U.S. DEPARTMENT OF ENERGY

POLYGRAPH EXAMINATION REGULATION

Notice of Proposed Rulemaking

Docket Number CN-RM-99-POLY

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In Re the Matter of the:

NOTICE OF PROPOSED RULEMAKING
AND PUBLIC HEARING

LAWRENCE LIVERMORE
NATIONAL LABORATORY

/

MORNING SESSION
September 14, 1999
9:00 a.m. to 1:00 p.m.

Taken by Leticia A. Ralls,
a Certified Shorthand Reporter
in and for the State of California
CSR No. 10070

P A N E L M E M B E R S

GENERAL GENE HABIGER, Presiding Official for the Hearing, Director, Office of Security and Emergency Operations, SO-1.

DOUGLAS HINCKLEY, Program Director, Counterintelligence Evaluation Board, Office of Counterintelligence, CN-1.

LISE HOWE, Attorney at Law, Office of General Counsel, GC-73.

WILLIAM HENSLEY, Acting Director, Office of Security Support, Office of Defense Programs, DP-45.

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I N D E X O F

S C H E D U L E D S P E A K E R S

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PROCEEDINGS

September 14, 1999 - 9:00 a.m.

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GENERAL HABIGER

GENERAL HABIGER: Well, good morning, ladies and gentlemen, and welcome. I'm General Gene Habiger, United States Air Force retired, Director of the Office of Safety Security and Emergency Operations. On behalf of the Department of Energy, and particularly Secretary Richardson, I'd like to thank you for taking the time to participate in this public hearing concerning the proposed Polygraph Examination Program.

Secretary Richardson has personally asked me to be here today to listen carefully to your comments and concerns and to report back to him. Let me assure you, we take this issue and your concerns very seriously.

The purpose of this hearing is for DOE to listen -- and let me underscore that -- to listen to your comments on the Department's Notice of Proposed Rulemaking. This is the time for us to listen and to understand your concerns. It is not

a forum to debate the issues. We are here with our ears tuned to what you have to say. Your comments are not only appreciated, they are essential to this rulemaking process.

The Department of Energy proposes regulations for the use of polygraph examinations for certain DOE and contractor employees, applicants for employment, and other individuals assigned or detailed to Federal positions at DOE.

The proposed regulations describe the categories of individuals who would be eligible for polygraph testing and controls for the use of such testing as well as prevention of unwarranted intrusion into the privacy of individuals. These regulations are being proposed to comply with various executive orders which require the Department to protect classified information.

These regulations for the use of polygraph examinations for certain DOE and contractor employees are intended to protect highly-sensitive and classified information and materials to which such employees have access.

This rulemaking also proposes conforming changes to regulations governing the Department's Personal Security Assurance Program, otherwise

known as PSAP, and the Personal Assurance Program, known as PAP.

If you have not already read the Federal Register notice from August 18th, 1999, I urge you to do so. Copies are available at the registration desk.

The comments received here today and those submitted during the written comment period, which ends October 4th, will assist the Department in the rulemaking process. All written comments must be received by this date to ensure consideration by DOE.

The address for sending in comments is: Douglas Hinckley, United States Department of Energy, Office of Counterintelligence, CN-1, Docket Number CN-RM-99-POLY, 1000 Independence Avenue, SW, Washington, DC 20585.

In approximately 14 days, a transcript of this hearing will be available for inspection and copying at the Department of Energy's Freedom of Information Reading Room in Washington, DC. The address is specified in the Federal Register notice and is also available at the registration desk. The transcript will also be placed in DOE's Internet web site at the following address:

home.doe.gov/news/fedreg.htm.

In addition, anyone wishing to purchase a copy of the transcript may make their own arrangements with the transcribing reporter.

This is not an evidentiary or judicial type of hearing. It will be conducted in accordance with Section 553 of the Administrative Procedure Act, 5 U.S. Code, Section 553 and Section 501 of the DOE Organization Act, 42 U.S., Section 7191.

In order to ensure that we get as much pertinent information and as many views as possible and to enable everyone to express their views, we will use the following procedures:

* speakers will be called to testify in the order indicated in the agenda;
* speakers will have an allotted five minutes for their verbal statements;
* anyone may make an unscheduled statement after all the scheduled speakers have delivered their statements. To do so, please submit your name to the registration desk before the conclusion of the last scheduled speaker;
* questions for the speakers will be asked only by members of the DOE panel conducting

the hearing.

As I said, the purpose of this hearing is to receive your comments and concerns on DOE's Notice of Proposed Rulemaking. I urge all speakers to provide us with your comments, opinions, and pertinent information regarding the proposed rule.

Please remember that the close of the comment period is October 4th, 1999. All written comments received will be available for public inspection at the DOE Freedom of Information Reading Room in Washington DC, and the phone number there is (202) 586-3142.

If you submit written comments, include ten copies of your comments. If you have any questions concerning the submission of written comments, please see Andi Kasarsky at the registration desk right outside in the foyer. She can also be reached at (202) 586-3012.

Any person submitting information which he or she believes to be confidential or exempt from public disclosure, should submit to the Washington, DC, address a total of four copies: one complete copy with the confidential material included, and three copies without the confidential information.

In accordance with the procedures

established in 10 CFR 1004.11, the Department of Energy shall make its own determination as to whether or not the information shall be exempt from public disclosure.

We appreciate the time and effort you have taken in preparing your statements and are pleased to receive your comments and opinions.

I would like now to introduce the board members of this panel. Joining me here today is Doug Hinckley, Program Manager, Polygraph Evaluation Board, Office of Counterintelligence. Doug?

Lise Howe, an attorney with DOE's Office of General Counsel. Lise?

And Bill Hensley, Director, Office of Security Support with DOE's Office of Defense Programs.

Before we begin to hear your comments, we thought it would be extremely valuable to provide you with a short briefing on polygraphs. We are well aware there is a lot of confusion and many, many misconceptions about this issue.

Last week we held in-depth briefings at each of the labs. This morning's briefing provides some of that material.

First I'd like to call Dr. Barland of the Department of Defense Polygraph Institute, and Dave Renzelman, Polygraph Program Manager for the Office of Counterintelligence, Pacific Northwest National Laboratory, to provide that briefing. Gordon.

DR. GORDON BARLAND

DR. BARLAND: Thank you, General Habiger.

I'll be very brief with my comments. I'm from the Department of Defense Polygraph Institute which is responsible for training all of the Federally-trained polygraph examiners.

The DOD Polygraph Institute provides approximately 15 advanced training courses in addition to the primary training course. And Federal standards require that each Federal polygraph examiner obtain about 80 hours of continuing education within every two-year period.

Each agency that is using the polygraph within the Federal government has a quality control office; thus, every single polygraph examination that is conducted within the Federal government is independently reviewed by at least one other polygraph examiner.

The DOD Polygraph Institute is responsible

for inspecting the Federal quality control offices to make sure that they're adhering to both their own guidelines and to the Federal guidelines.

We recently published Federal standards for how polygraph examinations are to be conducted within the Federal government, and the American Society for Test Materials is in the process of developing national standards for the conduct of polygraph examinations that would be applying both to Federal and to non-Federal polygraph examinations.

All entering students at the DOD Polygraph Institute are required to have a baccalaureate degree. The training at the Institute is conducted at a graduate level. We currently have an application pending with the Department of Education for authority to grant a Master's degree in forensic psychophysiology; that is, the polygraph discipline is emerging now as a separate scientific and forensic discipline.

The curriculum at the Institute is based upon research, accepted professional practices, and the codified standards. When we modify the curriculum, it is based very largely on additional research findings.

Now, the big question is how accurate the polygraph is. There are two types of accuracy that we need to be concerned about: The accuracy at detecting the lies of a person, and also the accuracy at clearing the person who is not lying to the relevant questions. And these would be called the "true positives" and "true negatives" respectively.

And this implies that there are two types of errors that can be made: You could incorrectly diagnose a truthful person as being deceptive, and that would be a false positive. On the other hand, you could also clear a person who is concealing significant information, and that would be a false negative.

Even though the polygraph has been subjected to decades of scientific research, the precise accuracy is still controversial, and I think it will remain controversial for the foreseeable future. It may be one of these insoluble type of questions.

Unfortunately, there is nothing known to be more accurate than the polygraph for the purpose of determining whether the person is telling the truth or not against which the polygraph can be measured.

It's kind of like asking how accurate the American judicial system is. There is simply nothing known to be better for our purposes than that itself.

Every methodological approach that has been applied to try to determine to affect the accuracy of a polygraph has its inherent strengths and weaknesses. The two major approaches are to use mock crime studies in a laboratory environment, and the other approach is to conduct field studies.

In the laboratory approach, the big advantage of it is that we know absolutely, positively, independently of the polygraph, whether each person has told the truth or has not told the truth to the relevant questions on the polygraph test. And that's a very big advantage.

On the other hand, a significant disadvantage is that the level of affect or the level of emotional involvement is not the same in a mock crime where people are just playing a role as it is in a real-life situation where there are real-life consequences hanging on the outcome of the polygraph.

Field studies, on the other hand, have the great strength that they are imminently generalizeable to a field precisely because they

are a field polygraph examination. The psychodynamics are the same; the examiners are the same; the issues are the same. They are field examinations.

But there's a very significant weakness to that line of approach, and that is: Independently of the polygraph, we don't really know whether the person was lying or telling the truth to the relevant questions in the vast majority of the cases. We know about it with only a high degree of confidence in a very small subset of cases.

So this is why the polygraph's accuracy is rather controversial.

In terms of the type of test that the DOE is considering employing in their screening program, there have been three significant mock screening studies examining the accuracy of this type of examination.

There were a total of 208 subjects in these three studies. And excluding the six percent of the cases where the examiner could not make a definite decision one way or the other in the test results on whether the subjects were telling the truth or not, setting those aside and looking at the accuracy of the actual decisions that the

examiner made, we see that the decisions were correct in 93 percent of the cases where the people were mock guilty and 94 percent of the cases in the mock innocent subjects. That compares very favorably with most psychological tests.

In terms of the empirical data, there has been one field study that is, in a sense, still in progress. Data collection has been completed, but the data analysis is still going on, and the report has not yet been published. This was on a contract basis. The polygraph examiners involved in the study were not Federal polygraph examiners.

There was an 11 percent inconclusive rate, and the criterion deceptive subjects -- that is, when we tried to establish the accuracy of the polygraph independently of the polygraph itself -- those who were being deceptive, according to our criterion, the accuracy rate with them on the polygraph was 72 percent, whereas it was 87 percent for the criterion truthful subjects.

Now, as I mentioned, one of the weaknesses of doing field studies is the inadequacy or the inability to determine with absolute precision who really was, in fact, telling the truth on the polygraph test or not.

But there is a third source of data which also is field data which I think is particularly important for those of you who may be involved in the DOE program. And this is a related program that the Department of Defense has had for a number of years where they are involved in security screening for people who have certain types of DOD clearances.

In the latest information available, which was published in a booklet that went to Congress that has congressional oversight of the DOD program, in the last fiscal year there were 7,461 people screened under this program, although there were actually more than that, but these figures do not include those from NSA and NRO because those figures are classified.

That figure, the total number of exams conducted is at the bottom of the -- the bottom row here, 7,461. Let's take a look at how those exams turned out.

First of all, nobody in that particular program refused to take the polygraph test. Now, in years past, there have occasionally been one or two people per fiscal year who declined to do it, more so at the beginning of the program than at

present.

In terms of those who were cleared by the polygraph, they were called truthful, or the technical parlance is NSR, "no specific responses," to the relevant questions. 7,334 people were called truthful on their polygraph test. That's over 98 percent.

