

Testing and  
Inspection Services



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May 24, 1994

Secretary  
U. S. Nuclear Regulatory Commission  
Washington, DC 20555

ATTENTION: DOCKETING AND SERVICE BRANCH

SUBJECT: COMMENT ON PROPOSED 10 CFR 34 REVISIONS

Upon review of the proposed rules concerning 10 CFR Part 34, I would like to comment on the proposed ruling detailed in paragraph 34.42 concerning the new requirements for Radiation Safety Officers, specifically, paragraph two (2), which requires 2,000 hours of documented experience in industrial radiographic operations, with 40 hours of formal classroom training with respect to the establishment and maintenance of a radiation protection program.

First, under the current requirements, licensees are only required to maintain records of radiographic activities for a period of three (3) years. If a current Radiation Safety Officer, who is or has been serving in mainly an administrative function as is usually the case for the the time he has been Radiation Safety Officer, has to go back through his entire history to document his hours he will find that the records needed to document these hours have been discarded, therefore, the time that a Radiation Safety Officer has put in as a Radiographer can no longer be accounted for. In addition, if an Radiation Safety Officer has to obtain records from previous employers, this would also pose a problem. If the Radiation Safety Officer has used the proposed two (2) year grace period to put in field time to meet the 2,000 hour requirement, this will have to be done at considerable time and expense to the licensee, as it would take almost a years worth of 40 hour weeks to document 2,000 hours, and will put a significant burden on the Radiation Safety Officer as he will have put in time in the field as a Radiographer, AND put in time to adequately maintain the Radiation Safety Program. I feel that if this turns out to be the case, it can only create an adverse effect on a radiation safety program with undue stress put on the Radiation Safety Officer, in effect, expecting the Radiation Safety Officer to perform two (2) jobs at once.

Second, concerning the 40 hour classroom training with respect to the establishment and maintenance of a radiation protection program, it is my understanding that the Amersham 40 hour course "Radiation Safety Aspects of Isotope Radiography" will not be allowed to be counted as classroom training to meet this requirement. As it stands, Amersham offers only two (2) other courses, the "Administrative Seminar," and the "Equipment Maintenance Seminar," each of which is 16 hour courses for a total of 32 hours, which would leave 8 hours of training needed with no other training courses left. If Amersham does institute another course (as they are expecting to do with a source retrieval seminar), again we are going to have to put in the time and expense to meet these requirements.

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I have noticed through the Nuclear Licensing Report Incidents that when Radiation Safety Officers fail to comply with NRC requirements that it is not that they are inadequately trained or fail to understand what's required of them, but that they deliberately, with full knowledge of what they're doing, act in violation of NRC requirements. I cannot see how implementing these proposed changes will affect in a positive way or improve a Radiation Safety Officer's performance in maintaining a radiation safety program. If these new requirements in regards to Radiation Safety Officer training are implemented in their present form, I feel that the two (2) year implementation schedule is an insufficient time frame to expect a Radiation Safety Officer to put in field time to document the necessary hours, take the required classroom instruction to meet the forty (40) hour criteria, implement the required revisions which will take considerable time and expense in itself, and perform all his normal duties in addition. I estimate a three (3) year time frame will be needed to implement these changes.

In addition, I would like to state that I find many of the proposed regulations will be useful in improving radiation safety and reducing the number of radiation incidents. (The mandatory certification of radiographer and mandatory two (2) man radiography crews being the prime examples). However, there are situations where the financial impact of proposed regulations is overlooked. For example, alarm rate meters. One of the main concerns when alarm rate meters became required was that a radiographer would rely on an alarm rate meter instead of a survey meter. You give as a reason for requiring additional protective measures for alarm rate meters that the radiographer could not hear his alarm rate meter but you do not mention whether or not he made a proper survey, which would of alerted the radiographer of the hazard regardless of the environmental condition. If it is the NRC's position that the additional measures for alarm rate meters would of prevented this incident, these measures should of been incorporated when alarm rate meters first became required. A licensee, who has already been affected financially by purchasing alarm rate meters, now will be affected financially a second time for the same reason.

The same condition exists with the proposed changes in surveys of exposure devices. The NRC decided to require a 360° survey of the projector and the entire length of the guide tube. Several licensees were fined for not performing surveys exactly as designated, although in no reported instances was the source found to be exposed. In the revised requirement, it appears that the previous required survey was found to be excessive, but again several licensees have bore the financial consequences.

While on the subject of surveys, I find most alarming the changing of calibration intervals for survey meters from three (3) months to six (6) month intervals. Survey meters are subjected to severe conditions including inclement weather, are constantly being bumped or dropped as a radiographer a lot of times has to perform his job in areas that at are very difficult to get to and work in. All these conditions lead to the chance that a survey meter could be adversely affected and by doubling the time before a survey meter is inspected, you significantly increase the chances of a radiographer being overexposed



as a result. There seems to me a very dangerous trend in the radiography industry. Where we are adding requirements in regards to rate alarms and permanent radiographic installations, adding all the bells and whistles, we are relaxing the requirements of the most important piece of equipment used in the industry. Nothing will ever take the place of a proper survey and I feel that a dangerous message is being sent to all radiographers to rely more on the bells and whistles than the survey meter. This can only have an adverse effect and will defeat the goals we are all trying to achieve.

Concerning proposed paragraph 34.23(b), the new requirement of disconnecting exposure devices completely each time the projector is moved from one location to another raises some questions and concerns. If a radiographer has to shift a projector one or two feet to better adjust the guide tube, does this new regulation mean he now has to perform a complete disconnect, move the projector, and reconnect the device? As a radiographer may have to perform this function several times during a shift (especially with large diameter pipe), to remain in compliance now would mean the connecting and reconnecting of the projector several times a day. This will put a tremendous amount of wear and tear on the equipment, which is unwarranted and undesirable from a safety point of view. Say a radiographer is on a pipeline job, in a ditch, having completed one (1) weld and has to move approximately twenty (20) feet to his next location, if he is now required to perform an entire breakdown before proceeding he will have to do so under undesirable circumstances. Disconnecting the projector in the ditch means the probability of subjecting the equipment to mud, dirt, debris, inclement weather, additional stress on the connections, etc. This will only have a negative impact on the radiographer and will greater increase the chances of overexposure due to equipment malfunction. In effect, this regulation "ties the radiographer's hands" in deciding the safest and most effective way to move from location to location.

I strongly feel that this regulation, as written, will not have the desired effect of reducing overexposures, but will only create the possibility of more overexposures due to equipment malfunction. Also, I do not see the proposed regulation of quarterly maintenance of all associated equipment to totally alleviate this problem.

In closing, I would like to say that I am open to any questions, comments, or critiques you may have. I appreciate the NRC's "ear" in allowing me to submit my views.

Respectively,

**TEI ANALYTICAL SERVICES, INC.**

A handwritten signature in cursive script that reads "Gary E. Weiss".

Gary E. Weiss  
Radiation Safety Officer  
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