Editor:

Sig Hecker is the director of the most famous laboratory in the world, certainly the laboratory that has had the largest effect on humanity's perception of science since the beginning of recorded history. This is The Laboratory that has shown people that they must take the effects of science seriously. It is also one of the laboratories that could teach the world just what science is and what they can expect from it. I have reason to believe that Sig Hecker is an exceedingly poor choice to represent science.

The public largely does not understand exactly what science is, and there appears to be a strong desire not to be compelled to find out either in school or by personal study. A significant fraction of the public has a deep hate for what they think science is. Another fraction feels that its beliefs are threatened. Both groups have launched assaults on science, and the people who love science cannot believe that it is happening. It is! We have seen a very practical result in the State Board of Education that will have long-term effects.

Science is not "things." It is a way of thinking. Classical Scientific Method is simply a method for objectively applying logic to the solution of problems. 1) The problem must be stated in clear terms, and obscure words must be defined clearly. The goal sought must also be stated clearly. 2) Everything known about the problem must be studied, and all references must be acknowledged. There must be no "hidden facts," and it is not clever to "blind side" the opposition. Carefully planned observations should be made. Different methods of observation should be made when possible, and results must be checked for internal consistency and agreement with reported results. All observations must be taken seriously, until some justifiable and clearly stated reason can be found to eliminate any. 3) A "brainstorming" session, preferably with other workers familiar with the problem, should try to develop as many potential explanations (hypotheses) as possible (Method of Multiple
Working Hypotheses), All hypotheses must be clearly stated. And 4), all of the hypotheses must be tested equally against the same, complete list of observations and facts. Testing may often involve making predictions on the basis of the hypotheses and testing the predictions by experiment. The Principle of Parsimony (Occam's Razor) states that the hypothesis that includes the largest number of facts and observations will be closest to the truth. Hypotheses that do not accept many facts without "special pleading" should be discarded.

We are now living in a time when the special pleadings have assumed more importance than the facts. An approach that does not include the components of Scientific Method is not "science."

A well-tested hypothesis, for which no exceptions have been found, is called a "theory." The word "theory" in science does not connote "speculation." Creationists misuse the term to confuse the public.

I asked Sig Hecker for help in the defense of science. He has, after all, espoused excellence in science" as his fundamental desire for the laboratory. With regard to creationism, his response was the following: "The lab has no official position on creationism. The media have tried, several times to get me to take a stance, and I have refused."

I suppose that a large government-financed scientific organization must be politically correct. It might not be good for the careers of scientific managers to propose an official position on something like science. An individual scientist, however, might be expected to make continual application of classical Scientific Method. He would be expected to keep "truth" as his primary goal. He would be expected to defend his methods under peer review. I believe that Sig's refusal to make a personal statement on creationism is his scientific position.

If the laboratory is managed by creationists who still profess to be scientists, they should be willing to present all of their facts for public scrutiny. If they are not willing to do this, I believe that higher authorities should return the laboratory to scientific management as quickly as legally possible. Persons who value science should insist on it.

R. N. Rogers