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34-150



(59 FR 9429)

Consulting Engineers • Testing • Inspection Services • Analytical Laboratories

March 22, 1994

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

OFFICE OF SECRETARY  
DOCKETING & SERVICE  
BRANCH

Attention: Docketing and Service Branch

Reference: Proposed Rule 10 CFR 34

Dear Sir:

Our company presently provides radiography services to a number of firms on an occasional, as-needed basis. We have been providing radiographic services since 1960 and have never had an incident. The use of our services is an important consideration for our clients, particularly on small projects where costs must be tightly controlled. We received numerous client complaints when we attempted to pass-through part of the \$20,000.00 NRC annual fees and inspection costs.

To tell these same clients we must now double our labor costs (with associated overhead and related costs) to do the same work we currently do with a one-person crew will be unacceptable for these clients. We have already cautioned some that we may have to do so and were informed that they simply could not afford the added cost. The cost to adopt the two-person rule will have an impact beyond the licensee, extending to many small businesses and users of contracted services.

We have considered the advantages the two-person rule would offer to the labor union petitioner and the large, multi-based supplier of radiographic services as a means of eliminating smaller competitors and believe they are highly influential.

Aside from that, we have viewed the two-person rule from our own perspective and the following considerations:

- 1) The need for a second person for field radiography
- 2) The need for a fully trained radiographer or radiographer's assistant to be a second person for field radiography
- 3) ALARA

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Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
March 22, 1994  
Page Two

There are valid reasons for a second person to be available in many radiographic operations. The main reasons are to assist in event of an accident or emergency situation and to provide additional surveillance or control of the restricted area if needed.

However, it does not require three months' training as a radiographer or forty hours of instruction as a radiographer's assistant to pick up a telephone to call the radiographer's office, Radiation Protection Officer, a twenty-four hour emergency number, or 911.

Radiographers always work in a controlled environment (10 CFR 20) so there should be no need for immediate action to protect non-radiographic personnel, if present, outside the restricted area, should the radiographer become incapacitated during the work. A second person could call for assistance and provide aid to an injured radiographer away from the radiation area.

Most plants and field sites have safety and health plans in effect in order to meet OSHA, State, Insurance, and Company requirements that are designed to prevent accidents and injury to all personnel, including visiting (or their own) radiographers even if the outside contractor (radiography) does not.

Many short term radiographic operations do not pose any unsafe conditions. In some instances, such as at elevated heights or in trenches, etc., rigid safety requirements are already in place (OSHA) and strictly enforced to prevent accident or minimize risks. A competent radiographer can assess a situation and he/she can best decide if an assistant is needed within the controlled area.

A second person can provide assistance in maintaining surveillance and in controlling access to a restricted area. Many job sites or plants employ security personnel that are specially trained in surveillance and control procedures. A highly visible authority such as a uniformed security officer can be more

Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
March 22, 1994  
Page Three

effective in controlling access than an outside contractor (radiographer) in many situations. Company supervisory personnel may also be more effective in surveillance of their own worksite than an unfamiliar radiographer's assistant; and are a recognized authority for site workers, for locking doors or re-assigning workers to other areas, etc.

In many instances, a necessary second person role is best served by non-radiographic personnel.

A mandatory requirement for two radiographers or radiographic personnel to be present at every radiographic field site would seem to be contrary to ALARA goals if the second person were to be within the controlled area. Why subject two people to radiation exposure when one can do the job? If the role of the second person is to provide emergency assistance, or call for assistance and provide surveillance, he/she can do so from outside the restricted area, as previously discussed.

A review of reported USNRC incidents of radiation over-exposures discloses that in many instances the radiographer's assistant was either the cause or the recipient of the over-exposure!

A mandatory requirement to have a radiographer or radiographer's assistant always present will not guarantee that incidents will be eliminated. In many instances having two people doing a one-person job leads to confusion and distraction. Having someone discuss last night's basketball game or relate personal conflicts while you're trying to do a job is a distraction that is counter-productive and sometimes dangerous. Relying on the other person to do the things you should be doing; e.g., surveillance or surveys, can result in oversights and in failure to do the task altogether.