Now, this is not to say that all of these were tested on just one occasion and that was the outcome. In a number of cases there had to be several examinations conducted before they were inconclusive initially. And so it took a couple of re-examinations to clear them. There were 208 people who required three series or more in order to arrive at a definite decision.

Furthermore, in some of these truthful outcomes, the people, during the polygraph test, explained during the pre-test interview -- before they were attached to the polygraph, they explained some concerns that they had, which in some cases may have been quite significant. But on the actual polygraph test, they did clear after they had made those explanations.

There were 110 people in which the test showed specific responses to the relevant

questions; that is, it showed that these questions were troubling them. These people then made admissions or explained what was bothering them about those questions, and then when they were re-tested, those responses died away. The presumption now is they were telling the truth.

So these are not false positive outcomes. These were -- the initial outcome was true positive because they explained what their problem was.

There were only two cases where the examiner was unable to make a definite decision. There are four cases in the last fiscal year in which there were significant responses to the relevant questions, but the person made no admissions whatsoever about what was troubling him about the questions.

Now, it's fully possible that the polygraph was completely correct with these four people and that they were, in fact, holding back significant information. On the other hand, it is also possible that these were false positive errors. The person really was not holding back any information, but the polygraph came up with the wrong results. We don't really know what the case was here.

There were an additional 11 people who showed significant responses. When they were confronted with those responses, they made significant admissions, but on their re-test, the test showed that they were still responding to the questions.

So either they were continuing to hold back additional information and the polygraph was correct, or they had fully explained what was troubling them, and the polygraph should have turned out showing no specific responses.

If we combine those last two groups, that would be a total of 15 people in which it is conceivable that there might have been a false positive error. So the maximum number of false positive cases out of over 7300, this would be -- a bottom line of maximum false positive rate in the DOD program would be one person out of 480 examinations. And that is phenomenal.

Of course, we don't know what the false negative rate is. We don't know how many people passed the polygraph who were holding back significant information. We do know, however, that there were a lot of admissions during the course of these examinations that were very significant.

In four cases within the last fiscal year, there were people discovered who were involved with the foreign intelligence services. In one particular case, a soldier over in Europe decided to defect to a foreign country. He walked into their embassy, offered them classified documents as inducement to accept his defection.

Their intelligence service said, "Look, you're going to be much more help to us if you would remain in the Army, and, when you retire, apply for a position at this particular agency" -- which I won't name here in this public forum, but -- "apply for a position with that agency, and then you can give us really useful information."

Well, we only found out about this as a result of the polygraph examination. It had not been developed during the background investigation.

In another case, the person was in the process of being recruited by a foreign intelligence service when he was applying for a position at, again, a very sensitive Federal agency. He knew that the foreign intelligence service was recruiting him; he knew what the service was, and he knew that they were recruiting him. There was no -- he knew what the situation

was.

In the course of the polygraph examination, he mentioned this special relationship that was being developed with that intelligence service and mentioned that that evening he was going to be contacting his case officer from the other intelligence service in order to brief him on how his polygraph exam turned out.

And it was only because he was caught on the polygraph at the 59th minute of the 11th hour before starting his espionage career that he declined their recruitment pitch. But, man, that's cutting it very close.

What we're saying here is that the polygraph is effective at catching real-life spies.

Since the collapse of communism nearly a decade ago, the polygraph has been spreading rapidly throughout the rest of the world. 68 countries now have a polygraph capability. That's roughly one country out of every three in the world. Obviously, an increasing number of foreign intelligence and counterintelligence services are using the polygraph.

One of the criticisms that has been leveled at the polygraph is that any spy worth his salt

would be trained in a short period of time in how to beat it.

And it is true that in the laboratory situation you can teach a person within a relatively few minutes -- say, about half an hour -- how to beat certain types of polygraph examinations. And there's a lot of information out on the web, on the Internet regarding how to beat the polygraph.

Fortunately, or unfortunately depending upon your perceptions, I guess, it's much harder to apply this successfully in real-life situations. There's a lot of uncertainties.

Now, you're familiar with the Ames case, of course, who was with -- a Soviet spy who was given a couple of polygraph tests. And when all was said and done, he basically cleared the polygraph test. So that was a failure of the polygraph.

Now, when his espionage career was discovered, the polygraph -- there was a bigger investigation, of course. And in the course of that investigation, it was discovered that he had only partially beat the polygraph itself. There were responses there -- and he did not clear the initial polygraph test that he was given; it's just

that he was able to talk his way out of it. He kind of beat the system rather than the polygraph itself.

We now train Federal polygraph examiners on how to detect countermeasure attempts or attempts to manipulate the outcome of the test.

This Doug Williams who has the page on the Internet where he will sell you information on how to beat the polygraph? We, earlier this year, published a case of one of his students who was using his techniques but did not successfully pass the polygraph test and explained that he'd been trained by Doug Williams in order to beat the test.

There's also a very recent espionage case in which the person was trained by a foreign intelligence service on how to beat the polygraph test. He was one of their top spies, and yet he did not pass his American test. He was re-tested and did not pass the re-test. In fact, he was tested multiple times; did not pass a single one of his American-administered test. And it was only when an investigation was opened up on him as a result of his having failed the polygraph test repeatedly that it was discovered that he was an espionage agent working for this other country.

Thank you very much.

DAVID RENZELMAN

MR. RENZELMAN: My name is Dave Renzelman, and I am employed by the Pacific Northwest National Laboratory. They pay my salary. I work for Edward J. Curran who is the Director of Counterintelligence for DOE when we're doing counterintelligence polygraph tests.

When we're doing other polygraph examinations not of a counterintelligence nature, I then work for General Habiger. I, or my, staff do quality control on every polygraph exam that's done in DOE.

DOE is the only agency in the Federal government that has contract Federal examiners. We are DODPI certified, Federally certified, and DOE certified. And we had to go through a lot of hoops to get that accomplished. And it was finally worked out in a Memorandum of Agreement between the Secretary of Energy and all the Federal agencies that they would accept our testing if we met certain prerequisites, and we do. DOE has ten polygraph examiners, and I am their program manager.

What I thought I would do today is walk you

through the DOE polygraph testing process should you be an individual that would be asked to take a counterintelligence polygraph exam.

Some people refer to a polygraph as a lie detector. I see many familiar faces here that I've spoken to before. My particular take on that: That's a term used by the media. I only knew two lie detectors in my entire career: One was my mother, and I married the second one. There is no way that you can show a response on a chart that is a lie.

We then move into the process of calling it a polygraph. I choose to call it a polygraph because we have a Polygraph Program. The science has brought it to the forensic psychophysiological detection of deception. For my presentation and my work, I choose to use the terminology "polygraph."

What is a polygraph? As far as you and I are concerned, it is a means and a mechanism by which we can see externally how you are feeling emotionally internally when you listen to a question, think about that question, and provide an answer to that question.

And the kind of questions we're talking about are very simply: Have you committed

espionage against the United States -- and that's a very simple matter to answer; either you have or you have not -- have you committed sabotage against the United States or a terrorist activity which is part of a sabotage effort?

The question that I predict that we would want to talk about the most would be unauthorized disclosure of classified information; i.e., to people who don't have the clearance for access to or need to know.

My boss, the Director of Counterintelligence, and General Habiger, have mandated that we are here with the sole charter to determine that the people who are going to take this test are verified that they are only working for one government, our government, and not another government as well. And track record shows that there are people who do that.

Now, people would say to me, "Well, you know, Dave, once upon a time I told my wife something about what I did, and I shouldn't have, and I know that now, and now I've got to take a polygraph test. What's going to happen?"

We're going to have talk about that. That's two things: a) not terribly intelligent, and,

b) probably some kind of a security infraction. But that's not what this program is all about. We are here to verify that the DOE's trust, faith, and confidence in the people taking the test is warranted, that they are only working for the United States Government.

Unauthorized contacts means exactly that, with a foreign intelligence service. How about people that go on to travel many times to many countries, maybe had dinner, drinks, or something of an exotic nature beyond which we've just discussed? We don't care about that unless that person was representing a foreign or hostile government or was a member of a foreign intelligence service. Then, of course, we'd be interested.

After the polygraph test -- and let me just walk you through a real quick one. A polygraph chart takes maybe eight minutes to conduct. In preparation for asking the four security questions and other diagnostic questions by which we make a determination, "Did your answer to that question trouble you," it takes about an hour to prepare you to take that test.

Then it takes a period of time after the

test is completed to evaluate the data. An examiner will take the data by polygraph chart and do a blind analysis of it. That examiner is then required to give it to a second examiner for a blind review, not knowing the benefit of the first evaluation of the data of your test.

Then the two test data analyses are compared. If there are no differences, because there should be none -- if one says it's a minus and one says it a plus, somebody's wrong -- we take procedures not to let that even happen.

Then it goes to a supervisory level who does another blind analysis. If all three are in concert, then the process is given to my office for quality control which has the absolute right to review that test, and, before the person is dismissed from the testing process, if additional testing is required, it is conducted on site, that time, that day. So we are not here to inconvenience you, your schedule, or the Department of Energy.

And, if additional testing is required, we'll tell you right up front. If your answer to that question troubles you, it troubles us. Our job is to determine "What is it about that question

or your answer to it that is bothering you."

Some people call it "lie response." I never saw a lie response in my life. I see concern or issues in people when they think about that question or they answer it.

The secretary has -- has identified my boss in writing and the delegation of authority of memorandum that for the counterintelligence program he's the only person that can approve those tests. I can't do it; nobody between my boss and I can do it. Only Mr. Curran.

Now, the results of your test can only be given to Mr. Curran. It is put into a classified computer system. They call it the Counterintelligence Analytical Research Data System -- acronym is CARDS. It's a classified system.

It goes, from the input that I put into it, directly to his office, and only he can read it; only he can act on it -- not your supervisor.

And I told you before, I work for a laboratory, too. The people that I work for and pay me don't know what I do because I can't tell them. I work for counterintelligence. They can come and ask me, and I can't tell them. They have

to go and ask Mr. Curran or General Habiger. It's just that way. When we're doing their work, we're working specifically for them, not for the Laboratory.

And we do quality assurance on all DOE polygraph examinations. Counterintelligence is not the only Polygraph Program run in the Department of Energy. There are people that work for General Habiger that have other issues where they may be falsely accused, and we have a track record of that.

Somebody said, "Mary did that," and Mary said, "No, I didn't do that, and I'll take a polygraph test to prove it." That's called polygraph by means of exculpation. This program does that as well. And it has cleared many people wrongfully accused.

Each examination is recorded on audio/videotape. And when I say that, let me say that it is an 8 millimeter tape that has an audio track and a video track.

If you have a non-issue test, no later than 90 days from the date that the results of your test are adjudicated, by regulation mandated by General Habiger and Mr. Curran, that test videotape is

destroyed.

We only do that every 90 days. The reason for that is: We have a procedure that we have to follow to destroy the videotape, and we can't go through that every day. So we collect them, keep them in a secure area, and, when the time is right, they are destroyed by incineration. And there are environmental rules that we have to follow, and it's done at the test site.

And the polygraph examination, when I say it's recorded in its entirety from the beginning to the end, it's on videotape. And then we take the data from the computer -- and our polygraph instruments are computerized -- we take that data and put it into that same videotape so that our quality control person, our supervisory person, can sit and watch your test as it's being conducted.

And we are the only Federal agency in this country that does that and, to my knowledge, in the world that does that so we can see on videotape you taking your test, how you're emotionally feeling when you hear that question in three parameters: We record your respiratory activity, your electrodermal activity, and your cardiovascular activity.

By that, I mean we follow your blood pressure on a mean level and your pulse rate on a mean level. And the electrodermal activity is nothing more than the fight/flight/free syndrome -- and we are pressed for time; anybody who wants me to explain that later, I'll be happy to in person.

