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PROPOSED RULE

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S. McGuire

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MEMORANDUM FOR: *Dr. Anthony Tse*
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RES

FROM: Joseph M. Brown, Jr.

SUBJECT: COMMENTS ON PROPOSED RULE, 10 CFR, PART 39

Listed on the attached are comments I would like to make on specific sections of the proposed rule, 10 CFR 39 - "Licensing and Radiation Safety Requirements for Well Logging Operations." These are personal comments based on my experience gained in the material licensing area from about 1977 through the present, and also as a participant in the development of Part W of the "Suggested State Regulations for Control of Radiation." These comments are entirely my own and do not represent the thinking of the Material Licensing Branch, FCMS, or any other member of the branch.

Joseph M. Brown, Jr.

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Attachment: Comments on Proposed Rule

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COMMENTS ON PROPOSED RULE

1. Section 39.13: Specific licenses for Well Logging Operations:

Section 39.13(b)(2): This section places a new specific annual retraining requirement for all logging supervisors and assistants irregardless of the size and complexity of the licensee's program. I believe this annual requirement is unnecessary in most cases and particularly for small business entities (one and two truck companies) where there is little change in standardized operating procedures. In most cases, operations are routine and already controlled by the maintenance of daily source use logs, check off type instructions and the maintenance of records of personnel exposures and survey records. This specific requirement placed without weighing the complexity and needs of a particular licensee would be of marginal importance to overall safety of operations and could prove to be non cost effective in many licensees' operations. It would appear that specifying "periodic retraining" and permitting the licensee some leeway in establishing a retraining program would be more desirable. If this is deemed to be too vague, then it is suggested that retraining be required between the periods of inspection, i.e., retraining at least every 3 years; but allow the applicant first crack at specifying the type of retraining and period within a maximum 3 year period. Inspectors could verify that retraining had been performed and had been completed within the specified time at each inspection.

Section 39.13(b)(4): This section places a new specific requirement for a written test to be taken by all logging supervisors to demonstrate knowledge and understanding of commission's regulations and licensing requirements, and also requires submission of a copy this test by each applicant. Since there are numerous ways of demonstrating knowledge (training resumes, oral discussions on a one-on-one basis, etc.). Why require a written test everytime? Over the past ten years, or more, applicants have provided sufficient information on user training without the need for a written test in every case and without the specific submission of copies of such tests as part of the application. Based on past history, this added requirement seems to be of marginal importance. Permitting the applicant to demonstrate, by outline or other means, his specific means of determining the logging supervisor's knowledge would appear to be sufficient. Elimination of this specific written test requirement would lessen the rigidity of the rule and provide the applicant flexibility without compromising safety.

Section 39.13(b)(5): This section places a specific requirement on providing a copy of written test or outline of the oral test. For similar reasons as given in the section above, I believe the test requirement and the submission of a copy of the test or outline as required by this section is unnecessary. More flexibility would be obtained by allowing the applicant to demonstrate the specific "means the applicant will use" rather than including the test submission requirement. The license application guide currently under development could given examples of acceptable means of demonstrating user competency.

Section 39.13(c): This section requires the applicant to submit written operating and emergency procedures. In keeping with the instructions contained in current draft licensing guides for all types of licenses (other than radiography) developed by the Material Licensing Branch, it is suggested that the applicant be given the option of submitting either a complete outline of its operating and emergency procedures or the submission of a complete written copy. Currently, the requirement for the applicant to submit a complete copy of all operating and emergency procedures is found only in Section 34.21, 10 CFR 34, for radiography licensees. Due to the fact that in well logging the use of much smaller sources and/or quantities of tracer materials coupled with the relative short time that it is necessary to maintain these licensed materials in an unshielded configuration, the potential for safety problems is relatively low. This is especially true when contrasted to the much larger quantities of licensed materials utilized in radiography and much longer times it becomes necessary to use the materials in an unshielded configuration, and also in a multiplicity of environmental conditions. For this reason, it is suggested that the currently used outline option be maintained. The option provides more flexibility to the licensee to make minor changes in procedures without compromising compliance with the tie down condition of the license.

Section 39.13(e): This new section requires the applicant to submit a description of its overall organization structure pertaining to its well logging program. Such a submission of organizational breakdown is not required for other material license categories other than radiography and we have not needed or used this type of information in the past. Already the NRC Form 313 requires that the application be certified by an official of the organization filing the application (usually the company President or Vice President of Operations, etc.). Furthermore, in almost every case the specific names of the individuals responsible for the radiation safety program, including the radiation safety officer, must be named in the application and, in turn, are entered on the license as users. Any changes in the radiation safety officer or other named users requires an amendment to the license. Why is it now found to be necessary to have a complete organizational breakdown submitted for an applicant company if notification of internal organizational structural changes will not be required? Let me point out that we do not now require notification when a hospital administrator changes or when a particular president or vice-president for research in a licensed organization changes. From the typical application currently received the reviewer is quite capable of determining from the submittal itself that there is appropriate delegation of authority and responsibility in the management structure of well logging companies. Therefore, it is suggested that this item be deleted for this type of license since it appears to be just another piece of paper of marginal use.

2. Section 39.15: Requirements for an agreement with well owner or operator.

I am of the opinion that Section 39.15(b) should be clarified and expanded to include a section between (b)(1) and (b)(2) or (b)(2) and (b)(3) that would require or provide for continuously monitoring of the recovery efforts by the licensee in the event of a lost or stuck source downhole. Such a statement in the written agreement might be:

(b)(3) A person (the licensee) will be permitted to continuously monitor the recovery efforts to test for source damage or rupture and any subsequent hole or surface contamination.

