



**SOCIETY OF PROFESSIONALS, SCIENTISTS, AND ENGINEERS**

**Affiliated with**

**University Professional and Technical Employees (UPTe),  
Communications Workers Of America Local 9119, AFL-CIO**

March 1, 2005

Department of Energy  
Office of Counterintelligence (CN-1)  
Docket No. CN-03-RM-01  
1000 Independence Avenue SW  
Washington, D.C. 20585

RE: Written Comments to DOE Proposed Revisions to Polygraph Plan

The Society of Professionals, Scientists, and Engineers (SPSE) at the Lawrence Livermore National Laboratory submits the following comments on the U.S. Department of Energy's (DOE's) proposed "revised polygraph plan."

**Polygraph Use in Employee Screening & Security Incident Investigations**

-- A technology that has remained unreliable, and supported weakly with tainted research not adhering to objectivity and other sound principles of science.

And sadly it has been in use ... for too long ...

SPSE calls upon DOE to institute an immediate moratorium on all use of polygraph testing.

The two principal arguments that DOE has advanced for retaining polygraph testing have been soundly rebutted by the National Academy of Sciences (1), as follows.

(A) DOE wants polygraph testing kept for pre-employment screening and scheduled periodic re-screening tests, allegedly for its predictive and deterrent effects, citing in-house anecdotal accounts, despite a strong recommendation from the NAS against polygraph use in this context.

One salient and strong conclusion in the NAS report, which Deputy Secretary McSlarrow himself conceded as "a compelling concern" (2), is:

"Polygraph testing yields an unacceptable choice .... Its accuracy in distinguishing actual or potential security violators from innocent test takers is insufficient to justify reliance on its use in employee security screening in federal agencies."

Employees who would remain in the "polygraph taking" pool, under the revised plan (3), even though scaled down to one-quarter its previous size, have a right to know what the ratio is of the rate of "false positives" to the rate "true positives."

The NAS review's answer, which Mr. McSlarrow gleaned from the report and mentioned in his testimony, is: "Unfortunately, we do not really know what that ratio actually is."

Mr. McSlarrow is suggesting that DOE should require employees handling classified materials to submit to polygraph testing, because DOE and DOD in-house experiences have "proven" that it has incidental benefits (predictive and deterrence values), even though NAS has concluded its intended effect (lie detection) is not significant enough to warrant the cost in investigative resources and the loss of quality "test willing" employees yet to be recruited. The NAS report made clear that the data for review received from government agencies using polygraph testing were not in a scientifically acceptable form that would allow its review board to assess the claimed deterrence benefit.

(B) DOE officials want polygraph testing kept for investigative (incident-prompted) use, because many laboratory-controlled studies using mock crimes report a success rate above chance level, though it is far from perfect. DOE's decision is made without addressing a serious issue raised in the NAS Report: In a realistic case of investigation, one should be concerned whether polygraph testing would add anything to what is learned with traditional investigative means, before the polygraph test is given.

The NAS review board explicitly warns that in realistic investigations traditional investigative methods have often moved the investigation sufficiently close to a resolution that one may ask whether polygraph testing is necessary at all, or has added anything to the successful outcome of an investigation.

In addition, one may rightfully ask: if the traditional methods have not led to a group of prospective examinees that includes the perpetrator, might not polygraph use lead to dwelling on false positives that would further delay, or even deny us, an investigative success? If an investigative team has not been successful with their traditional methods prior to polygraph use, resorting to it will only get them from one group of test takers to another, making the situation similar to the practice of random testing, and hence risking a mounting number of false positives. The problem then would become not unlike the screening use of polygraph testing discussed above, to which the NAS board seriously objected.

Hence, for lack of salient comparative studies between polygraph use versus traditional investigative methods only, the NAS board declined to address whether and by how much polygraph use has added, or can add, to the success of traditional methods alone.

In conclusion, we strongly urge DOE to institute immediately a moratorium on all polygraph testing. The moratorium should remain in effect until polygraph proponents can gather up data that can convince the NAS of its validity for its intended purpose and the soundness of evidence for its incidental utility values, in the manner suggested in the Report.

Certainly, DOE cannot expect its scientists to do good science while at the same time trusting their careers to a technique based on unsound science.

Sincerely,

Jeff Colvin  
SPSE Executive Board

John Yio  
SPSE Membership

References:

- (1) The National Academy of Science (NAS) Report, The Polygraph and Lie Detection, 2003. (Based on a review commissioned by the US Congress, to aid DOE's decision making.)
- (2) DOE Deputy Secretary Kyle McSlarrow's testimony before the Senate Committee on Energy and Natural Resources, September 4, 2003.
- (3) Revised "Counterintelligence Evaluation Regulations", January 7, 2005. Federal Register: Volume 70, Number 5.