And we're looking for changes from the norm. When we ask you a question, if emotionally your answer to that question troubles you, then there's a reason for that, and we're looking to discuss with you "What is the reason that it did bother you."

Now, let's suppose that you had a troublesome answer to a question, and you said, "Well, yeah, the reason that bothers me is" -- and this actually happened in DOE -- "I took a document that listed all of the nuclear warheads and where they're located in this country, and I gave them to the First Secretary of the Russian Embassy who I met at a party, and maybe I was thinking that's a problem." Well, we thought it was a problem, too.

And we discussed it, and it was decided, yes, that was a problem: a) he shouldn't have done that; b) it was against the rules and regulations; and, c) it had to be referred to the FBI for

investigation, who has the charter for investigating counterintelligence matters within this country.

We only use the process put out by DODPI, the Department of Defense Polygraph Institute. Seated with us here, not yet introduced, is Dr. Andy Ryan who is the Director of Research. And they have a significant staff at DODPI. And we support their research efforts, but we do not do anything that is not mandated.

Dr. Barland related to how they have a quality assurance program where they come out and inspect people. I am proud to tell you that the Department of Energy was inspected last year. We are the only Federal agency in the U.S. Government that has a quality control program that there were zero findings. They found nothing in error with the DOE Polygraph Program, and I intend to keep it that way.

The Secretary of Energy has said very, very clearly that adverse personnel actions cannot be taken against you solely based upon adverse results -- or, as you would call it, not passing your polygraph test -- unless all reasonable efforts are made and completed to independently

determine "Why did your answer to that question bother you."

And then I don't make that determination. I'm just telling you what it is.

We already talked about our folks in addition to the requirements to get into the school. DOE requires that our examiners go on and complete a minimum of an advanced degree at the master's level in order to be a certified DOE examiner. We require proven counterintelligence experience in addition to just meeting the qualifications to be a polygraph examiner.

There are some agencies that will take college graduates and train them to be a polygraph examiner. I will not let a person test you that I would not let test me if my career, reputation, and future depended on the outcome of that examination. That's how much I care. And I was given that mandate by Mr. Curran and General Habiger.

General Habiger took his polygraph test. He's been at our facility, and he has seen it. And he knows the examiners by name and face and reputation and capabilities.

We just have, in my opinion, the very best program in the Federal government. We're small and

we have a lot of work to do, but we're not going to take anything less than the best to do this job.

All of our people at 1811 have the GS rating in the Federal government for Criminal Investigator of Counterintelligence, or they have a DOD investigative agency's rating with NIS or SI, Army MI or CID. They have to be DODPI certified.

And then we go through a DOE certification process that is stricter than any Federal agency. CN-1 coordinates all of your polygraph procedures with the Director of the Polygraph Institute.

And there are two people whose names should be familiar in authority and polygraph in the Department of Energy. One is General Habiger seated right down in front, and the other is Edward J. Curran, the Director of Counterintelligence.

And that was a seven and a half minute presentation that normally takes me an hour to do.

Thank you.

GENERAL HABIGER: Well, thank you very much Gordon and Dave.

Ladies and gentlemen, we're going to step into the next phase of our open hearing this morning. In order to get us into a transition, we'll take a 15-minute break, and then when we

reconvene, we'll have our first scheduled speaker come up.

Thank you for your patience.

(Whereupon, a recess was taken.)

GENERAL HABIGER: Ladies and gentlemen, it's now time to move on to the reason why we're all hear, to listen very carefully to your comments on Notice of Proposed Rulemaking.

I would like to call our first speaker to the agenda. For the record, I ask that each speaker please state his or her name, whom you represent, before making your statement.

First I'd like to call Mr. Jeff Colvin.

MR. COLVIN: Right here?

GENERAL HABIGER: Yes, sir.

JEFFREY D. COLVIN

MR. COLVIN: My name is Jeff Colvin. I'm a Lawrence Livermore National Laboratory physicist. I'm here speaking for myself. I'd like to read my statement so I can be sure of staying within the five-minute limit.

Thank you for allowing me the opportunity to present my comments on DOE's Proposed Rule on Polygraph Examination Regulation.

I have had a DOE Q clearance and have worked in some aspect or other of the U.S. nuclear program for 27 of the past 32 years, the last 16 years at the UC labs: first at Los Alamos and then here at LLNL.

I am well aware of my responsibilities as a holder of a Q clearance and support any and all measures that serve to enhance and strengthen U.S. nuclear weapons security. The use of polygraph examinations, however, will not help to strengthen nuclear weapons security but will, in fact, have just the opposite effect as I will now argue.

In the absence of nuclear testing, the credibility of the U.S. nuclear deterrent rests entirely on the credibility of the science base on which it is built. The science cannot thrive and prosper in an environment of fear, distrust, and suspicion which is precisely the atmosphere that is created by this proposed rule.

One of my roles in my current position is to recruit new postdocs to our program. It is already difficult to find people with the requisite training and the high-energy density physics required for this work. And we have a hard time competing with major university laboratories for

the few good people who have such training.

If I have to tell prospective postdocs that they need to undergo polygraph testing to take a job in our lab, then my already difficult recruiting job becomes impossible.

Even for the scientists already here, the proposed rule is already having a chilling effect. The number of papers being presented by Livermore scientists at this November's annual American Physical Society meeting is down by 33 percent from last year.

Although there may be several factors responsible for this big decrease, surely one of them is that many people have been scared off by the current swirling controversy over security lapses at the labs and have chosen to keep a very low profile.

There are several other measures of decreased scientific productivity that perhaps other speakers will have time to address. If this productivity decline becomes a long-term trend, as is likely in my view if this rule is implemented, then the science enterprise at the labs will surely be damaged, and the U.S. will become, after 10 or 20 years, only a second-rate nuclear power. It is

hard for me to see how this outcome enhances U.S. security.

There are many other reasons to oppose polygraph testing, including its unreliability and its questionable history and effectiveness. You will hear statements from other speakers on these matters, so I will not address them.

I would like to use the few remaining minutes of my time to identify the specific sections of the proposed rule to which I object and why.

Sections 709.3 and .12 specify that the proposed examination consists of much more than the polygraph machine test. The wording in these sections leaves the examiner with too much latitude in an open-ended pre-test interrogation in deciding how the test questions are to be worded and presented, and in making a judgment concerning deception on the basis of the pre-test interrogation as well as the machine test results.

What provisions are there to guard against abusive and intimidating practices by the examiner? How are we to be protected against biases? Are we simply to trust the judgment of the examiner when he is busy looking for evidence not to trust ours?

In addition, what assurances are there that Laboratory management will not inject itself into this process? Section 709.4, which defines to whom the examination will be administered, is drawn so broadly that it does not exclude that Lab management will have to supply lists of employees who are to be tested and in which order the testing is to take place.

What protections are there that such lists will not be engineered to target employees of, say, Chinese or Russian ancestry, employees who are union or employee rights activists, or employees who management would like to get rid of anyway to cover project cost overruns?

Further, it is clear from Section 709.15 that if the examination indicates deception or even if the results are inconclusive, a full-blown investigation is triggered, during which the individual will likely lose the clearance or access authorization, which amounts to the same thing as losing the job.

The same consequences, according to Section .14, befall an individual who refuses the test or who fails to complete any part of it.

The fact that coercion is used -- threat of

loss of clearance and, hence, job -- to secure an individual's consent to the test seems to me to be illegal, unnecessary, and can even have a result opposite to that intended.

People who will submit to such coercion are more likely to be more vulnerable to foreign intelligence agents than those who resist coercion; thus, it is the people who refuse this test who are the ones you should keep on the job.

Finally, I am not a lawyer, but it seems to me that Section 709.22, which bars an individual from having legal counsel present during an interrogation that could lead to loss of livelihood, would not withstand a court challenge.

In summary, I would like to commend Secretary Richardson for all he has done to turn back the many attempts by some members of Congress to impose even more Draconian measures on the labs in their misguided attempts to protect nuclear weapons security, and I would urge him to turn this one back, too, or, at the very least, completely rewrite this rule so that polygraph testing would be used only to support an investigation instead of as a precursor to one.

This proposed rule has things the wrong way

about and can only lead to endless court challenges, wide-scale resistance, and, ultimately, a degradation of the science on which our nuclear deterrent depends.

GENERAL HABIGER: Thank you very much, Mr. Colvin.

Our next speaker is Dr. Douglas Post. Dr. Post?

DR. DOUGLAS E. POST

MR. POST: Thank you.

I'm Douglas Post, Associate Division Leader for Computational Physics, an A-Program.

Ladies and gentlemen, thank you for this opportunity to comment on the issue of polygraphs and our national security. I will address only one of the many problems of polygraphs: The impact on recruiting and retaining competent staff.

For recruiting and retaining competent staff, it is neither my opinion nor your opinion that matters. It is the opinion of the staff about polygraphs that matters. This is a free country, and people can freely choose their place of employment.

I lead the A-Program Computation and Physics

Group at Livermore: about 100 physicists, computer scientists, and systems operations engineers. We develop the complex computer programs used to simulate nuclear weapons. These simulations have to be good enough to replace real experiments -- no nuclear testing.

This enormous challenge requires an unprecedented improvement in our simulations. If we fail, the U.S. will be forced to return to testing.

My group is responsible for about one-half of the Livermore simulation programs. This work is at the forefront of computational physics and computer science.

We have to recruit and retain our staff in a very competitive job market. Silicon Valley is 45 miles southwest of Livermore. The computer companies there aggressively recruit good computational staff. Even closer to us is PeopleSoft, six miles west of here. You passed them on 580 coming in. They had 3,000 job openings last year.

There are a number of incentives to work at Livermore, including: Challenging and important problems; unprecedented computer resources;

opportunities to publish and do unclassified research; a stable and supportive work environment.

There are also a number of disincentives, including: Lengthy clearance processes -- up to a year or more; strong physical and human security -- guards with guns, barbed wire fences, safes, security procedures; a difficult computing environment made more challenging by cybersecurity; a lack of a public record of one's past accomplishments being classified work, and, therefore, somewhat lower job mobility; lower salaries -- we offer less than the industry, not more; and no stock options.

To these disincentives, we now plan to add polygraphs.

These disincentives make recruiting very difficult. The recruiting, clearance, and training process now takes one and a half to two years. I spend much of my time recruiting to add staff and to replace those who leave to join the computer community in the Bay Area.

Four of my best staff left my group in the last two months due to security issues -- not problems they had, but unhappiness with the situation.

After waiting 13 months for a clearance, Ian McGreer accepted a job with Netscape a week before his clearance came through. Another left because of his general unease about the whole security atmosphere, including the two stand-downs ordered by DOE with little or no planning.

Brian told us, "Life is too short, and there are so many better places to work where some bureaucrat won't shut me down for no good reason that I can see, and there are guards with guns, and I won't get punished for making a minor mistake."

You may or may not agree with Brian, but it doesn't matter. It's a free country. Brian has chosen not to work here. He works somewhere else, and I'm busy trying to find someone half as good to replace him.

I have two job offers out to prospective staff who have both expressed a lot of concern and fear about polygraphs. My experience shows me that polygraphs will further erode our ability to recruit and retain quality staff.

What do we get for this? I've looked at the issue, researched as best I can, and have found no convincing evidence that polygraphs are an effective screening tool. Mr. Barland himself said

there's no way of telling if polygraphs are effective or not.

I question the wisdom of relying on polygraphs for screening for something as important as national security. On the basis of a recent polygraph interrogation I took myself as part of NSA clearance, I think that some of these fears are perhaps unfounded.

However, my views and your views on polygraphs are, with all due respect, completely irrelevant for recruiting and retaining staff. The relevant views are those of the staff, and they are scared of polygraphs due to the reputation and abuse of polygraphs by law enforcement and intelligence agencies.

