

WASTE, FRAUD, ABUSE, AND MISMANAGEMENT

HEARINGS
BEFORE THE
TASK FORCE ON NATURAL RESOURCES
AND THE ENVIRONMENT
OF THE
COMMITTEE ON THE BUDGET
HOUSE OF REPRESENTATIVES
ONE HUNDRED SIXTH CONGRESS
SECOND SESSION

HEARINGS HELD IN WASHINGTON, DC: MAY 24, JULY 12 & 19, AND
SEPTEMBER 13, 2000

Serial No. 10-4



Printed for the use of the Committee on the Budget

U.S. GOVERNMENT PRINTING OFFICE

WASHINGTON : 2000

64-703cc

COMMITTEE ON THE BUDGET

JOHN R. KASICH, Ohio, *Chairman*

SAXBY CHAMBLISS, Georgia, <i>Speaker's Designee</i>	JOHN M. SPRATT, Jr., South Carolina, <i>Ranking Minority Member</i>
CHRISTOPHER SHAYS, Connecticut	JIM McDERMOTT, Washington, <i>Leadership Designee</i>
WALLY HERGER, California	LYNN N. RIVERS, Michigan
BOB FRANKS, New Jersey	BENNIE G. THOMPSON, Mississippi
NICK SMITH, Michigan	DAVID MINGE, Minnesota
JIM NUSSLE, Iowa	KEN BENTSEN, Texas
PETER HOEKSTRA, Michigan	JIM DAVIS, Florida
GEORGE P. RADANOVICH, California	ROBERT A. WEYGAND, Rhode Island
CHARLES F. BASS, New Hampshire	EVA M. CLAYTON, North Carolina
GIL GUTKNECHT, Minnesota	DAVID E. PRICE, North Carolina
VAN HILLEARY, Tennessee	EDWARD J. MARKEY, Massachusetts
JOHN E. SUNUNU, New Hampshire	GERALD D. KLECZKA, Wisconsin
JOSEPH PITTS, Pennsylvania	BOB CLEMENT, Tennessee
JOE KNOLLENBERG, Michigan	JAMES P. MORAN, Virginia
MAC THORNBERRY, Texas	DARLENE HOOLEY, Oregon
JIM RYUN, Kansas	KEN LUCAS, Kentucky
MAC COLLINS, Georgia	RUSH D. HOLT, New Jersey
ZACH WAMP, Tennessee	JOSEPH M. HOEFFEL III, Pennsylvania
MARK GREEN, Wisconsin	TAMMY BALDWIN, Wisconsin
ERNIE FLETCHER, Kentucky	
GARY MILLER, California	
PAUL RYAN, Wisconsin	
PAT TOOMEY, Pennsylvania	

TASK FORCE ON NATURAL RESOURCES AND THE ENVIRONMENT

GEORGE P. RADANOVICH, California, *Chairman*

PAT TOOMEY, Pennsylvania, <i>Vice Chairman</i>	DAVID E. PRICE, North Carolina, <i>Ranking Minority Member</i>
WALLY HERGER, California	JOSEPH M. HOEFFEL III, Pennsylvania
GIL GUTKNECHT, Minnesota	EDWARD J. MARKEY, Massachusetts

PROFESSIONAL STAFF

WAYNE T. STRUBLE, *Staff Director*
THOMAS S. KAHN, *Minority Staff Director and Chief Counsel*

CONTENTS

	Page
Hearing held in Washington, DC, May 24, 2000: Management Failures at the National Parks	1
Statement of:	
Barry T. Hill, Associate Director, Energy, Resources, and Science Issues, the General Accounting Office	5
Kevin R. Garden, Partner, Saltman and Stevens Attorneys at Law (on behalf of Fred Vreeman, President and CEO, Kings Canyon Park Service Co.)	10
Maureen Finnerty, Associate Director for Operations and Education, the National Park Service	15
Prepared statement of:	
Mr. Hill	7
Mr. Garden	13
Ms. Finnerty	17
Earl E. Devaney, Inspector General, U.S. Department of the Interior	20
<hr style="width: 10%; margin: auto;"/>	
Hearing held in Washington, DC, July 12, 2000: Department of Energy Management Practices—Uncertainties at Savannah, Paducah, and the National Ignition Facility	39
Statement of:	
Dr. Carolyn L. Huntoon, Assistant Secretary for Environmental Management, Department of Energy	41
Brig. Gen. Thomas F. Gioconda, U.S. Air Force, Acting Deputy Administrator for Defense Programs, National Nuclear Security Administration, Department of Energy	59
Gary L. Jones, Associate Director for Energy, Resources, and Science Issues, General Accounting Office	71
Prepared statement of:	
Dr. Huntoon	44
William D. Magwood, IV, Director of the Office of Nuclear Energy, Science and Technology, U.S. Department of Energy	65
Ms. Jones	74
<hr style="width: 10%; margin: auto;"/>	
Hearing held in Washington, DC, July 19, 2000: Fire Safety Failures of the Park Service—Caretaker of the Nation’s Treasures Ineffective in Addressing Hazards	87
Statement of:	
Jim Wells, Director of Energy, Resources, and Science Issues, Resources, Community, and Economic Development Division, U.S. General Accounting Office	89
Maureen Finnerty, Associate Director for Park Operations and Education, National Park Service, U.S. Department of the Interior	95
Prepared statement of:	
Hon. George Radanovich, a Representative in Congress From the State of California	88
Mr. Wells	91

IV

	Page
Hearing held in Washington, DC, July 19, 2000—Continued	
Prepared statement of—Continued	
Ms. Finnerty	97
—————	
Hearing held in Washington, DC, September 13, 2000: Controlling Wildfires in the Future—What Strategies and Resources Are Needed?	119
Statement of:	
Barry T. Hill, Associate Director, Energy, Resources, and Science Issues, the General Accounting Office	125
Randle Phillips, Deputy Chief for Programs and Legislation, United States Forest Service	132
Robert H. Nelson, Senior Fellow in Environmental Studies, the Com- petitive Enterprise Institute, Professor of Environmental Policy, School of Public Affairs, University of Maryland	138
Prepared statement of:	
Mr. Radanovich	120
Mr. Hill	127
Mr. Phillips	134
Mr. Nelson	141
September 20, 2000, memorandum from the Congressional Research Service to Congressman Herger pertaining to Forest Fires and Forest Management	122

Management Failures at the National Parks

WEDNESDAY, MAY 24, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
TASK FORCE ON NATURAL RESOURCES AND ENVIRONMENT,
Washington, DC.

The Task Force met, pursuant to call, at 2 p.m. in room 210, Cannon House Office Building, Hon. George Radanovich (chairman of the Task Force) presiding.

Chairman RADANOVICH. Good afternoon and welcome to the Budget Committee Task Force on Natural Resources and the Environment.

I would like to thank everybody for being here today at the first hearing of this oversight Task Force on Natural Resources. Joining me are Pat Toomey, Wally Herger, and Gil Gutknecht; and David Price, Ed Markey, and Joseph Hoeffel.

I look forward to exploring this Task Force's purview and would like to welcome the people testifying today. If you would like to go ahead and take your positions, we will do that before the opening statement.

I want to welcome Barry T. Hill, Associate Director, Energy, Resources and Science Issues for the General Accounting Office; Kevin R. Garden, Partner, Saltman and Stevens Attorneys at Law, on behalf of Fred Vreeman who is the President and CEO of Kings Canyon Park Service Company; and Maureen Finnerty, Associate Director for Operations and Education for the National Park Service.

Welcome, and I am looking forward to your testimony.

In the next 2 days, tourists from all over the country will be making a run on our national parks, particularly the larger parks that offer lodging. These properties are known as destination properties and have been established in some of the Nation's most breathtaking regions. The visitors headed to these parks for the Memorial Day weekend will be the first among millions of travelers expected this summer. They will be among the first this summer to find what the GAO office has found: substandard lodging that fails to provide some of the most basic comforts. In Sequoia and Kings Canyon National Park, set in the towering Sierra Nevada Mountains and covered by groves of giant Sequoias which have stood for thousands of years, this beauty stands in stark contrast to many of the facilities provided in the park. The guests who will use these public bathrooms will be greeted with eyesores such as mildew, ants, stained shower pans, leaky faucets, spit wads, chipped paint and graffiti, to name a few. Many rooms at Sequoia

and Kings Canyon do not meet some of the most basic standards, lacking telephones, locks on doors, windows, electric outlets, et cetera.

What the GAO found in Sequoia and Kings Canyon is representative of a concessions program within the Department of Interior that lacks uniformity, consistency and accountability.

The General Accounting Office looked at several other parks in addition to Sequoia and Kings Canyon and released a report of their evaluation of the National Park concessions program. The GAO questions the Department of Interior's hiring practices of the concession staff. It also criticizes the staggering backlog of expired contracts, the lack of incentives given to concessionaires to offer quality service, and it highlights the lack of accountability and direct supervision within the concessions program. This report is the focus of our hearing today.

Issues addressed in the GAO report are of particular interest to me. I represent an area of three national parks and three national forests, which brings Federal land ownership in my district up to roughly 65 percent. Consequently, I serve on the Resources Subcommittee on National Parks and Public Lands. Our subcommittee has jurisdiction over many of the same issues that this Task Force will be evaluating, including today's issue of concessions within the national parks. The Parks Subcommittee held a hearing several weeks ago which broadly addressed this issue. I am pleased that we are spending time today to look into these matters more intently, and I appreciate the cooperation of the Resources Committee in our endeavor.

Nearly two-thirds of my district is federally owned. It is difficult enough when such a large segment of my district's tax base has been taken out of commission; these difficulties are compounded by the struggle to ensure honest stewardship of these lands, something that we are not getting from the National Park Service. I am sure that my district shares this struggle with other regions of the United States.

I have been a close observer of the Park Service and concession issues for many years. Like the GAO, I question whether the Park Service is doing what it should to see that optimal services are provided to the visitors of our national parks. That is why we are holding this hearing, which is one in a series to ensure that the Federal Government is operating in the best interests of the people.

The Budget Committee is responsible for providing a blueprint for how our Nation spends \$1.7 trillion annually. The Chairman has therefore created several Task Forces to evaluate how Federal money is spent and to ensure that this money is spent wisely. Our goal is to make sure that the government agencies will eventually operate effectively in the administration of the public trust which includes public lands.

Though concessions operations are businesses, they exist to provide needed services to people visiting public lands. The quality of the national park visitors' experience hinges greatly on the quality of the parks' food, lodging, shopping and other facilities provided by the concessionaires, making them part of the public trust.

In an effort to improve concessions, Congress has provided several new funding sources for the parks in recent years. We have

also given more latitude to park superintendents with the hope that it would result in needed improvements to concessions.

But what has been done to satisfy the basic needs of visitors in our national parks? The evidence that we have seen from the GAO, the Inspector General, and the Park Service shows that improvements are not happening, and that they have not been happening despite repeated notices over the past 10 years.

I would like to draw your attention to the chart to my right. I want to make the statement that the GAO has also shared some compelling information about concessions contracts. According to the report, there was no training required for those who wrote the \$765 million in contracts in 1998. Furthermore, there was no continuing education requirement for those who write the contracts and no experience required for writing \$1 million contracts. This does not make for good administration of the public trust.

To shed some light on the problems with the concessions program, we will be hearing today from Mr. Barry Hill, Associate Director of Natural Resources for GAO; Kevin Garden, who will be testifying on behalf of Fred Vreeman, President and CEO of the Kings Canyon Park Service Company; and Maureen Finnerty, Associate Director for Operations and Education for the National Park Service.

We will start with Mr. Hill who will testify on the recent GAO report outlining the many deficiencies within the concessions program. These deficiencies have been illustrated consistently over the last 10 years in reports by the GAO, the Inspector General and the Park Service itself.

Next, Mr. Garden will speak to Mr. Vreeman's experience with the National Park Service since entering into a concessions contract with them 4 years ago. In that time, Mr. Vreeman has witnessed firsthand the inconsistencies within the Park Service concessions program. Mr. Garden will tell you that had the Park Service adhered to the contract and acted in a timely manner, the lodging facilities at Sequoia and Kings Canyon National Parks would currently be quite suitable. Finally, we will hear from Ms. Finnerty who will share her thoughts on the GAO report.

The Park Service has responded to this report by outlining some of the changes to the concessions program they are pursuing. These changes include reforms under the 1998 Concessions Act, the implementation of performance-based contracting, and staff changes designed to address problems with management. These reforms all sound viable, although we have yet to see them enacted. It is safe to conclude from what we know of the GAO report, the Park Service's response to the report, and the experience of concessionaires, that there are major shortcomings in the concessions program. We can further conclude that these shortcomings are the result of a lack of diligent oversight and a standard of accountability.

I am looking forward to hearing from each of the witnesses on ways they think we can address these problems. The GAO report on National Parks' concessions illustrates that the program is disjointed and plagued with inconsistency. Whether a visitor's experience at a destination park will be an enjoyable one or a poor one, particularly as it relates to lodging, is the luck of the draw. This is because of the lack of commitment and oversight within the con-

cessions program. The concessions operation is weighed down by poorly-trained officials and suffers from a lack of accountability, and the visitors to these parks suffer as a result.

Destination parks are the crown jewels of our national park system. The government has taken the responsibility for this land in the interest of ensuring that it will be enjoyed by all. It is incumbent upon the government to make sure that guest services in the parks are run efficiently, effectively, and that is clearly not happening. I hope that this hearing will steer us in the direction of improving the concessions operation and thereby the visitor's experience at our national parks.

Before we hear from the witnesses, I would certainly like to yield to Mr. David Price from North Carolina to make an opening statement.

Mr. PRICE. Thank you, Mr. Chairman. I don't have a formal opening statement, but I would like to add my word of welcome to our three witnesses, and I anticipate their testimony with great interest. We, of course, want to make certain that our National Park Service is operating in a way that is welcoming to guests and that reflects good stewardship of Federal dollars. There are some elements in this GAO report that I look forward to hearing addressed by those who know the report well and also those who are attempting to respond to it within the Agency.

We have set up these Task Forces on the Budget Committee under the assumption that there is going to be some waste and fraud to be identified in various operations of government, and I am sure that is true; but I expect also—and today may be one of those days—that we will come across some of the problems associated with underfunding or inadequate support for various services that our agencies render and we need to know about that as well. Are the staffing levels adequate? Is the mix adequate? Are the contract terms that the Park Service is able to offer to concessionaires, are those adequate? In what ways can we, through funding and other mechanisms, address these problems? To what extent are they already being addressed, and what can we do to help?

I hope that we can approach today's hearing in that kind of constructive spirit because these are challenges that we ought to be able to address, and I think with sufficient goodwill and determination that we can do so.

Welcome, and I look forward to your testimony.

Chairman RADANOVICH. Thank you very much, Mr. Price.

I would ask unanimous consent that all members be given 5 days to submit written statements for the record. Without objection, so ordered.

I would like to begin by introducing Mr. Hill. Welcome to the committee and please—I think the way that we will do this, everybody will be given 5 minutes to make their statement and then we will open up for questioning with the panel after Ms. Finnerty. Thank you.

STATEMENT OF BARRY T. HILL, ASSOCIATE DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, THE GENERAL ACCOUNTING OFFICE

Mr. HILL. Thank you, Mr. Chairman and members of the Task Force. It is certainly a pleasure to discuss the management of the Park Service's concessions program; and if I may, I will briefly summarize my prepared statement and submit the full text of my statement for the record.

My comments today are based primarily on two reports. The first report, which we issued in August 1998, reviewed the condition of lodging facilities in 10 national parks. The second report, which we issued in March of this year, addresses key management problems in the concessions program. Both these efforts found that the condition of these lodging facilities varied considerably from park to park and was at times quite poor, as illustrated by the pictures that appear to the right of me. If you look to the picture to my immediate right, it shows exposed wiring in public bathroom and shower facilities at the Sequoia-Kings Canyon National Park. And the picture to the left of that shows poor conditions of drinking water and shower facilities at the Death Valley National Park.

Before I discuss the problems we found and options for correcting them, let me provide some background on the Park Service's concession program. Concessionaires play a significant role in providing services to many of the over 270 million visitors who annually visit the Park Service system. In 1998, the latest year for which data are available, 630 concessionaires provided visitor services in many of the 379 park units located across the Nation.

These concessionaires generated \$765 million in revenues of which \$479 million, almost two-thirds, came from the 73 concessionaires that provide lodging. Our most recent report disclosed shortcomings in the agency's overall approach to managing its concessions programs, and these shortcomings center on the following three areas: First, the inadequate qualifications and training of the agency's concession specialists and contracting staff; second, the agency's out-of-date practices in handling its contracting workload as well as its chronic backlog of expired contracts; third, a lack of accountability within the concessions program.

For the most part, these problems are long-standing and, as you pointed out in your opening statement, Mr. Chairman, are consistent with similar concerns raised by the Department of Interior, the Office of the Inspector General, and the Park Service concession staff.

Let me discuss each problem starting with the staff qualifications and training issue. Concerns about the qualifications and training of the Park Service's concession staff have been raised in numerous studies as far back as 1990. The chart to my right lists several notable reports and other documents that discuss these concerns over the past 10 years.

Primary concerns disclosed by these documents center on the agency's concession staff not normally having the business, financial, and contracting backgrounds needed to successfully carry out the concessions programs.

Despite these disclosures, in the last 10 years the Park Service has made only limited progress in addressing these concerns. Spe-

cifically, the agency has made little effort to professionalize its work force by hiring staff with education or experience in business or hospitality management. Instead, it has chosen to fill concessions positions by internally transferring staff out of other career fields rather than seeking to professionalize the work force. The chief concessions official in one regional office said the agency has taken the view that “anyone can do concessions.” Our work indicates that this comment typifies the agency’s approach to managing its concessions program.

In addition to problems with the qualifications and training of its staff, the Park Service’s concessions contracting practices are out-of-date, and do not reflect the best practices of the Federal Government, the private sector, or even other contracting programs within the agency.

For example, contracting staff in other agencies throughout the Federal Government are encouraged to write contracts that are performance-based, meaning that the contracts contain incentives for good performance and disincentives for performance that falls below expectations. However, the agency’s concessions program is not using performance-based contracts and had no plans to do so.

Furthermore, for about 10 years the agency’s has had difficulty addressing its contracting workload in a timely manner, resulting in chronic backlogs of expired concessions contracts.

The third major management issue affecting the concessions program is a lack of accountability. Under the agency’s organization structure, the head of the program, the chief of concessions, has no direct authority over those that implement the program in individual park units. Thus, the organizational structure of the agency limits the impact that the head of the program or other central offices can have on its ultimate success. This structure relies on regional directors holding park superintendents accountable for the results of their parks’ concessions programs. However, concessions officials in the Park Service’s headquarters in the two largest regional offices indicated that this is not occurring.

Further contributing to this lack of accountability is the fact that there is no process in place for headquarters or regional staff to ensure that park concessionaires are meeting the agency’s minimum acceptable standards or that the standards are being consistently applied, such as using independent inspections that are common in the private hotel/motel industry.

We believe that the Park Service has two principal options available for dealing with the problems identified in the management of its concessions programs: First, using better hiring and training practices to professionalize the work force and thus obtain better business and contracting expertise; and/or, second, contracting for the needed business and contracting expertise.

Regardless of which option or combination of these options it selects, the Park Service will need to strengthen its accountability for and control of the concessions program. Unless changes are made to better link the concessions program at the park level with the agency’s leadership of the concessions program, the impact of efforts to improve the program through the suggested options will be reduced.

In closing, Mr. Chairman, while the Park Service's concession program continues to affect the experience of millions of park visitors each year, the management of the program continues to be plagued by some of the same problems it faced as many as 10 years ago. Until the agency takes action to address these management problems, it will continue to struggle in managing the performance of concessionaires to ensure that these operators consistently provide high-quality facilities and services to park visitors. That concludes my statement and I would be happy to answer any questions you may have.

Chairman RADANOVICH. Thank you, Mr. Hill.

[The prepared statement of Barry T. Hill follows:]

PREPARED STATEMENT OF BARRY T. HILL, ASSOCIATE DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, RESOURCES, COMMUNITY, AND ECONOMY DEVELOPMENT DIVISION, THE U.S. GOVERNMENT ACCOUNTING OFFICE

Mr. Chairman and members of the committee, we are pleased to be here today to discuss the management of the Park Service's concessions program. Our comments are based primarily on two reports. The first report, which we issued in August 1998, reviewed the condition of lodging facilities in 10 national parks. The condition of these facilities varied considerably from park to park and was at times quite poor.¹ The second report, which we issued in March 2000, addresses key management problems in the concessions program and options available to address them.²

In summary, our most recent work shows the following:

We found shortcomings in the agency's overall approach to managing the concessions program that center on three areas:

1. The inadequate qualifications and training of the agency's concessions specialists and concessions contracting staff;
2. The agency's out-of-date practices in handling its contracting workload as well as its chronic backlog of expired contracts; and
3. A lack of accountability within the concessions program. For the most part, these problems are longstanding and are consistent with similar concerns raised by the Department of the Interior, its Office of the Inspector General, and Park Service concessions staff.

The Park Service has two principal options available for dealing with the problems identified in the management of the concessions program: First, using better hiring and training practices to professionalize the workforce and thus obtain better business and contracting expertise or second, contracting for the needed business and contracting expertise. These two options are not mutually exclusive in that the agency could contract for expertise in certain functions while developing the expertise in-house for other functions. No matter which option—or combination of options—it selects, the agency needs to strengthen its accountability for and control of the program. Unless this is done, the effectiveness of other changes to the program will likely be diminished.

BACKGROUND

Concessioners play a significant role in providing services to many of the over 270 millions visitors who annually visit the national park system. Concessioners, which are private businesses operating under contracts with the Park Service, provide facilities and visitor services such as lodging, food, merchandising, marinas, and various guided services. In 1998, the latest year for which data are available, 630 concessioners provided visitor services in many of the 379 park units located across the nation. These concessioners generated about \$765 million in revenues, of which about \$479 million (almost two-thirds) came from the 73 concessioners that provide lodging.

For many years, concerns have been raised by the Congress, the Park Service, and GAO about the need to reform existing concessions law and better manage the agency's concessions program. In November 1998, the Congress enacted a new con-

¹National Park Service: The Condition of Lodging Facilities Varies Among Selected Parks (GAO/RCED-98-238, Aug. 6, 1998).

