Preparing the Health Physicist to Testify at Deposition

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Abstract

In many lawsuits brought by nuclear workers against utilities alleging negligent overexposures, a health physicist is required to testify at a deposition or trial regarding his knowledge of the incident, the worker, health effects of radiation, and plant radiation protection procedures. Questions regarding ALARA, the standard of care and the risks posed by radiation may be asked. The health physicist's testimony is critically important to the case, and can be decisive in establishing legal precedent. Being familiar with the issues that likely will be addressed and understanding deposition procedures will enable the health physicist to effectively and honestly testify in such proceedings and will help to avoid typical pitfalls and traps that may await the naive, uneducated witness.

Key Words

ALARA
deposition
fact/expert witness
federal permissible dose limits
health physicist
radiation risk
standard of care
testimony

In radiation litigation, federal courts throughout the country are making law as they determine the legal principles they apply in deciding these cases.[1,2] When a nuclear worker sues a licensee for physical or emotional injuries arising from radiation exposure, health physicists are likely to be called to testify. The testimony may be given at trial or long before the trial at deposition. In a deposition the witness is questioned under oath and his testimony is recorded by a court reporter. A deposition allows the parties to discover the information and witnesses which the other side will use at trial. Such testimony given by health physicists at that early stage of the case can be decisive since each radiation case may set legal precedent. What subject areas will a health physicists depostion likely cover? How can his testimony potentially shape the law for future cases? What issues does the health physicist need to be particularly careful about if he or she is required to give testimony? What pitfalls and traps does he or she need to avoid? This article specifically addresses some of the major issues currently being litigated and provides guidelines for the health physicist as he prepares to testify at deposition.

In any lawsuit there are usually two types of witnesses. The "fact witness" is one who has personal knowledge of an event and is called to testify concerning what he has seen, heard, or knows about the event. His perception is what is most important. The "expert witness" is one who by reason of specialized training, education, knowledge or experience can aid the jury or judge in understanding issues that the average laymen would not understand. His expertise is what is most important. In
radiation litigation, the health physicist is often a hybrid of the two: a combined fact-expert witness. He may have personal knowledge of an incident or of the licensee's radiation protection program and therefore be called to testify as a fact witness. At the same time, because the health physicist has specialized knowledge and training, he may be asked questions of a technical nature and his answers may come within the realm of "expert" testimony. An H.P. Technician is most likely to fall near the fact witness end of the spectrum while the Certified Health Physicist is most likely to fall at the expert witness end. As shown below, in either case, the testimony provided by the health physics witness is critically important to the case, and in fact, the case can rise or fall on his or her testimony.

One of the most significant issues likely to arise at deposition is the standard of care required of a licensee with respect to the radiation dose a worker may have received. The "standard of care" is a legal term that defines the duty that the courts place on a defendant to act in such a way as to not cause unreasonable risk of harm to others. For example, if a driver is reading a book while driving and thereby causes an accident, the first question to determine is whether a driver has a duty to not read while driving. If so, the act of reading the book while driving is a breach of the standard of care required under the circumstances. In the context of the radiation case, a crucial issue is what radiation dose will a court allow a licensee to give a worker.

To answer this question one should turn to the federal regulations that govern occupational radiation exposures. Since these regulations are based upon a conservative scientific estimation of risks of exposure, the regulations provide licensees with the standard of conduct required. A number of federal courts have recently held that the federal permissible dose limits set forth at 10 CFR §§ 20.101 and 103 constitute the standard of care. On the other hand, many plaintiffs who have sued licensees have argued that the real standard of care should be ALARA and that whenever ALARA is violated the licensee should be deemed to have breached its duty to a worker.

However, ALARA is not a tort standard of care. Rather, it is a professional philosophy of excellence. This means that just like good students strive to get an "A" on a test, all licensees strive to implement a successful ALARA program in order to reduce individual and collective doses. If a student receives a B, C, or even a D, that does not mean he has failed, but that he has not achieved the goal of desiring excellence. Similarly, when a worker receives 50 millirem on a job, but could have received 40 millirem, this does not mean the licensee is negligent, but it may mean that excellence was not achieved if better planning would have decreased his dose. If ALARA were the standard of care, every exposure, no matter how small, could potentially make the health physicist and licensee liable for negligence since every exposure could be analyzed with the benefit of hindsight and in most instances it would be "possible" to have reduced the exposure. This would undermine the very stability that the regulations were designed to provide because licensees and health physicists would be held liable for allowing a dose that the regulations specifically labeled as permissible.

Finally, it makes no sense to attach liability to exposures at levels below the federal dose limits since there is no scientific evidence that these levels produce excess cancers in the exposed workforce. To make an ALARA violation the equivalent of breaching a legal standard of care would be like imposing tickets on drivers for not driving as slow as reasonably achievable. Licensees would be held liable for allowing doses well below the normal variation in natural background radiation in different parts of this country. ALARA as a tort standard of care is unworkable, unfair and is not in society's best interest.

The health physicist's deposition is crucial because he is likely to be asked questions about ALARA in the context of the legal standard of care without realizing this crucial
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difference. If answered carelessly or inaccurately, the plaintiff's attorney can cite to the defendant licensee's own "expert" witness as testifying that the standard of care is ALARA. If the judge agrees and "adopts" the language used by the health physicist, ALARA could become the applicable standard in that case and in that jurisdiction. Other courts may then adopt that court's ruling and also hold that ALARA is the standard of care.

The health physicist should anticipate questions about ALARA. However, the lawyer is not likely to ask the straightforward question but will try to ask questions in such a manner that assumes the health physicist agrees with the premise that ALARA is a standard of care:

1. Is it important to make sure that ALARA is practiced?

Likely response: Yes.