Our best staff, especially computer scientists and systems operations engineers, have too many other choices with challenging positions with higher pay, often with stock options, almost none of the security restrictions we find here, more opportunity for job mobility and public recognition for their work without polygraphs.

Is the political cover and possible improved security that polygraphs give DOE worth the real degradation to national security that will result

from the exodus of good staff? I think not.

I appeal to you not to damage the security of the United States with polygraphs.

Thank you.

GENERAL HABIGER: Dr. Post, thank you very much.

Our next speaker is William O'Connell. Mr. O'Connell?

WILLIAM O'CONNELL

MR. O'CONNELL: Good morning. I'm William O'Connell, the president of the Society of Professional Scientists and Engineers. I thank the distinguished panel for the opportunity to present these comments as part of the Federal Register and rulemaking process.

The SPSE is an independent organization of professional employees at the Lawrence Livermore Lab and is interested in employee rights in the workplace. I have had a lot of input on preparing these comments, but in the final analysis, it's my own work.

The first point I would like to address is the unreliability of the polygraph tests. Mr. Barland addressed this earlier, and I would

like to look at it from a different perspective.

The polygraph process, and especially as a screening tool for a very minuscule fraction of hypothesized spies, is an unreliable process. There are the problems of false negatives, which mean that the process does not really reinforce our nation's security. There are also problems of false positives, which put the reputations and careers of loyal government employees in jeopardy.

I won't launch into the continuing scientific debate during this hearing today, but I will just quote a summation by the U.S. Supreme Court. In a 1998 decision, the Supreme Court agreed that a military court was reasonable in continuing to follow Military Rule of evidence 707, which excludes polygraph examinations and the opinions of the polygraph examiner from evidence in their court system.

The Supreme Court noted that this rule serves several legitimate interests of a trial process, including ensuring that only reliable evidence is introduced at trial. On this point, the majority opinion notes,

"There is simply no consensus that

polygraph evidence is reliable. To this date, the scientific community remains extremely polarized about the reliability of polygraph techniques."

And they go on to cite several references and statistics from different sides of the ongoing argument.

The second point is that this polygraph test procedure is an undue burden on loyal employees. The false positive finding or a finding of lack of complete cooperation in the test could result in further complications, field investigations, interruption or loss of career, and loss of reputation.

A briefing by DOE for our employees last Friday by the same speakers who spoke briefly this morning elaborated on the test procedure which is described briefly in the actual proposed regulations.

The subject is alone in the test; no independent witnesses allowed. The polygraph examiner, to be certified, must be an experienced counterintelligence or criminal investigator with extensive additional training in interrogation and

in psychology. That is specified in the draft regulations.

A pre-test interview of the examiner with the subject clarifies the procedure and questions and elicits any gray areas which the subject feels might interact with his feelings when he is asked the main questions.

Further, if upon completion of the polygraph test there are any unresolved issues, the polygraph examiner must conduct an in-depth interview of the individual to address those unresolved issues.

Thus, this is an in-depth interrogation covering any topics where the subject feels an associative link to the four question areas which are the legitimate subjects of the examination. Thus, it is rather broad, and it elicits a broad range of information from the subject who must take this test. It is open-ended in that sense.

Thus, I must admit that the polygraph procedure is a tool of some power for an interrogator, at least for some part of the subject population, even if it is not of a known reliability in its conclusions.

Thus, in summary, this screening polygraph

examination places a serious burden on the employees and violates what are usually considered an American citizen's civil rights.

There is not sufficient justification for putting thousands of loyal employees of the government through this process just to highlight one or two who might equally well be brought to notice by good fieldwork or rather specific evidence.

I can tell you from my own recent conversations that many Lawrence Livermore Lab employees are troubled by the proposed polygraph rule, by the false positives, or by the procedure itself, and all for a result which is only modestly effective at best in directing attention to real positives.

And I am appending to my written comment, which I provided, a formal statement by our organization on this subject.

My third point is that focus on the areas of real security problems would be more effective. The recent congressional committees and the President's committee have found security problems in DOE, and these are mainly in management follow-up and in physical security, procedural

security.

DOE has made improvements in some of these areas, but much more could be done. And the focus should be on areas where the real problems are rather than being distracted by the polygraph procedures and polygraph application.

Fourth, I note that congressional action on polygraphs is under deliberation in Congress but has not yet been completed. The DOE should extend its comment period and wait and see what the Congress decides.

In particular, the latest draft congressional bill language is that from the House Senate Conference Committee which differs somewhat from both an original House version and the Senate version. And this calls for polygraph testing of some DOE contractor employees but a rather strict scope of programs within the defense programs.

The proposed DOE rule covers a similar list of programs but also one much broader and rather vague category, which has been mentioned by another speaker.

10 CFR 709.4(a)(6) basically positions that the DOE Secretary has determined to have a need-to-know or access to information designated by

the Secretary or his delegatee concerning nuclear weapons information. That is a rather broad category and basically could include all personnel who have a Q clearance and are using their Q clearance actively in a classified work. And that goes beyond what the Congress is considering in its latest round.

And I will be submitting some further written comments later in the comment period to expand on some other points, notably that if there is to be polygraph testing, the range of questions should be specified more narrowly, and the test should be made a simple test, with the witness present, perhaps with the subject being able to select his own polygraph examiner, and just asking the basic questions rather than going into an in-depth probe of all subjects which are somehow linked to the question areas.

Thank you for the opportunity to comment, and hopefully public comments will have some influence on the final form of the rules which are being developed in this present rulemaking process.

Thank you.

GENERAL HABIGER: Thank you, Mr. O'Connell, for that very valuable input.

Our next speaker is Mr. Michael Axelrod.

MICHAEL AXELROD

MR. AXELROD: Good morning. My name is Michael Axelrod. I'm with the Division Sciences Group at Livermore Laboratory. I've been at the Laboratory about 25 years.

In some respects, my comments will amplify the previous speakers. Specifically, I'd like to deal with the section of the CFR that says,

> "However, DOE is aware of no scientific studies that establish that polygraph examination results are unreliable for use as an investigative tool as DOE has proposed to use them."

Usually one has to prove a positive and not a negative. Nevertheless, I'd like to furnish some references which I have found. If the DOE can present us with further evidence or even newer studies, I'd be very happy to read them, as my colleagues would, too.

First one is the scientific validity of polygraph testing. This is an OTA report, published 1983. I will read briefly one of the summary statements.

"OTA concluded that the available research evidence does not establish the scientific validity of the polygraph test for personnel security screening. OTA was able to identify only four studies directly relevant to personnel security screening use."

More recently, Professor Hunt -- and I might add that Professor Hunt is a recognized authority in polygraph and generally would come out on the side of polygraph testing in the criminal investigative arena. He was the author of a friend of the court brief submitted to the Supreme Court in the case that Bill told you about.

Here is an article by him, published in Forensic Reports in 1991. I'll quote a few relevant sentences.

"All uses are controversial, but the screening uses particularly so. Polygraphers' claims of high utility on the basis of development of information during interrogations are suspect because the information they develop has

never been shown to be predictive of future behavior."

One of the problems we have in mass screening is the same you have in medical mass screening. You try to identify a very small group. This is why there's no mass screening for AIDS. You're very susceptible to the false positive rate.

Let me give you a specific figure that I worked out. If we take some very optimistic numbers for false positive and false negative, say, 10 percent, we give someone a test; he comes out as being deceptive. What is the probability he's actually deceptive?

If you work that out, assuming about 1 in 1,000 -- and I think this is probably an overestimate -- of spies or saboteurs or espionage people are actually in the population. I think that's an overestimate because here we'd be dealing with a population of employees that has already been screened by an investigative process.

The result is less than one percent probability he's actually being deceptive. This is an almost incontrovertible result. It follows directly and mathematically from the assumptions.

Now, Dr. Hunt does pick up on this. It's called the base rate problem. And I'll read you this.

> "This concerns a study done by DOD poly in 1989. It was a mock espionage test. You had a 50/50 breakdown between the guilty and the innocent."

The results of Barland announced that he suggested the polygraph techniques used by the Federal government for periodic screening are accurate with innocent subjects but that they are no good with guilty subjects.

Another comment. CSP, Counterintelligence Scoping Program, is highly ineffective at detecting deception.

So, thus, we see perhaps the real problem is not so much the false positive rate, but it's actually the false negative rate. Are we wasting the taxpayers' money with a program that is not going to bear much fruit and is likely to cause damages to morale and recruiting as the other speakers have described?

I will submit written questions or written statements to the DOE on this issue, and I will

also prepare a white paper for anyone who's interested in seeing it.

Thank you very much.

GENERAL HABIGER: Thank you very much, sir.

Mr. Tom Reitter?

TOM REITTER

MR. REITTER: Hello. My name is Tom Reitter. I'm a mechanical engineer at the Lab, speaking for myself. Thank you for holding this hearing in Livermore.

A lot of what I had planned to say has been alluded to already, so I'll try to summarize a little more quickly.

The DOE proposes to use polygraph on a large scale to screen thousands of current and future employees to detect and deter espionage and inappropriate disclosure of classified information.

I believe this will be ineffective for its stated purposes and will have the unintended consequence of actually reducing national security by reducing the technical expertise at DOE laboratories.

At considerable expense, the screening

process will identify a number of false positives. These people will be put through very stressful, detailed, further investigations before they are, hopefully, exonerated.

Of course, some valuable employees will quit before they are exonerated.

I am even more concerned about false negatives. Will any actual agents be spared further scrutiny?

I have known a number of people who frequently gave incorrect information with great sincerity, yet they were not necessarily lying. Some people have to change the truth in order to remember it, is what I have concluded.

If someone thinks they are telling the truth about their inappropriate past behavior, how can a polygraph catch them?

The impact of polygraphing on retention or recruitment has been glossed over, I believe, in the Federal Register. Perhaps people in the intelligence or counterintelligence work have no problem with polygraphing. But many scientists, engineers, and technicians doing classified, technical work do not see it that way.

I have been at the Lab 26 years, yet I still

remember the culture shock of coming here from an academic environment. During my 26 years, I've also been aware that there is a bias among technical workers in favor of doing unclassified work because of the absence of ever-increasing security requirements and the possibility of establishing a reputation in the larger technical community.

Polygraphing may seem like a minor thing to those in security, but it may well be the straw that breaks the camel's back for some technical people.

Most important of all is the fact that it is the best people and the younger people who have the most options for going elsewhere.

Very detailed research is necessary on the effect of polygraphing on retention and recruitment of the best people before anyone can dismiss its impact.

The impact may not be immediately apparent, however. Given the strong bias in technical fields outside against people over 40 and the desirability of the University's retirement plan, Lab employees between 40 and 60 will put up with more annoyances than will younger people.

But for the future, the DOE labs need an even larger pool of talent from which to choose employees. Instead, polygraphing will further shrink the pool of available talent for classified work.

It is noted on page 45064, column 3, that all polygraph examinations administered by DOE are voluntary. This is very misleading. Anyone who refuses will probably be given a few months to find an unclassified job.

But there aren't enough unclassified jobs, and the competition will become even stiffer if there are a significant number of refusers. So refusal will, in most cases, lead to termination, thus, a cloud on future employment.

On page 45069, top of first column, it is claimed that the DOE may not ask questions that concern conduct that has no security implication. Wouldn't anything that is embarrassing and, therefore, produceable for extortion be considered relevant?

Also, the questions that have been discussed publically are much more limited than what is discussed in the Federal Register. Why should we believe that the questions won't become more

intrusive if the initial furor over polygraphing dies down?

I think polygraphing should be avoided in favor of other methods for improving security. The Senate Select Committee on Intelligence several months ago said that they wanted to see alternative methods investigated.