²Park Service: Need to Address Management Problems That Plague the Concessions Program (GAO/RCED-00-70, Mar 31, 2000).

cessions law as part of the National Parks Omnibus Management Act of 1998. One of the Congress's intentions was that the new concessions law would increase competition in the award of new concessions contracts. In addition, the law established an advisory board whose mission was to advise the Secretary of the Interior on improvements the agency could make in managing park concessioners. The problems that we addressed in our report, and are discussing today, are management problems which will persist even under the new law unless the agency takes actions to make improvements.

LONGSTANDING MANAGEMENT PROBLEMS AFFECT THE CONDITION OF LODGING FACILITIES

Concerns about the qualifications and training of the Park Service's concessions staff have been raised several times since 1990 by the Department of the Interior's Office of the Inspector General and the agency's own staff. (App. I lists several notable reports and other documents that discuss these concerns.) The primary concern raised was that the agency's concessions staff do not normally have the business, financial, and contracting backgrounds needed to successfully carry out the concessions program. The Park Service has made only limited progress in addressing these concerns. The agency has made few efforts to professionalize its workforce by hiring staff with education or experience in business management or hospitality management. Instead, it has filled concessions positions by internally transferring staff out of other career fields. Once transferred, the agency's concession staff receive only limited training. A more qualified and better-trained workforce would have a better understanding of industry trends, best practices, and the tools needed to effectively manage concessioners. Rather than seeking to professionalize the workforce, the chief concessions official in one regional office said, the agency has taken the view that "anyone can do concessions." Our work indicates that this comment typifies the agency's approach to managing its concessions program.

In addition to these problems with the qualifications and training of its concessions staff, the Park Service's concessions contracting practices are out-of-date and do not reflect the best practices of the Federal Government, the private sector, or even other contracting programs within the agency. For example, contracting staff in other agencies throughout the Federal Government are encouraged to write contracts that are performance based—meaning that the contracts contain incentives for good performance and disincentives for performance that falls below expectations. However, the agency's concessions program is not using performance-based contracts, and, according to several senior Park Service concessions program officials, has no plans to do so. Furthermore, for about 10 years, the agency has had difficulty addressing its contracting workload in a timely manner, resulting in chronic backlogs of expired concessions contracts. Many concessions contracts expired 5 to 10 years ago, and concessioners have since been operating on 1- to 3-year contract extensions. These expired or extended contracts contribute to the varying condition of lodging facilities because concessioners operating under short-term contract extensions, or nearing the end of their contracts, are less likely to invest in their facilities to make needed capital improvements.

The third major management issue affecting the concessions program is a lack of accountability. While the Park Service, like other Federal agencies, is trying to improve accountability and program performance in response to the Government Performance and Results Act (GPRA) and other related initiatives, the concessions program is an area where these efforts need to be improved. Under the agency's organizational structure, the head of the program—the Chief of Concessions—has no direct authority over those that implement the program in individual park units. Thus, the organizational structure of the agency limits the impact that the head of the program or other central offices can have on its ultimate success. This structure relies on regional directors holding park superintendents accountable for the results of their parks' concessions programs. However, concessions officials in the Park Service's headquarters and two largest regional offices indicated that this is not occurring. Specifically, they acknowledged that superintendents are not being evaluated on the results of their concessions programs. Further contributing to this lack of accountability is the fact that there is no process in place for headquarters or regional staff to ensure that park concessioners are meeting the agency's minimum acceptable standards or that these standards are being consistently applied. In the private hotel/motel industry and the Department of Defense—which manages similar activities—independent inspection teams are used to determine the condition of facilities and services being provided to the public. The Park Service does not have such teams. As a result, Park Service management has no systematic way of determining

what, if any, problems are occurring throughout the agency; whether corrective actions are necessary; or whether new initiatives are warranted.

OPTIONS ARE AVAILABLE TO ADDRESS PROBLEMS IN MANAGING THE CONCESSIONS PROGRAM

Two options are available to the agency to deal with the problems identified in its management of the concessions program: First, professionalize the workforce to obtain better business and contracting expertise or second, contract for the needed business and contracting expertise.

The first option focuses on improving the skills and abilities of the Park Service's concessions staff by changing the agency's hiring practices and upgrading its training. Rather than filling concessions positions with staff transferred from other career fields within the agency, the Park Service could hire staff with backgrounds or education in hospitality and/or business management. By doing so, the agency would gradually develop greater in-house expertise in managing concessioners in a more businesslike manner. In addition, the agency could upgrade the training of its concessions contracting staff so that they were as well qualified as other agency contracting staff outside the concessions program. As it is now, the Park Service staff responsible for administering procurement and acquisition contracts receive far more training than their counterparts in the concessions program.

The benefit of pursuing this option would be that the agency could develop a more qualified, better-trained, and professionalized workforce. However, the agency's past record in taking action to address these issues is not encouraging. Many of the concerns we have raised in this report about the qualifications of concession staff have been raised repeatedly over the past 10 years by the Department of the Interior's Inspector General and by several different departmental or agency task forces. Several times over this period, the Park Service has generally agreed that it needs to professionalize its concessions workforce. However, as our work indicates, the agency has not made significant progress in this area.

Alternatively, the Park Service could contract for the expertise it needs to operate its concessions program. Contractors could be hired to handle a number of financial and business-related tasks, such as planning, writing contract prospectuses, performing financial analysis, assisting with contracting, and evaluating the performance of concessioners.

Contracting for business-related staff would have several benefits. For example, through contracting, the agency could obtain a highly qualified workforce in a short period of time. In addition, the agency would gain some workforce flexibility because it could adjust the number of staff needed to fit the size of its upcoming workload. Contracting would allow the agency to bring more staff on to handle its backlog of expired and expiring concessions contracts and to reduce the number of contractor staff when the workload is diminished.

Furthermore, contracting for certain functions has the potential to improve the program's performance as well as reduce its costs. For example, traditionally, one responsibility of park concessions staff was to conduct inspections of the concessioners' facilities and operations. These inspections can be subjective, and the application of standards can vary from park to park. If the agency centralized and contracted for this function, it could perhaps perform inspections with fewer people and yet achieve greater consistency across the agency.

While contracting has the potential to reduce some costs in the concessions program, it could also increase some costs, particularly in areas where the agency would contract for larger numbers of highly skilled staff than it currently maintains. However, some of these increased costs could be mitigated by centralizing certain functions, such as inspections. In addition, the increased costs could be mitigated by reducing the number of agency staff in the concession program.

The two options available to the Park Service for dealing with its concessions management problems are not mutually exclusive, in that the agency could contract for expertise in certain functions while developing expertise in-house for other functions. These options are principally focused on improving the agency's management of its largest concessioners—most of which are lodging concessioners. In our view, once the agency has made changes in the concessions program to address its largest concessioners, the benefits of additional expertise—whether acquired through hiring, training, or contracting—are likely to cascade down to improve the management of its smaller concessioners.

Finally, regardless which option or combination of options it selects, the Park Service will need to strengthen its accountability for and control of the concessions program. Unless changes are made to better link the concessions programs at the

park level with the agency's leadership of the concessions program, the impact of efforts to improve the program through the suggested options will be reduced.

In closing, while the Park Service's concessions program continues to affect the experiences of millions of park visitors each year, the management of the program continues to be plagued by some of the same problems it faced as many as 10 years ago. For the most part, these management problems are well documented and well known. In fact, the agency generally agreed with the findings and recommendations in our report. However, until the agency takes action to address these management problems, it will continue to struggle in managing the performance of concessioners to ensure that these operators consistently provide high-quality facilities and services to park visitors. To address these problems, our March 2000 report recommended that the agency first, either improve the qualifications of its own concessions staff, contract for these services, or engage in some combination of the two; and second, improve the accountability of park managers by establishing a formal process for performing periodic independent inspections of concessioners' lodging operations throughout the park system and reporting the findings to the head of the agency for corrective action.

This concludes my statement. I would be happy to answer questions from you or other members of the committee.

APPENDIX I.—NOTABLE REPORTS AND MEMORANDUMS THAT RAISE CONCERNS ABOUT THE QUALIFICATIONS AND/OR TRAINING OF PARK SERVICE CONCESSIONS STAFF

Source and date of report/memorandum	Concerns raised by report/memorandum
Report of the Task Force on National Park Service Concessions, U.S. Department of the Interior, Apr. 9, 1990.	Concessions staff do not normally have the business, financial, and contracting backgrounds needed to successfully carry out the concessions program.
Follow-up Review of Concessions Management, National Park Service, Report No. 90-62, Office of the Inspector General, U.S. Department of the Interior, April 1990.	Agency staff working in concessions do not have sufficient educational backgrounds to perform their work well. The report recommends improving the qualifications of staff working in the concessions field.
Report of the Concessions Management Task Force, U.S. Department of the Interior, Nov. 4, 1991.	This report recommends that all agencies within the Department recruit staff for their concessions programs with a basic knowledge of business, including such subjects as contract law and administration, hotel/restaurant management, and financial management.
Memorandum from the Director of the Park Service on Personnel Staffing for National Park Service Concessions, Jan. 12, 1994.	The agency needs more concessions staff with education or experience in business, accounting, business law or the hospitality industry. To recruit qualified staff, the Director suggests that the agency look for candidates outside the government.
Park Service concessions work group, June 1994—findings reported in Concession Careers Future Task Force Report, National Park Service, Oct. 97..	The agency needs to develop a recruitment program, enhance training and development, and improve career development.
Concessions Management Curriculum Task Force Report, National Park Service, Sept. 1995.	The concessions management program has failed to give its employees the training they need to manage the complex concessions program. A systematic, comprehensive employment development program is needed.
Concession Careers Future Task Force Report, National Park Service, Oct. 1997.	This report outlines a series of human resource management processes and recommendations to strengthen and professionalize the staff needed to effectively manage concessions.

Source: GAO's compilation of agency documents.

Chairman RADANOVICH. We will hold questions until testimony is given by all three witnesses.

Mr. Garden.

STATEMENT OF KEVIN R. GARDEN, PARTNER, SALTMAN AND STEVENS ATTORNEYS AT LAW (ON BEHALF OF FRED VREEMAN, PRESIDENT AND CEO, KINGS CANYON PARK SERVICE CO.)

Mr. GARDEN. Thank you, Mr. Chairman and members of the committee. I appreciate and thank you for the opportunity to tes-

tify before you today. My name is Kevin Garden. I am an attorney with Saltman and Stevens here in Washington, D.C. and I am before you representing Fred Vreeman who is the president of Kings Canyon Park Services. Mr. Vreeman was unable to make the necessary travel arrangements to be here.

In my testimony I am going to discuss some of the specific experiences that Kings Canyon has had in the last 4 years in operating a concessions contract it has at Kings Canyon. It is my hope in discussing his experiences, I will help you better identify the problems with the current administration of the Park Service's concession program, as well as the solutions to those problems.

To give you some brief background, Kings Canyon Park Service owns and operates various lodging facilities in Kings Canyon National Park, as well as Sequoia National Forest which is run by the U.S. Forest Service. They signed a contract back in October 1996 for a term of 15 years. The contract specifically called for a construction phase in the first 5 years of the contract and an investment by the contractor of \$3.8 million. This period is very critical to the contract because the remaining 10 years are then available to recoup the investment that the contractor makes. The economic viability of the contract in fact is dependent upon this construction period being maintained.

When Kings Canyon Park Service entered into its contract, it intended to complete the construction and remains today intending to do so, and has the financial wherewithal to do that. However, in the 4 years it has been operating its concessions contract, it has been continually frustrated by National Park Service delays in completing tasks needed to complete this construction, a lack of cooperation on the part of the National Park Service, which is critical to performing a contract of this nature as well as being a fundamental contracting responsibility, and inconsistent evaluations and directions from various members of the Park Service.

The reasons for these problems and frustrations is the NPS' lack of a staff knowledgeable with what is specifically going on under this contract, and a lack of awareness of the financial impact of the Park Service's actions on a concessionaire that is trying to maintain a viable operating business.

Kings Canyon believes, as Mr. Hill referred to, that the key to solving these problems is holding the Park Service accountable for its actions. The GAO report focused on holding the various parks accountable to the agency overall. Well, Kings Canyon would also suggest that the Park Service be held accountable to its contractors.

As to the delays I mentioned, probably the most significant one for Mr. Vreeman at Kings Canyon has been the fact that the contract, as I mentioned, called for construction. This was the demolition and reconstruction of various facilities in the park. This included some bathhouses and cabins which are mentioned in the GAO report. In order to do this construction, Kings Canyon needed the Park Service's approval. The Park Service, once this construction was proposed, informed Kings Canyon that an environmental assessment was required under NEPA. However, the Park Service also informed Mr. Vreeman that the Park Service did not have the staff to complete this EA, and if they wanted it done in a timely

manner they would have to do it themselves, so Mr. Vreeman undertook this responsibility, which was not originally set forth in the contract.

Kings Canyon submitted the EA in January 1999 and they repeatedly tried to get the—excuse me, the Park Service repeatedly tried to get Kings Canyon to include in the EA various alternatives which were inconsistent with the specific requirements in the contract. Mr. Vreeman did not want to do that but he did. He was essentially being asked to write an alternative contrary to what he had contracted for back in 1996.

He did not get a final response on the proposed alternative that was consistent with his contract until April of 2000, 18 months later. When that response came, it was a denial of the EA. However, the frustration he felt was that the basis for the denial was based on facts that were known to the Park Service back in January 1999 when he originally submitted the EA. Had the Park Service operated in an efficient and prompt manner, they could have told him of their decision sooner, thus making sure that he could do a better job of maintaining that 5-year construction window.

I referred earlier to a lack of cooperation, and probably the most significant example of this involves an incident with the State Preservation Historic Office of California, also known as SHPO.

When the contract was first obtained by Kings Canyon, the SHPO office had reviewed the various facilities on the park and indicated that they were not eligible for historic status. In fact, they did this twice. However, after performance began, apparently the Park Service, from Mr. Vreeman's understanding, had destroyed some historic structures elsewhere in the park without consulting with SHPO, and also wanted to take down some additional historic structures. Therefore, they were looking to curry favor with the SHPO office.

As a result, they affirmatively went to the SHPO office and identified for them certain facilities that were intended to be demolished and reconstructed under the contract and asked that those be found eligible for historic status. The critical fact was now an environmental assessment was required to do the construction. This was not anticipated originally in the contract and was brought about solely by the Park Service's affirmative actions.

I believe this shows a fundamental misunderstanding of their contractual obligations; i.e., the obligation to cooperate. To take this kind of affirmative action which frustrates the contractor is inconsistent with that obligation. I believe that ties in with the GAO comments on the lack of training in contract matters that the Park Service personnel have. This is a fundamental contracting responsibility that any contracting officer in the Department of Defense would be aware of. But from all respects and all evidence we have, the Park Service has no understanding of this responsibility.

I just want to give you some examples of some of the inconsistent evaluations that Kings Canyon has endured. For example, they recently painted some of the rooms in one of their lodges and remodeled the rooms. A Park Service inspector stated that the paint job in the rooms was unacceptable and had to be redone. Kings Canyon didn't agree with that and contacted the superintendent's office and

a second inspector came along and stated that the paint job was great.

Another example is that they have an employee housing unit in the park built in the 1930's. The wiring, of course, in that unit is quite out of date. An inspector came along one day and informed Mr. Vreeman he had to rewire the building to make it consistent with the current UL Code. This made no sense to him. He has a construction background and he contacted the superintendent's office and a second inspector came out and informed Mr. Vreeman that in fact he was correct; the wiring did not have to be redone because the building had been built prior to that code coming into effect.

I have a few more examples, but they run along the same strain so I don't want to take any further time. Again, thank you for your time and I am happy to take any questions that the committee members may have later.

Chairman RADANOVICH. Thank you, Mr. Garden.

[The prepared statement of Kevin R. Garden follows:]

PREPARED STATEMENT OF KEVIN R. GARDEN, PARTNER, SALTMAN AND STEVENS ATTORNEYS AT LAW, ON BEHALF OF FRED VREEMAN, PRESIDENT AND CEO, KINGS CANYON PARK SERVICE CO.

It is an honor to appear before this task force. I hereby submit this written testimony on behalf of Fred Vreeman, President of Kings Canyon Park Services (KCPS). KCPS is currently a concessioner with the National Park Service and operates lodging and other facilities in Kings Canyon National Park and Sequoia National Forest.

I am Kevin Garden and am appearing on behalf of Mr. Vreeman. Mr. Vreeman is disappointed that he could not make the necessary travel arrangements to be here in person.

BACKGROUND

KCPS is a small family-owned business. In 1996, it was awarded its current contract with the NPS and took over the facilities in Kings Canyon National Park which were run-down and long overdue for replacement. KCPS also agreed to help the NPS complete services to the public for 2 years in the Giant Forest in Sequoia National Park. This area was scheduled for upcoming demolition when KCPS assumed its responsibilities. Because of the run-down nature of the Giant Forest facilities and their pending demolition, completion of these services resulted in significant financial loss to KCPS. Notwithstanding this loss, NPS acquired a Government Improvement Fund of nearly one million dollars as a result of KCPS's efforts. The enticement was placed in front of this family business that it would be able to recoup its losses incurred in operating the Giant Forest facilities under its operation of the concessions contract in Kings Canyon National Park.

However, since competing for and obtaining its current contract to provide lodging and other services in Kings Canyon National Park, KCPS has not been able to operate profitably. This unprofitable status is the direct result of NPS actions which have delayed the construction of new and improved facilities which were identified in the contract at the time KCPS bid for and obtained it. Moreover, the construction phase of the contract has to be completed within the first 5 years (i.e., by 2001) in order for the contract to be profitable. As of the present date some three and one-half years after contract award, significant construction has not taken place contrary to KCPS's intentions and many of the old, deteriorated facilities, some of which are highlighted in GAO's report, still remain despite the efforts of KCPS to demolish them and replace them with new, attractive buildings. In addition, KCPS has incurred unnecessary expenses due to the NPS's inconsistent administration of the Kings Canyon concessions contract. These delays and expenses are the direct result of the NPS's improper management of KCPS's contract.

UNEXPECTED DEVELOPMENT EXPENSES

When KCPS and the NPS signed the long-term contract for concessions services at Kings Canyon National Park, the contract authorized construction of 58 addi-

tional rooms and the replacement of dilapidated and worn out facilities. In the Request for Proposal (RFP), NPS represented to KCPS that, based on the information it was aware of at the time of award, compliance with the National Environmental Policy Act (NEPA) for purposes of this new construction was complete. NPS made these assurances because it was aware, as is any contractor, that compliance with NEPA's requirements is time-consuming and expensive. The construction work called for under the contract was consistent with the Park's Development Concept Plan, which was finalized in 1987. However, now that the contract has been awarded and notwithstanding its prior representations, the NPS is imposing new requirements for NEPA compliance which were not assumed by KCPS under the contract and are not due to any new environmental information.

The NPS has suspended construction activities while it reviews environmental studies which were completed pursuant to NEPA and relevant to the actions which had been clearly set forth under the original contract. As to these actions, NPS had represented that all NEPA compliance had been accomplished. However, no new significant information or changed circumstances related to the environment have occurred since the contract was awarded. Rather, the delay is due to admitted lack of staffing needed to promptly review the completed environmental analysis.

In addition to this action significantly delaying the critical construction phase under the contract, the NPS also informed KCPS that it wanted KCPS to prepare the environmental analyses, at its own expense. KCPS has been told that this is necessary because the NPS does not have the funds or personnel available to accomplish this task. Pursuant to NPS's request, KCPS drafted extensive portions of the environmental compliance documents. However, the NPS refused to edit or review them in a timely manner and continues to insist that KCPS include additional new development alternatives that are not economically viable or consistent with the terms of the contract.

The resulting delays have created unexpected loss of revenue that was not anticipated when the contract was awarded. Additionally, the added expense of preparing the environmental analyses was not anticipated or planned for in KCPS's economic assessment at the time it bid for the contract. The true cause of these delays is not any substantive new environmental issue, but rather an inability by the NPS to efficiently complete the necessary environmental reviews.

CONSTRUCTION INSPECTION AND APPROVALS

After development plans are approved, but before KCPS or any contractor can proceed with construction in the National Parks, it must obtain NPS approval. Simply put, the necessary approvals at each stage of the construction process are slow, inconsistent and expensive. KCPS has found it difficult or impossible to work with the NPS in a manner consistent with its needs to operate a viable business. Based on KCPS's experience, the main reasons for this difficulty are lack of knowledgeable construction inspectors and the inability of the NPS bureaucracy to provide consistent direction.

In an effort to do more than simply criticize, KCPS offers a suggestion for a solution on this particular point. NPS could contract with an entity or agency (whether it be private, county or state) in each park area that has qualified engineers who are licensed to review and approve construction projects. NPS would therefore obtain knowledge of the specific local codes and ordinances which may be applicable to local construction only when specific projects were being reviewed, thus not requiring it to incur the expense of a full-time inspector.

FACILITY INSPECTIONS

Once a facility is completed, it is subject to inspection to ensure that it is being sufficiently maintained and meets the necessary criteria. However, KCPS's experience has been that these inspections are inconsistent and often conducted by untrained NPS personnel. For example, different inspectors reviewing the same facility may rate it differently. In other situations, the same NPS inspector may grade a facility at one level 1 day and, although the same conditions exist upon a later visit, give the facility another grade the very next time.

However, this type of inconsistency, which can produce havoc for a business trying to maintain itself as a viable entity, can be eliminated. As those in the private recreation business are aware, professional inspection agencies are available (e.g., AAA, Best Western, Mobile Travel Service) which would produce consistent reviews. Another option is that the NPS can contract for independent contractors which it then can use in several parks.

GAO REPORT

The recent GAO report entitled "Park Service: Need to Address Management Problems That Plague the Concessions Program" and issued in March 2000 found deficiencies in the operations of the facilities at Kings Canyon National Park. While GAO visited Kings Canyon National Park when many of the facilities were being prepared for the upcoming season and had been dormant for many months, GAO's report highlights the problems that KCPS and the Park itself are left with when planned and needed construction of new facilities is delayed. (The items noted by GAO were fixed when GAO subsequently visited the facilities after they had been opened for the season. These were run-down facilities that KCPS had been trying to replace for 3 years.)

