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August 27, 1985

Dr. Anthony N. Tse  
Office of Nuclear Regulatory Research  
U. S. Nuclear Regulatory Commission  
Washington, D.C. 20555

Dear Dr. Tse:

Thank you for the copy of the Proposed Rules. My comments are attached.

As indicated, I have been involved in Radiological Safety as it applies to the Logging Industry since 1952. I have been RSO for Lane Wells (now called Dresser Atlas), General Nuclear (now called Gulf Nuclear) & S.I.E. I have given radiological Safety Courses since 1960.

Currently I have been presenting such courses on an individual course bases. That is, I have been presenting my credentials along with the course results to the NRC or Agreement State for each course. However, I would like to be informed as to how I could register such a course with the NRC and Agreement States.

Again, my thanks for your prompt response to my call and I will look forward to hearing from you.

Very truly yours,

*Alfred E. Caswell*  
Alfred E. Caswell

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Acknowledged by card .....

- A. Agreement with Well Owner or Operator - Written agreement between licenses and well owners or operators is the preferred route. As indicated, this practice has been used for 20 + years and is understood by those in field operations. Costs should be far less than using the General License approach.
- B. Radiation Detection Instruments - In general, I agree with what is proposed. However, I'm sure that all concerned in developing these regulations have considered the cost and lack of ruggedness (necessary for field operations) of good alpha instrumentation. Your provision for the use of consulting service may solve that problem.
- C. Leak Testing of Sealed Sources - basically no change.
- D. Physical Inventory - presently practiced by most larger logging companies and is necessary.
- E. Design and Performance Criteria for Sealed Sources - a necessity.
- F. Inspection, Maintenance, and Opening of Source or Source Holder - I thoroughly agree with the prohibition of a licensee trying to free a stuck source without due authorization. However, if it is intended that consultants or source manufacturers perform such acts, then this must be controlled very carefully. In twenty six years of working with radioactive materials in the logging industry, I have worked in R & D, a logging service company, a tracer and source manufacturing company and logging equipment manufacturing company. As a result I have seen the use of R/A materials from all sides and thoroughly believe that the problem of a stuck source in a holder or a tool is one of the most hazardous, if not the most hazardous in well logging. The combination of the potentially high exposure rates received during the attempt to free the source and the distinct possibility of rupturing or cutting into the source makes a thorough evaluation necessary. Usually, the logging company will have the cost of the source firmly in mind when considering what to do. Controls should be spelled out and this aspect should be stressed in training.
- G. Subsurface Tracer Studies - the problem here will be the proper care and storage of the protective gloves, clothing and other equipment.
- H. Radioactive Markers - no comment
- I. Uranium Sinker Bars - no comment
- J. Use of Sealed Source in a Well without Surface Casing - this is a good control.
- K. Training - the list of subjects in 39.61 is thorough, but the end result of such a course must be kept in mind. The object is to make field personnel thoroughly aware of what they are working with and the proper procedures to prevent themselves or others from being overly exposed from the radioactive materials involved - not to make them Health Physicists. I have been teaching such courses for twenty-five years and I have seen five day courses for field personnel that belonged in a University. The typical logging engineer or

operator is not necessarily a college graduate and may never have had physics and very limited math. This must be taken into consideration in course presentation. Frankly, I think it can be done in less than forty hours if it is done properly.

L. Operating and Emergency Procedures - a necessity

M. Personnel Monitoring and Radiation Surveys - basically no change

N. Contamination Control - a necessity

O,P,Q,R No comment