One example that comes immediately to mind is the screening of large numbers of employees for whom there is no existent cause for suspicion would certainly be cheaper and probably more effectively done by having everyone answer the relevant questions, with expanded responses as appropriate, on paper, under penalty of perjury. Standard investigative techniques could then be used to identify employees whose responses suggest the need for more information.

In summation, large-scale polygraphing would be very expensive, ineffective, and detrimental to retaining and recruiting the best people for technical work vital to our national security. I urge you to reconsider the proposed implementation.

GENERAL HABIGER: Mr. Reitter, thank you very much for your insightful comments.

Mr. David Dearborn.

DAVID DEARBORN

MR. DEARBORN: My name is Dave Dearborn. I'm a physicist here at Lawrence Livermore National Labs. And in the years I've been here, I've worked on basic physical processes that are pertinent to weapons; I've fielded -- proposed and fielded experiments for detecting clandestine nuclear explosions; I've designed and fielded a number of nuclear tests.

I more recently was heavily involved in the W87 Life Extension program, the W78 peer review, and have participated in a number of other stockpile support issues.

I've received two Weapons Excellence awards from the DOE: one for work on lasers and one for a new powerful method for analyzing radar data of re-entry vehicles. And, in addition to that, I regularly publish in astrophysics and archaeology, so fortunately I've kept my employability outside the Lab available.

In addition to that, I've received the Shelby Fellowship of the Australian Academy of Science. Also fortunate it's not a sensitive foreign country.

Earlier this year, the Secretary informed us through the media that we'd been ordered to stand-down for a refresher security awareness course.

As part of that re-education experience, an FBI officer and security consultant gave us a most entertaining lecture that included anecdotes regarding two spies. Neither of these traitors had been caught through polygraph screening. They did fail after they had been caught, and that is consistent with the American Association of Polygraphers' statement of how polygraphs should be used as part of an investigation. With the proper investigation behind them, they're a useful interrogation tool.

The OTA report that was just referred to also expressed concern for the viability of polygraphs to genuinely address security risks. Unless anyone claimed that the procedures have improved, in 1997 testimony to the Senate Committee on the Judiciary, Dr. Drew C. Richardson of the FBI Laboratory went further by stating that polygraph screening is completely without theoretical foundation and has absolutely no validity.

He further said that the diagnostic value of

this type of testing is no more than that of astrology or reading tea leaves.

Now, of course, the subjectivity of the polygraph exam is in some sense a win/win for the Department of Energy. An agency that wants its people to pass will find most of them doing so. And I was assured by friends of mine who take regular polygraph exams for the DOD, "Don't worry; if they want you to pass, they'll scoot you through it; not a problem."

Perhaps this encouragement that that works to get us through is the source of the very high, almost unbelievable accuracy rate that we've heard in the newspapers and seen again today.

Accepting those claims of .2 percent, though, means that in an organization the size of Livermore, 15 people develop the employability of Win Ho Lee being innocent. In a room this size, the probability is that one person, if it were filled, would be falsely accused and completely fail that test. So it's not a zero. And the question is what we're getting back from this.

And there's a second benefit for the Department of Energy. In the past, when people have reached out with concern for employees who

have exercised their freedom of speech -- not divulged secrets but simply said things that were not aligned with DOE policy -- there have been cases where people have reached out to have individuals fired.

Fortunately, the University of California has a strong belief in freedom of speech, a constitutional right, and they found it difficult. It might not be so difficult in the future with this sort of interrogation process available anytime someone in management is annoyed with us.

Now, these questions may seem a little harsh, but an agency that makes such an Orwellian use of the word "volunteer" really has to expect this type of response.

Here at Livermore, we take our security very seriously. My colleagues and I have produced the secrets that you come here claiming to protect. We work very hard to wrestle them from nature, and we recognize their value.

We further recognize ourselves to hold positions of trust, and we've already allowed extensive intrusion into our lives by making available our financial, legal, health records, as well as by answering in-depth questions on our

friends, relations, and much more. We are regularly investigated already.

Yet you're coming here and you threaten our honor and integrity requiring us, on effective threat to our employment, to volunteer for an even deeper intrusion into our rights to privacy, and it's through a procedure that seems flawed and where there seems to be a free hand to terminate any employee who speaks his conscience.

If you choose to implement this astrology surrogate and treat us with such deep disrespect, don't confuse the contempt for arrogance that we are accused of.

GENERAL HABIGER: Thank you, sir.

The next speaker is Mr. William Tong.

WILLIAM TONG

MR. TONG: Good morning. I'm a limited-term employee working in the UV Program here at Lawrence Livermore. "Limited-term" means that I'm basically a year-to-year contractor. And I enjoy working at Lawrence Livermore so far. I have found it an exciting place to work; I'm learning a lot; and, to be honest, I'm keeping my eyes open for a permanent opening here.

But I'm troubled by this new requirement that employees that work on national security issues will be required to take polygraph tests.

And I think the previous speakers have already talked about the unreliability of the polygraph test, so I'm not going to go into too much detail except for the fact that I will compare polygraph tests to fortune-telling.

I mean, you hear a lot of people, you know, coming back from fortune-tellers saying that, "Oh, my God, they're really accurate; they nailed it right on the head."

Except what all these people do is they can tell from the way you dress, the way you carry yourself, that maybe you have trouble with your wife or maybe a person has trouble at their job -- just from your demeanor.

The polygraph examiner simply has a machine, and, you know, it's an accurate machine, and that can help them measure that. So, you know, they have a higher probability -- 60 to 90 percent. You know, that's what I read.

I mean, I don't believe this 99.8 percent number. I mean, if you ask a fortune-teller whether they are accurate or not, they would tell

you it's 100 percent, too.

So, yes. And also, it's very subjective to the examiner. It depends on how good the examiner is; it depends on the subject. Some people can lie with calmness; other people get nervous and start sweating even before the question is asked. So to me, it's very subjective.

Now, the trouble with the polygraph is that it has this mythical reputation of being accurate. You know, you always hear people say in public -- or a certain suspect for some crime, "I'm willing to take a polygraph test," as if that would prove his innocence.

Or if someone refuses to take a polygraph test, the public would tend to think, "Oh, he's probably guilty," even though, you know, there's -- nobody knows how accurate this test is. I mean, you hear varying opinions.

Now, in the private sector, you know, an employee can refuse a lie detector test or maybe fail it even, and then -- you know, if I worked at McDonald's or Costco or something and they think I stole some money and then I fail a lie detector test, I get fired, and that's the end of that.

But here, you know, you have the FBI, the

CIA, the DOE -- all the investigative tools behind you. I mean, you know, they are all ready to pounce on me, to investigate my life. That is very scary.

And also, in a bad political climate, such as the current one with the Chinese spy -- and I am Chinese-American -- when everybody is looking for a scapegoat, and, if I -- if the suspect -- you know, if the word leaks out, someone will leak out the word that the suspect refuses to take the polygraph test, he might as well be convicted.

I mean, people -- it's happened before. Look at Richard Jewell, I think, at the Atlanta Olympics a few years ago. They were looking for a scapegoat. And basically, words got leaked out, and then everybody assumed he was guilty. This is all very scary.

So let me go to my second point. Now, I think you made a point or -- this proposal only applies to those who engage in weapons work. And frankly, most scientists -- the mission of the Lab is for national security. And most scientists who contemplate a career here will do some weapons work in their career.

Now, I hope that most people here who are

into making weapons -- who are making weapons don't do it because they enjoy making weapons. I mean, they do it probably because they believe in this country. They believe that they are helping to maintain a free democracy and not to promote a police state or a totalitarian regime.

And someday, perhaps, maybe the technologies that we develop here will overturn totalitarian regime like the Nazi Germany of Adolph Hitler or the current Yugoslavia regime of Slobodan Milosevic. These are police states.

Now, random polygraph test is a tool of the police state. It is an invasion of privacy.

Now, you may -- you may be able to argue that polygraph tests will help us stay technologically ahead of police states like China or Yugoslavia, but I ask you: What's the point when, in doing so, in trying to stay technologically ahead, we become a police state ourselves?

Thank you.

GENERAL HABIGER: Mr. Tong, thank you very much.

Our next speaker is Mr. Patenaude. And I've butchered your name, sir.

MR. PATENAUDE: You got it right.

GENERAL HABIGER: Thank you, sir.

STEVE PATENAUDE

MR. PATENAUDE: Hello, members of the panel. I'm an employee of the University of California Lawrence Livermore Laboratory, now entering my 37th year as a scientist, and I represent myself.

I'm here today to add my voice to the growing throng of those who are opposing the use of polygraph testing as an improvement in security.

After extensive reading, I have concluded that polygraph testing has highly questionable value as a scientific tool, offering little counterintelligence improvement to security while exposing enormous risk to those who are forced to take polygraph tests. After all, scientific method is a mission of this Laboratory.

My main concern is that subjective testing like polygraph could be used by unscrupulous individuals to selectively silence unpopular voices of dissent, a well-established condition of which the Department of Energy and State Department has past knowledge.

As a teen-ager, I could not understand why

the adults of this era were so upset over the words of some obscure senator's voice crackling out of the radio saying, "Mr. Smith, are you now or have you ever been a member of the Communist party?"

I would not too much later come to loathe those words. And now, gentlemen, here we are again facing the 1950s' loyalty oath question wrapped in the security shell as "polygraph testing."

I love my country. For nearly four decades I have been intimate with the naked beauty, the terror, and the enormous destructive potential of nuclear weapons, and I'm here to tell you in the strongest possible terms: I cannot imagine any circumstance in which I would betray the secrets to anyone, much less those of a foreign power.

This fact is something that you must trust me on; however, polygraph testing is contrary to that trust. Without this trust, the nuclear game is over.

I would like to read to you a few sentences taken from the January 21st, 1999, Congressional Record given on the floor of the United States Senate by former Senator Dale Bumper.

H.L. Mencken once said, "When you hear

someone say, `It's not about money,' it's about money. And when you hear someone say" -- speaking of the impeachment charges -- "`It's not about sex,' it's about sex." And so today when you hear someone say of polygraph testing, "It's not about politics," it's about politics.

I have willingly devoted most of my adult life to the furtherance of science at this Laboratory, and I find being here today, in one word, incredulous. I could not have imagined a more corrosive force to this Laboratory than distrust. I can only speculate that espionage would do less damage to the national security than institutional distrust of the very people now charged with the protection of its national secrets.

I fear for the continuance of the University of California management of this great institution.

Time and circumstance may prevent me from making the difficult decision, "Will I submit to the polygraph test?" When and if that time comes, there can be little doubt as to how I must choose.

GENERAL HABIGER: Thank you very much, sir.

Our next speaker is Tom Thomson.

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MR. THOMSON: Thank you. I'm Thomas Thomson. I have been working at the Lawrence Radiation Laboratory since 1965. And since that time, I have been a warhead designer for the improved Spartan ABM system, the HardSite ABM system, the W79 Artillery Fired Atomic Projectile, special nuclear devices for underground nuclear weapons effects testing, special purpose nuclear warheads.

I led the physics group that originally was assigned to assess the utility of high-energy lasers to nuclear weapons design issues. I have also served as a project leader for the W70 Lance tactical missile warhead, and project leader for the W62 Minuteman III warhead.

I've participated in the design and execution of 24 nuclear underground tests. In 1985, I was the recipient of the DOE award for innovation in nuclear design.

I currently serve as Deputy Thermonuclear leader for Plans.

I speak today on behalf of American democratic principles. First, let us be clear as to what the real issue is today. It is not about

espionage, it is not about polygraph machines, and it is not about nuclear secrets. It is about political control.

It is about suppressing dissenting views. It is shocking that after a lapse of 200 years, this administration is attempting to resurrect the evils of the Sedition Act of 1798, an act notorious for its blatant political motivation.