The facilities identified in GAO's report were constructed in the 1920's and 30's. When KCPS became the operator of the facilities in 1996, the facilities were long-overdue for significant renovation or removal. Although KCPS agreed to renovate or remove and replace these tired facilities and the contract specifically identified this goal, the NPS has delayed approvals for the necessary replacement. As discussed above, the approval process is extremely lengthy with inconsistent requests for information and slow reviews. It is and has been KCPS's desire to complete building improvements that are identified in its contract, appropriate for the park, approved by the NPS, meet all NEPA standards and are financially sound. But for the NPS's actions, these efforts would not have been delayed.

SUMMARY

As demonstrated by KCPS's experience, the NPS is not managing the concession program efficiently. KCPS is a contractor able and willing to produce a first-class recreation experience for visitors to Kings Canyon National Park. In fact, it is in KCPS's own interest to do so as it will obtain the financial benefits from attractive lodging facilities. KCPS did not compete for the concessions contract at Kings Canyon National Park under the intention or belief that the facilities present when it obtained that contract would still largely be in place today. In fact, in 1997 KCPS completed the construction of the John Muir Lodge pursuant to its intentions and the contract's specifications. (This facility was not inspected by GAO because it was not yet completed at the time of GAO's visit.) The timely completion of this beautiful and tasteful facility has proven to be the exception and, when compared to the facilities identified in GAO's report, in large part highlights the contrast between proper and improper contract administration.

KCPS is appreciative of the efforts made by Congress to instruct the NPS as to its administration of its concession contracts. However, despite this instruction, concessionaires are still faced with inconsistent contract administration. The arbitrary changes in contract administration effect the economic viability of KCPS's as well as others contracts. KCPS prays that the result this task force will accomplish is to hold the NPS accountable in the proper administration of its contracts. Only upon the imposition of accountability, which does not currently exist, will on-the-ground changes be made and improvements realized.

Thank you for the opportunity to present these positions.

Chairman RADANOVICH. Ms. Finnerty, welcome. We look forward to your testimony.

**STATEMENT OF MAUREEN FINNERTY, ASSOCIATE DIRECTOR
FOR OPERATIONS AND EDUCATION, THE NATIONAL PARK
SERVICE**

Ms. FINNERTY. Thank you, Mr. Chairman. I request that my full statement be incorporated into the record and I will briefly summarize some of the high points.

Chairman RADANOVICH. Without objection.

Ms. FINNERTY. The National Park Service does substantially agree with the GAO report. We believe that it will provide a basis for strengthening our program, and working along with the new Concessions Management Improvement Act of 1998, it will allow us to truly implement concessions reform in the National Park Service. The GAO report also deals with many issues that are also being dealt with and looked at by the legislatively established Con-

cessions Advisory Board, particularly issues relating to outsourcing and the professionalization of the work force.

GAO makes recommendations in three major areas. Here in summation is what the National Park Service is doing to respond to those recommendations. On work force professionalization and training, 60 percent of our 125 permanent personnel who work in concessions have either relevant education or experience in business or the hospitality industry. We know we need to do better. We are aware that we need to increase the professionalization of our work force.

We are committed to aggressively recruiting from all sources, from outside sources, again to improve the professionalization of the work force. We have recently hired two individuals with MBAs and we have a key position vacant in Denver, the head of our concessions program center, and it is our full intention to recruit and fill that job from the outside, from the business sector, to help increase the professionalization and oversight of that program.

We do have a Concession Careers Future Report which was completed a couple of years ago. We are moving forward to implement various pieces of that report, particularly as it pertains to training and professionalization of the work force. We have already developed competencies for concession employees and looked at strategies for improving the competency of our concessions work force.

We also are actively engaged in agreements and arrangements with Northern Arizona University to work with us on the hospitality end and increasing expertise on the hospitality side of concessions management.

We are working with Cornell to strengthen our financial capability, in-house financial capability, and we are working with the Army to strengthen and improve many of our contracting procedures.

The second major area that GAO made recommendations on is our out-of-date contracting practices. We certainly agree that this has been the case over a number of years. We now do have a new law and we have new concessions regulations which went into effect just about a month ago. We are now working with the solicitor's office and others to adopt relevant Federal acquisition regulations for our programs, for example, performance-based contracting, and certifying those who are involved in contracting activities in the concessions program.

We are moving forward with dealing with the backlog of contracts that have expired and that are on short-term extensions. We have plans in place to essentially redo over 200 concessions contracts this year through the end of the calendar year, and another 165 are planned for next year. We essentially will do this through the use of teams made up of senior concessions personnel and also through outsourcing various components of the program to help us get the work done.

On the issue of outsourcing or contracting out, in 1990 essentially we didn't contract out any portions of the concessions program and over the last year we have moved to contracting out almost \$1 million of work primarily in the areas of financial analysis, appraisals and arbitration. The advisory board has also been asked to come up with some recommendations for the secretary and the

director on other areas that we can contract out and other ways that we can tap into the private sector to help us to professionalize our contracting capabilities.

The GAO report recommended the outsourcing and centralization of inspections, particularly of large operations. We agree with that. We like that idea and we are moving forward to try to implement that over the next year or so.

On the question of accountability, last fall regional directors were told to put accountability and oversight of concessions in the performance standards for those 132 parks which have concessions programs. A critical element will be added to the performance standards of all of the SES individuals, namely the regional directors who have oversight of superintendents. This will take place on July 1.

We are critically looking at the phasing out over a period of time of collateral duty personnel. This has been one of the issues which has been raised, folks trying to do 3 or 4 or 5 different tasks. It is particularly an issue in those parks which have big concessions programs and have only part-time individuals that may not be adequately trained and may not have the experience.

We have put together a budget request for the 2002 budget which is the next cycle that we can influence, specifically requesting additional resources again to help beef up our professional staff both in parks and regional offices. We have contracted with PricewaterhouseCoopers. They have started to look at our entire concessions program. They are doing an analysis of ways that we can improve it, what are our shortcomings and deficiencies, and hopefully we will come up with some recommendations that will be helpful to us in the years ahead.

Also the Service as a whole is looking at reinstituting an operations evaluation program which we used to have that essentially looks at all operational programs in the field and is another method and practice that really helps improve accountability. We have not done that in a number of years, and I think the director is committed to reinstituting that and putting that in place so we can improve accountability not only in the oversight of this program but also in others where we have had some challenges.

That completes my remarks, Mr. Chairman, and I will be happy to answer questions.

[The prepared statement of Maureen Finnerty follows:]

PREPARED STATEMENT OF MAUREEN FINNERTY, ASSOCIATE DIRECTOR FOR
OPERATIONS AND EDUCATION, THE NATIONAL PARK SERVICE

Thank you for the opportunity to discuss with you the recently issued report by the General Accounting Office (GAO) on the management of the National Park Service concessions program. This report, entitled "Park Service: Need to Address Management Problems That Have Plagued The Concessions Program" (GAO/RCED-00-70), highlights issues and factors that impact the National Park Service (NPS) concession program.

As Don Barry, Assistant Secretary for Fish and Wildlife and Parks, indicated in a letter to GAO dated March 16, 2000, overall, we agree with many of the report's findings. This report offers us an opportunity to strengthen our program and begin true concessions reform, while supplementing our ongoing efforts to implement the Concessions Management Improvement Act of 1998. One such effort includes a proposal in the President's 2001 Budget to establish a new Senior Executive Service position in the National Park Service for an Associate Director for Partnerships and Business Practices, which will enforce our commitment to improving the concessions

program. Another effort involves the increased consideration of performance-based contracting measures. Though the report focuses on the condition and management of lodging facilities operated by concessioners, it appears that many of the factors that were examined could apply equally to other aspects of the NPS concession management program. The implementation of these recommendations will benefit park visitors and the program in general.

The report covers issues that are very similar to those that are being dealt with by the National Park Service Management Advisory Board. This body, created by Congress in the Concessions Management Improvement Act of 1998, is tasked with advising the Secretary on ways to improve the concessions program. The Board consists of members from the hospitality, tourism, accounting, outfitting, and crafts industries, as well as a member from a nonprofit conservation group, and a member from a state government agency. The Board is in the process of preparing a report to Congress pursuant to this act, and it will deal with many of the issues covered by this GAO report, such as outsourcing, and the professionalization of the NPS concessions workforce.

WORKFORCE PROFESSIONALIZATION AND TRAINING

The GAO report recommends that NPS recruit workers with business and hospitality backgrounds, and train its employees in these disciplines. It notes that our program lacks employees with professional education and experience in business, finance, and accounting. We agree that NPS must enhance its concessions management expertise by improving training for current employees, recruiting new employees with a background in the hospitality industry, and contracting out when it is more efficient to do so. The NPS previously identified professionalization of the work force and succession planning as a priority and identified them as elements in the Concession Careers Future Report approved by the Associate Director, Park Operations and Education in 1997. The report outlines a series of human resource management processes that will allow us to professionally manage the concessions program into the next century. The Concessions Management Improvement Act of 1998 could potentially provide us with some additional fiscal resources, especially to address immediate needs for appraisals and financial analysis of contracts that have built up over the past few years.

We understand the need for more concessions staff with a background in the hospitality industry. We believe, however, that the GAO report may understate the value of concession managers and staff having broad experience in other park programs. It is common practice in business to rotate key staff through different programs within a company to gain a breadth of experience in company operations. We believe the most effective team for NPS concession management consists of a good mix of those with experience in other park programs, teamed up with specialists from the business community and hospitality industry. In fact, employees who have a stronger NPS background and insignificant hospitality experience, administer the outstanding program at Zion and Bryce Canyon National Parks that was highlighted in this report.

In the same vein, we believe that GAO may have over-emphasized the importance of specialists from the hotel industry. The majority of businesses in national parks are not part of the hospitality industry, which is generally thought to include lodging, food service, marinas, and merchandising. More than half of all park concession contracts involve traditional park activities, such as livery operations, river running, hiking, and climbing, all of which have very little or no relation to the standard hospitality industry activities and businesses. Less than 25 percent would be recognized as traditional industry operations. Alaska, for example, has 400 companies providing commercial visitor services in 15 national parks. Only three of these are primarily in the lodging business. The majority is in guide and outfitting, with the largest revenues and franchise fees generated by cruise and tour operators. Of course, the majority of concessions revenue is earned from businesses in the hospitality industry, and our emphasis should be on improving the oversight and management of these contracts.

Another area of emphasis is the increased use of performance-based contracting. People with financial skills, coupled with current facility assessments and adequate planning documents are necessary for development of contract requirements, while people with contracting backgrounds are needed for the actual mechanics of contracting and contract administration (amendments, extensions, sales/transfers). More contracting challenges could also arise as competition for new contracts increases as a result of Public Law 105-391 and sales and transfers become more complex. Concessioner support of the NPS visitor service and education mission depends on the traditional agency abilities and knowledge that park employees bring

to the table when working with concessioners. Yet, we also need contract specialists that can introduce some of the advances that other agencies and businesses have made in using performance-based contracts to encourage more responsive contractors and concessioners.

The National Park Service Organic Act, as well as the new concessions law, provides for visitor use and enjoyment of an area when necessary and appropriate and when consistent with the protection of park resource values. The use component is not an independent or unconnected arm without any ties to our agency preservation responsibilities. There must be a coordinated effort that blends together the use and preservation components seamlessly when providing a park visitation experience.

The National Park Service will aggressively recruit from the private business sector when specific positions require that type of knowledge and expertise. The NPS will also implement the previously discussed Concession Careers Future Report to ensure NPS employees with concession responsibilities have mastered program competencies. Furthermore, the NPS will contract out for expertise when it is appropriate to do so. In the interim, we are developing a concession contracting certification program modeled after the Department of the Interior's contracting officer's warrant certification program, and are having discussions with Cornell University and the Department of Defense in the development of an advanced finance course. We have also discussed with the Department of Defense Training Academy the cross training of NPS concession personnel and the possibility of developing specialized training specifically to meet NPS contracting needs. We are also working with Northern Arizona University to develop a hospitality curriculum for concessions employees.

We have recommended that \$90,000 be dedicated for concession training in the FY 2001 servicewide program. Additional training funds may be needed, depending on the mix of training, new hires, and contracting out.

OUT-OF-DATE CONTRACTING PRACTICES

The GAO Report also stated that NPS has outdated contracting practices. We agree with GAO that concession contracting can benefit from the best practices of the Federal Acquisition Regulations. There is, however, a significant difference between concession contracting and the procurement function. Concessions contracting must have as its primary goal the protection of park resources. FAR contracting, on the other hand, is often (but not always) focused on the lowest cost bidder. Both, however, are intended to obtain the most appropriate return to the government, so there are issues that apply to both.

We concur with GAO that contract extensions hamper the effectiveness of the program and affect the quality of visitor services and facilities. Public Law 105-391 and new concession regulations will allow us to move forward and address this important issue.

The National Park Service will review the concession program and update its practices where appropriate. We will also continue to investigate mechanisms, such as performance-based contracting, for providing financial incentives to concessioners for exceptional performance and disincentives for mediocre performance. The development of certifications and specialized training for our personnel, as noted above, will help us update our contracting practices.

OUTSOURCING

The GAO report also recommends that NPS outsource certain aspects of the concessions program. We agree with GAO and are, in fact, presently outsourcing significant components of the concession contracting process. Financial analysis, appraisals, and arbitration are contracted with the private sector on a regular basis. There are, however, other significant components of the contracting process, such as planning, that occur at the park level and cannot be contracted out. Park planning documents based on General Management Plans, Development Concept Plans, Commercial Services Plans, and cultural and natural resource compliance documents relate to the fundamental mission of the Park Service to preserve park resources, and thus should not be contracted out.

The National Park Service will continue to contract out portions of the concessions contracting program. We will also explore the possibility of contracting out other functions, such as intermittent inspections of larger, more complex concession facilities with centralized teams to augment existing park concession management programs.

LACK OF ACCOUNTABILITY

We concur with GAO that the NPS must improve accountability of park managers. A number of factors contribute to this weakness. One factor is the use of the collateral duty concession manager in parks with major, complex concession programs. Collateral duty personnel administer approximately 20 percent of the 90 contracts that gross over one million dollars. The use of collateral duty personnel contributes to a lack of understanding of the details of the program, an inconsistent approach on how the program is managed and a lack of focus and consideration for the complexity and importance of the concession management program. Technical assistance to some of these parks could remove the need for most collateral duty operations. Coupled with a policy that would place full-time concession specialists in parks that presently have collateral duty personnel administering the concessions program, this would ensure a more consistent approach to concession management servicewide.

We agree with GAO that successful completion of concession management responsibilities and oversight should be considered during annual performance reviews. This is a review that must be applied servicewide.

NPS will ensure successful completion of concession management responsibilities during annual performance reviews conducted by the Director for each regional director, and by the appropriate regional director for each park superintendent with concession responsibilities.

This concludes my testimony. I would be happy to answer any of your questions.

Chairman RADANOVICH. Also for the record, we are allowing the written testimony from the Department of Interior's Inspector General for the record, and I ask unanimous consent that the full testimony of each witness be in its full text in the record. Without objection, so ordered.

[The prepared statement of Earl E. Devaney follows:]

PREPARED STATEMENT OF EARL E. DEVANEY, INSPECTOR GENERAL, U.S.
DEPARTMENT OF THE INTERIOR

As the Inspector General of the Department of the Interior, I want to thank you for this opportunity to provide a statement to the Committee about the National Park Service's (NPS) management of concessioners at our nation's parks.

The Office of Inspector General (OIG) has provided extensive audit coverage of NPS's concessions management, contracting, and fee collection activities over the past decade. Repeatedly, we have issued audit reports that describe ineffective, inefficient, and disadvantageous NPS concessions management practices; inadequate oversight of concessioners' operations; and concessioners' noncompliance with Federal law and internal NPS policy. Our audits reveal three general shortcomings in NPS's concessions management:

1. NPS has not obtained a fair return from concessioners that operated in the national parks, particularly on franchise fees, which are revenue-based fees that concessioners pay the Government, and on fees for the use of park buildings and facilities;
2. NPS has not received full reimbursements for utility and maintenance services provided to concessioners; and
3. NPS has not employed businesslike practices, such as competitive procurement practices and unrestricted offerings of concessions opportunities, in contracting for concessions operators.

Legislation governing Federal concessions policy explains some of NPS's failures to follow businesslike practices in its management of concessions. Prior to November 1998, the controlling legislation was the Concessions Policy Act of 1965, which had few incentives for NPS to manage its concession program in a more businesslike fashion. For example, until 1998, all franchise fees were deposited into and retained by the U.S. Treasury. Thus NPS reaped no financial benefit from aggressive efforts to obtain higher concession fees. Also, until 1998, concessioners were given preferential rights in contract renewals—a condition that discouraged competition in concession contracting.

With passage of the National Park Service Concessions Management Improvement Act of 1998, NPS was granted the right to retain concession fees and existing concessioners' preferential rights (with few exceptions) were no longer authorized by law. Since the Improvement Act's passage, NPS has not resumed concession contracting. As such, NPS has not been able to benefit fully from the potentially more

advantageous terms and conditions that might be provided in new or reissued concessions contracts.

The OIG continues to have concerns about NPS's commitment to improving its concessions program. Time and again, we have issued audit reports making recommendations for improving concessions management, and time and again NPS has not effectively or fully implemented these agreed-upon recommendations. For example, in 1990, we issued a follow-up audit report on concessions management, in 1994 we issued another concessions management report, and in 1999 we issued an audit about concession contracting procedures, all of which stated that NPS failed to ensure that concessioners paid fees that adequately compensated the Government for the privilege of doing business in the national parks and for use of park property. Despite NPS's representations that it had implemented our recommendations on charging concessioners fully for fees and for their use of park utility and maintenance services, our follow-up audits have shown that our recommendations have not, in fact, been fully implemented.

Although the Improvement Act should encourage NPS to adopt a more businesslike approach to concessions management, we do not believe that the Act's passage has or will, standing alone, result in effective management of the concessions program. The deficiencies in NPS's concessions program that we have identified in our audit reports—the absence of an accountable management structure, insufficient staff training and expertise, and insufficient policy and controls to monitor policy implementation—appear to be ongoing. For instance, in March 2000, GAO issued an audit report, "Park Service: Need to Address Management Problems That Plague the Concessions Program." That report reaffirmed our previous findings, such as NPS's having "out-of-date" methods for handling its contracting workload and a "chronic backlog of expired contracts, lacking accountability in its concessions management program, and having inadequate qualifications and training for its concessions staff.

In summary, these recent GAO findings, coupled with OIG's findings over the past decade, suggest that more is needed to bring NPS's concessions management in line with responsible businesslike practices.

SUMMARY OF OIG AUDIT REPORTS RELATING TO NATIONAL PARK SERVICE'S
CONCESSIONS MANAGEMENT OVER THE PAST 10 YEARS

1. In April 1990, the OIG issued "Follow-up Review of Concessions Management, National Park Service," (No. 90-62). The audit, requested by the Secretary of the Interior, evaluated NPS's effectiveness in managing major concessioners' operations. The audit was a follow-up of an OIG March 1986 report "Audit of Concession Management, National Park Service." The audit concluded that NPS did not have an adequate method for computing franchise fees and did not encourage competitive offers for concessions operations. Specifically, the audit found that:

- NPS did not receive adequate fees from large concessioners. OIG attributed this deficiency to factors such as NPS not charging fees recommended by NPS rate-setting officials, mutual agreement clauses in contracts that prevented NPS from establishing revised fees unilaterally, and concessioner resistance to higher fees. OIG stated that NPS "generally opted to obtain capital improvements in lieu of higher fees" and that these improvements "tended to enhance the concessioners' facilities." OIG also said that NPS's concessions program personnel did not have appropriate or adequate educational backgrounds to set concession fees. It further referenced an NPS Concession Funding Task Force's 1988 draft report that found that "additional training for park managers and other personnel involved in concession programs was needed."

- NPS generally did not charge concessioners fair rental value for their use of Government buildings. OIG found that NPS did not consistently obtain building appraisals and, even when appraisals were done, NPS did not charge market rates because concessioners made building improvements and/or resisted the charges.

- NPS reduced franchise fees in recognition of concessioners' agreements to pay for capital improvements. These improvements, however, generally benefitted the concessioners exclusively. Also, NPS did not have adequate procedures for ensuring that concessioners' planned capital improvements were properly financed and completed in accordance with contract provisions.

- NPS did not solicit competition in concession contracting and provided insufficient information for interested parties to evaluate offered concession opportunities.

The 1990 audit contained 16 recommendations to correct these deficiencies in the concessions program.

2. In September 1994, OIG issued "Concessions Management, National Park Service," (No. 94-I-1211). The audit evaluated whether NPS received a fair return from

concessioners and effectively managed the collection of and accounting for franchise fees. The audit found that:

- NPS did not consistently obtain a fair return from concessioners because first, NPS had not implemented recommended fees, second, NPS undercharged for the use of Government buildings, third, NPS overcompensated concessioners for their park investments, and fourth, NPS allowed concessioners to exclude the sale of Native American handicrafts from gross receipts (on which franchise fees are based).
- NPS did not adequately monitor special account deposits, record as a receivable franchise fees due from concessioners, record franchise fees accurately, require monthly payment of franchise fees, or enforce the requirement for electronic fund transfers of fee payments of \$10,000 or more.

Many of the deficiencies identified in the 1994 audit report were previously identified by the OIG 4 years earlier in its 1990 audit report. The 1994 report contained 13 recommendations.

3. In February 1997, OIG issued "Oversight of Concessions Operations and Fee Payments, Guest Services, Inc., and Rock Creek Park Horse Centre, Inc." (No. 97-I-515). This audit report similarly evaluated whether the NPS effectively managed the collection of and accounting for franchise fees from concessioners. The report found that NPS:

1. Had not reviewed and revised concessioners' operating and maintenance plans as required by NPS policy;
2. Did not monitor concessioners' operating hours and seasons;
3. Did not always approve concessioners' rates and prices;
4. Allowed concessioners to operate at facilities that were not authorized under a concession contract; and
5. Allowed a nonprofit organization to operate in a park without contract authorization. Also, NPS did not ensure that concessioners reimbursed the Government for all utility costs and did not ensure that concessioners implemented adequate controls over the revenues on which franchise fees are based.