Having a radiographer or radiographer's assistant present for the sole purpose of satisfying a mandatory requirement is a recipe for distraction, oversight and unnecessary radiation exposure for the second person. No amount of superfluous personnel can take the place of careful work by a competent radiographer working in full compliance with existing regulatory requirements.



Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
March 22, 1994  
Page Four

As a practicing radiographer and Radiation Safety Officer with over thirty years' experience, I am firmly convinced that a mandatory requirement to have a radiographer or radiographer's assistant as a second person at every radiographic unshielded room assignment is unnecessary and burdensome in many instances.

Consider a situation where the high cost of providing radiographic services (NRC annual fees, license fees, annual inspection fees, equipment costs, disposal costs, film costs, labor costs, etc.) makes many operations marginal for the supplier of service and expensive for the users of the service. Doubling the cost of that service by requiring a second radiographic person to be present may cause a severe hardship for smaller radiography and user companies.

Many users of radiographic services have only occasional needs for radiography; e.g., one or two spot shots on a vessel; one or two pipe welds or a single repair shot. Many radiography service operations can provide one person to safely perform the job at a reasonable cost. However, if they are required to double their trained and qualified labor force for the occasional small job, their labor costs for additional personnel at forty hours per week, per man is oppressive, (particularly if they do not always have forty hours per week work available for a single person crew).

The end result may well be a lower paid, less competent two-man crew doing the work formerly handled by a highly safety-motivated single radiographer.

Another result may be the creation or widespread use of "body-shop" operations where a company can "rent" a radiographer without having him under company full-time employment. Another recipe for misadventure.

Labor unions, large or single-source suppliers of radiographic services may realize some financial gain or minimum cost impact by a regulatory requirement for two-man radiography crews, but many smaller suppliers and users of radiography will suffer by such a measure.



Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
March 22, 1994  
Page Five

A requirement which will not assure greater safety, (many NRC reported incidents suggest just the opposite) and will compromise ALARA by subjecting two persons to exposure instead of one, should not be mandatory for every unshielded room operation. A requirement for a second person to be in attendance outside the restricted boundaries, to call for assistance in event of emergency and additional surveillance if needed, would seem appropriate. The second person would not have to be a radiographer or radiographer's assistant or in the employ of the radiography supplier; but could be security or supervisory personnel of the user of the service.

In summary, I would ask that you not force my company out of supplying radiographic services (and me out of a job) or into hiring less qualified (lower pay) personnel to satisfy a mandatory requirement which has not demonstrated that increased safety will result. Please consider each of these arguments and their impact on the smaller suppliers and users, of radiography.

We have a history of over thirty years of careful and competent performance of radiography without incident and should not be penalized by such a requirement. Standing regulations, (10 CFR 20-34; OSHA, etc.) are already in place. ALARA concepts are in practice. Many radiography firms already use two-person radiography crews and others could be directed to on a case by case basis if their individual performance indicated it would be beneficial.

Careful attention by compliance and safety agencies on a case by case or situation by situation basis is far more desirable than "shotgun coverage" by over-reaching mandatory regulation that can hurt smaller suppliers and users.

We endorse safety, the use of qualified, motivated competent personnel, compliance on a case by case basis, standing 10 CFR 20-34 requirements, the concepts of ALARA and the value of a safe performance history. We endorse the use of a second person to be in contact with the radiographer at field sites.



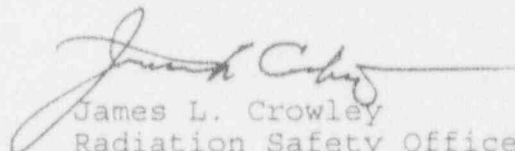
Secretary  
U.S. Nuclear Regulatory Commission  
Washington, D.C. 20555  
March 22, 1994  
Page Six

We do not endorse blind regulation. We do not endorse the requirement for a mandatory two radiographers or radiographer and radiographer's assistant on every radiographic operation outside of shielded room conditions.

Please consider each of these comments carefully. Your assistance in having these concerns properly weighed is appreciated.

Respectfully submitted,

CTL ENGINEERING, INC.

  
James L. Crowley  
Radiation Safety Officer

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