The Sedition Act of 1798 intended to reenact the English common law of seditious libel. This law, according to Kelly and Harbison of The American Constitution, permitted very broad prosecution for seditious libel subsequent to the publication of anything unfriendly to the government.

The truth of the published matter at issue did not constitute a defense, and the judge had the sole power to decide whether or not it was libelous.

J.D. Hicks in The Federal Union speaking on this matter stated,

> "The Sedition Act, like the Alien Acts, accomplished more by the threat it made than by any actual enforcement. A large number of

indictments were returned, but only a few persons, most of them prominent Republican editors, were ever brought to trial. When the trials were held, however, the methods of the prosecution were as ruthless as the law under which the charge was made."

The polygraph screenings now proposed will serve the same purpose. Rather than having to publish unfriendly articles, the crime will have unfriendly squiggles on a chart. And the interrogators will be the sole judges as to whether or not this constitutes sedition.

Likewise, innocence will be no defense. The crime is failure to pass the test. The truth or falsity of the questions is not important. Just as in the Sedition Act, more will be accomplished by the threat than by the actual enforcement.

On this issue, I stand strongly with the President -- Jefferson not Clinton.

What is it that this administration hopes to accomplish with this new Sedition Act? They hope to accomplish precisely what the framers of the original Act hoped to accomplish -- the silencing

of dissent.

This should come as no surprise. When this administration first came to power, their first Energy secretary stated that her first priority would be accountability. I hope no one was so foolish as to think this had something to do with numbers or ledger books. This was a politician speaking, and when a politician speaks of accountability, they mean political accountability; you will answer for your dissent.

So the question is not about the veracity of polygraph screening tests -- they are well known to be useless for their stated purposes. The question is what dissenting views are they now afraid of.

Faced with the evidence of gross mismanagement, Congress has recently seen fit to order the restructuring of the Energy Department. And to date, Congress has only scratched the surface. I urge them to get at the truth. They must parse every statement and diagram every sentence until they understand what the meaning of is is.

Read every statement as if it was meant to mislead, and they will reap a rich harvest. Pay attention only to statements under oath and

official documents. All the others are just spin and are not meant to clarify or to find the truth.

It is a truism that institutions only worry about heresy when they have begun to rot from within. And just what rot is this administration trying to hide from the Congress and the American people?

GENERAL HABIGER: Mr. Thomson, thank you very much.

I'd like to call our next speaker, Mr. Manuel Garcia, please.

MR. GARCIA: Thank you. I'm Manuel Garcia. I'm here representing Norm Thomas who was unable to be here. I will read his statement.

However, I am a person in my own right, and I had wished to also address the assembly, and I thought that I was on the schedule to do that.

So without further ado, I will read Norm Thomas' statement, which is quite short and you have a copy of, and then I will read my own, which is also very brief. I think I can do this well within ten minutes.

So first, in the name of Norm Thomas, an employee here for 30 years or so, a member of SPSE, I will read directly from his testimony.

Excuse me. I think that it's pretty clear that we're actually speaking to these people (indicating).

I also think, if I may add one personal comment, in preparing for today's testimony, I was reviewing E-mail that we received that informed us that six polygraphers had already been hired in anticipation of implementing this rule. This affected me very strongly in preparing my comments.

I thought that the purpose of the hearing in anticipation of a rule was to help sway you before making a decision. I personally find it sad -- I'm slightly angry -- that I feel I'm participating in what's essentially a charade because you already have concluded that you are going to proceed with this and that our opinions are of little importance.

I would like to then spin a tour through the ancient days. In Greece -- in ancient Greece about 25 centuries ago, slaves all were considered unreliable witnesses. And so in order to get -- of course, their opinions were of no matter.

And to get testimony from slaves, you had to torture them. This was required through court. If a slave was considered, torture them. And it's a

shame that 25, 30 centuries later, our government views us as a servile class, not to be listened to regarding the process, but, when necessary to extract information of an evidentiary nature, must be essentially tortured.

I think you can see the tenor of my comments. Let me read from Norm first.

NORMAN THOMAS

(As Read By Manuel Garcia)

MR. GARCIA: "My Encounter with Polygraph Testing."

In the spring of 1961, when I was a physics student at a California university studying for the Graduate Record Exam, the chairman of the physics department asked me to help at an American Association of Physics Teachers meeting by running a 16 millimeter movie projector.

When I arrived at the physics lecture hall the next Saturday morning, I found the projector already set up. I threaded the film through and proceeded to show the instructional physics movie.

After the meeting, I rewound the film, returned it to the chairman, left the projector where I had found it, and returned to my apartment.

After my first physics class the following

Monday, I was called into the physics department and asked, "Where did you put the movie projector?" I said, "I left it in the lecture hall." It turned out that the projector could not be found. And so my life for the next two weeks encompassed a series of traumatic encounters with the campus and local police departments.

On Tuesday, the campus police interrogated me under a bright light in a closed room. They asked, "Why did you take the projector?" "Where is the projector?" they asked. My pleas of innocence were ignored.

On Wednesday, I was asked to take a lie detector test which was to be administered at the school's Department of Criminology by the local law enforcement agency. They told me that they could not force me to take the test, but since I had nothing to hide, I agreed to take it.

To my shocked suprise, the polygraph test results were positive. According to the machine, I was a thief, a felon. Now the police investigators knew they had their perpetrator.

In the days that followed, I felt that I was under surveillance. The local police asked if they could visit my apartment. I agreed again knowing

that, since I was innocent, nothing in my apartment could incriminate me.

They immediately followed me into my apartment, apparently so that I wouldn't dispose of any evidence of my crime. They searched every room, cupboard, and closet in my apartment.

Upon closing one closet, they discovered my legally-owned revolver at the top shelf. They took it to a table, examined it thoroughly, and recorded the serial number. Even though they did not find the missing projector, this discovery had apparently confirmed their idea that I was a criminal, now possibly in the possession of other stolen property.

My orderly world was collapsing around me into a chaos at a critical point in my professional career: just before my Graduate Record Exam. I was traumatized.

Finally, after two weeks, on a Monday morning, the department secretary called me to say, "We found the movie projector locked in the chairman's office this morning."

They now knew that no crime had been committed; however, I never received even a letter or even a phone call from the campus police or

local law enforcement agency telling me that my polygraph test had resulted in a false positive indication, nor was there any semblance of an apology ever made to my inconvenience, problems, or terror this false indication caused me, nor was I ever informed that a percentage of polygraph tests will always result in false positives.

But I was most certainly personally informed about what an innocent person giving a false positive during a voluntary, in quotes, polygraph test mentally goes through, and it is an experience I would wish upon no one else.

This incident at the very beginning of my professional career taught me never to trust the results elicited by polygraph machines and their operators.

Today, almost 40 years later, at the climax of my professional career, we face an institutionalizing of polygraph testing at LLNL. From my firsthand knowledge of what can happen when such tests fail, I urge DOE, the University of California, and Lab management to reject the policy of polygraph testing certain Lab personnel or of testing new hires as a condition of employment for certain jobs.

End of quote.

Norman Thomas. September 8, 1999.

He is in the Chemistry and Materials Sciences Department. I wish he could be here. He's better speaking his own words than I am.

MANUEL GARCIA

MR. GARCIA: I will now read my statement.

I've been here 21 years. In 1989, I was at the peak of my career as a Lab employee. I had done an experiment that Dearborn and Thomson might consider useful for nuclear weapons.

I was celebrating the collapse of the Cold War and thinking that finally my family, who had lost the family fortune in Cuba, was reaping some reward for its involvement -- its visceral involvement in trying to do something for freedom.

I now believe that that faith was misplaced.

Statement to the DOE on polygraphs, by Manuel Garcia. My abstract: The value of LLNL will diminish with polygraph.

In your haste to regain your dignity, don't lose your honor.

I believe that SPSE has stated the best course of action which is, quote, open a dialogue with Laboratory workers themselves as to how

security can be improved, end quote.

Intimidating us further is neither an honorable nor an effective substitute for security measures.

Now, the outline of my presentation is the following -- I have three points.

Point one: Polygraph does not address the basic security issues. And three examples: "Physical security of documents." I don't have my briefcase. My briefcase up there has a nice copy of Jonathan Swift, which might be considered seditious literature, might count as classified. But if I wanted to take classified out of this Laboratory, I'd put it in my briefcase, walk out the gate.

Now, if I do this at Cody's Books in Berkeley: ding, ding, ding, ding, ding. Why don't the documents here have little metal detectors that go off? "Best industrial practice" I think is what it's called.

Have physical security. "The physical security of computer networks." I understand that some of our foreign colleagues who work in nuclear weapons have classified offices in classified buildings and unclassified offices in unclassified

buildings. There are no wires between them; no computer security problems. Again, a noteburner.

"Travel disclosures." KGB and other very effective counterintelligence agencies simply interview travelers going on high-risk trips before, during, and after. They don't need polygraphs; they just talk to people.

We are not against security. We are the purpose -- we understand security very well. I understand the misuse of security also.

And, thirdly, perhaps the most important, why not simply reduce the amount of distributed classified rather than increasing the number of people at jeopardy? I mean, the easiest way to keep a secret is not to tell anybody. Right?

So those are sort of three issues on actually addressing the security issues rather than doing this distractional polygraphy.

Second point: "Polygraphy is pseudo-science, and it will cheapen the image of DOE science labs." It is a deterrent to intelligent prospects of which we've heard. It is a deterrent to people of principle whom I claim you have too few of in this Laboratory and certainly in your agency in the government.

Third: "Polygraphy is a degradation of employee and citizen rights." You ask for one-way trust. We have to trust you; you don't trust us.

Let me tell you this: You want to interrogate me without a representative. Interrogation without representation is fascism. I'll say that again in case you didn't hear it. Interrogation without representation is fascism.

DOE lacks credibility as a trustworthy agency. It lacks -- it lacks a response in employee concerns about equity and management accountability and safety. And there's a lack of response in aiding employees suffering reprisals -- witness the Lappa case.

I'm going to give you my three-minute speech.

DOE does not deserve this power. It has failed to listen to employee concerns on equity, mismanagement, safety, and retaliation -- witness the Lappa case now pending.

And there is no reason to believe that it will not abuse this power. Sloppy management, excessive distribution of classified material, racially-tinged and inept securities investigations and a disdain for employee involvement in policy

questions do not add up to a just cause for further intimidation of a productive workforce with a personally invasive pseudo-scientific inquisition.

"Above all else, do no harm," to paraphrase Hippocrates. I do not relish having my body invaded to have my mind raped by a class of latter-day phrenologists and soothsayers.

Do your homework instead. Follow through on gumshoe investigations. Diminish the number of classified documents and networks. Secure them with physical barriers. Interview travelers as needed. These are the measures that unmask espionage.

You are more likely to lose talented people of principle and trample on the rights of unlucky, honest citizens -- people whom you should prize -- than to nab spies or see this intimidated workforce produce anything worth spying on.

The rush to polygraphy is symptomatic of a lack of vision or faith in democratic principles. It is this attitude on your part more than anything else that has precipitated the crises of confidence you now face.

Safeguarding our most personal rights is the fundamental point of national security. If you are

willing to sacrifice that, then you eliminate any moral justification for your agency and its actions.

Now, more for my colleagues than the panel, I'd like to read a quote that I think helps to summarize the situation. I commented earlier to a friend of mine that I have a personal belief and a pessimistic one that it's easier to find brains than backbone here. And I encourage a little calcium supplements because we may need it in the coming days.

> "The great wish of some is to avenge themselves on a particular enemy" -- perhaps those spies -- "the great wish of others is to save their own pocket. Slow in assembling, they devote a very small fraction of the time to the consideration of any public object, most of it to the prosecution of their own objects. Meanwhile, each fancies that no harm will come of his neglect, that it is the business of somebody else to look after this or that for him; and so,

by the same notion being entertained by all separately, the common cause imperceptibly decays."