Better response: It is important to maintain professional goals of excellence.

2. Would you agree that everyone in the plant should conform to the ALARA standard?

Likely response: Yes.

Better response: It is important that everyone should strive to maintain professional goals of excellence.

3. As a standard of care, ALARA is designed to protect workers, isn't it?

Likely response: Yes.

Better response: ALARA is not a standard of care as your question assumes; it is a professional philosophy of excellence.

4. If a worker gets an unnecessary exposure, that is a violation of ALARA?

Likely response: Yes.

Better response: What do you mean by unnecessary exposure? It depends upon the context and circumstances of the exposure. All exposures are in a sense unnecessary to that worker because he could simply elect to not be a nuclear worker. Once he elects to be a nuclear worker, he consents to receive an exposure within the federal numerical limits, so that exposure cannot be then called unnecessary. It is a necessary part of the job he has chosen to pursue.

5. If a worker gets an unnecessary exposure that could have been prevented, it is a violation of ALARA, isn't it?

Likely response: Yes.

Better response: Not necessarily. It could have been perfectly permissible to intend to give him the dose which he received. One really has to look at the exact facts and numbers involved rather than speak in broad and vague terms such as unnecessary or necessary.

The health physicist could unwittingly fall into a trap unless he listens carefully and answers thoughtfully. He should respond carefully that ALARA is not a standard, but is a professional goal, a philosophy of excellence. Note how a good health physicist being deposed in a real case carefully avoided conceding to the false assumptions hidden in the lawyer's question:

Q. Was it your goal when you held that position in September and October of 1983 to see that persons working in and about that plant were not exposed to excess or unnecessary radiation?

A. It was my goal to operate the radiation protection program in
full compliance with the code of federal regulations.

Q. Well, that would include then not having people working on or about that plant to be exposed to unnecessary or excess radiation, wouldn’t it?

A. The objective of a radiation protection program is to comply with the regulations, assure that people are within the regulatory limits, and then using sound engineering judgment to reduce exposure to the individual and to the collective work force as much as practical.

Q. So there is not unnecessary or excessive radiation, is that correct?

A. Could you rephrase the question because I - -

Q. You don’t understand unnecessary or excessive radiation?

A. I want to understand what you mean by unnecessary or excessive. The objective is to minimize the exposure of individuals in the work force to radiation exposure. If it’s possible to eliminate or it’s practical to eliminate the radiation exposure commensurate with the work that needs to be done as part of the operation of that station then that’s unnecessary exposure and yes, under those circumstances unnecessary exposure or excessive exposure is to be avoided.\[4\]

A second important issue that may be raised at deposition is the concept of hypothetical risks posed by radiation. While radiation can pose significant health risks at high doses, there is no evidence of significant risks at the doses routinely experienced by nuclear workers. The radiation safety standards are premised upon the linear threshold hypothesis which simply assumes that the risk per rad posed by high doses is the same as the risk per rad posed by low doses. That is, the risks are assumed to exist for the sake of providing conservative radiation protection standards to workers. However, there is a difference between assuming a hypothetical risk when setting radiation protection standards, and using those same assumptions to prove that a low dose caused a specific disease in a lawsuit. The assumptions governing radiation protection standards were never intended to be used as scientific proof that a particular low-dose exposure caused a particular injury, especially when the dose received is well below the federal permissible dose limits. Indeed, as one federal court stated, A hypothesis is synonymous with a theory. Consequently, any hypothesis or theory is not fact until it has been scientifically proven. Anyone who has been trained in the scientific method realizes that a hypothesis is a scientist’s educated speculation.\[9\]

Speculation is inadmissible as evidence. Unfortunately, in radiation cases, the linear hypothesis may be carelessly brushed aside and assumed as fact. Some attorneys attempt to have health physicists make erroneous concessions at depositions based on an incorrect understanding or a deceptive use of the linear hypothesis.

Because the health physicist is likely to be questioned about the “dangers” of radiation he should be especially alert for them. Questions are often posed in the abstract so that no context is provided in which to accurately answer. Moreover, questions may contain multiple assumptions that pose a significant
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Ten Suggestions (Commandments) for the Health Physicist Testifying at a Deposition

1. Tell the truth—the deponent is under a moral and legal obligation to tell the truth.
2. Telling the truth includes stating that you do not know the answer or do not remember a particular fact if you do not.
3. Listen carefully to the entire question—it is important not to anticipate the meaning of a question before the question is finished.
4. Make sure you understand the question. Ask for clarification if you do not.
5. Do not volunteer information. Always answer the question and nothing more.
6. Watch for questions that call for speculation. Courts are interested in the truth of a matter, not speculation about what could have happened or might have been.
7. Do not let the lawyer put words in your mouth. You are not required to use specific terminology that he uses which may be inaccurate or unscientific. If the deposing attorney insists on using inaccurate terms tell him that it is inaccurate and tell him that you cannot answer the question unless it is rephrased.
8. Take time to examine every document that is shown to you.
9. Stick to your guns. If your answer is correct but the deposing attorney does not like it, do not change your answer to please him.
10. If you misspeak or misstate a fact, candidly say so and correct your mistake.

The deposition is an important part of any radiation lawsuit and the health physicist's deposition can be instrumental in shaping the law of radiation litigation. The issues of ALARA and risks of radiation are two significant topics that the health physicist is likely to be questioned about. Hopefully, the discussion in this article will be of some help to the health physicist as he or she addresses these issues at deposition. If you have any questions or comments please contact David Wiedis at 215/436-1888.
References


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