The report contained eight recommendations.

4. In March 1998, OIG issued "Concessioner Improvement Accounts, National Park Service" (No. 98-I-389). The objective of the audit was to determine whether amounts deposited into concessioners' special accounts and expenditures from the accounts were appropriate. The report found that first, NPS did not provide clear, sufficient, and timely guidance on special accounts; and second, two of five concessioners made improper deductions from gross receipts in determining amounts to be deposited into special accounts.

The report contained three recommendations.

5. In March 1998, OIG issued "Follow-up of Maintenance Activities, National Park Service" (No. 98-I-344). In this follow-up audit, the OIG found that NPS had not taken sufficient actions to recover its costs of maintaining facilities used by concessioners and other non-Governmental entities.

The report contained three recommendations.

6. In April 1998, OIG issued "Follow-up of Recommendations Concerning Utility Rates Imposed by the National Park Service" (No. 98-I-406). This follow-up audit concluded that NPS did not revise guidance on the recovery of utility system capital investment costs, did not fully recover all utility system operation costs from non-Governmental users, and failed to ensure that receipts for utility services were collected and deposited in compliance with NPS policy.

The report contained six recommendations.

7. In June 1999, OIG issued "Concession Contracting Procedures, National Park Service" (No. 99-I-626). The objective of the audit was to determine whether NPS's concessions contracting was conducted in compliance with Federal law and in accordance with NPS guidance. The OIG found that NPS did not fully comply with Federal law and NPS policy in contracting for concession operations, and that NPS did not ensure that the Government obtained a fair return from concessions operators. Specifically, NPS did not comply with its policies for approving concession contracting actions and fee adjustments and for extending expired contracts. NPS also did not periodically reconsider fees as required by law and by provisions in concessions contracts, did not consistently obtain reimbursement for utility services provided to concessioners, and did not require all concessioners to assume full responsibility for maintaining their facilities. Also, NPS did not always implement or fully implement recommended fee adjustments, identify the projects for which special account funds were to be used, or charge building use fees. All of these deficiencies had been identified in prior OIG audit reports. OIG also found that NPS received no payments for Government-owned housing used by concessioner employees. Furthermore, if the concessioners received rent for the housing, they were not required to include the rent in the revenues on which their fees were based.

The report contained nine recommendations.

Chairman RADANOVICH. My first question is for you, Mr. Hill. And I appreciate Ms. Finnerty addressing each problem and it sounds like you are on the right track. There is a problem with the poster over here. We have had 7 reports over 10 years. One thing that you mentioned that has occurred most recently has been the recent concessions contract. Mr. Hill, based on the lack of performance as a result of the last 7 reports over the last 10 years, in your view will the concessions contract that was recently adopted—I think it was what, 1998—will that help in a situation like this or is this an issue of funding? Is it an issue of lack of response to congressional inquiries?

Mr. HILL. I think you are referring to the National Parks Omnibus Act of 1998, those requirements that put some additional or new requirements on the concessions program. There were a lot of things contained in that law, perhaps the biggest being getting rid of the preferential right of renewal provision that the old law provided for. And I think there are a lot of things that will help the Park Service improve the program. There are a lot of things in that law that are consistent with prior findings and recommendations that GAO made over the years. But I think the problems that we are talking about today are more management problems and I don't think that law is really going to address that. I think that has got to come from within the Park Service and Department of the Interior itself in order to fix those problems. Those problems can continue to exist even with the new law.

Chairman RADANOVICH. Why, after 7 reports over 10 years articulating problems, is there still no change in management?

Mr. HILL. That is probably a question you should ask the Park Service. Our feeling is that it has been a low priority. They have not given it sufficient attention and authority and come to grips with the problem.

I am encouraged to hear about the positive response that they are planning to do, but I think there is certainly a need for the Congress and certainly GAO to continue to provide oversight and follow through to make sure that they implement a lot of the provisions that Ms. Finnerty just got done describing.

Chairman RADANOVICH. Mr. Garden, for Mr. Vreeman who has been frustrated with his contract that he signed for Kings Canyon, is there relief on the horizon? Are you still in the middle of the problems? I know that you have recently opened one new facility, but there are more to come, I think. What is the status? Is this a nightmare that has already happened or a nightmare that you are in the middle of?

Mr. GARDEN. A little of both. There has been a nightmare which put him behind schedule. I do understand that currently there are discussions that are underway and they are going fairly well. It is Mr. Vreeman's hope that it is not too late to get the work done that he needs to get done to make the contract viable over the full 15 years, but that is by no means a given right now.

Chairman RADANOVICH. Ms. Finnerty, your response to—it has been 7 reports over 10 years, and listening to GAO it sounds more like a management problem than a funding problem. Would you care to respond to that? And also perhaps with the results of what

we see here under the lack of experience and qualified personnel dealing with concessions contracts, has that been—has that been an issue that is considered low priority with the Park Service? Does it therefore not get addressed because they have given attention to higher priority issues?

Ms. FINNERTY. Well, I think it is obviously—and we have had a number of reports, many of which, as GAO pointed out, have sort of repeated the same findings and concerns. There have been sporadic attempts to try to deal with this, to try to issue directives to the field to ask them to start focusing on this. I think it is a combination of things. I think it is perhaps not enough resources in the program. We only have 125 permanent people managing a \$765 million program. That is down from what we had a number of years ago due to downsizing and a number of other things. I don't think that we have had the resources and been able to put the resources into training and professionalization.

I would agree with GAO that I don't think the new concessions law and the procedures that it spells out, particularly on contracting and that kind of thing, necessarily are going to fix some of the management problems that we agree that we have had. But there are two provisions of that law that are going to help us address this program and the problems.

One is the establishment of an advisory board which is an external group made up of professionals with a lot of expertise in the area of concessions management, accounting, finance, tourism, outfitters and those kinds of things. They have met twice. They are actively engaged in working with us. At their last meeting they had extensive discussions on the GAO report and recommendations. They will be coming forward in November with a report to the Secretary, which I expect will help us to address and deal with a lot of these issues so we have that body that is giving us a lot of assistance.

Secondly, the new law does allow franchise fees to be retained by the National Park Service. Eighty percent of them are in the parks where there are concessions and 20 percent go into a servicewide pot, so we now have a source of funding that we are tapping into this year already to help us with some of the outsourcing and the contracting and also some of our training and professionalization needs.

So I think those two things are going to help us and give us some resources that we haven't had in the past and we are very much looking forward to having those things assist us in the management of the program.

On the issue of training for people who do contracting and concessions, we obviously agree with those findings. We have been pretty deficient in the training requirements that we have asked our contracting people to—in concessions, essentially they have had almost no training and we now have a 5-year training program in place. We estimate if we spend about \$450,000 over the next 5 years we can substantially increase the professionalization of the group. We are also looking at requiring certification which they do under other procurement regulations. So I think some of those things are well underway and I think we will have some real positive influences on the program.

Chairman RADANOVICH. Thank you. I yield to you, Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

Mr. Hill, let me discuss some background information about the GAO report and some of the conclusions one might draw from it about the duration of this problem and the nature of it. How many parks have you looked at and how did you determine the sampling procedure as to what you would look at?

Mr. HILL. Over the two audits that we did, the first audit looked at 10 parks.

Mr. PRICE. When was that done?

Mr. HILL. It was issued in 1998 and it included the results of our investigation at 10 parks. The parks that we chose there were a mixture of parks. Obviously we were focusing on parks with lodging facilities. We wanted to find some parks that were operating under the government-owned, concession-operated types of facilities as well as the concession-owned, concession-operated types of facilities. We wanted a mixture and a geographical dispersion. We wanted different concessionaires.

And that audit was strictly focused at looking at the conditions of these facilities. What we basically found was a mixed finding. We found all kinds of interesting things. We found some parks that the lodging facilities were in very good condition, others were in OK condition, and we found a number that we thought were in terrible condition.

The second report was geared more toward why. Why the inconsistency in the facilities out there? We took five of the same parks that we had originally visited. We took two that were in very good condition and three that were not in so good condition. In addition, we added two more parks that had multiple concessionaires operating it to see what was the common thread that would create this inconsistency out there. We looked for a pattern where there was a government-owned, concession-operated facility or a concession-owned, concession-operated facility, or maybe it was a seasonal park. We wanted to get a feel for what was the root cause that would create these inconsistencies. Maybe it was the contract itself.

The bottom line was that there was no pattern other than the common thread we found was the lack of management and attention and accountability that we found pervasive in the program.

Mr. PRICE. So you picked a diversity of park and concessionaire and management arrangements in the initial sample?

Mr. HILL. That is correct.

Mr. PRICE. Were you focusing on situations where problems were reported or suspected? Did that enter into your choice of situations to investigate?

Mr. HILL. Not really. I think we were looking at the larger parks. We went to the Park Service and sought their advice in terms of getting input from them as to what parks they felt would be good parks to look at. We consulted with them in the process as well.

Mr. PRICE. So you wouldn't have much doubt that the range of findings that you reported could be generalized to the broader universe?

Mr. HILL. The 12 parks that we went to are among only 30 parks with these types of hotel lodging facilities. There are an additional 15 parks which have accommodations but they are considered more

rustic or back-country type things. So 12 out of 30 is a fairly representative sample. I don't think that the Park Service would question that it was a biased sample and I think they would agree that it is fairly representative.

Mr. PRICE. I want to get some parameters established here. As the Chairman said and you said, this is not the first report. They go back 10 years at least. What is the time frame? When did we first have a report roughly comparable to the one that we are looking at now? Ten years was used; is that accurate?

Mr. HILL. There have been reports issued by the Park Service itself, the Inspector General, that have documented problems with the concessions program over the past 10 years.

Mr. PRICE. That raises a question about what does it mean to say that these problems have persisted? One question is, has the kind of problem we are talking about here remained the same? And then, secondly, are we talking about the same parks over time? For example, have Death Valley and Kings Canyon or Sequoia consistently had problems? In those earlier reports, were problems identified and fixed and are we now looking at different parks? Can you put these in perspective? It is not very helpful if we don't know what kind of mix of parks we are looking at.

Mr. HILL. That is part of the problem; there is no baseline data that anyone keeps. It is hard to go back. There are no centralized inspection records where you can go back and see inspections done at these parks and the results of those inspections. These are all done at the park level. They are self-done inspections basically. The parks are supposed to maintain the records. But, in some cases they don't. The information that they collect is not very good. We generally know that when they do these self-inspections, most of the time they give satisfactory ratings.

Mr. PRICE. You are referring to studies and reports that go back 10 years. Those are not all internal self-inspection documents. Did GAO not look into the time line on these situations that you were examining and look back and see to what extent these problems had existed earlier or had been dealt with earlier?

Mr. HILL. The problems that were identified in the earlier studies dealt with the problems that we mentioned in terms of lack of qualified staff, lack of training, lack of accountability. Those problems have been raised for the 10-year period, and we certainly found them present in the audit work that we did. Our audit was limited to the lodging concessionaires and the extent of our work was done in basically the past 2 or 3 years.

Mr. PRICE. You specifically identified serious problems at Death Valley and Sequoia-Kings Canyon. Do you have information about how long those problems have persisted?

Mr. HILL. No, I don't.

Mr. PRICE. So the generalization that these problems have been around for 10 years and not dealt with, they don't apply to individual cases? I don't understand the basis for the generalization.

Mr. HILL. Those studies were done by the Park Service and the Inspector General themselves. When we went out and looked at these lodging facilities, we found those same problems persisting at those facilities. I can't say what the condition of those facilities—the lodging facilities were 10 years ago, because we did not do that

work and those reports explicitly, and we don't have that level of detail in them that I'm aware of.

Mr. PRICE. I see. In your opinion, has the leasehold surrender interest provision of the 1998 National Parks Management Act improved the efforts of private concessionaires to upgrade facilities? First of all, if you can explain how those provisions work, what kind of incentives there are for and against concessionaire investment in facilities, and what is your bottom line assessment?

Mr. HILL. I do know that the old law provided for a possessory interest that the concessionaire would build up in facilities. That basically was changed by the most recent law and it does provide a leasehold surrender interest basis. I don't have much more details than that at this time.

Mr. PRICE. It is an interesting question. Does that provide stronger or weaker incentives for a concessionaire to upgrade facilities? I want to ask the Park Service that question as well.

Mr. HILL. I don't have an answer right now.

Mr. PRICE. Let me turn to the Park Service in the second round. But first, Mr. Hill, in the GAO report you address and then dismiss several potential mitigating factors on concessions quality. You say that you don't find significant differences between seasonal and year-round use or between public and private ownership, et cetera. Is there anything any lingering questions here as to the firmness of those findings that these factors are not important?

Mr. HILL. This is what I was referring to earlier where we were looking for a pattern in terms of why these conditions varied so greatly and we did not see a pattern. In one case of the 12 parks that we went to, the same concessionaire was operating the lodging facilities at three different parks, and we found very different conditions even within the same concessionaire. What that shows is that the quality of the conditions of the lodging facilities are dependent largely on the quality of the concession staff that are operating it and the quality of the park staff that are overseeing that concessions contract. It has nothing to do with a particular concessionaire or arrangement; that is, concession-owned and operated versus government-owned and concessionaire-operated. We found no pattern in terms of seasonality or anything like that.

Mr. PRICE. So the pattern that you do find applies to what?

Mr. HILL. It applies to the degree of management and oversight that the Park Service officials are providing at the park unit itself and the extent to which they are accountable for what they are doing out there.

Mr. PRICE. Your conclusion is that it is not uniformly defective, but sporadic. It is sporadic and therefore in need of systematic attention? Is that a fair statement?

Mr. HILL. It is very park-specific depending on the people involved in this. We think that there is a greater need for more centralized oversight and management of the program at the headquarters and regional office level and the need to make the parks more accountable to make sure that you have consistency throughout the entire system.

Mr. PRICE. Thank you.

Chairman RADANOVICH. Thank you, Mr. Price. Mr. Toomey.

Mr. TOOMEY. Thank you, Mr. Chairman.

I would like to ask Mr. Hill just a couple of questions. The March 2000 GAO report dealing with—specifically in the section where you refer to the Park Service concessions contracting practices, it mentions that these practices are out of the date and do not reflect the best practices of the Federal Government or the private sector or other contracting parties. It talks specifically about performance-based contracts being the norm, I think it would be fair to say, is my understanding of the way that this is written. Has the GAO specifically recommended the use of performance-based contracts?

Mr. HILL. We have not specifically recommended that, but it is part of the FAR requirement; but here again, this particular program is not required to follow the Federal acquisition regulations.

Mr. TOOMEY. But it is your belief that performance-based contracts are the better way to go; that is the standard for this kind of contracting; is that correct?

Mr. HILL. That is correct. Not only do we believe that, I think the Department of Interior believes that in whole, because we have statistics that show that 77 percent of the contracts that they let over \$100,000 use performance-based contracts, but not in this program.

Mr. TOOMEY. In your research have you found any evidence that the Park Service is moving in the direction of performance-based contracts in any systematic fashion?

Mr. HILL. We did not find any evidence of that, although I would defer to Ms. Finnerty who made reference to that in her remarks earlier.

Mr. TOOMEY. One of the things that is referred to in the GAO report, it states that there are several senior Park Service officials who indicate that the agency's has no plans to move in the direction of performance based. Maybe the question should be directed to Ms. Finnerty.

What is the position of the Park Service regarding the use of performance-based contracts and what kind of progress has been made, if any, in using them?

Ms. FINNERTY. Congressman, we have made and continue to make progress in the use of performance-based contracting. Much of the information gathered for this GAO report was gathered in 1998 and 1999, so it is dated. We certainly have moved forward in the last several months. Even though we do not believe that the concessions contracts are subjected to the Federal acquisition regulations as a whole because it is not Federal funds that are being used, we do agree that there are aspects of the FAR regulations that can and should be applied to concession contracting to help us do a better job, and one of those is performance-based contracting. And we are working closely with individuals in the departments and with our solicitor's office to get those procedures in place and hopefully have them in place starting in calendar year 2001. So it is our full intention to apply performance-based contracting as we get into all of the various revisions of contracts that we have to get underway in the next couple of years.

We also intend to use some of the aspects of FAR as far as training requirements and certification of individuals that are doing this contracting in the concessions field. We feel that is important, and part of our proposal is to get those individuals trained, to get them

warranted, adequate training so they can be more effective in the issuance of contracts.

Mr. TOOMEY. What you are saying then, beginning next year we will start to see greater prevalence of performance-based contracts. I wonder how long has it been that performance-based contracts have been the norm or widely accepted as the best practice for the Federal Government? And assuming that has been awhile, why is it that it is just now that the Park Service is starting to use these contracts?

Ms. FINNERTY. When this issue came up a number of years ago, we sought some legal advice about whether FAR regulations should apply to concessions contracting, and we were told no, they didn't. So probably we took that answer and went along our way. But in looking closely at some aspects of that, we realize that we certainly should be looking at pieces of that and making that applicable to our program, and we intend to do that.

Mr. TOOMEY. Thank you.

Chairman RADANOVICH. Thank you. Mr. Gutknecht.

Mr. GUTKNECHT. Mr. Hill, how long have you been with GAO?

Mr. HILL. Thirty years next month.

Mr. GUTKNECHT. So you have participated in a significant number of these kinds of audits?

Mr. HILL. A significant number, yes.

Mr. GUTKNECHT. I must say this is some of the toughest language I have ever read. Can you remember ever using language like this in an audit before, and can you give us a comparison? For example, when you say just reading from some of the comments in the audit, that—you say and I will quote, "Little hope for improvement. The agency's past record in taking action to change its hiring practices and upgrade its training is not encouraging." and you go on to say that the Park Service has generally agreed that it needs to professionalize its concession work force. However, the agency's past performance suggests to us that there can be little confidence that the agency will address these issues.

Literally, the more I read this, this is one of the most damning reports I think I have ever read. And it is particularly troubling because this is a—I mean, perhaps here in Washington \$765 million doesn't seem like a lot of money, but back home a three-quarters of a billion dollar business is a big business. And it may well be that to the average consumer of these facilities, in other words the people who go to the parks, their level of expectation is such that they may say well, I guess this is what we expect when we come to Death Valley. But at the same time we are charging, it seems to me, pretty healthy rates for these rooms. In some respects, Americans look at this and say, I am paying for this in my taxes, and now I am paying up to \$80 or perhaps more a night for these facilities. It just seems to me that we have a responsibility to treat them like real consumers and that is not what is happening.

I think the most troubling thing to me is that in your passages under the headline of Lack of Accountability—and frankly I was one who really felt that this committee, the Budget Committee, ought to have some subcommittees and we ought to have some oversight hearings, because when you look at all of the money that we spend on behalf of American taxpayers, I don't think that it is

too much for those taxpayers to ask that we do some effort to make certain that they get their money's worth.

Let me read some of the quotes, and I would like you to comment and perhaps Ms. Finnerty would like to comment as well. This is very troubling to me. "the former chief of concessions (who retired during the course of our review) told us that he did not have information on the condition of the lodging facilities in the parks."

He didn't have information. In some respects I have to ask myself: What is he doing?

"He indicated that our review would provide him with valuable information about the condition of these facilities. He did not have such information, because although the condition of the facilities is generally known by the park managers, it is not generally known or reported to higher levels within the agency."

That is astonishing to me, and it should be astonishing to every American. Here is a person who is responsible for concessions in the Federal park system and he doesn't know what the conditions are out there.

This is not just a simple matter of a little more management training. There is a fundamental breakdown here in who is responsible and accountable for what.

I will read another quote. Well, I don't have to read many more quotes. Is this one of the toughest audits that you have ever written?

Mr. HILL. I can't say that. It rates right up there. We have found similar types of concerns in other Park Service programs. There seems to be a pervasive culture out there where the park superintendents are given the authority and the discretion to basically operate the parks with little oversight by the regional or headquarters staff or accountability to them. We have found this in numerous areas over the years. This is another area that we are adding to it. It seems to be the culture of how the Park Service operates.

We are bothered by it. I can understand a decentralized organization. You would want the people to operate the park, but that doesn't mean that you divorce yourself from headquarters and regional office level in terms of oversight and management of the program. You need to have performance measures and objectives, goals. You need to have inspections and evaluations. You need to know how your program is operating at all 379 units because you want the taxpayers and the visitors to have the best experience possible when they visit these parks.

Mr. GUTKNECHT. Mr. Hill, in the private sector—and you hate to say that the parks ought to be run by the private sector, but they could learn a little bit. It strikes me if you had people operating facilities like this, at some point one of them might lose their job. Has anybody been terminated as a result of some of these things and continual breakdowns in management accountability?

Mr. HILL. No, not to our knowledge.

Mr. GUTKNECHT. Ms. Finnerty, do you want to respond to that? We are here representing the taxpayers. It is their parks, and we owe it to them to give them a good experience at a fair price, and it strikes me that is not what is happening out there.

Ms. FINNERTY. This accountability issue and dealing with a very decentralized organization is something that the Park Service is struggling with. We have 379 units, seven regional directors that try to provide oversight, enormously complex and numerous programs and issues and those kinds of things.

The director is very well aware that this is an issue not just for concessions but other programs. I think he is committed to trying to put in place better accountability systems and better checks and balances and being able to look at what is going on out there and reporting on—and doing evaluations and monitoring and those kinds of things.

The ability to roll information up on a national level is something that we have struggled with. You literally have to go to the parks to find out what the facts are.

We have made some good progress in the last year to get some systems in place so we can answer basic questions on a Service-wide basis. We are just going to keep working on it, and the director is committed to that. He is very well aware of this GAO audit and several others that we just have to address and try to figure out how we are going to become more accountable and get the information that we need at the national level and then how are we going to individually hold a very decentralized organization more accountable than it has been in some of these programs.

Mr. GUTKNECHT. Please assure us today that we will not have a situation 1 year from now where the person who is responsible for concessions has no idea what condition these facilities are in. It seems to me if they can't go out to some of these facilities they can send someone out. Employees from the National Park Service, if they would stay in some of these facilities, perhaps you can send a report with them and maybe give them a discount.