That's Thucydides, 460-400 B.C., commenting on the decay of democracy in Rome during the Peloponnesian War.

Thank you. That ends my comments. I appreciate the First Amendment.

GENERAL HABIGER: Thank you, Mr. Garcia.

Our next speaker is Kim Yates.

KIM YATES

MR. YATES: Good morning. I'm Kim Yates. I have come and gone a couple of times between this Laboratory and the outside world. I know it still exists. I've got about 13 years here; all together, 14 years, computer scientist and mathematician.

The previous speakers have all been really eloquent and well-prepared, but I'm just going to try to wing it here. We'll see how it goes.

I think this what you've proposed, what the government proposes, is really a poor idea. I think it's going to be ineffective and it's going to be injurious -- injurious not just to the

employees here, but to the Laboratory and to the Department. I think this is a lose/lose situation here.

What the government plans to do is to take literally thousands of people -- these are people who are not accused or suspected of any criminal wrongdoing, no kind of misbehavior -- to take those people one by one and put them in a little room, separated from their family, from their friends, from their co-workers, from any kind of independent representative -- no legal counsel or anything like that -- we're just supposed to trust them that they've got our interests at heart.

Well, excuse me. I don't think so.

This is not only contrary to usual notions that most of us have about American justice and fair play, but the ultimate irony here, too, is that, you know, we are scientists; we are engineers; we are mathematicians. We built our careers on logical proof and hard, objective evidence.

Now we find that our careers are basically up to, well, not those standards. I think we all know that if we proposed any kind of scientific experiment based on the methodology of the

polygraph, we would not be here; we would have no money. You know, this is just absurd.

Okay. We've also been told that if we go into these interrogations with a bad attitude -- exact words -- that things will not go well for us, that the interrogations could go on for hours, days. Who knows? I don't see a time limit to this.

So, to sum up, I just hope that my colleagues will not aide and abet this witch hunt, period.

GENERAL HABIGER: Thank you, sir.

Our next speaker is Mark Mallah.

MARK MALLAH

MR. MALLAH: Thank you.

My name is Mark Mallah. I'm representing myself. And unlike the previous speakers, I am not employed here.

I was special agent of the FBI from 1987 to 1996. And for the majority of that time, I worked in Foreign Counterintelligence, so I am a very strong believer in good internal security.

And I'm here today to say that the polygraph has been tried, has been in use, and has been a

total failure.

I feel particularly strong about this because in 1995, I took a routine counterintelligence scale polygraph, exactly like the ones contemplated here today. And solely because of that polygraph, I was falsely accused of unauthorized contacts with foreign intelligence service.

These polygraph charts and nothing more launched a major investigation of me which lasted about two years or almost two years.

This included 24-hour surveillance, including an airplane buzzing above my house every morning; my home was searched, which I consented to in an effort to demonstrate my innocence; the FBI conducted extensive interviews of my family members, my wife, and many, many friends, some of whom I hadn't seen in 10 and 12 years.

These interviews were highly insinuating, and there were far, far too many details for me to elaborate upon here.

It took me nearly two years -- it took two years to finally clear my name. And throughout those two years, the words of one of the foremost proponents of the polygraph kept ringing in my

ears.

In 1986, he wrote -- and this is David Raskin -- he wrote,

> "A more extreme problem of the same type is inherent in large-scale counterintelligence polygraph screening programs. Even if one accepts a liberal estimate that one percent of the tested individuals are actually spies, 89 to 96 percent of those found deceptive on the polygraph test would be wrongly suspected."

The government would have to spend millions of dollars for field investigations to uncover the mistakes, or, as I like to say, to cover the mistakes.

I would respectfully suggest to you that before investing so much in the polygraph, you demand and insist upon empirical proof of its success.

And before I walked in here today, I was not aware of one single case where a spy has ever been caught by the polygraph. And Dr. Barland mentioned a couple cases to the contrary, and I would urge

you to pay very close attention to that because in my experience, polygraph examiners inflate their own figures, mischaracterize what is an admission, all for the purpose of serving their own industry.

Now, I'm not saying they're lying. But I am saying that they have a strong incentive to shade all the evidence in their favor.

And also be aware that to a polygraph examiner/interrogator, a confession is like a trophy. So the slightest sliver of anything -- anything that can be construed or misconstrued as damaging -- that examiner has a strong incentive to say, "I got an admission; this person was deceptive; here's the proof."

If I were the head of a hostile intelligence service, right about now I'd be throwing a party at the prospect of the Department of Energy employing large-scale polygraphs because I would know that with some training, the polygraph is very easy to beat.

So my spy, I'd put right here. And he would pass the polygraph because all the tests indicate such, and you would have a false sense of security about that. You would think that guy is completely clean.

I would also note that you would be completely diverted in pursuing the wrong people. So you would be completely wasting your energy. All the while the polygraph experts are insisting that those people are deceptive.

And to top it off, the polygraph has zero accountability. If the examiner says someone is deceptive, you launch an investigation and you can't find anything, the polygraph people will tell you, "You just haven't found it; you've got to keep looking."

They're not going to admit that they're wrong, nor would they have any reason to think they're wrong. They don't even know that they're wrong if they are wrong.

And for those people falsely accused, those 89 to 96 percent, according to Dr. Raskin, there is no way for them to prove a negative.

If we had a device that could deliver on the advertised promises of polygraph, I would be all for it. But unfortunately, in 1999 we do not have that luxury.

If you're truly interested in catching spies, I suggest you go back and look on the record of how every spy in this country has ever been

caught. Now, I haven't studied it myself, but to my knowledge, it's been a combination of defectors, sources and family members and other investigative channels. My suggestion would be to study the successful techniques and build on those.

Now, I'm not saying we have to settle for that and we have to freeze ourselves in the past. What I am saying is that using a polygraph machine to help detect national security is nothing more than a delusion which inevitably will result in the same mistakes that were made in my own case and ultimately threaten national security far more than it will protect it.

Thank you.

GENERAL HABIGER: Thank you very much, Mr. Mallah.

I'd like to call to the podium Ms. Jane Dignon.

JANE DIGNON

MS. DIGNON: Good morning.

GENERAL HABIGER: Good morning.

MS. DIGNON: My name is Jane Dignon, and before I go on, I'd like to point out a misspelling of my name. The correct spelling is D-i-g-n-o-n.

GENERAL HABIGER: Thank you, ma'am.

MS. DIGNON: I have been an employee at the Laboratory for nearly ten years, and I came here because I was looking forward to an academic yet promising career working for the U.S. government.

I have a couple of comments I'd like to make. First, I'd like to say that I would express my support for the SPSE statements that were given by Bill O'Connell earlier.

Next, I have a book I'd like to quote two passages from. The title of the book is A Tremor in the Blood, and it's written by Dr. David Lykken. David Lykken is a retired professor of psychology at the University of Minnesota. He's a fellow of the American Association for the Advancement of Science and the American Psychological Association. He's testified on lie detector evidence in many State, Federal, and Military courts, a committee of the British throne, legislative committees of several states, as well as three committees of the U.S. House and Senate.

In 1990 he received the American Psychological Association award for a distinguished contribution to psychology.

The first statement, and I quote,

"The theory and method of polygraphic lie detection are not rocket science. Indeed, they are not science at all. Most of the these techniques were developed by the police or lawyers."

Second quote,

"We have no definitive scientific evidence on which to base precise estimates of the lie detector's validity. But we have enough evidence to say that an innocent person has nearly a 50/50 chance of failing the lie detector test."

When your own expert, Dr. Barland, can't give a conclusive estimate of the accuracy, my concern is that my innocence, my professional career, and my family's livelihood, including my five-year-old daughter, may be dependent on an examination which has no better odds than, say, one in ten -- and some say those odds are actually worse than that.

It's a very, very difficult position you're putting these people in that you trust with nuclear secrets and the country's security. This is

intimidation in its highest form.

GENERAL HABIGER: Thank you for your comments.

I'd like to call next Mr. Lee Busby.

LEE BUSBY

MR. BUSBY: Good morning.

GENERAL HABIGER: Good morning, sir.

MR. BUSBY: My name is Lee Busby, and I'm representing myself.

I'm quite unhappy to be here, but I do appreciate the opportunity to address the panel, and I do appreciate the time and effort that each of you is putting into this process.

I've been a computer scientist at LLNL since 1987 and was employed at UC Berkeley for about three years prior to that. I'm strongly opposed to the imposition of polygraph testing at Livermore and the other laboratories.

The potential for unfair destruction or foreshortening of innocent persons' careers should be considered an unacceptable risk. I believe polygraph testing will instill an atmosphere of intimidation and mistrust that would poison relationships inside the laboratories and cause

irreparable harm to these institutions. The scope, quality, and value of scientific research will all be detrimentally affected.

I believe that human beings share a propensity toward cooperation with our captors. We tend to internalize the customs of our social organizations so that it becomes very difficult to break a rule even in a context where this is obviously harmless and even in the absence of external enforcement.

Polygraph testing is by its nature a powerful force for rule internalization. I suspect this is well known and valued among managers. However, good science depends upon people who have the ability and the willingness to set aside their preconceptions, go beyond accepted limits, and, yes, sometimes even to break the rules, certainly in a metaphorical if not a literal sense.

I'm not suggesting that we have to give away our secrets to do good science here or that good scientists are in any way more likely to become spies. My point is that polygraph testing will encourage, reward, and select for a culture with more boundaries and more internal limitations on right thinking and that this will be devastating to

our scientific mission.

There seems to be little awareness for the changes technology may bring to the field of polygraph testing. Those who favor testing must agree that cheaper and less-intrusive testing would certainly be even better.

Soon it will be possible to put the machinery of a polygraph into a wristwatch, allowing us to carry out round-the-clock, remote monitoring looking for significant responses. We will have software capable of understanding context and content good enough even for espionage, as Mr. David Renzelman put it.

If this seems a bit extreme to you, perhaps we'd only ask our employees to wear their polygraph during foreign travel or while giving a talk at a conference where something might slip out. Surely our secrets are worth such a small inconvenience.

I have read these rules, and I see nothing that would forbid this outcome in the wrong hands. Where will we draw the line?

It is very hard for me to articulate the nature and the depth of my feelings about this proposal. On the most basic level, I feel threatened, intimidated, violated, and I feel

dishonored.

I have always imagined that I have two roles here at the Laboratory. My primary goal is to produce good science. I strive to be an ornament to my profession in every activity and every relationship here and outside the fence. Second, but no less important, is my role to protect those materials and ideas that have been designated "national secrets."

I am greatly honored by the trust our nation places in me. That honor and the mutual trust it is founded upon is central to my job here. This proposal changes the most fundamental aspects of my job. My loyalty is no longer a matter of personal honor; it is a matter of subtle intimidation and coercion towards the corporate definition of that word.

I believe in the existence of the heart of hearts and that the most important struggles in a person's life are essentially private. I believe that the loyalties I feel are ultimately mine alone and that their precise contours are not at so long as my actions meet the standards of my family, my community, my workplace, and my country.

This proposal for lie detector testing is

fatally offensive to the honor I feel for the work I do here. The DOE has taken me to a small room and bared its fangs. I am not surprised to observe how long and sharp they are, but I am gravely distressed and irrevocably disappointed and disillusioned.

GENERAL HABIGER: Mr. Busby, thank you very much for your most sincere input.

Our next speaker is Mr. Tom Harper. Mr. Harper?

Let the record reflect that Mr. Harper is not here.

Do you need a break? Okay.

Ladies and gentlemen, I need a break, so we'll reconvene in ten minutes.

Thank you very much.

(Whereupon, a recess was taken.)

GENERAL HABIGER: Okay. Ladies and gentlemen, let's go ahead and reconvene if we could, please.

