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May 16, 1994

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

Attention: Docketing and Service Branch
Subject: Comment 10 CFR Part 34 proposed rulemaking

Gentlemen:

The following are my comments concerning the proposed 10 CFR changes:

Proposed 10 CFR 34.3 Definitions

Temporary jobsite is used in the definition of a permanent radiographic installation but a temporary jobsite is not defined. In some cases a "Field station" may be confused with a temporary jobsite. Radiographic equipment may be temporarily stored for several days and equipment dispatched to several locations within that temporary jobsite address. The term "field station" needs to include other conditions such as storage and dispatch for 180 days or more and the licensee establishing telephone communications, etc.

Proposed 10 CFR 34.13 Specific License for Radiography

I do not agree with the reduction of the frequency of radiographer inspections as specified in proposed 10 CFR 34.13(e) and 10 CFR 34.43(d). Most events during radiography that result in escalated exposures are a result of the radiographer or radiographer's assistants failure to perform proper surveys and conduct their activities in accordance with license and Commission requirements. An annual time frame is too long of a period to evaluate these critical radiographer performance issues. However, it is obvious that a licensee is unable to personally review every radiographic operation. Perhaps time frames of either 3 month or 6 month intervals would be more appropriate. The requirement to inspect the radiographer assistants performance should be deleted. A radiographer's assistant may not perform radiography unless under the direct supervision of a radiographer. Therefore, all inspections of a radiographer's assistant are actually inspections of the radiographer's performance concerning the supervision of the assistant.

Proposed rule 10 CFR 34.13(g) states that an applicant must designate a Radiation Safety Officer that would be responsible for *implementing* the licensees radiation safety program. This section is inconsistent with proposed 10 CFR 34.42 where it states that a Radiation Safety Officer must *ensure* that radiation safety activities are performed...". I recommend changing proposed 10 CFR 34.13(g) to state "ensure" rather than "implement" to be consistent with proposed 10 CFR 34.42 and to allow the organizational structure of larger licensees where the Radiation Safety Officer ensures compliance and safety but does not necessarily directly implement the practices.

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Proposed 10 CFR 34.20 Performance requirements for radiography equipment

Proposed Part 34.20(b)(1) requires each exposure device to have attached by the user a label bearing specified information. This section should be changed to allow attachment of a label or labels by an authorized user or supplier. The requested change is needed because the information required by Part 34.20(b)(1)(i) through (iv) is usually on one label and frequently attached by the supplier. The information required by Part 34.20(b)(1)(v) is usually on a separate label and attached by the user.

Proposed Part 34.20(b)(3) as written would prohibit any modification whether or not safety related. The regulation as currently stated in 10 CFR 34.20(b)(3) would permit cosmetic, labeling, and other modifications that would not compromise the safety features of the equipment and should be incorporated into the proposed regulation.

Part 34.20(c)(5) as stated in the proposed regulation requires (or at least implies) that each guide tube must individually be subjected to crushing and kinking tests. In my opinion the integrity of the guide tube concerning crushing and kinking resistance may be ensured by an evaluation of the design and employment of quality assurance/quality control measures without the need for testing each guide tube. This would reduce the testing burden while maintaining the desired level of safety. Wording similar to the proposed 10 CFR 34.20(c)(8) would be more appropriate.

Proposed 10 CFR 34.23 Locking and relocation of radiographic exposure devices, storage containers and source changers

Proposed 10 CFR 34.23(b) does not adequately describe the intent concerning moving the device from one location to another. The devices may need to be moved either to disconnect the controls or to prepare for another exposure in the same area (ie. same weldment, casting, etc.). Perhaps a change in the wording in part to... before being moved from one radiographic area to another and at the conclusion of the final exposure... would allow minor movement yet restrict more distant moves without disconnecting controls and insertion of safety plugs.

Proposed 10 CFR 34.25 Radiation survey instruments

I support the reduction of survey instrument calibration frequency from 3 months to 6 months. The instruments we use seldom need calibration adjustment at the current 3 month intervals.

Proposed 10 CFR 34.27 Leak testing and replacement of sealed sources

Proposed 10 CFR 34.27(f) should include a provision to exclude the testing for DU contamination if the device is in storage and not being used. This would relieve licensees of the burden of performing leak tests on exposure devices that are in storage and not in use.

The wording contained in the proposed 10 CFR 34.27 requires (or at least implies) that a licensee conduct an additional leak test annually that specifically addresses depleted uranium contamination. I believe we should integrate a depleted uranium contamination evaluation as part of our current 6 month leak test practices and therefor minimize additional test burden. Most of the leak tests performed by the user are done by wiping the port,lock end

and nearest accessible point to the source assembly (ie "S" tube). This is the same basic practice that would be employed to check for depleted uranium contamination. A change in the proposed regulation could combine the tasks. Changes such as: "The wipe sample must be taken from the nearest accessible point to the sealed source where contamination may accumulate and the exposure device "S" tube where depleted uranium contamination might accumulate. The analysis must be capable of detecting the presence of 0.005 microcurie (185 Bq) of radioactive material on the test sample and must be performed by a person specifically authorized by the Commission or an Agreement State to perform the analysis. Any test revealing the presence of 0.005 microcurie (185 Bq) or more of removable radioactive contamination shall be considered evidence that the sealed source or depleted uranium shield is leaking. Further analysis shall be performed to determine the source of the radioactive contamination.

Of course other parts of proposed 10 CFR 34.27 would need to be changed or deleted to fully accommodate the combined tasks.

