

DOCKET NUMBER

PROPOSED RULE

PR-19,20,21 et al.

(50 FR 13797)

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DOCKETED
USNRC

OLD BEN COAL COMPANY

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OFFICE OF SECRETARY
DOCKETING & SERVICE
BRANCH

July 8, 1985

Secretary of the Commission
U.S. Nuclear Regulatory Commission
Washington, D.C. 20555

Attn: Docketing and Service Branch

Re: Proposed NRC Regulations 10CFR, Parts 19, 20, 21, 30, 39, 40, 51, 70,
71, and 150

Gentlemen:

We have reviewed with interest the above referenced proposed regulations. These comments are submitted as both a licensee and as a well owner/operator with the understanding from Dr. Anthony Tse that the comment period was extended to July 31. This company utilizes a borehole geophysical logging unit owned by a sister subsidiary and also makes extensive use of commercial geophysical well logging services. It is this company's view that the proposed regulations will severely impact the geophysical logging industry by increased compliance costs and loss of business, and the coal industry in terms of increased exploration costs and decrease in data obtained from drill holes.

As a general comment, this company received what it considers to be inadequate notice of the proposed regulations. Direct notice as a licensee was received only two weeks before the July 8 deadline for submittal of comments. These rules should have been proposed far enough ahead of the comment deadline that mining trade publications could have brought them to the attention of the industry early enough to permit widespread specific and technical input from those who are knowledgeable in this field. Also, the Preliminary Regulatory Analysis is inadequate concerning the true costs of adoption of the proposed regulations. That analysis indicates the cost of compliance is relatively minor, and to be borne by the licensees, which we find not to be the case. Neither the proposed regulations, nor the Regulatory Analysis, considers that geophysical logging for the coal industry is greatly different from that practiced by the oil and gas industry.

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More specifically, certain sections of the proposed regulations deserve comment as follows:

39.15 Agreement with well owner or operator.

The proposed required agreement is common practice among the major logging companies and exploration companies, and its universal adoption would help safeguard the public.

39.43 Inspection, maintenance, and opening of a source or source holder.

Section D of this part sounds like a prohibition of performing even routine maintenance on sources, even changing O-rings to make them less likely to fall out of the probe. A logging company would have to ship its probes to an approved shop to conduct even simple maintenance on the sources. This is impractical and expensive for logging companies. The transportation of these probes would put the public at greater risk than the current practice of having individual logging companies perform their own routine maintenance. Further, the cost to individual logging companies of shipping probes to an approved shop for routine maintenance would be significant.

39.73-75 Documents and records required at field sites and temporary job sites.

The practicality of this rule would depend upon the definition of the terms "field sites" and "temporary job sites". This rule could be construed as to require the maintenance of detailed records in the logging unit itself, or in the house trailer used by the logger while on an extended well logging project. Either interpretation would require needless and expensive duplication of records on the part of the logging operator.

39.51 Use of a Sealed Source in a Well Without Surface Casing .

This proposed regulation is this company's main concern. The Sohio coal subsidiaries drill two to three dozen deep air-rotary or water-rotary holes per year, averaging 600-800 feet deep in depth. The coal zone only is normally cored in these holes and the geophysical logs serve as the only, but adequate, record of the uphole lithology. Occasionally the hole is not cored at all, and geophysical logs serve as the only record of coal thickness and character. This is especially true in the 150 foot or shallower holes drilled

in evaluation of surface mineable coal properties. This company drilled several hundred holes this way in the last year. Even when the coal is cored, good geophysical logs are needed to help determine core loss and to gain data not discernible to the naked eye in examining core. The drill pipe used in rotary drilling is so heavy as to virtually preclude the obtaining of meaningful geophysical logs through the pipe walls. The cost of placing special casing for logging would equal or exceed the cost of the logging itself.

Should these rules be enacted, we would need to core all holes and to change to continuous wireline core because only wireline pipe is thin enough to allow useable geophysical logs. Even these are less satisfactory than open-hole logs because of loss of resolution. The increase in cost of changing from this company's current method of rotary drilling to continuous wireline coring under this scenario would be between \$2700 and \$3500 per hole, or in the range of \$81,000-\$105,000 per year. In addition to this direct increase in drilling costs, drilling alone would take 1½-2 additional days per hole because wireline coring is so much slower. In terms of what it costs to keep a professional geologist in the field, the increase in costs for personnel would be \$14,000-\$19,000 per year for this company's deep exploration holes only. Exploration and evaluation drilling for surface mining involves many more holes, although they are shallower. We would need to core where we do not now core, with a corresponding cost increase of at least \$20,000 per year, and possibly two to three times that figure. This company estimates its exploration costs would increase approximately \$140,000 per year, or more, if these regulations were enacted.

The foregoing paragraphs presume that a coal exploration drillhole must merely be cased its entire depth because in many areas fresh water is encountered at significant depths. If the regulations are interpreted to require grouting of casing to protect aquifers, little casing could be recovered for reuse. This could easily double the cost of the drillhole. If this were the case, this company would cease geophysical logging of drillholes altogether.

The significant differences between coal exploration and exploration for oil and gas are not accounted for in the proposed regulations. An oil or gas exploration drillhole can be expected to produce gas or oil and thus pay for itself. A coal exploration drillhole provides information only, and any payoff is usually many years later. The sizes of radioactive sources used in coal exploration are much smaller than in oil and gas exploration. Typical source sizes are as follows:

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<u>Use</u>	<u>Element</u>	<u>Source Size in Curies</u>	
		<u>Coal</u>	<u>Oil & Gas</u>
Density	Cs 137	0.125	2.0
High Resolution Density	Am 241	0.025	N/A
Neutron	Am 241-Be	1.0	20

The deepest coal exploration drillholes are usually 2500 feet, and usually less than half that depth. The ambient temperature, pressure and groundwater chemistry conditions are far less severe in coal drilling than in the deeper drilling associated with oil and gas drilling, so a lost radioactive coal source would be far less soluble.

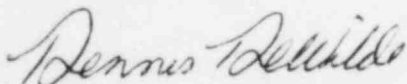
It is this company's recommendation that the NRC define a source size, and/or set of temperature/pressure/chemistry conditions within which open-hole, or non-cased hole, geophysical logging using radioactive sources is allowed. The safety record for coal radioactive logging sources is excellent, especially the small number lost down-hole, which speaks well for the current standard practices of the coal industry. The proposed regulations attempt to make geophysical logging in coal exploration risk-free, but in so doing would impose an additional financial burden on the coal industry, and reduce significantly the incomes of geophysical logging companies and rotary drilling companies with no significant improvement in public safety.

Old Ben Coal Company sees a direct and significant increase in exploration costs if the proposed regulations are enacted. This increase in costs comes at a time when the coal market is under the pressure of declining oil and gas prices, and these regulations would make it even more difficult to be competitive, both domestically and internationally.

Your interest in industry comments is appreciated and please take these comments into account in the final regulations.

Yours truly,

OLD BEN COAL COMPANY



Dennis M. DeWilde
Vice President, Engineering
and Environmental Affairs

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