Our next scheduled speaker is Marylia Kelley. Marylia Kelley. Ms. Kelley I'll give you one more opportunity. I'll let you come back later if you arrive.

Okay. Our unscheduled speakers. I'd like

to call to the podium Joel Wong. Mr. Wong?

JOEL WONG

MR. WONG: Good morning. My name is Joel Wong. I've been here at the Lab for about 14 years, and I'm speaking on behalf of myself.

My concerns are that -- first of all, I'm concerned about the subjectivity -- subjective interpretation of the polygraph test results, and that it might put unnecessary burden on Asian-Americans and, in particular, Chinese-Americans. Let me explain.

Mr. Paul D. Moore, who was the FBI's chief Chinese intelligence analyst from 1978 to 1998, has a theory, and his theory goes like this: China has managed to slip hundreds of sleepers or agents into our defense industry targeting Chinese-American. All these Chinese agents -- all they have to do is to simply convince the Chinese-Americans who are second or third generation into this country that are in the security or have job security clearance, that all they have to do is to convince them to perceive that they are more Chinese than they are Americans. And they have the duty, a duty somehow, some day, to help their ancestral land.

The Chinese agents often pay their target for the intelligence they produce, thus, they don't leave any trail that can be easily followed. While government and other country intelligence specialists constantly screen their employees for personal situation that might give rise to hostile intelligent exploitation, nobody consider ethnic background to be reliable predictor of an employee's possible covert intelligence activities.

Because of this, the above theory, some FBI agents concluded they have every right and moral duty to suspect every Chinese-American working in science and high-technology area.

If this theory was true, then we can also easily come to the conclusion that Italian-Americans are more prone to be against us, that Irish-Americans are more prone to be terrorists, and that Jewish-Americans are more prone to spy for money. So this is my first concern.

My second concern has to do with Asian cultural traits. More and more Asian-Americans are valuing their own cultural heritage and traits and are holding on to them.

My concern is that the polygraph test

administrators are unaware of their own cultural bias. This may lead to inaccuracy in their interpretation of these tests.

Thank you very much.

GENERAL HABIGER: Thank you very much, sir.

Our next unscheduled speaker, Mr. Richard Sharp.

RICHARD SHARP

MR. SHARP: My name is Richard Sharp. I'm speaking for myself.

Normally I don't like to get involved in things that are more or less political, but I felt I have to go on the record for this issue. Much of what I had to say I think has already been brought up by earlier speakers, so I will just go through the points very quickly.

First of all, there's no such thing as a lie detector test. There's no theory that connects lies and physical responses. There are no adequate studies to support any conclusions of high accuracy.

Lie detector tests are in the same general scheme as cold fusion, astrology, alien abductors. We should not associate DOE's scientific integrity

with this sort of nonsense. They've been shown to be fallible.

We all know that scam artists can lie with impunity and steal people's savings and do all sorts of things like this without any trouble whatsoever.

It is ineffective to screen 5,000 people with something that might be 10 or 20 percent accurate, and, thus, have 500 or 1,000 errors in it to find two or three spies.

They are not -- lie detector tests are not accepted by the courts. There's a lack of due process in this thing. There's no sense of probable cause for such an intrusive process, no sense of what America stands for in doing this sort of thing.

This process could kill recruiting and retention of people such as computer scientists and other areas of high demand. That will hurt the labs very badly, will hurt national security.

This is intimidation. Why not the rack or something else or what Israel just had to admit to?

This is not something I agreed on when I started in this business 30 years ago. If I take this test, it will be under duress. Unfortunately,

I don't have the option to quit. If I were probably three or four years older, I would take this badge and throw it in your face and walk out the door. This is just an insult on me personally. This is the way I feel about this.

This very eloquent talk was brought just a few minutes ago about honor and how to treat people and trust people.

Well, anyway, I think I said what I need to say.

Thank you.

GENERAL HABIGER: Thank you very much, sir.

The final unscheduled speaker we have at this particular point -- but we're going to stay here through the appointed time -- is Mr. Stephen Wofford. Mr. Wofford?

STEPHEN WOFFORD

MR. WOFFORD: Good morning.

GENERAL HABIGER: Good morning, sir.

MR. WOFFORD: My name is Stephen Wofford. I'm speaking for myself today.

I am an assistant archivist in the Laboratory archives here at Lawrence Livermore. I've been at the Laboratory for about 16 and a half

years now. Excuse me.

The prospect of polygraph testing has raised everyone's awareness of the issue of trust. In my personal experience at this Laboratory, it has been of paramount importance to every individual I have dealt with to protect classified information, especially with respect to nuclear weapons.

When I applied for the job here at the Laboratory, I underwent an extensive background investigation. In addition to that, I was asked, and voluntarily agreed, to sign a waiver significantly reducing any right to privacy I may have enjoyed under the law. I don't have a problem with that.

I have a problem with the proposed rule on polygraph testing. It is central to my major concern here today, and that concern is national security.

When I talk about national security in relation to the DOE weapons laboratories, I am talking about the continuing ability of those laboratories to assure the ongoing safety and reliability of the U.S. nuclear weapons stockpile.

I don't want a graduate of Sierra Academy armed with a crescent wrench and a ball peen hammer

doing that work. I want the most highly-qualified, the best available people to do those critical tests.

I greatly fear that, given human nature, the prospect of undergoing polygraph examinations is going to significantly and adversely impact the ability of the weapons laboratories to retain and to attract those highly-qualified people.

I'm deeply afraid that the Department of Energy is preparing to shoot itself in its collective foot here. No one that I know -- not myself, probably no one in the room, probably none of you -- enjoys working in an environment where the explicit message is "You cannot be trusted."

Thank you for your time.

GENERAL HABIGER: Thank you, sir.

Let me again ask if Mr. Tom Harper is in the audience and would like to speak?

Marylia Kelly?

Ladies and gentlemen, that concludes our scheduled speakers and our unscheduled speakers up to this point. The panel will remain in session as advertised until 1:00 o'clock for any other speakers, and then we'll reconvene later this afternoon.

(Whereupon, a recess was taken.)

GENERAL HABIGER: The panel has reconvened, and we have another unscheduled speaker.

Mr. John Hobson, we appreciate you coming by, sir.

JOHN HOBSON

MR. HOBSON: Thank you.

I'm here to express opposition to the proposed lie detector test. In brief, I support the SPSE's statement which has been read into the record earlier this morning.

My primary concern is that it is inaccurate. And one need only pronounce such tests are inadmissible in courts of law, and, therefore, cannot be considered an aid to justice or due process.

I'm also concerned that this proposal is politically motivated. The impetus behind this is the supposed spy at Los Alamos, but the evidence is so scant that supposedly no prosecution is likely. Expert scientists such as Edward Teller, if the newspaper reports I've read are accurate, doubt whether espionage took place.

It is clear elements in the Congress want to

embarrass administration, including DOE, and DOE has then become a pawn in this game. And now you want to continue this game by imposing ineffective testing. To me, this is something out of Nazi Germany or Communist Russia.

And as a life-long, trained scientist, I find lie detector tests as rational as tea leaves, Ouija boards, horoscopes and tarot cards. And just as I don't read my horoscope everyday, I have no intention of submitting to such a test. And if that ends my 27-year career at the Lab as a computer scientist, so be it. And shame on you for disgracing this fine Laboratory in our great country.

Thank you.

GENERAL HABIGER: Mr. Hobson, thank you very much, sir.

(Whereupon, a recess was taken.)

GENERAL HABIGER: Well, we have an unscheduled speaker: Mr. Ed Farley. Is that right, sir?

MR. FARLEY: Correct.

GENERAL HABIGER: Thank you very much.

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MR. FARLEY: I'm representing myself.

GENERAL HABIGER: Certainly.

MR. FARLEY: And having not heard the other speakers, I may be covering old ground, but I'd like to ensure that it is covered.

I've been at Lawrence Livermore for 40 years now, both as a full-time employee and as a retiree part-time. And I consider it an affront to me to have to be subjected to polygraph testing.

I've seen underground tests; I've seen above-ground tests; I've seen just about everything. I am aware that known spies have been caught in lies with polygraph testing. I'm aware that people who consider themselves to be spies to have been caught with polygraph testing. I'm aware that polygraph is considered to be a deterrent to spying; however, I do not know how many people have actually been deterred as a result of polygraph testing.

In summary, I believe that the issue of polygraph testing at the DOE labs is basically the result of the current political climate. I resent the manipulation which I believe happens at the initial interview to disarm and prepare the

interviewees, and I believe that polygraph testing will increase the employee dissatisfaction not only with the DOE, of course, but also Lawrence Livermore and probably the other laboratories.

Thank you.

GENERAL HABIGER: Thank you, sir. I appreciate you coming by.

(Whereupon, a recess was taken.)

GENERAL HABIGER: Mr. Chapline, thank you very much for coming, sir. You are considered an unscheduled speaker, but we're happy to have you here, sir.

GEORGE CHAPLINE

MR. CHAPLINE: Well, I came over, in fact, because someone told me that no one was here; I wouldn't have to wait.

I've worked at the Lab since 1969. I'm a theoretical physicist by training and have worked at various programs in the Lab over the years. I might mention that I'm a winner of the Department of Energy Lawrence Prize for Contributions to National Security.

As I presume with most of the speakers, I am very much disturbed by the polygraph testing

requirement. I feel that -- strongly feel that in the long run this will be very damaging to national security.

I think that by far the most important contribution to national security that can be made by places like Lawrence Livermore National Laboratory is having very bright people work here. And I think this will be a strong deterrent to having very bright people here.

I, incidentally, spoke with a friend of mine who used to work here and now works at the Naval Air Warfare Center at China Lake, and he told me the whole thing was very scary to him, and that, you know, it was a necessary part of being employed there, but that it was certainly nothing he looked forward to.

And so I think that, you know, whatever gains -- and it's not clear to me that there are any significant gains to this procedure in terms of increasing national security -- I think you'll always -- national security will always be dependent mainly on the integrity of the people who work in classified programs.

And counter to that I think is creating an atmosphere of no fear, general -- you know, another

factor as to why, you know, a bright person just getting out of graduate school in the physical sciences, for example, might not want to come and work at a place like this I think is a far overriding factor in terms of the long-range security of the United States.

I think that that should really -- you know, a lot of weight should have been given -- thought should have been given to that aspect of it. I mean, I'm sure that some thought was given to it, but I think that -- that particularly, you know, in a place -- I mean, I appreciate that since the end of the Cold War, you know, the need for cutting-edge research has probably decreased, but I said in the long run, I think that you will always need very bright people working on problems of national defense.

GENERAL HABIGER: Mr. Chapline, thank you very much, sir.

MR. CHAPLINE: Okay.

GENERAL HABIGER: I appreciate you coming by and letting us hear your views.

THE WITNESS: Thank you.

GENERAL HABIGER: Thank you.

(Whereupon, a recess was taken.)

GENERAL HABIGER: Well, ladies and gentlemen, let the record reflect the time is 1300 Pacific Daylight Time. The panel will be released until 1500 hours, two hours from now.

(Whereupon, the hearing adjourned at 1:00 p.m.)

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STATE OF CALIFORNIA)
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I, LETICIA A. RALLS, a Certified Shorthand Reporter in and for the State of California, do hereby certify:

That said hearing was reported by me at said time and place, and was taken down in shorthand by me to the best of my ability, and was thereafter transcribed into typewriting, and that the foregoing transcript constitutes a full, true and correct report of said hearing which took place.

I further certify that I am not of counsel nor attorney for either or any of the parties hereto, nor in any way interested in the outcome of the said hearing.

IN WITNESS WHEREOF, I have hereunder subscribed by hand this 21st day of September 1999.

LETICIA A. RALLS, RPR
CSR NO. 10070