I have to come back to something that the GAO said, and that is, if you read their report, it essentially says money is not really the answer. I mean, at some point it really is about just managing the facilities that you have.

Unfortunately, I am afraid what is going to happen is the answer to every problem is more money. Well, excuse me, I don't think that this is going to take a whole lot of money to resolve. I think once the various park superintendents and managers understand that they will be held accountable and responsible for the facilities in those parks, I will bet that this will improve quickly. But until and unless—and this has to come from the top level of the Park Service. Until or unless people understand that they are going to be held accountable, this story is going to go on and on and on.

We won World War II in less than 4 years. The idea that it somehow takes year and years and years to get something done, even by the Federal Government, I think is just grossly overstated. I am sorry. On behalf of the people that I represent and on behalf of the people on the Budget Committee, we are going to demand more accountability of every agency. Because that is our job, and we are held accountable every 2 years.

I want to thank the chairman for holding these hearings. I hope that we have more.

It is not just to cause heartburn for folks like you. I do think that when you read through some of the things in this report, it is just

unbelievable. You are probably—we are all fortunate that our constituents out there back in fly-over country really won't get a chance to read this, because I suspect that people would be very furious if they learned that we have a \$765 million industry that is basically not accountable to anybody.

I yield back the balance of my time.

Chairman RADANOVICH. Thank you, Mr. Gutknecht.

Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

Let me, Ms. Finnerty, turn to you and ask you, first, to give us your take on a couple of the questions that I raised with Mr. Hill about the report itself; and then I obviously want to ask you about your time line and your plans for dealing with some of these GAO recommendations.

Do you have anything to add about the 10-year time frame and the persistence of the problem? Are there things that we should know about facilities where there have been persistent problems for 10 years or are we talking about a range of facilities, comparing apples and oranges? What would you say? Is it a fair generalization to say these problems have persisted over 10 years and really have not been dealt with?

Ms. FINNERTY. Without the baseline information that we have admitted and agree that we don't have, it is difficult for me to say that this has persisted for 10 years. I would expect, though, that we have had some condition problems and facilities that have been in various stages of disrepair over a period of time.

I think some of the management issues dealt with in the GAO report are things that have contributed to this, and I think obviously we need to get a better handle on it, and we need to be more accountable and have better baseline information so we know what is going on in the field. Beyond that, I could not speak whether these particular conditions have existed in the parks for 10 years. You would have to go out to the parks and look at their inspection reports and those kinds of things to get that information.

Mr. PRICE. And the GAO conclusion is that it really doesn't seem to matter whether you are talking about seasonal or year-around facilities or whether you are talking about privately owned or government property. Do you agree with that? In your own assessments, are there mitigating factors that we should attend to?

Ms. FINNERTY. I think, as we look at the various concession facilities, we see government-owned facilities that are in good shape and poor shape. I think there is a real mix. I think there is no particular pattern as far as seasonality and ownership. I think there are problems throughout. We haven't seen anything to indicate that there is more of a trend with one kind of ownership or one kind of seasonality than there is with something else.

Mr. PRICE. Can you just tell us in general terms what the Park Service's time line looks like for dealing with these recommendations, especially with respect to hiring practices and the implementation of a more systematic program of oversight and accountability?

Ms. FINNERTY. We have already started to work on a lot of these issues.

Looking at the training and professionalization, we have a 5-year training strategy which we have started to implement this year; and more of it is under development for the next several years. It is our intention to put more resources into training and professionalization of our personnel. And we do now have a source of funding through the 20 percent franchise fee accounts that we can put some more money into training and professionalization. We do have under way agreements with Northern Arizona University, Cornell and the Army to help us professionalize certain aspects of the program.

As far as our hiring practices, certainly as positions become vacant it is our intention to try to professionalize those and to try to hire from outside and try to strengthen and beef up the background and experience and training of these people.

As far as the contracting piece, we are actively involved in trying to apply best practices to contracting, and we hope at the beginning of 2001 we will be able to start applying some of those. Most of our contracts have to be redone. We have been on short extensions. We have had a long moratorium on contracting that is now over. So we have a good opportunity to influence lots of contracts that are coming up now for renegotiation and discussion. That is well under way.

We do have a request in or pending in the 2002 budget to get at some of the other staffing and professionalization needs. The idea of centralized inspections is one that we like a lot, and we are looking at options to try to provide that. We will continue to look at opportunities to outsource. We are already outsourcing about a million dollars of work, and I suspect that we will increase that over the coming years.

So efforts are under way and will continue. I think once we get the advisory board's report in November and some pretty strong recommendations from them, that will give us more impetus to move forward and hopefully to make improvements in the program.

Mr. PRICE. Let me ask you about the possible way that you might determine consumer satisfaction. We have talked about the quality of service being offered to the consumers, to the citizens who take advantage of visiting our parks. I assume that you have some kind of consumer satisfaction or visitor satisfaction surveys already. Let me ask you a couple of things about that.

First of all, have you analyzed those and can you say whether they reinforce or somehow contradict the GAO findings?

Secondly, are there any plans for maybe improving those instruments or using them in more systematic ways?

Ms. FINNERTY. I have here, Congressman, actually a customer survey report that we do every year in the National Park Service, and we have done it for a number of years. We do three to five parks a year. We survey the park visitors to see how we are doing. Over the last 5-7 years, we have gone to 70 or 80 parks. And on concession services we ask about lodging, food services and about gift shops. This is system-wide. It is not targeted—it is targeted at the parks that are surveyed for that year.

Mr. PRICE. Can you break it down for the individual parks?

Ms. FINNERTY. Yes. The ratings consistently go from 65 to 85 percent customer satisfied with lodging, food services and gift

shops. So they are consistently ranging 65 up to 85 percent, depending on the questions.

That doesn't mean that we couldn't do better, and it doesn't mean that we can't improve facilities and that kind of thing. And certainly maybe one of the things that we should consider, we do have a sociologist that works with us, and we could perhaps look at and think about doing more tailored surveying, particularly as it pertains to concession facilities to see how we might be doing and whether we are making the improvements. These questions are quite general, but we could maybe tailor them more specifically and look at some of these issues more specifically.

Mr. PRICE. Have you included in these surveys the specific parks that the GAO looked at and is there anything that you can say about the consistency or inconsistency of the findings?

Ms. FINNERTY. I didn't do that prior to this. I don't have a list of all of the parks that have been surveyed. We can certainly do that and compare if some of those same parks have been visited.

Mr. PRICE. I would find that of interest.

Ms. FINNERTY. OK.

Mr. PRICE. Your contracting arrangements, you say that your period of limited contracting is now ending because you have your regulations in place and you have longer term contracts. What kind of limitations are going to be on the contracts that you grant to private concessionaires? What prompts the decision in the first place about whether to privatize concessions or to maintain park-owned facilities? And how adequate—when you go the contracting route, how adequate are your contracting provisions in terms of holding those concessionaires accountable and getting the kind of service that you want?

Ms. FINNERTY. In response to your first question about whether we decide to go with a concession contract or decide to privatize, that case is made on a park-by-park basis.

One, we look at what provides the best service to the visitor. Do we need to have these facilities in a park to begin with or can these amenities and these services be provided outside of the park?

In some cases, we have moved facilities out of the park or we have determined not to have them in a park to begin with. This is all part of the planning process where discussions are held about can this be done outside of the park and still serve the visitor.

If they are going in a park, there is a lot of planning that has to be undertaken. We have got to look at compliance issues and those kind of things.

As far as the contracting is concerned, I think we are comfortable with the new contracting provisions in the law and in the regulations. We have been able to streamline the process. I think there is more provision for competition in the new procedures; and, obviously, we haven't done it yet because we are just about to launch into renegotiating over 200 contracts pursuant to the new regulations that have been in place for less than a month.

I think we have procedures in place, and we will see over the next year, 12-18 months, when we are looking at many contracts. But I think we are confident that the regulations and the contracting procedures will serve us well and will provide more competition

and hopefully a good return to the government and all of those kinds of things that we look at.

Mr. PRICE. One further question related to that is the leasehold surrender provision of the 1998 act. How do you assess that in terms of the kinds of incentives that it provides to concessionaires?

Ms. FINNERTY. We believe it provides incentives because it provides a compensable interest to the concessionaires. We have not applied it yet because we are about to launch into redoing the contracts.

One of the major intents behind the Concessions Management Act of 1998 was to make the concessions program more competitive, to attract more competition for individual contracts. The preferential rider renewal was removed; and the feeling of the Congress when they wrote the bill was that LSI, because it does provide a compensable interest, would put more competition into the process. And we believe that will happen, and it remains to be seen as we get in depth into the contracting procedures whether in fact that is true. We think that it will be.

Mr. PRICE. Thank you.

Chairman RADANOVICH. Mr. Garden, in Mr. Vreeman's contract with the National Park Service, is there any right to sue for breach of contract or anything?

Mr. GARDEN. No, there is no specific clause in the contract for that. I do know that National Park Service Manual 48 did at one point refer to bringing claims through the Interior Board of Contract Appeals. However, that requires a disputes clause to be in the contract to do that, and that clause is not in Kings Canyon's contract. I also note that National Park Service 48 is no longer valid. They pulled that recently.

Chairman RADANOVICH. Any other questions, Mr. Gutknecht?

Mr. GUTKNECHT. Thank you, Mr. Chairman.

Let me come back to a couple of points. I think it is great that you are doing these surveys, but next week I am going to go fishing, and I am going to stay in a cabin. I have been going to this place since I was 6 months old. When we first started going to this particular resort, the cabins were very, very basic. They had outdoor plumbing, and they have gradually improved them, and now they are too nice, and so we like a little bit of the outdoor experience. Your level of satisfaction is largely dependent on your level of expectation, and as you do this questionnaire you ought to allow the GAO to write the survey.

Here is a question that I want to ask. In terms of the facilities that we see here, who originally was responsible for building those facilities and who was responsible for maintaining them?

Ms. FINNERTY. Again, that may be different in different parks. When they enter into a concession contract, part of the contract has a maintenance agreement and deals with use and occupancy of the buildings.

Mr. GUTKNECHT. But, in general, who built the lodging facilities at the parks? Were they built by private sector?

Ms. FINNERTY. In general, government.

Mr. GUTKNECHT. In general, they were built by the taxpayers. There is a difference. If the consumer realized when they checked into these facilities that, A, they were built with taxpayer money;

and, B, this is a big business, somehow if there was some disclosure in that questionnaire I think you would get a lower level of satisfaction. So I hope when we do these questionnaires there is truth in advertising in terms of how much we put into it.

In fact, in fairness, at every one of the facilities if you are going to ask people whether they are satisfied you ought to tell them the American taxpayers invested \$5.3 million building this particular facility. We also invest X amount of dollars every year in keeping it maintained. Now against that backdrop—and you paid \$82 a night to stay here; how satisfied are you now? I think you would get a much different level.

More importantly, if you disclose and people are satisfied, that is great. That is what we want. We want satisfied customers. But I think we have to let people know the truth about how much we have already invested in many of these facilities. And I think, frankly, my own sense is, and we can get to the bottom of this, people would be shocked if they knew how much the American taxpayers had already paid for these facilities. I also have this instinctive belief that, wherever possible, concessionaires try to get the taxpayers to pay for the maintenance as well one way or the other.

Finally, I just hope—and this is just a suggestion because in some respects I hope we don't have to have you folks back next year, but, if we do, I hope you or Ms. Orlando will not be coming forward and saying, I have not seen these facilities. I hope there will be an effort by the department to make certain that one or both of you get out and visit most of these facilities and hold the superintendents more accountable and remind them how much we have already invested in the facilities and that we owe it to the American taxpayers to take good care of them.

I would hope, as you prepare the questionnaires for next year, you give people complete disclosure; B, that there is a real commitment by Ms. Orlando and the entire department to hold people accountable for these facilities.

That is my last word. I yield back the balance of my time.

Chairman RADANOVICH. Mr. Price, do you have one last question?

Mr. PRICE. On Mr. Gutknecht's point about how a questionnaire might be designed, let me just say I am not a professional designer of questionnaires, but it does strike me that a questionnaire of the sort you describe would be sending a fairly mixed message. We have spent X million dollars and you spent the night here, now how do you feel about that? I am not sure that you would get a more straightforward answer than if you simply said, did you have a good night's stay?

Anyway, it is, of course, important for people to understand where their tax dollars have gone. For us to make certain that they are getting good value and asking them how they feel about it is surely one way to do that.

Mr. Hill and Ms. Finnerty, you might both want to respond to this. It is a more general kind of question, but I wonder if we have really said all there is to be said about the centralized versus decentralized model of how all of this ought to work.

I take it that an implication of the GAO study is that Park Service operations are decentralized to their detriment, that there is a

lack of standardization, there is a lack of accountability, there is a kind of sporadic quality to the way that these operations go, and somehow we would be better served if there was a centralized bureaucracy or system that was somehow imposing a set of standards across the whole system or at least monitoring across the whole system. I don't know if that is a fair statement or not, but often there are some advantages and disadvantages associated with that kind of central management and that kind of top-down structure. And I don't know how far you are taking that recommendation, but I would appreciate you and Ms. Finnerty reflecting on it.

Are there advantages to this decentralized structure? Obviously, there are some individual facilities that haven't had the attention that they should have had. I think everyone agrees to that. Is the case for more centralized operations? Or are we overlooking some possible benefits of a looser and more decentralized and diverse kind of organizational structure?

Mr. HILL. Mr. Price, if I may respond, we are not advocating centralized operations. There are 379 parks. Each of them is unique. It has to be done in a decentralized way. The park superintendent knows what is going on at the park, knows the community and the surrounding area, knows the problems and concerns and the issues that need to be dealt with in operating that particular park.

What we are talking about is centralized oversight from the agency level in terms of their overall programmatic goal. If a programmatic goal is to have a concessions program, facilities that meet nationwide standards, programmatic standards, you want to have somebody at the central office at headquarters or certainly down at the regional office level providing periodic inspections and oversight to make sure that the program goals and standards are being carried out consistently.

The one recommendation that we made dealing with a formal inspection program I relate back to comparing it to private industry. If you have a private motel chain like a Holiday Inn or somebody who has franchises across the country, they have inspection teams that go out to make sure that each of those franchises are meeting certain minimum standards that the Holiday Inn or whatever facilities has to meet. If those standards are not met, they take their name off of that particular facility, and they are not part of that chain any more.

We have a nationwide park system, and we want that park system to meet certain standards, and they deal with safety standards, health standards—in this particular case, lodging conditions standards. Someone at the regional or central office I think needs to get on top of it to determine what are the conditions of these lodging facilities in our parks. And if there are problems, let's deal with them and get these facilities up to the standard.

Mr. PRICE. Ms. Finnerty, do you have any comment on that issue of organizational structure?

Ms. FINNERTY. Yes, I would agree with Mr. Hill's assessment. I don't think that the answer is more centralization. I actually think it would be very difficult to have that work with the system the way that it is structured in all of the parks.

Having said that, I think we in the Service, for this program and others, need to do a better job at the top setting priorities that are

important and goals and objectives to be accomplished; and then that needs to be conveyed down to regional directors to ensure that the accountability is there.

I think we do need to standardize our procedures on this program so that we are looking at the same things. I think we need to continue to work on gathering baseline information and baseline data so that we can answer questions about what is going on on a system-wide basis. I think those things can be done even within a decentralized organization, and we are working on it, and the director is committed to trying to improve some of these systems that currently are fragmented and are not nearly as consistent as they need to be.

I think that is the challenge that we face. I think it is better systems in place, better accountability and agreement on objectives and goals and things that are important. All of these people have enormous workloads and a lot of issues to deal with, and we have to decide which of those are perhaps more important than others.

Mr. PRICE. Thank you.

Chairman RADANOVICH. Thank you, lady and gentlemen, for the excellent testimony.

This concludes this hearing, and I do appreciate your participation. Thank you.

[Whereupon, at 3:39 p.m., the Task Force was adjourned.]

**Department of Energy Management Practices:
Uncertainties at Savannah, Paducah, and the
National Ignition Facility**

WEDNESDAY, JULY 12, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
TASK FORCE ON NATURAL RESOURCES AND ENVIRONMENT,
Washington, DC.

The Task Force met, pursuant to call, at 2 p.m. in room 210, Cannon House Office Building, Hon. George Radanovich (chairman of the Task Force) presiding.

Mr. RADANOVICH. Good afternoon and welcome to the Budget Committee Task Force on Natural Resources and the Environment. Today our hearing is on the Department of Energy management practices, and I welcome everybody here, including our guests. Our guests today are Dr. Carolyn L. Huntoon—and thank you, Carolyn, for coming—who is the Assistant Secretary for Environmental Management of the Department of Energy, and Brigadier General Thomas Gioconda—welcome, General—United States Air Force, Acting Deputy Administrator for Defense Programs at the National Nuclear Security Administration of the Department of Energy.

I will go ahead and read my opening statement and then please ask you to do the same, and the course of this hearing will be that plus questions that I or others who will arrive during this time might have of you, and then our second panel today will be a representative from the General Accounting Office. So welcome and thank you for taking time out of your day to come to the Hill and testify.

Today we will be reviewing reports from the General Accounting Office that touch on disturbing trends within the Department of Energy. Mismanagement, cost overruns and project delays are among the recurring themes throughout these reports. We have witnesses with us today from the Department of Energy who will speak to these problems and who will hopefully share some meaningful plans they have to make improvements.

In addition to the GAO reports, this review was spurred by last year's bipartisan approval of a House Appropriations Committee report that characterized the DOE's programs as models of mismanagement and waste. DOE's past record and the costs associated with some of the Department's projects that we will be discussing today suggest that congressional oversight of the Department is an appropriate, necessary role of this committee. The budget impact of these projects alone is significant. There is no way to

know what costs await us at other DOE projects, making it imperative that we are satisfied that the Department is doing everything in its power to make meaningful changes to ensure cost controls and accountability.

Our first witness today will be the Assistant Secretary for Environmental Management, Carolyn Huntoon, who will discuss the Savannah River Project and the Paducah cleanup plan. The Savannah River In-Tank Precipitation, or ITP, Project is designed to process high levels of liquid radioactive waste at the Savannah River nuclear facility in South Carolina. It was abandoned by the DOE last year after years of criticisms that ITP would not work. The DOE has gone back to the drawing board in search of a replacement.

The Paducah site cleanup plan lays out the blueprint for cleaning up hazardous and nuclear waste at the Paducah, Kentucky site. It is projected to cost \$1.3 billion and be completed by 2010. But the GAO's office say the estimates fail to account for numerous factors that would lead to added costs and the DOE will have difficulty meeting its 2010 date.

Then we will hear from Brigadier General Thomas F. Gioconda, who is the Acting Deputy Administrator for Defense Programs at the National Nuclear Security Administration within the DOE. He will discuss the status of corrective actions at the National Ignition Facility, or the NIF, a super laser project under construction at the Lawrence Livermore Laboratory in California. It is intended to simulate nuclear weapons explosions. In June 1999 Secretary Richardson declared the project on time and on budget. However, the DOE recently admitted that the project is more than a billion dollars over budget and will be 4 years late in beginning operation.

On our second panel we will hear from Ms. Gary Jones, Associate Director for Energy and Science Issues at the GAO, who will testify about her agency's reports on the Savannah project and the clean-up plan at Paducah.

The Department has taken steps to address concerns raised by the GAO and others in each of these three projects. Nonetheless, many of us on this committee are skeptical when it comes to the DOE's explanation of how problems and flaws in major projects will be resolved and managed effectively in the future. We are skeptical because of the Department's history of poor performance in managing projects and overseeing contractors.

Almost since its creation in 1977 the U.S. Department of Energy has been plagued by chronic management problems, countless reports by the GAO's office and the Inspector General and others who have repeatedly identified examples of mismanagement in the Department's operations, including poor project management, inadequate oversight of contractors, inadequately trained employees, and the lack of accountability at both the Department and among the contractors.

Just this past February Ms. Jones of the GAO had this to say about DOE's operations: DOE's history of failures in managing major projects that are critical to its mission have resulted in significant cost overruns, scheduled delays and failure to complete and operate those projects. She goes on to say that past studies have identified basic flaws at DOE. The complicated, dysfunctional

organizational structure and unclear lines of authority throughout DOE have long resulted in weak oversight of contractors and poor accountability for program plans. For years DOE has failed to respond to our report that has highlighted these weaknesses. Indeed, an internal DOE study reflected the concerns about problems at the DOE. In 1997, a DOE internal study noted a lack of clarity, inconsistency and variability in the relationship between headquarters management and field organizations. This is particularly true in situations with several headquarters programs fund activities at laboratories.

In addition, the President's own Foreign Intelligence Advisory Board, headed by Senator Warren Rudman, expressed concerns about the DOE's ability to address such problems. In June 1999, in the wake of the Wen Ho Lee spy case, the Board said it was extremely skeptical that any reform, no matter how well-intentioned, well-designed and effectively applied, will gain more than a toehold at the DOE given its labyrinthine management structure, fractious and arrogant culture and the fast approaching reality of another transition in the DOE leadership.

On that resounding note I will simply say we look forward to the testimony of the panels, we are anxious to hear about the DOE's efforts to address these problems, and we anticipate a future full dialogue. Thank you very much again for joining us, and I would like to invite other members, Mr. Price, to give opening statements and also like to state too that anybody who is not here or anybody who would like to submit a written statement I would ask unanimous consent that they be given 5 days to do so.

With no objection, Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman. I have no formal opening statement except to welcome the witnesses and to say that we do look forward to their testimony, to getting a balanced and objective view of some of these allegations that the chairman has referred to, and also an honest account of the Department's efforts to address these questions and concerns. I am sure you will bring that to us and in that spirit I await your testimony.

Thank you.

Mr. RADANOVICH. Thank you, Mr. Price. Ms. Huntoon, again welcome and please feel free to give your testimony at this time. I see no need to do buttons and whistles, so just please be welcome to give your testimony.