Furthermore, I believe the agreement should also be expanded to provide for the use of radioactive tracers in addition to sealed sources. This could be accomplished by adding a separate subsection to the agreement to provide for continuous monitoring of surface tracer operations and provide for the licensee's clean up and disposal of surface contamination resulting from surface spills or the blow out of the tracers from the well itself. The licensee needs full authority to be able to exercise responsibility and control of these operations and this authority should be made clear in the written agreement.

3. Section 39.33: Radiation detection instruments.

I believe this section should be modified to require an operable beta, gamma radiation survey instrument at each field station and job site. This has been a license condition requirement for many years. For the well logging industry, the primary need for a survey instrument is for low level contamination control, i.e., (1) the checking of the well head and logging tool after source removal to determine any source damage or loss of containment of the source, (2) the monitoring for contamination during and following lost source recovery efforts and (3) the monitoring for contamination during well tracer studies. Unlike survey instrument use in radiography, low level beta and gamma contamination monitoring and control is of primary concern in well logging and the need for the increased sensitivity of a beta, gamma monitor is of primary importance.

Furthermore, as required by 39.33(a), I do not believe that it will be cost effective to require that all survey instruments read up to 100 mR/hr within the next five years. Most transistorized portable beta, gamma survey meters (such as the Eberline Model 120) purchased in the late 1970's already will read up to 50 mR/hr. What is to be gained by requiring replacement of all such meters just to read to 100 mR/hr? Unlike the case of radiography, there is seldom, if ever, a need for high range instrument use for the establishment of radiation areas in well logging operations. In addition, the life expectancy of transistorized survey instruments (like a television or radio) can be considerably greater than 5 years. The replacement of literally hundreds of these meters within 5 years would not appear to be of significant safety importance nor would it be cost effective, based on the primary uses as specified above. It is suggested that this replacement time be extended to ten or more years. Additionally, the new requirement of section 39.33(b) would appear to further offset the need for the rapid replacement of the older survey meters as required by Section 39.33(a).

4. Section 39.41: Design and performance criteria for sealed sources.

Section 39.41(c) requires the licensee to keep source certification documents for inspection by the commission for 3 years after transfer or disposal of the source or its abandonment in a well. This section should be changed to overcome an unnecessary paper hurdle for the well logging industry. First, I am not sure that currently manufactured and approved well logging sources which are registered in the NRC/Agreement State sealed source and device catalog system are always shipped to a licensee with individual source certification documents. Therefore, such documents may not be readily available or easy to obtain for every source in the licensee's possession. Secondly, if sources were purchased by licensees subsequent to the issuance of the standard USASI N5.10-1968, as revised by ANSI N542-1977, these sources would be approved for well logging use and listed in the license by manufacture and model number. Such sources

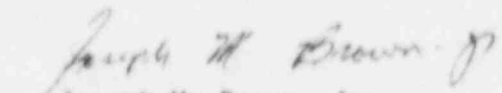
would meet the requirements of the section and at least if not individually pressure tested, they would be prototype tested by model number. These sources would additionally be listed on the NRC/Agreement State source and device computerized registry. From this registry, it should be relatively easy to obtain and maintain a separate and current list of all sources, by manufacturer and model number, which comply with the requirements of Section 39.41. With such a listing it would be unnecessary for the licensee to maintain a separate certificate for each manufacturer and model number source possessed and used under a license, since design and performance criteria for a model source listed on the license could be readily identified from the computerized list. However, certification documents would be needed for older sources, i.e., those purchased prior to 1968, which are not currently listed in the sealed source and device registry as possessing well-log classification of source design of 77C 56522. This classification is identical to the criteria of this section. A listing of these older well logging sources could also be obtained from the computerized sealed source and device registry and used to inform the industry, NRC and Agreement States of the particular model sources that would need to be retested and for which the licensee would need to maintain certificates.

From the above I think that the section should be revised to require certificates only for the older well-logging sources that are not currently approved by the NRC and Agreement States as having met the source design classification of 77C 56522.

5. Section 39.61: Training.

The minimum 40 hour formal training requirement of subsection (a)(1) may prove to be an excessive time requirement for adequately training logging supervisors to perform in a safe manner, particularly where only sealed source use is requested. Forty hours would be a more reasonable requirement if tracers were to be used by an individual in addition to sealed sources in logging tools. Based on previously submitted training resumes and course outlines, approved by license condition over the years for most licensees, a more reasonable training period might be 24 hours formal training for sealed source in logging tool use only. This could be increased to 40 hours if sealed source and radioactive tracer use is requested. The rigid training time minimum over and above what has been routinely accepted over the years does not appear to be warranted.

Finally, I believe that the cost estimates for compliance with all of the requirements of the rule as written are low. It will be interesting to compare the presented cost estimates with those received in the comments from the well logging industry. The suggestions made above for several of the sections should lower considerably the cost of implementing the rule. I think they can be accomplished without any significant compromise of the overall radiation safety programs for well loggers. These suggestions are also made in accordance with the Commission's Policy and Planning Guidance 1984 (NUREG-0885 Issue 3, Item IV(A), Planning Guidance 3, which states "Existing regulatory requirements that have a marginal importance to safety should be eliminated."


Joseph M. Brown, Jr.