Proposed 10 CFR 34.33 Permanent radiographic installations

The proposed 10 CFR 34.33 regulation would essentially require licensees to have replacement alarm systems in inventory or a redundant alarm system to allow the continuance of radiography in permanent radiographic installations in the event an alarm system fails to operate as required and needs repair. The proposed regulation should be modified to allow other methods of control while the alarm system is under repair. A maximum time frame such as 30 days could be stipulated to minimize the use of alternate measures during alarm system repair. The proposed regulation also does not appear to allow direct surveillance as permitted by 10 CFR 20.1601(b) for those areas (eg. roof areas of uncapped or minimally capped exposure cells) that cannot be adequately controlled by an alarm system of the type prescribed by proposed 10 CFR 34.33(a)(2). The proposed 10 CFR 34.33 should be changed to allow surveillance of high radiation areas existing where alarm systems are not effective or feasible for installation and control. The practice would be consistent with those practices of other licensees as permitted by regulation. There are many permanent radiographic installations in use that are either uncapped or capped with material that is not sufficient to reduce radiation levels below high radiation levels. The cost to re-engineer, modify or reconstruct these installations is substantial. It is evident that the Commission considers the controls of 10 CFR 20.1601(b) to be an adequate measure for controlling access to high radiation areas and these alternatives should be provided to industrial radiography licensees.

Proposed 10 CFR 34.41 Conducting radiographic operations.

MQS Inspection advocates the use of two person radiography crews and considers this regulatory mandate to be long overdue. MQS Inspection Inc. also believes that the positive impact on the safety of industrial radiography operations outweighs any perceived or actual economic burden.

The Commission expressed a concern in the supplementary information portion of the proposed regulation regarding the cost impact on small entities. When evaluating the cost impact on small entities the Commission needs to be aware that the additional person on the radiography crew is revenue producing. The cost of the additional person on the crew will, in most instances, be passed to the licensee's client.

Proposed 10 CFR 34.42 Radiation Safety Officer

Title 10 CFR 34 needed to include the duties and qualification of a Radiation Safety Officer. I disagree however with the specific nature of proposed 10 CFR 34.42(a)(2) concerning the hours of experience and formal classroom training of Radiation Safety Officers. Radiation Safety Officers should have formal training with respect to the establishment and maintenance of a radiation protection program and experience in industrial radiographic operations. Is there evidence that Radiation Safety Officers with less than the additional 40 hours of radiation safety program establishment and maintenance training perform poorer than those with 20 hours of the additional training? I prefer a more structured approach to this proposed regulation by first defining the duties of a Radiation Safety Officer and evaluating whether expected results are achieved. Then address training hours specifics after evaluating the improvement accomplished by defining the position of Radiation Safety Officer.

Proposed 10 CFR 34.45 Operating and emergency procedures

Proposed 10 CFR 34.45(a)(8) should be modified to clarify that operating and emergency procedures need to address instances when alarming ratemeters alarm unexpectedly. Alarming ratemeters would frequently sound at the remote controls (crank handle) when exposing sources of radiation. I am concerned with the implication of proposed 10 CFR 34.45 (a)(12). There are basic principles that may be applied to source recoveries but each recovery exhibits unique circumstances. It would be prudent to address the principles for source recovery in an operating and emergency procedure. Source recovery could be hindered, however, if the regulation is interpreted as requiring too many specifics to effectively recover sources.

Proposed 10 CFR 34.47 Personnel monitoring

Proposed 10 CFR 34.47(g)(3) should be deleted. It is not necessarily within the licensee's capability to provide an alarming ratemeter that will alert the individual regardless of the environmental conditions. Compliance is limited to the availability of alarming ratemeters that are capable of alerting the individual regardless of environmental conditions. There are several other environmental conditions both singularly and combined that may exist during radiography although high ambient noise levels was used as an example. These conditions along with other personal protective equipment and clothing will limit the alarming capabilities of the ratemeter. It is important to remember that the alarming ratemeter is a secondary warning device and that the primary instrument for radiation level evaluation is the survey meter.

Proposed 10 CFR 34.79 Records of training and certification

Proposed 10 CFR 34.79(a) should be modified to require licensee retention of licensee administered written tests not "...copies of written tests...". The licensee will not have copies of test administered by a third party through the central certification process.

Proposed 10 CFR APPENDIX A to Part 34

Proposed Appendix A to Part 34 item I.12. implies that the Commission will provide information to certifying organizations and certifying organizations will provide information to the Commission about certified individuals. If this is not the case, then the section should be modified to require the two way information exchange. This information is needed to properly enforce the certification program.

The intent of proposed APPENDIX A Part 34 item III.3 is questionable. The technical content of an acceptable examination is beyond the ninth-grade reading comprehension level and it is impossible to separate the technical portions from the remaining text. Proposed APPENDIX A item III.4. requires a scientifically analyzed question base with the intent to produce consistent results obtained through various certifying agencies. This section is vague and should be clarified especially from a logistics standpoint. Proposed APPENDIX A to Part 34 item III.6 requires a population of ten times as many questions as may be needed for any one examination. A substantially smaller population of questions in my opinion would be adequate to ensure that an examinee would not retake the same examination.

General Comments

The dual units of measurement used throughout the proposed regulation should state the current accepted units of measurement followed by the SI units in parentheses consistent with 10 CFR 20.

Hopefully the comments provided by this letter will be considered constructive. Many elements of the proposed change are positive but perhaps these comments will aid in providing a more usable regulation that will produce positive results.

Very truly yours,

MQS INSPECTION INC.



Earl L. Banfield
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ELB/sjp:94-156

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