STATEMENTS OF DR. CAROLYN L. HUNTOON, ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT, DEPARTMENT OF ENERGY; AND BRIG. GEN. THOMAS F. GIOCONDA, U.S. AIR FORCE, ACTING DEPUTY ADMINISTRATOR FOR DEFENSE PROGRAMS, NATIONAL NUCLEAR SECURITY ADMINISTRATION, DEPARTMENT OF ENERGY

STATEMENT OF DR. CAROLYN L. HUNTOON

Dr. HUNTOON. Thank you, Mr. Chairman. I appreciate the opportunity to testify before you today. The Department is making substantial progress in cleaning up the legacy of radioactive and hazardous contamination at over 100 sites across the Nation left by nuclear weapon production and energy research. We are reducing

serious risk, as well as accelerating and finishing cleanup at sites across the country. We are safely storing and safeguarding excess nuclear materials and reducing the long material cost of these programs.

To protect the health and safety of our workers we have established safety as our top priority. To get the most work done with our budgetary resources we have incorporated state-of-the-art private sector contracting and management practices into our operations. To make the most use of our unique facilities and capabilities we are integrating the use of our resources across the DOE complex. To reduce cost and schedules we are investing in science and development of new technologies. We are working with regulators and stakeholders to address their concerns and find mutually acceptable cleanup solutions. And, we are working with Congress to secure the funding that we need to meet our compliance obligations and our closure goals.

Our programs at Paducah and the Savannah River site provide good examples of both of our successes to date and the challenges that remain. At each of these sites and other sites across the complex we have made a lot of progress. In the past several years, we also faced technical, managerial, budgetary and regulatory challenges to completing the cleanup task. These challenges reflect the complex and extensive nature of the hazardous radioactive contamination and materials for which we are responsible.

At the Paducah site in Kentucky, the EM program is responsible for addressing serious problems, including soil and groundwater contamination and radioactive hazardous chemicals, surface water contamination in ditches, creeks, lagoons, approximately 65,000 tons of scrap metal stored on-site, 12 burial grounds containing a variety of radioactive and hazardous waste, 52,000 drums of low level and hazardous chemicals and two contaminated process plants that have been shut down.

To date we have significantly reduced risks while ensuring the safety of workers, the general public and the protection of the environment. For example, we have addressed the risk proposed by contamination of off-site residential wells from contaminated groundwater by supplying municipal water to over 100 residences and businesses. We have installed pump and treatment systems in groundwater plumes to contain the spread of contamination. We have eliminated immediate risk and contamination hot spots. We began the removal of Drum Mountain last month and expect to complete removal by the end of this year.

To accelerate our cleanup at Paducah, we have significantly increased the funding for cleanup in fiscal year 2000; our 2001 request of \$78 million is more than twice the funding level for fiscal year 1999. We are working with the Commonwealth of Kentucky and the Environmental Protection Agency as well as with workers and local citizens to accelerate the cleanup. These efforts have helped us develop a new baseline with the completion date of 2010. The GAO report depicts a very real challenge the Department faces at Paducah. The Department agrees that these factors could affect our ability to meet the cost and schedules we have laid out. However, the Paducah site cleanup plan addresses the cleanup that is

large in scope, technically complex, and spans a 10-year period and therefore has inherent uncertainty.

As recommended by GAO, the Department is preparing an integrated plan for the Paducah site that will cover all activities at the site, including the EM cleanup and the Office of Nuclear Energy materials management responsibilities. The plan will provide an integrated life cycle baseline describing the cost, scope and schedule for completing all of the work at Paducah. We expect to begin implementing the plan in fiscal year 2001.

We do not support the GAO recommendation to consolidate all DOE efforts at the site into the EM program. The Office of Nuclear Energy has a unique capability to perform its mission at the site. We are also concerned that the consolidation will lead to reduced funding for the cleanup portion of the DOE program. The Department appreciates congressional support for the increased funding in fiscal year 2000. We need your continued support for the critical funding increases for fiscal year 2001 that are now before you.

The Savannah River site has approximately 34 million gallons of high-level waste that requires permanent isolation. The highly radioactive portion of this waste will be transformed into a more stable glass form using a process called vitrification for ultimate disposal. The remaining low activity portion will be stabilized and managed as low level waste. Separating out the highly radioactive element in the waste will significantly reduce the volume of waste that is needed to be vitrified and therefore reduces processes in disposal costs by billions of dollars.

In January 1998, after an in-depth technical assessment of the problem and expert reviews, the Department determined that the In-Tank Precipitation technology being developed to remove cesium from the high level waste salt stream could not safely meet the safety and production requirements. Since then our efforts have been focused on identifying and evaluating alternative technologies to replace the ITP process. The Department's goal is to ensure the technology selected will be successful.

In response to concerns raised by the GAO and based on our own experiences with ITP, the Department has established a rigorous research evaluation process to identify and evaluate potential technologies. The process that we are now undertaking ensures sufficient research and development is completed before a selection is made. It brings internal and external expertise into the process, including the National Academy of Sciences. It provides for effective management and oversight of the project and close involvement by headquarters and senior management.

Early in 1999, the Secretary decided to remove the contract to Westinghouse from the selection process for the technology and to seek a contractor to design and construct the selected technology through open competition. Based on our own analysis and recommendations from the National Academy of Sciences, the Department recently concluded that more research is needed before we can select preferred technology. We now anticipate identifying that technology in June of 2001. This approach will give us the confidence that we are selecting technology that will work as expected.

In the meantime we will continue to make progress in the high-level waste program. We continue to produce canisters of vitrified

waste at the current production rate of 200 canisters per year. We will produce sludge-only canisters through 2010 without increasing the total number of canisters produced. We will continue to meet our commitments to close high level waste tanks. We have completed the removal and closure of two tanks on the Savannah River site and are on track to close another two tanks ahead of regulatory commitments.

The Department has made significant progress in managing and cleanup extensive legacy of hazardous and radioactive contamination from nuclear weapons production. Nonetheless, there is a long way to go. We face unprecedented technical, financial, regulatory, and managerial challenges, but we believe we have established a firm foundation that will enable the Department to tackle these problems as they arise. We will continue to work with Congress on this important endeavor.

Thank you.

[The prepared statement of Dr. Carolyn Huntoon follows:]

PREPARED STATEMENT OF DR. CAROLYN HUNTOON, ASSISTANT SECRETARY FOR ENVIRONMENTAL MANAGEMENT, U.S. DEPARTMENT OF ENERGY

Mr. Chairman and members of the Task Force, I appreciate the opportunity to testify about the Department of Energy's (DOE) Environmental Management (EM) program at the Paducah Gaseous Diffusion Plant in Kentucky and the Salt Processing Project (SPP) at the Savannah River Site in South Carolina.

Overall, the Department is making substantial progress in cleaning up the legacy of radioactive and hazardous contamination at over 100 sites across the nation left from the nuclear weapons production process and nuclear energy research. We are reducing the most serious risks posed by this contamination, accelerating and finishing cleanup at sites across the country, safely storing and safeguarding excess materials that can be used in nuclear weapons, and reducing the long-term costs of the program.

To protect the health and safety of our workers, we have established safety as our top priority. To get the most work done with our budgetary resources, we have incorporated state-of-the-art private sector contracting and management practices into our operations. To make the most use of our unique facilities and capabilities, we are integrating the use of our resources across the DOE complex. To reduce costs and schedules, we are investing in science and developing new technologies. We are working with regulators and stakeholders to address concerns and find acceptable cleanup solutions. And we are working with Congress to secure the funding that we need to meet our compliance obligations and reach our closure goals.

Our programs at the Paducah and Savannah River sites provide good examples of both our successes to date and the challenges that remain. At each of these sites, and others across the complex, we have made a lot of progress in the past several years, but also face technical, managerial, budgetary, and regulatory challenges to the cleanup and completion of our mission. These uncertainties and challenges reflect the complex and extensive nature of the hazardous and radioactive contamination and materials for which we are responsible. Before discussing our approach to cleanup at Paducah and the Salt Processing Project, I would like to provide some background on our program and these issues.

THE ENVIRONMENTAL MANAGEMENT PROGRAM

Mission: Cleanup of the Environmental Legacy of the Cold War

The EM program is responsible for managing and cleaning up the environmental legacy of the nation's nuclear weapons production program and government-sponsored nuclear energy research. The scope and challenge of this task is enormous, involving managing large volumes of nuclear wastes, safeguarding materials that could be used in nuclear weapons, and remediating extensive surface and groundwater contamination. The EM program is responsible for:

- remediating 1.7 trillion gallons of contaminated ground water, an amount equal to approximately four times the daily U.S. water consumption;
- remediating 40 million cubic meters of contaminated soil and debris, enough to fill approximately 17 professional sports stadiums;

- safely storing and guarding more than 18 metric tons of weapons-usable plutonium, enough for thousands of nuclear weapons;
- managing over 2,000 tons of radioactive spent nuclear fuel, some of which is corroding;
- storing, treating, and disposing of radioactive and hazardous waste, including over 160,000 cubic meters currently in storage and over 100 million gallons of liquid, high-level radioactive waste;
- deactivating and/or decommissioning about 4,000 facilities that are no longer needed to support DOE missions;
- implementing critical nuclear non-proliferation programs for accepting and safely managing spent nuclear fuel from foreign research reactors that contain weapons-usable highly enriched uranium; and
- providing long-term care and monitoring, or stewardship, for potentially hundreds of years at an estimated 109 sites following clean up.

Accomplishments

Some of the major program accomplishments include:

- Active cleanup is complete at 69 of 113 sites as of the start of fiscal year (FY) 2000.
- The Waste Isolation Pilot Plant (WIPP) is open and disposing transuranic waste. To date, WIPP has received 61 shipments, or 420 cubic meters, of transuranic waste from Los Alamos National Laboratory, Rocky Flats, and Idaho National Engineering and Environmental Laboratory (INEEL). The first shipment from the Hanford site will arrive this week.
- In FY 1999 alone, we disposed of 49,000 cubic meters of low-level waste, 14,000 cubic meters of mixed low level waste, and 282 cubic meters of transuranic waste at disposal facilities at DOE sites and at commercial disposal facilities.
- Cleanup of all 22 large uranium mill tailings sites is complete, as well as 5,300 "vicinity properties," including elementary schools and homes.
- At Rocky Flats, we continue to work toward meeting our 2006 closure goal, including removing all plutonium pits from the site, beginning shipments of highly-enriched uranium to other sites, and demolishing a major plutonium research facility.
- At INEEL, we completed the new dry storage facility for spent nuclear fuel and began transferring Three Mile Island spent nuclear fuel from wet storage to the safer new facility.
- At the Hanford Site, we restarted plutonium stabilization activities to reduce the risks posed by unstabilized plutonium materials; we have resolved three of the four high-priority safety issues for the high-level waste tanks, such as the generation of high heat in one tank and a rise in the surface level in another; and we have removed liquids from 123 of the 149 old, single-shell tanks.
- At the Savannah River Site, by the end of FY 2001 we will have completed approximately one-third of the planned shipments of spent nuclear fuel containing uranium originally enriched in the United States from foreign research reactors around the world. This program reduces the threat of nuclear proliferation by ensuring enriched uranium will not be used to make nuclear weapons.
- At the Savannah River Site in South Carolina and West Valley site in New York, we are operating the nation's only high-level waste vitrification facilities for stabilizing high-level liquid wastes stored in underground tanks. We have produced over 890 canisters of vitrified glass since the Savannah River facility began operating in 1996, and we will complete the vitrification of all 600,000 gallons of liquid high-level waste at West Valley in FY 2001 and begin deactivation of the facility.
- We continue to use new technologies. During FY 1999, DOE sites used new technologies 218 times in cleanup activities, 129 of which were used for the first time at a site. Since the inception of the EM Science and Technology program, we have seen over 450 deployments at DOE sites of over 200 new cleanup technologies. The deployment of these technologies is yielding significant benefits to the cleanup of the DOE complex, including: more efficient removal of highly-radioactive tank waste; containing and treating subsurface contamination; enhancing in situ bioremediation of organic contaminants; treatment of mixed low-level waste; and better methods to deactivate, decontaminate and dismantle facilities while ensuring worker safety and minimizing risk to the surrounding environment.

Program Management: Principles and Practices

The actual tasks of remediating contamination and storing, treating, and disposing of wastes are performed at the sites where the contamination and wastes are located. The role of Headquarters is to provide program guidance and management as to how this work will be conducted. We have established several management principles to guide the program:

- Safety first;
- Reduce risks;
- Meet our commitments;
- Accelerate site cleanup and project completion;
- Strengthen project management;
- Integrate nuclear waste and materials management and operations across the DOE complex;
- Build public confidence and involve stakeholders in cleanup decisions;
- Develop an effective long-term stewardship program for post-cleanup protection;
- Apply the best science and technology to solve technical problems and reduce costs.

A brief description of each of these principles is contained in the Appendix to this statement.

CHALLENGES REMAIN

Despite our progress, there is a long way to go. Our larger and more complex sites will take decades to clean up. The General Accounting Office (GAO) has reported on the uncertainties and challenges facing the Department's cleanup of the Paducah site and on the difficulties in developing a technology for the processing of radioactive salts at the Savannah River Site. We certainly agree that we face uncertainties and other challenges at these sites. These uncertainties and challenges reflect the nature of our mission. There are similar complex, technical, regulatory, financial, and managerial challenges at other sites where we also face unique mixtures of hazardous and radioactive wastes that must be safely isolated from our workers and the human environment for many years. However, we believe we are addressing these challenges in a timely manner. I would now like to turn to each of these issues.

CLEANUP OF THE GASEOUS DIFFUSION PLANT SITE IN PADUCAH, KENTUCKY

Cleanup Scope and Progress

At Paducah, EM is responsible for the remediation of environmental contamination, management and disposal of "legacy" waste generated by decades of uranium enrichment operations, and disposition of surplus materials and facilities no longer needed for the Department's mission. Specifically, at Paducah EM has responsibility for:

- groundwater contaminated with radioactive and hazardous chemicals, primarily trichloroethene (TCE) and technetium-99, which has contaminated private residential wells and continues to migrate off-site;
- surface water contamination in surrounding ditches, creeks, outfalls and lagoons, and about 65,000 tons of scrap metal stored on-site that is the main source of the contamination;
- surface soils on- and off-site that have been contaminated by water runoff, spills and releases of hazardous and radioactive substances, and leakages from buried waste, such as polychlorinated biphenyls (PCBs), radionuclides, volatile organic compounds, and metals;
- twelve burial grounds containing a variety of radioactive and hazardous wastes;
- 52,000 drums of low-level and/or hazardous chemical waste stored on-site that must be characterized and dispositioned; and
- two contaminated process plants, including ancillary buildings associated with the plants, that have been shut down: the C-410 Feed Materials Plant and the C-340 Metal Reduction Plant.

Our cleanup strategy for tackling these complex problems is based on the risks they present to the public, workers and the environment. To date we have reduced risks to workers and the public and developed a sound technical foundation for the next stage of cleanup. For example:

- We addressed the risks posed by the contamination of off-site residential wells from contaminated groundwater. We funded the extension of 12 miles of municipal water supply line to over 100 residences and businesses whose wells were contaminated. We are also paying their water bills.
- We identified the areas of the plumes with the highest concentrations of contaminants and installed groundwater pump and treat systems in each plume to contain the spread and treat the higher contaminant concentrations. Monitoring data show that these systems have met their objectives. We routinely sample groundwater using a monitoring network of some 165 residential and other wells installed to track contaminant migration.
- We eliminated immediate risks and contamination "hot spots" and other suspected sources of off-site contamination. Actions range from removing contaminated

soil from areas with high concentrations of contaminants to reducing potential contamination associated with the North-South Diversion Ditch, where the highest levels of plutonium and uranium have been found.

Like any other complex cleanup project, much of our initial work involved working with our environmental regulators to characterize the nature and extent of the contamination at the site so that we could identify and prioritize risk reducing activities and devise sound technical cleanup solutions. While less dramatic than on-the-ground work that reduces contamination, characterization is a critical step in cleanup and is required under an enforceable cleanup agreement. Because of the hazardous nature of the contaminants and the processes involved, characterization is also a critical step in protecting the workers who are doing the cleanup.

As a result of the health and safety investigation conducted in August 1999 by DOE's Office of Environment, Safety and Health (EH), the Department also prepared a corrective action plan containing 77 specific actions to address the findings in the report. More than 60 percent of these actions have been completed. We have made improvements to our radiation protection and workers' safety programs and have strengthened DOE oversight of the contractor.

We have also improved the pace and effectiveness of environmental cleanup of the Paducah site, a key area of concern in the EH investigation. In brief, we have:

- *Sought increased funding.* In FY 2000 the Department requested and received a \$6 million funding increase and transferred more than \$10 million in additional funds to Paducah. In addition, we sought an additional \$8 million for the Paducah cleanup in the President's supplemental request for FY 2000; Congress recently passed legislation that would provide the supplemental funds for Paducah cleanup. Our FY 2001 request of \$78 million is almost \$16 million above the current FY 2000 appropriation level, including the \$8 million in supplemental funds.

- *Established a Tri-Party Working Group with State and EPA regulators to evaluate the site strategies and priorities and identify ways to accelerate cleanup.* We have identified early actions to remove contamination sources, are making progress in streamlining the formal regulatory process, and are continuing to work to resolve issues related to PCB cleanup levels and future land use designations.

- *Accelerated cleanup activities.* With the additional funds provided in FY 2000, we have accelerated the removal and disposal of "Drum Mountain," a large scrap pile containing thousands of drums, which is a suspected source of contamination of the Big and Little Bayou Creeks from surface run-off. On June 23, 2000, the subcontractor began to remove the drums. We are on schedule to remove Drum Mountain by the end of this fiscal year and complete disposal of the packaged waste in December 2000, a year earlier than previously planned. In addition, the Department has developed a life-cycle baseline that details the schedule, scope, and estimated cost to accelerate overall site completion by 2 years to 2010. The life-cycle estimates associated with this baseline range from about \$880 million to \$1.1 billion depending primarily on whether waste generated from the cleanup can be disposed of on-site or is required to be disposed of at an off-site facility. We will continue working with the Tri-Party Working Group to refine this baseline.

- *Continued cleanup progress.* We began operating the "Lasagna" technology in December 1999 to treat shallow soils contaminated with TCE in the former Cylinder Drop Test Area, a major source of TCE contamination in groundwater. Named for the layered "treatment zones" in the subsurface soil, the Lasagna process generates an electric field and uses chemical means to destroy the TCE. We expect to complete TCE removal in the Test Area in FY 2001.

Once Drum Mountain work is complete, we plan to begin removing other scrap metals at the site, starting early in FY 2001. In preparation for this, we have replaced silt fences that control surface water runoff and repaired bank erosion control measures that retard erosion to creeks and ditches. We will soon start construction of the pilot-scale unit at the Southwest Plume to test the suitability of permeable treatment zone technology for the Paducah site and provide data for full-scale operations. We have completed the workplan for the treatability study and about 90 percent of the design and technical specifications for the pilot facility. We expect to complete construction by the end of this fiscal year.

Challenges at Paducah

The GAO report, "Nuclear Waste Cleanup: DOE's Paducah Plan Faces Uncertainties and Excludes Costly Cleanup Activities," depicts the very real challenges the Department faces in keeping this complex cleanup within the cost and timeframes laid out in the current cleanup plan. The report identifies uncertainties and other factors that could increase costs and cause delays. These are:

- uncertainties about the nature, extent and sources of contamination;

- uncertainties about whether the technologies being pursued to address contamination, some of which are new and innovative technologies, will be successful;
- the need to reach agreements with regulators and stakeholders on aspects of the cleanup, such as land use and cleanup levels, that will affect what cleanup approaches are taken;
- future funding levels; and
- other areas at the site, outside of the current scope of the cleanup program, that are not included in the cleanup plan, but that the Department will need to address.

The uncertainties that GAO raises are valid. It is clear that the Paducah site cleanup plan is large in scope, technically complex, and spans a 10-year period. It is also clear that such a plan, by its scope, duration and the nature of the complicated site conditions it addresses, faces inherent uncertainties.

It should be emphasized, however, that the same uncertainties faced at Paducah exist at many of the technically complex projects EM manages—and many private sector cleanups as well. The Department has specifically acknowledged this elsewhere, most recently in the “Status Report on Paths to Closure” (March 2000):

“The future costs of many complex environmental management and remediation programs are difficult to quantify with precision, particularly when many projects remain in a planning stage. As project planning progresses, and more is known about what will be required to implement a project, cost estimates, and consequently schedules, may significantly increase or decrease. Management studies have shown that complex environmental programs, along with other first-of-a-kind projects, have some of the greatest variability in life-cycle cost estimates.”

The question, therefore, is not whether we face uncertainties in meeting our goals, but whether we are managing those uncertainties wisely and effectively. As previously explained, the EM program seeks to manage the uncertainties and minimize their impacts—at Paducah and at other sites across the complex—in a number of ways. We have invested in science and research to develop new technologies to characterize and remediate contamination and to develop more effective and cost-efficient technologies than traditional approaches. We are working with regulators and stakeholders to address concerns and find acceptable cleanup solutions. We are working with Congress to secure the funding that we need to meet our compliance obligations and reach our closure goals. And we are integrating our cleanup and materials management efforts across DOE sites and programs to ensure that the Department performs these activities expeditiously and cost-effectively. Let me address more specifically how we are managing the uncertainties the GAO report highlighted at Paducah.

Managing the Technical Challenges

At all of our sites, we face uncertainties about the size and scope of the contamination. As previously noted, much of the early work at Paducah involved working with regulators to characterize and assess the contamination at the site to support cleanup decisions. From FY 1988 through FY 1999, about \$112 million, or almost 30 percent of the funds have supported characterization and assessment activities at Paducah.

Such characterization work is necessary to devise sound technical solutions, prioritize work, and to protect the health and safety of the workers doing the cleanup work. The Department is increasingly pursuing a strategy that allows us to move forward with cleanup actions when we, and the regulatory agencies, believe there is sufficient information to take action, building flexibility into the process to help us deal with the unexpected. At Paducah, our characterization efforts continue. However, the Tri-Party Workgroup involving our regulators also has identified a number of early actions to eliminate potential sources and reduce contamination, including the removal of Drum Mountain. We will continue to work with this group to identify ways in which to accelerate the cleanup even more.

