
H. C. Golden
W. W. Grant
D. L. Hayhurst
W. E. Hynan - NCA
P. S. Mattson
R. L. Morley
A. Peart - Utah Dept. of Health
B. Poyser - PMC
M. J. Young