RT Radiation Technology, Inc.
Radiological Services

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April 20, 1994

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

Attn: Docketing and Service Branch

Re: RIN 3150-AE80-1

Gentlemen:

The following comments are offered with regard to proposed regulatory amendments impacting 10 CFR Part 20.

The definition of occupational dose puts no restriction on the assignment of duties. However in the published example, i.e., the delivery man on site; visiting the facility and making deliveries are assigned duties in the course of his employment. An interpretation is then added to occupational dose by saying, "...were not assigned by the licensee or the licensee's contractor." These words do not appear in the occupational dose definition. How does one know this hypothetical delivery man is not a contractor or employed by a contractor of the licensee?

It seems to follow from the definition, that any individual who is employed and assigned duties such that there is some radiation exposure at some undefined level, receives an occupational dose. Employment does not have to be with the licensee, and assigned duties do not have to be assigned by the licensee, per the definition. If that is what is meant, it should be clarified in the definition.

One might consider phraseology taken from the Department of Labor, "If any individual receives an exposure to radiation and/or radioactive material in the normal course and scope of his duties, that is occupational dose. If any individual receives radiation exposure outside the normal course and scope of his duties, that would be public dose." Therefore, defining public dose is unnecessary. It would simply be any exposure other than occupational dose.

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"Controlled area" should not be deleted from 20.1301 because it serves as a buffer between unrestricted and restricted areas. Section 20.1301(a)(2) states that dose in any unrestricted area from external sources must not exceed 2 millirem per hour. By doing away with controlled area, you force all licensees who have devices with radiation levels in the near vicinity of the devices exceeding 2 millirem per hour to either add shield material and/or other construction material to comply; or to restrict the area and train all who enter.

This 2 millirem per hour level should not be extended on to a plant site. The NRC has no basis in risk assessmen', radiation exposure, or dose records that should require the expenditure of millions of dollars in time and materials to reduce the radiation levels around these tens of thousands of devices to meet 2 millirem per hour. Today you are still approving devices for distribution to both specific and general licensed customers with the radiation levels exceeding 2 millirem per hour. This rule in its application may require the back fitting of all these devices with shields to lower the levels. We are aware of one licensee who when forced into that situation expended well over $100,000 in a relatively short period of time, adding shielding to his 43 gauges. Another licensee had 62 devices and spent $68,000 to accomplish the 2 millirem level; not counting the cost of four new devices in much larger shielding.

Why isn't the NRC required, when evaluating its own regulatory impact to defend this sort of action? What is the dose reduction we are trying to achieve here? At the very least, all devices authorized for distribution prior to the effective date of the new Part 20 regulations should be grandfathered. "Controlled areas" allow a little bit of leeway in that individuals could have radiation areas around devices and if inaccessible, or the area was not frequented by individuals for a number of reasons, one could comfortably and safely use devices with radiation levels in excess of 2 millirem per hour. But when "controlled area" is taken out and only two definitions are allowed; then one must comply with the 2 millirem per hour level if the area is to be unrestricted.

Section 20.1301(a)(ii) is punitive and should be deleted. Paragraph 1 already addresses dose limits to the public. Paragraph 2 adds nothing to that criteria. It does not even address the release of radioactive material. It specifically addresses external sources; and accomplishes nothing by way of dose reduction except to penalize individuals with devices or sources of radiation that exceed that number, with no flexibility.

Paragraph 20.1302(b)(2)(ii) should also be deleted because it is simply unduly restrictive. It accomplishes nothing and will require the expenditure of large sums of money, with no demonstrated reduction in dose. For example, there are literally hundreds of thousands of devices containing licensed material distributed as specifically and generally licensed units in the industrial dome ' ' community. These devices must be approved prior to distribution and many are delivered to individuals who for the most part are not even aware of 10 CFR Part 20. Many of these devices have been deemed safe enough when used in their intended manner, that no training is required for the licensee other than precautions listed on device tags and copies of the GL section of the regulations. Then

suddenly, and with no defense provided, these licensees instantaneously are in non-compliance; not due to any fault of their own, but just because of a change in the regulations.

What recourse do they have? Many of the licensees who possess these devices are not even required to have a survey meter on site, but now they are supposed to restrict an area, and train their people on radiation hazards. What does one suppose the reaction of an individual will be who has worked around these devices for 15 or 20 years; when told this is now a restricted area to prevent "undue risks" from radiation exposure. Does that mean he hasn't been safe all these years? Has there been some current discovery associated with low dose, long term effects? Can the NRC quantify risk factors at these levels?

Tens of thousands of dollars will be spent for compliance when there is little possibility of identifiable dose reduction. This is certainly in conflict with ALARA, as licensees will be forced to expend large amounts of money with no relative reduction in dose or risk to public health and safety; to meet 2 millirem per hour. Why consider ALARA policies if the maximum exposure rate available in the area is 2 millirem per hour in the work place?.

Recommendations for Improvement:

1. Leave controlled areas in.
2. Allow unrestricted areas to be those over which the licensee has absolutely no control.
3. In the definition for restricted area, delete everything between "...undue risk..." and where "restricted area..." begins again. By doing so, you allow licensees to have restricted areas because they were not specifically restricted due to the use of radiation; control exposure to individuals; and have some flexibility to make decisions.

Paragraph 20.1801 requires that all licensed material be in a restricted area. If that is what is intended, why not just say so? Why present it in such a way as to require constant surveillance which would be economically impossible, with the only alternative being to provide restriction of the area? When I first read this paragraph, I thought it contained a typographical error and you really meant "or" instead of "and". However it has been repeated several times, and I am now beginning to worry that the intent is real.

The large majority of licensed material in use is in unrestricted areas and is not under constant surveillance. It is not in storage, it is in use. Even generally licensed exit markers would require constant surveillance or restriction of entire areas. What is the purpose of such an extreme? If people did restrict all these areas, they would have to train all the people who work in the areas. Was that what was intended? Has radiophobia reached the point where all licensed material must be in a restricted area? The economic impact of that alone is very large; with no corresponding reduction in dose to individuals.

Thank you for considering these comments, late as they are. I really appreciate your willingness to at least discuss them.

Sincerely,

RADIATION TECHNOLOGY, INC.

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