The GAO report also raises legitimate concerns about the need to pursue effective technologies and technical strategies to address environmental contamination, specifically groundwater contamination and its sources. Trichloroethene (TCE), a widely-used degreasing solvent, is the most commonly occurring contaminant in groundwater across the country, and is notoriously difficult to extract from groundwater with conventional pump-and-treat technologies. While there are risks associated with the use of new and innovative technologies, we manage those risks by applying the best science and expertise to the problem—and the risks of relying on conventional technologies that cannot effectively and efficiently solve the problem are greater. Since early 1999, the Innovative Technology Remediation Demonstration (ITRD) program has been working with the Paducah site office to identify and demonstrate innovative technologies that can solve cleanup problems in a more efficient

and less costly manner. The pilot-scale unit being developed to test the permeable treatment zone technology and the “Lasagna” technology now in operation are products of this effort. In addition, I sent a Technology Deployment Assistance Team to the site in November 1999, which included experts from the Savannah River Site Technology Center and the national laboratories, to conduct a technical review of the groundwater contamination at Paducah and provide recommendations for expediting cleanup of the groundwater plumes. The Deployment Assistance Team validated the technologies and approaches recommended by the ITRD and supplemented ITRD recommendations for treatment of groundwater source terms and increased plume monitoring.

Groundwater contamination at Paducah is one of the technical challenges across the DOE complex that our science and technology program is working to address. EM is investing in science and research to develop and deploy technologies for environmental problems that need new or more effective technological solutions. Our efforts are beginning to make real, on-the-ground contributions. Since the inception of this program, we have seen over 450 deployments at DOE sites of approximately 200 new technologies that were sponsored by EM’s science and technology program. One of my priorities since becoming Assistant Secretary in EM has been, and will continue to be, to bring the best science and technology to bear on solving the cleanup challenges facing the Department.

Working Cooperatively to Resolve Regulatory Issues

The Department has worked closely with State and Federal regulatory agencies and other stakeholders throughout the cleanup process. DOE conducts the cleanup pursuant to a three-party, enforceable agreement with the EPA and the Commonwealth of Kentucky under the Comprehensive Environmental Response, Compensation and Liability Act (CERCLA), similar to the regulatory agreements that direct cleanup at most of our sites. Through the process established by the agreement, the parties establish priorities, assess contamination, and determine cleanup remedies. In November 1999, in the wake of concerns raised by DOE’s Office of Environment, Safety and Health investigation and others about the pace of cleanup at Paducah, the Tri-Party Working Group (made up of senior managers from DOE, the State and EPA) was formed to evaluate priorities and strategies and to identify ways to accelerate the cleanup. Staff that support the Tri-Party Working Group meet on a monthly basis and have reached general agreement on early actions which can be taken to accelerate cleanup completion by 2010, including work not previously included in the life-cycle baseline, such as decontaminating and decommissioning of two radiologically contaminated facilities and installing sedimentation basins at specific outfalls. In addition, the Tri-Party Working Group is considering another alternative proposed by the Department to further accelerate cleanup by disposing remediation waste in an on-site cell.

While we may not have resolved all regulatory issues that could affect the cost and schedule of cleanup, the Department believes it has a solid and effective working relationship with our regulatory partners and has in place a process that will lead to mutually supported cleanup decisions.

Funding the Cleanup

The Department is seeking significantly increased funding for the Paducah cleanup. The Congress recently approved the \$8 million for cleanup of Paducah that the Administration included in its supplemental request for FY 2000. The funding request for FY 2001 of \$78 million is more than double the FY 1999 appropriation and almost \$16 million more than FY 2000.

However, as GAO notes, “[f]unding constraints have always been an issue, according to DOE, contractor and regulatory officials, and their recurrence could delay the project and add to its ultimate cost.” Beginning in FY 1996, the Department saw its funding requests for the Uranium Enrichment Decontamination and Decommissioning (UE D&D) Fund—the appropriation account that supports cleanup of the three uranium enrichment facilities—reduced and, consequently, less funds were available for cleanup at Paducah. From FY 1996 through FY 1999, the UE D&D Fund appropriations were reduced from the Administration request by approximately \$10 million, \$40 million,¹ \$18 million, and \$57 million respectively, resulting in funds for Paducah reduced, for example, in FY 1999 by \$20 million. The Department, with reduced appropriations, was required to adjust its cleanup activities and priorities accordingly.

¹\$10 million was later shifted to the UE D&D Fund in FY 1997 through a reprogramming action.

The \$8 million that Congress provided pursuant to the supplemental request will support two important projects: first, removal of concrete rubble piles outside the plant fence that may have low levels of radiological contamination for ultimate disposal in the on-site landfill; and second, stabilization activities to reduce radiological risks associated with the C-410 Feed Materials Plant, one of the two surplus contaminated process buildings for which EM is responsible. These activities address EH concerns and also make use of the skilled workers who are subject to layoffs by United States Enrichment Corporation (USEC) beginning this month.

For FY 2001, the Department has requested \$78 million for the cleanup of Paducah. This funding level will enable us to continue accelerating our cleanup efforts. At this level, we will continue accelerating disposition of the remaining 57,500 tons of contaminated scrap metal stored in outside storage areas at a pace for completion by FY 2003, allowing characterization of the ground underneath the piles. We will also continue stabilization activities in the two shut down buildings; characterize and dispose of the remaining 9,000 drums of low-level radioactive waste, some of which are currently stored in deteriorating drums; and ship 2,000 drums of mixed waste to an off-site disposal facility. In addition, we will issue the record of decision for the final groundwater remedy and begin remedial design, accelerate the surface water investigation, and finalize the decision and begin remedial design for cleaning up the North-South Diversion Ditch.

It is critical that Congress approve the full request so that the Paducah cleanup can proceed expeditiously and meet the 2010 completion date. In this regard I am very concerned about the recent House-passed FY 2001 Energy and Water Development Appropriations Bill that would consolidate the two uranium program funding accounts and reduce the total (from the requested level) by \$43 million. This reduction would impact funding levels at three sites (Paducah, Portsmouth, and Oak Ridge) and would seriously impede our cleanup efforts at Paducah as well as the other sites. I urge this Committee to support restoration of this funding as the appropriations process moves forward.

Integrating Cleanup And Materials Disposition

As it does at other operating sites in the DOE complex, EM shares responsibilities at the Paducah site with other Departmental programs. The Office of Nuclear Energy (NE) has on-going responsibility for management of materials, facilities, and support of the site infrastructure, or "landlord" responsibilities. This office, therefore, has responsibility for management of materials stored in USEC buildings in DOE Materials Storage Areas (DMSAs) for potential reuse by USEC. As these materials are evaluated by NE and USEC, the responsibility for any materials not needed by USEC would be transferred to EM. NE is also responsible for the management and conversion of the depleted uranium hexafluoride currently stored in cylinders into a more stable form—with the potential of commercial reuse of fluorine by the nuclear industry.

In addition, USEC is responsible for maintaining facilities and managing waste generated by its operations. The Department—and specifically EM—will be responsible for the D&D of the plants when USEC ceases operation.

While these cleanup and materials management activities constitute work the Department must accomplish, the division of responsibilities among programs is essentially consistent with our management approach at DOE facilities that have on-going operations in several DOE programs. For example, there are multiple programs with responsibilities at the Oak Ridge Reservation, including the Offices of Science, Defense Programs (now a part of the National Nuclear Security Agency), Nuclear Energy, and Environmental Management. EM is responsible for environmental cleanup, D&D of surplus facilities, and management of waste, while other programs are responsible for materials management and maintenance of site infrastructure and facilities supporting on-going operations.

With different offices having responsibilities at the same site, it is important that the activities be integrated, the relationship between them defined, and the costs for activities and the site clarified. As recommended by GAO, the Department is preparing an integrated plan for the Paducah site, and a plan for the Portsmouth site as well, that will cover all activities at the site. The plan will be comprehensive in scope and will include current EM and NE responsibilities, a process for transferring additional responsibility to EM as materials are determined to be waste, and also will outline our handling of the return to DOE of the gaseous diffusion plant from USEC at an as yet undefined time in the future. It will provide an integrated life-cycle baseline describing the cost, scope and schedule for completing all the work at Paducah and closing the site, and the assumptions and uncertainties that underlie the plan.

The integrated plan will provide the basis for the total site budget, provide the basis for measuring performance, and facilitate common priorities among all activities. EM and NE are currently working to develop the plan and define costs and schedules. We expect to complete the plan this fall and begin implementing the plan in FY 2001.

Response to GAO on consolidating NE and EM Responsibilities

The Department has two concerns with the GAO recommendation that responsibilities for materials management, infrastructure support, and other landlord functions currently being performed by the Office of Nuclear Energy, be transferred to the Office of Environmental Management. First, the Department is concerned that if these responsibilities were given to EM at this time, funding for these activities would directly compete with other cleanup priorities at other sites—including some with very high risks—for the limited resources in the EM budget. The House-passed Energy and Water Appropriations Development Appropriations Bill illustrates our concern. The House Bill would consolidate funding for all of the uranium programs at Paducah, Portsmouth, and Oak Ridge into one account, but only provide approximately the amount of funding requested by EM, thus resulting in a \$43 million overall reduction from the EM request. The Department believes that maintaining separate uranium programs in NE and EM for the near term, while developing an integrated management plan is more likely to enable EM to complete its cleanup by 2010.

Second, consolidation of NE's responsibilities into EM would be premature at this stage. Although the Department envisions the combination of these two functions at a future date, at this time NE has the sole expertise for several of the Department's responsibilities at Paducah. First, NE is the Office with the expertise for working with USEC to evaluate the content of the DMSAs to determine which materials can be re-used at the USEC facilities and elsewhere, and which materials can be declared excess. These materials will be EM's responsibilities only after NE has determined that they are excess to the Department's needs. Further, NE is the Office within the Department with the expertise to work with the nuclear energy industry on these recycle issues, such as the potential re-use of fluorine derived from the depleted uranium hexafluoride inventory. Accordingly, until the Department, through NE, is able to complete the evaluation of the DMSAs and develop a clear path forward for the disposition of the depleted uranium hexafluoride at Portsmouth and Paducah, we believe it is premature to transfer NE's responsibilities at Paducah into EM.

THE SALT PROCESSING PROJECT, SAVANNAH RIVER SITE

The Savannah River Site has approximately 34 million gallons of high-level waste in the form of liquid and salt cake (about 31 million gallons), and sludge (about 3 million gallons) stored in 49 active tanks containing about 400 to 450 Megacuries of radioactivity. This waste, generated primarily by chemical separations activities in reprocessing spent nuclear fuel and other nuclear weapons components, is intensely radioactive and will remain so for many thousands of years, and it therefore requires permanent isolation. The highly radioactive portion of this waste will be transformed into a more stable glass form using a process called vitrification and will be disposed of in a geological repository. The remaining low activity portion will be stabilized as saltstone, a form of cement, and managed as low-level waste.

The radioactivity in the liquid and salt cake waste is primarily associated with plutonium, strontium and cesium in the waste. However, only about 10 percent of this 31 million gallons of waste is highly radioactive. By separating out the highly radioactive elements in the waste, the volume of waste that needs to be transformed into glass can be significantly reduced, thereby reducing processing and disposal costs dramatically: using an approach that includes separation of the high- and low-activity fractions, DOE plans to produce about 5,700 canisters of vitrified waste, at a lifecycle cost of about \$18 billion. If the waste fractions were not separated, one estimate suggests the Department would need to produce an additional 118,000 canisters at an estimated lifecycle cost of over \$75 billion.²

The high-level waste program at the Savannah River Site includes activities to reduce the volume of high-level waste, pre-treat or separate the high- and low-activity fractions, vitrify high-level waste for disposal, and close the high-level waste tanks in compliance with applicable environmental requirements. The Salt Processing Project (previously referred to as the In-Tank Precipitation Project) encompasses the activities necessary to separate the high- and low-activity fractions of the waste,

² General Accounting Office, "Nuclear Waste: Process to Remove Radioactive Waste From Savannah River Tanks Fails to Work" (GAO/RCED-99-69, April 1999).

including the selection, design, construction, and operation of effective treatment technologies to prepare the high-level waste feed material for the vitrification facility, the Defense Waste Processing Facility (DWPF), which began operations in 1996. DWPF is the nation's first high-level waste vitrification facility for defense wastes. To date, it has produced about 890 canisters of vitrified waste, or about 15 percent of the canisters that it will ultimately be produced.

In the early 1980s, the Department began development of the technology referred to as In-Tank Precipitation (ITP) to remove cesium from the high-level waste stream, a technology that offered the potential to significantly reduce life-cycle costs of cesium separation. Radioactive operation of the ITP facility began in September 1995, but the process generated benzene at a much higher rate than expected, which presented a potential explosive and toxic hazard and significantly decreased production rates. As a result of the excessive benzene generation, ITP operations were suspended in 1996 and, following in-depth technical assessments of the problem and expert reviews, the Department determined in January 1998 that the ITP process could not meet safety and production requirements and halted work on the technology. In hindsight, this conclusion should have been reached sooner based on various independent reviews and GAO reviews. Our challenge at this point is to learn from the experience and establish a sound scientific process for developing a new treatment technology.

Since that decision was made, our efforts have been focused on doing just that in order to identify and evaluate the best alternative salt processing technologies to replace the ITP process. The Department's goal throughout this selection process is to ensure the technology selected will, in fact, be successful in removing the cesium from the waste. We have put in place a new management approach for conducting the research and applying the criteria to select the preferred technology alternative. Our management approach makes use of the best expertise available, both internal and external to the Department, and ensures that we conduct the research necessary to reduce uncertainties and give us the confidence that we are selecting a technology that will be effective and will minimize unexpected future cost and schedule impacts.

Based on our own analysis and recommendations from the National Academy of Sciences, the Department recently concluded that more research is needed on the technology alternatives currently under consideration before we can select a preferred technology. We now anticipate identifying a preferred technology alternative in June 2001. While this may initially take more time, we will continue to make progress in the high-level waste program at Savannah River Site. For example:

- There is no immediate impact on the DWPF operations. DWPF will continue to produce sludge-only canisters of vitrified waste at the current production rate of 200 canisters per year while the salt processing technology is re-evaluated. Our current projection indicates that DWPF can continue to produce sludge-only canisters through 2010 without increasing the total number of canisters produced.
- We will continue to meet our commitments to close high-level waste tanks. To date, we have completed the removal and closure of two tanks at Savannah River ahead of schedule and are on track to close two other tanks ahead of their regulatory commitment dates of FY 2003 and FY 2004.
- We believe the approach and schedule will keep us on track to meet regulatory commitments for closing old-style tanks and processing existing inventories of high-level waste, including the milestone to remove wastes and close all tanks by 2028.
- We continue to manage the high-level waste tank farm operations to support the stabilization of nuclear materials and spent nuclear fuel in the canyons.

PROGRESS IN IDENTIFYING A SALT PROCESSING TECHNOLOGY

In response to concerns raised by the General Accounting Office in its report, "Nuclear Waste: Process to Remove Radioactive Waste from Savannah River Tanks Fails to Work" (April 1999), and based on past experiences and "lessons-learned" with the ITP project, the Department has established a formal and rigorous research and evaluation process to identify and evaluate potential technologies. The process ensures that sufficient research and development is completed before a selection is made, brings internal and outside expertise into the process, and provides for effective management and oversight of the project, with close involvement by Headquarters and senior management.

The Technical Evaluation

- At the Department's direction, the contractor, Westinghouse Savannah River Company, formed a systems engineering team, whose membership included experts from other DOE sites, academia and the national laboratories, to identify alternatives to the ITP process for separating cesium. The team identified approximately

140 processes that could potentially be used to separate cesium from salt solutions. These processes were grouped into an initial list of 18 alternative processing options. The list of 18 was subsequently screened using a multi-attribute analysis to focus on a "short list" of four alternatives for further research and evaluation.

- In 1998, Headquarters established an independent review team with experts from other DOE sites and the private sector to provide oversight of the process and results, including the cost estimates, of the Westinghouse-led team. The team issued reports in December 1998 and December 1999.

- The Department asked the National Academy of Sciences (NAS) to review the Department's evaluation of technologies to replace ITP. NAS issued a preliminary report in October 1999, and its final report is expected to be issued soon. The NAS has agreed to continue its involvement and provide advice on the selection process.

- While the contractor, Westinghouse, is involved in research on some of the technologies under consideration, the Secretary determined early in 1999 that Westinghouse would not be involved in the selection of the technology and that DOE would seek a design and construction contractor(s) for the selected technology through open competition.

The Department is now carrying out research and evaluation on four alternatives for pre-treatment of the salt high-level waste. Three alternatives: First, small in-tank precipitation using sodium tetrphenylborate; second, crystalline silicotitanate ion exchange; and third, caustic side solvent extraction focus on extracting the cesium from the waste. A fourth technology—alpha removal—is needed to separate plutonium and strontium from the waste, a necessary pre-treatment step for the liquid and salt cake wastes.

As a result of its assessment and NAS reviews, the Department has determined that each alternative required further research and development to resolve technical and engineering issues and reduce technical uncertainty before one technology for cesium separation could be selected. Accordingly, DOE has deferred issuance of a draft Request for Proposals seeking input from the private sector for proposals to design and construct the needed separation facilities, and the issuance of the Supplemental Environmental Impact Statement (SEIS) pending further development of technology alternatives.

Over the next 12 months, the Department will conduct the necessary research and development and the technical evaluation process on the alternatives. We expect to have sufficient information to complete the SEIS and select a technology for cesium separation in June 2001.

Management of the Project

In November 1999, the Department began to implement a restructured management of the Salt Processing Project. The goal was to consolidate the Department's Headquarters and field office resources to jointly manage the project, and to remove Westinghouse Savannah River Company from the management and decision making for technology alternatives. The Savannah River Operations Office, EM's program office in Headquarters and EM's Office of Science and Technology are working together to find suitable treatment technologies, and to establish a sound technical basis for the cleanup of the high-level waste tanks at the Savannah River Site. We are applying lessons learned from the Savannah River Systems Engineering Review, the Department's Independent Project Evaluation Team's review, and the NAS's interim report as we proceed with further research and development to reduce the uncertainties for each of the technologies under consideration. The basic elements of our management approach include:

- We have established the Technical Working Group, comprised of staff from the EM headquarters offices and the Savannah River Office, to manage the research and development activities for the technology alternatives. The Group is responsible for making the recommendation to me for a preferred technology alternative by June 2001.

- We are making our best technical resources available to the Technical Working Group to provide advice on knowledge gaps, future research activities to fill knowledge gaps, and the potential pitfalls of implementing various alternatives. The Science and Technology program's Tanks Focus Area will serve as a technical resource on research and development aspects. The Technical Advisory Team, consisting of experts from the nuclear and chemical industry with expertise in implementation (design, construction, and operation) of treatment technologies similar to those selected for further research and development, will provide assistance on implementation issues.

- We will continue independent oversight of the project through the continued involvement of the NAS and through project management oversight by the Department's Office of Engineering and Construction Management.

- We will ensure the involvement of the Department's senior management throughout the process. I will continue to have close involvement in the project as it moves forward, and the Department's Deputy Secretary in his role as Chief Operating Officer will provide close oversight of the project.

- Our process also ensures that Congress is kept informed of the project's progress. We briefed interested Committee staff in June 2000 and plan to provide updates on our progress on a quarterly basis.

Cost and Budget Implications

In FY 2000, the Department plans to spend about \$25 million, which includes \$7.5 million within the Science and Technology program, for the Salt Processing Project. Our request for FY 2001 is \$21.5 million, plus \$7.6 million in Science and Technology program funds. This request will continue the research and development necessary to reduce uncertainties associated each of the potential separation technologies and allow a selection to be made. Under our current schedule we anticipate beginning design for the selected technology in FY 2002.

The cost associated with each of the alternatives will be considered in the selection process. There have been rough life-cycle estimates developed for the different alternatives under consideration at various points in our evaluation process, but these are only preliminary estimates and are very uncertain. We are now developing cost estimates sufficient to support the technology selection decision. Once a technology is chosen and we move forward in the design process, we will be able to prepare a firm cost and schedule baseline.

CONCLUSION

The Department has made significant progress in managing and cleaning up the extensive legacy of hazardous and radioactive contamination from more than fifty years of nuclear weapons production and nuclear energy research. Nonetheless, there is a long way to go. Our mission will not be complete for decades. We face unprecedented technical, fiscal, regulatory, and managerial challenges. We believe we have established a firm foundation that will enable the Department to tackle these problems as they arise. We will continue to work to make progress at Paducah, the Savannah River Site, and elsewhere throughout the complex. We will work to accelerate cleanup, apply new technologies, develop partnerships with our stakeholders and regulators, reduce costs, and seek the resources we need to do the job, while ensuring the safety of our workers, the public, and the environment. We look forward to continuing to work with the Congress on this important endeavor.

APPENDIX

ENVIRONMENTAL MANAGEMENT PROGRAM: PRINCIPLES AND PRACTICES

The actual tasks of remediating contamination and storing, treating, and disposing of wastes are performed at the sites where the contamination and wastes are located. The role of Headquarters is to provide program guidance and management on how this work will be conducted. We have established several management principles to guide the program:

- Safety first;
- Reduce risks;
- Meet our commitments;
- Accelerate site cleanup and project completion;
- Strengthen project management;
- Integrate nuclear waste and materials management and operations across the DOE complex;
- Build public confidence and involve stakeholders in cleanup decisions;
- Develop an effective long-term stewardship program for post-cleanup protection;
- Apply the best science and technology to solve technical problems and reduce costs.

Safety First

The safety of our workers is our highest priority. We have incorporated Integrated Safety Management into all of our work—the systems, procedures, and attitudes necessary to meet our safety goals and improve our safety performance. Managers at all levels are responsible for safety monitoring, ensuring that safety is a priority throughout the organization, and participating in feedback systems to make further improvements. In the recent EM reorganization, we created the Office of Safety, Health and Security to ensure all EM personnel understand their responsibilities in the areas of safety and security and help ensure that these concepts and practices are integral to all EM programs and activities.

Reduce Risks

Another EM priority is to reduce our most urgent risks. As an example of this progress, later this year—our target date is November 2000—we will begin to move spent nuclear fuel, some of which is corroding, in wet storage pools near the Columbia River to a new dry storage facility further away from the river.

At the INEEL, we will complete the transfer of Three Mile Island spent nuclear fuel to dry storage and the transfer of spent nuclear fuel at the Idaho Nuclear Technology and Engineering Center (INTEC) from aging, deteriorating underwater storage to safer storage facilities. We are continuing to reduce risks by stabilizing plutonium-bearing materials at the Hanford and the Savannah River Sites. At Hanford, we will resolve high priority safety issues regarding the liquid high-level radioactive waste in underground storage tanks, such as flammable gas generation, and we will continue to pump liquid waste from the aging single-shelled tanks—some of which have leaked—into safer double-shelled tanks.

Meeting our Commitments

Most of our activities are governed by Federal and state environmental statutes and regulations and enforceable agreements between the Department and Federal and state agencies. We are committed to complying with these legal requirements and agreements. In addition, we plan to meet our commitments to the Defense Nuclear Facilities Safety Board. In several cases, we need to work closely with our regulators and the Board as well as our stakeholders and Tribal Nations, on the appropriate schedule and milestones for our program. We will continue to work to reduce costs and accelerate schedules so that we can meet our compliance requirements in the most practical and cost-effective manner.

Accelerating site cleanup and project completion

EM has established a goal to clean up as many of the remaining contaminated sites as possible by 2006, safely and cost-effectively. At the start of FY 1997, shortly after the EM program first established this goal, 61 of the 113 sites in the EM program required active cleanup. We now have completed cleanup at 69 sites, and have 44 sites that still require active cleanup. We plan to complete cleanup at two additional sites this fiscal year and at three sites in FY 2001, to reduce the number of cleanup sites remaining to 39 by the end of FY 2001.

Progress at West Valley—This year, at the West Valley Demonstration Project in New York, formerly a privately-owned commercial nuclear processing facility, we will complete high-level waste vitrification processing, producing the final five canisters, and begin deactivation of the vitrification facility. At the end of the vitrification campaign, the Department will have vitrified 600,000 gallons of liquid high-level waste, reducing risks to the workers and public by converting the waste into a stable form. We will also complete the shipment of all spent nuclear fuel to INEEL. Removing the 125 spent fuel elements from the spent fuel pool at West Valley is a prerequisite for decontamination and decommissioning of facilities.

Accelerated Closure of Rocky Flats—The Rocky Flats site is the largest site at which we are attempting to complete cleanup by 2006. To date, significant progress has been made toward making this goal a reality. On February 1, 2000, our new cost-plus-incentive-fee closure contract with Kaiser-Hill took effect. The closure contract, valued at nearly \$4.0 billion plus incentive payments, provides incentives to the contractor to finish the work by 2006, and reduces the fees paid for work completed beyond that date. The Department and Kaiser-Hill are working to revise the baseline for 2006 closure in accordance with the terms of the contract. We have come a long way since the previous contractor estimated a few years ago that it would take \$30 billion and 30 years to complete cleanup at Rocky Flats.

Critical elements in the closure strategy are stable funding for the life of the project and the ability to move nuclear materials and radioactive wastes from the site, which requires that other sites—often DOE sites—are available and prepared to accept the materials. The coordination of these planned shipping campaigns to the receiver sites demonstrates the Department-wide commitment to the goal of achieving accelerated closure of Rocky Flats.

Make Progress Toward Closure at Ohio Sites—At the Fernald Environmental Management Project, we will continue accelerating closure of this former uranium production facility. We will place a permanent cap on Cell 1 of the On-site Disposal Facility using an innovative capping technology. At the Mound Plant in Ohio, we will accelerate tritium decontamination in buildings on the “critical path” to closure, completing decontamination of three of eight acres in the Semi-Works building, one of three significant contaminated buildings that comprise the tritium complex. We will also continue demolition of surplus buildings. Of the 107 buildings to be re-

moved from the site, approximately 50 percent will be either demolished or auctioned off by FY 2001.

Strengthen project management

From the Manhattan Project through the Cold War, contracting practices of the Department and its predecessor agencies had remained essentially unchanged. The management and operating (“M&O”) contract in common use at Department of Energy sites was a non-competitive, cost-reimbursable arrangement in which the government paid virtually all contractor costs and relieved the contractor of all risk. During this period, M&O contracts were typically awarded or renewed on a 5-year basis without any competition. The pool of private contractors with nuclear weapons production expertise was limited and operations were shrouded in secrecy.

After the Cold War ended, much of the Department’s mission shifted from the production of nuclear weapons to management and cleanup of the nuclear wastes and materials that were left from the nuclear weapons production era. In many instances, the contractors that had historically operated the DOE sites did not possess the environmental expertise to clean-up this legacy of contamination. The old practice of renewing and awarding contracts without open competition was not suited to the changing missions and needs at the Department’s sites. As the Department’s mission shifted, these historical practices came under criticism from the GAO, the Department’s Inspector General, and the Congress.

The Clinton Administration immediately recognized and responded to these contracting problems in 1993 by initiating comprehensive contract reform. Since 1994, the Department has:

- significantly increased competition, recompeting, since 1994, 28 M&O contracts worth over \$40 billion. Indeed, over 94 percent of our new (non-M&O) contracts were competitively awarded in FY 1999 (up from 93 percent in FY 1998). This exceeds the total number of M&O competitions in the entire previous history of DOE and its predecessor agencies.

- spurred participation in DOE contracting by firms that had not generally participated in DOE procurements for traditional M&O contracts;

- brought in contractors with environmental expertise rather than relying on traditional nuclear weapons production contractors to perform cleanup and encouraged more contracting out by facility management contractor to apply niche expertise to defined projects;

- encouraged the use of fixed-price contracting, where appropriate, both at the prime contract level and at the subcontract level. For example, at Savannah River, from FY 1996 through FY 1999, an average of 97 percent of our total subcontracting commitments have been awarded as fixed-price contracts—amounting to a total dollar value in excess of \$1.25 billion. Similarly, during the same period at the Hanford site, 100 percent of the subcontracts awarded by the M&I contractor (Fluor Hanford, Inc.) and the Environmental Restoration Management Contractor, or ERM (Bechtel Hanford, Inc.), have been awarded on a fixed-price basis—for a total contract value of \$661 million;

- made performance-based contracting, rather than level of effort, the norm;
- instituted an innovative, performance-based “closure” contract at Rocky Flats;

and

- worked to tailor the contracting mechanism to the job at hand.

To further improve contractor performance, last year Secretary Richardson strengthened project management by:

- simplifying and clarifying the responsibility and accountability of line management for program and project performance;

- creating the Office of Engineering and Construction Management in the Office of the Chief Financial Officer to improve project management throughout DOE, including establishing baseline change control processes, and quarterly project performance reviews;

- conducting external independent reviews by highly experienced project management professionals in the early planning stages of a project (with additional reviews as appropriate in later stages of design and construction), followed by the development and tracking of corrective action plans, if needed, in order to correct management, technical, or regulatory deficiencies prior to any significant cost and schedule impacts;

- establishing a Project Engineering and Design (PED) funding line and authorization to design projects for future years new starts, which will enable a more credible baseline, derived from 35 percent design, to be used for Line Item project approvals;

- making greater use of the National Academy of Sciences in reviewing projects;

and

- establishing the Deputy Secretary's "Watch List" of critical or troubled projects that will be subject to intense oversight at the highest levels within the Department until identified problems have been corrected.

This year, the Secretary has taken additional actions, including:

- requiring all major systems critical decisions, baseline change proposals, or site selections for all new missions to be approved by the Deputy Secretary before proceeding to the next acquisition phase; and
- strengthening the Department's ability to sanction poor contractor performance and reward outstanding performance, including allowing the Secretary to direct a contractor to remove its top manager for failure to perform;

EM has similarly improved program and project management, including establishing the Office of Project Management within EM. This new office supports our field offices in their project management efforts and assists Headquarters staff with their oversight of project implementation. Additionally, the office coordinates internal and external reviews of our projects and critical decisions for significant projects not reviewed by the Deputy Secretary. This office is working with organizations such as the Construction Industry Institute, the Project Management Institute, and the National Aeronautics and Space Administration, to bring state-of-the-art project management tools and training into the EM program to enable us to better manage our projects.

Integrating nuclear waste and materials management

Sharing information and the unique capabilities for managing and treating nuclear wastes and materials at many of our sites is critical to our success. Our integration initiative seeks to consolidate treatment, storage and disposal facilities and use available capacity rather than construct new facilities; apply innovative technologies at multiple sites; and apply lessons learned and site successes complex-wide.

We have integrated our waste and materials management capabilities in several key programs. The shipment of nuclear materials from the Rocky Flats site to the Pantex Plant in Texas, the Y-12 Plant in Oak Ridge, Tennessee, and to the Savannah River Site in South Carolina provides an excellent example of how we are integrating the nuclear materials storage and treatment capabilities across the DOE complex. With respect to waste management, in December 1999, after extensive technical analyses and consultation with state representatives and other stakeholders, we announced our site preferences for disposal of DOE low-level and mixed low-level waste based on the Waste Management Programmatic Environmental Impact Statement. This allowed us to complete a formal Record of Decision in February 2000 on low-level and mixed low-level waste treatment and disposal facilities, after further consultations with the affected states.

The opening of WIPP in New Mexico for disposal operations in March 1999 provides a good example of the benefits of integration. The WIPP provides a means for the Department to permanently dispose of the long-lived transuranic radioactive waste that has been stored for decades at about two dozen sites across the United States. WIPP is critical for closing sites like Rocky Flats; for meeting compliance obligations for more than a dozen other sites, including the Idaho Settlement Agreement; and for reducing storage costs and risks to the public.

Finally, the transport of radioactive waste and material between sites is critical to the success of our integration priorities. EM is working with other DOE program offices and with the sites to develop a strategy to identify packaging and transportation needs, to support shipping schedules, and to use our transportation assets efficiently.

Building Public Confidence

Good technical work is not enough. Getting the job done requires cooperation with regulators and others outside of DOE that have a stake in our actions. By working cooperatively with regulators, stakeholders, local communities and the Tribal Nations, we have improved the efficiency of the EM program and have met our regulatory commitments more efficiently.

Developing Effective Long-term Stewardship

At most sites the Department is performing cleanup that will make the land available for other uses, but not necessarily unrestricted use. Cleanup to levels allowing for unrestricted use often cannot be achieved at DOE sites for economic or technical reasons and has not been demanded by regulators. The Department has been able to take advantage of the Superfund administrative reforms developed by the U.S. Environmental Protection Agency (EPA) to allow anticipated future land use to be considered in developing cleanup remedies.

The goal of long-term stewardship is the sustainable protection of human health and the environment after cleanup, disposal or stabilization is completed. A reliable long-term stewardship program can also provide confidence to regulators and the public that non-removal remedies are acceptable because the Department can be trusted to care for the sites after the waste is contained in place.

During the past year, the Department has taken action to strengthen its long-term stewardship program. First, we increased the budget for long-term stewardship to respond to the greater demand resulting from the completion of more cleanups. Second, we recently established an Office of Long-Term Stewardship at our Headquarters office. The office is addressing these emerging challenges with responsibility for field guidance and policy development, technical analysis, and identification of science and technology needs.

In accordance with the FY 2000 National Defense Authorization Act (NDAA), the Department will provide a report to Congress by October 1, 2000, with the best available information on the cost, scope, and schedule for long-term stewardship at sites and portions of sites in sufficient detail to undertake the necessary stewardship responsibilities.

In addition, we are preparing a study on long-term stewardship pursuant to the lawsuit settlement agreement (*Natural Resource Defense Council, et. al. v. Richardson, et. al., Civ. No. 97-963 (SS) (D.D.C. Dec. 12, 1998)*). The study will address national, programmatic, and cross-cutting issues related to long-term stewardship.

Solving Problems Through Science And Technology

Our investments in science and technology are providing the scientific knowledge and new technologies necessary to help us reduce the cost and time frame of the complex-wide cleanup effort, and enable us to tackle cleanup problems that had no effective solutions. Our science and technology program has made a significant impact on how we conduct our cleanup operations. Over 75 percent of the approximately 250 innovative solutions made available for use over the past 10 years are making real on-the-ground contributions. For instance:

- Site characterization represents a large portion of the cost for environmental restoration activities. We now have very sophisticated, safe methods to identify, characterize, quantify and monitor contamination.
- New remotely operated machines now exist to perform work in conditions that are too hazardous for humans, such as inside radioactive waste tanks.
- Among the new technologies making a difference is a process that uses a concentrated caustic solution to dissolve and remove large quantities of unwanted non-radioactive elements in the sludge, thereby decreasing waste volume (Enhanced Sludge Washing). This process has been selected as the technology to be used to pre-treat Hanford tank sludges where it is expected to avoid \$4.8 billion in costs compared to other technology choices.
- An in-ground "wall" of iron filings (Permeable Reactive Treatment Wall) has been installed at the Kansas City Plant and Monticello Uranium Mill Site to remove contaminants from groundwater as the water passes through the "wall." This eliminates the need for a more costly "pump and treat" system.
- A third Passive Reactive Barrier is in place in the Solar Ponds at Rocky Flats to destroy nitrates and remove uranium from groundwater. Other reactive barriers deployed at Rocky Flats have been designed to destroy chlorinated solvents and capture radionuclides.
- Optimized use of the existing re-injection well network at the Fernald site in Ohio will enable the site to accelerate groundwater remediation.

We are also pleased with the progress of our EM Science Program (EMSP), which is conducted in partnership with DOE's Office of Science. Since its inception in fiscal year 1996, EMSP has invested over \$224 million in support of 274 research projects. Our open, competitive approach has ensured the highest caliber of research involving 90 universities, 13 national laboratories, and 22 other governmental and private laboratories. Research is being conducted in 34 states and the District of Columbia, two Canadian provinces, Australia, Russia, the United Kingdom, and the Czech Republic. Our efforts are already providing some encouraging results. For instance, a high-level waste research project, being led by Pacific Northwest National Laboratory, focuses on determining the effect of radiation on the stability of glasses and ceramics at an atomic, microscopic and macroscopic level. Because these materials are an integral part of the planning for the final waste forms of a number of DOE waste streams, an understanding of how radioactive materials influence their long-term stability is critical in material selection.

The increasing number of deployments of new technologies to solve real cleanup problems demonstrates that the field is recognizing their value. Preliminary data, now being verified, indicate that during fiscal year 1999, DOE sites used innovative

technologies 218 times in cleanup activities, 129 of which were first uses by the site. Of these deployments, 166 were science and technology-sponsored technologies. This is a definite and dramatic improvement over previous years. Since the inception of this program, we have seen nearly 450 deployments at DOE sites of 194 new technologies that were sponsored by EM's science and technology program. The accelerated site technology deployment effort initiated in FY 1998 has contributed to these increased deployments. A total of 47 projects have been initiated that involve a total of 92 technologies.

To help ensure that this upward deployment trend continues, the Department is working with our site contractors to provide better incentives to use new technologies. Contract incentives, coupled with the integration of our technology developers and users, will ensure that the new technology we are providing will accomplish our cleanup goals at less cost, faster and safely.

Mr. RADANOVICH. Thank you very much.

Brigadier General, welcome and please make your statement if you wish.

STATEMENT OF BRIG. GEN. THOMAS F. GIOCONDA

General GIOCONDA. Thank you, Mr. Chairman and members of the Task Force. I appreciate the opportunity to talk to you about the National Ignition Facility. NIF will be a key component of the stockpile stewardship program to maintain a safe, secure and reliable nuclear weapon stockpile indefinitely without underground nuclear testing.

Before I talk about the project corrective actions taken since NIF cost and schedule problems were identified last August, and the process by which we will provide a revised final baseline for the project by mid-September 2000, I would like to put NIF in context for you.

The National Ignition Facility at Lawrence Livermore National Laboratory is an essential element in the stockpile stewardship program for three reasons. First, it is the only facility that will allow direct experimental study of issues that affect the aging stockpile in temperature and pressure regimes approaching those that occur in nuclear weapons.

Second, it will play a major role of providing the underlying science needed to validate the state-of-the-art nuclear weapons simulation codes under development by the Accelerated Strategic Computing Initiative, or ASCI.

Third, NIF's unique scientific challenges, including the demonstration of ignition in the laboratory, will serve to attract, train and retain the outstanding technical talent required for success of the stockpile stewardship program over time. It is not simply for today that we have to think about what NIF will bring to the stockpile stewardship program. It is for 10, 20 or more years down the road that we have to think about NIF now, plan for what NIF can do now, and prepare for the beneficial use of information that will only be available from NIF.

We in Defense Programs had asked for a back to basics reaffirmation of the role of NIF in stockpile stewardship. We need a successful NIF which will contribute to the maintenance of our nuclear weapons stockpile. The directors of all three weapons laboratories concurred in a white paper on this subject that I offered to committee staff prior to this hearing. But what you want to know today is where are we with NIF. The NIF building, representing an investment of approximately \$250 million, is about 90 percent com-

plete and remains on cost and on schedule. The 33 feet in diameter, 150 ton aluminum target chamber critical for NIF experiments is installed in the building. The optics assembly building where final precision cleaning of the optical components will be accomplished and a central plant and its cooling towers have been completed and turned over to the laboratory for operation.

NIF will be 60 times more powerful than its state-of-the-art predecessor laser system, called NOVA, but at just one-sixth the cost of the unit of energy generated. This advance in capability is made possible by six major breakthroughs in technology which the benefit laser technology in the future: Faster and less expensive laser glass production, large aperture optical switches, stable high gain preamplifiers, servo controlled large aperture deformable mirrors, and large rapid growth frequency conversion crystals and long life final stage optics.

The one remaining technical challenge that I have mentioned above is the demonstration of long life final stage optics that can withstand exposure to high energy levels associated with operating the laser at the required ultraviolet wavelength. We are making good progress here. The issue is one of economics. How often the final stage optics in the system need to be refurbished or replaced directly does affect cost.

Research is progressing to meet this challenge and we expect it will be completed in time to fulfill the needs of stockpile stewardship. Integration, schedule and cost problems associated with the construction of NIF were identified to me in late August, actually 3 days after I took over as the Acting Defense Programs DP-1. On September 3, 1999, the Secretary of Energy announced a series of actions to address problems before we proceed any further with NIF at my recommendation. They involve finding out what went wrong, reviewing management actions that led to the problems, and the development of a path forward in which the Secretary would have confidence again.

While the nature and magnitude of the problems had not yet been identified at that time, Lawrence Livermore management had concluded that they were outside the project's ability to handle without a baseline change at the acquisition executive level. I immediately tasked cognizant DP line managers with investigating NIF problems so I could determine appropriate course of action.

Following in-depth consultations between Defense Programs and Livermore, we concluded that there were several issues that had to be addressed. First was problems with project management, as you had mentioned, in the history of the program. Delays in completing the design were creating cost and schedule problems, inadequacy of the total original contingency, especially that associated with clean assembly requirements for a laser of this magnitude, and baseline cost and schedule estimates for assembly and installation of the laser beam path infrastructure were inadequate.

These issues, taken together with the perception that the project had waited too long before notifying DOE management about them, helped form the basis of the Secretary's six-point plan to bring NIF back to a more realistic path forward to completion. A first critical element of baseline strategy was to review the actual mission of NIF before we began. Three reviews were conducted over the past

9 months to look closely at the NIF mission: The Department's 30-day review, a review of NIF programs by committee, Target Physics Review Subcommittee, and a Department of Energy report in classified and unclassified white papers, as I mentioned, signed off by the three laboratory directors.

These reviews affirm the importance of NIF to the stockpile stewardship program. At the Secretary's direction, an independent task force was formed by the Secretary of Energy Advisory Panel to review options to complete the project and to recommend the best technical course of action. The overall conclusion in the interim report to this SEAB stated the task force has not uncovered any technical or managerial obstacles that would in principle prevent the completion of the NIF laser system. Nevertheless, serious challenges and hurdles remain. The NIF task force believes, however, that with appropriate corrective action, a strong management team, additional funds, and extension of the schedule and recognition that NIF is at its core a research and development project, the laser system can be completed.

The task force has concluded this evaluation and will submit its final report to the Secretary this month or in early August. This report will also become part of the final baseline. The Secretary is committed to NIF and an interim baseline was submitted to Congress on June 1, 2000. The final baseline will be reviewed and evaluated in August and will be submitted to the Congress by mid-September. I have been monitoring the project's progress in preparing the new baseline proposal very closely, and all of those involved are very aware that the rebaselining schedule must not slip.

To date, the project is meeting all the milestones, interim milestones, established for this baseline effort—for this rebaseline effort. Continued congressional support in the NIF project as a key element of stockpile stewardship remains essential. I believe the progress currently in place will enable DOE to deliver such a baseline by mid-September as promised by the Secretary.

You no doubt will ask what changes have been made so you could have confidence in that effort. Line and project management at DOE and Lawrence Livermore have been restructured and have demonstrated over the last 6 months that they are capable of managing a project of this scope.

The NIF project method of execution is being changed to address the increased complexity of this state-of-the-art system and associated cleanliness problems in assembling and installing the laser and target infrastructure. For example, assembly and installation of the beam path will now be managed and performed by an industrial partner and industrial subcontractors with proven records of constructing similar complex facilities.

Changes to clearly define line management, which you also mentioned in your opening statement, apart from the staff support functions required to complete the project successfully, have been made. Line management responsibility flows now from the Secretary through the Administrator of the NNSA, his Deputy for Defense Programs, which temporarily is me, to the Director, Office of NIF that reports directly to me. The line responsibility then continues directly to the Director of Livermore to the Livermore Lab NIF

project. Everyone else is staff in that function. That line is directly accountable up the line to the Secretary.

The project management team at Livermore has demonstrated over the last 6 months that it is capable of managing this project with the development of the rebaselining and regaining the confidence of the Department. In particular, it is engaged in utilizing industrial experts with relevant experience to both review and participate in the project. In developing a rebase—revising the baseline we took the time to examine options ranking from completion of the NIF in the shortest possible time to schedules that would stretch the completion and funding over a much longer time. The quickest completion project was also the most costly. Plus it would unbalance the stockpile stewardship program which I have overall responsibility for.

The stretched out schedule options range from a maximum increase of 150 million in fiscal year 2001 to no increase in that particular year. We knew that these options were likely to result in further schedule delays and increased total project costs, but we needed to understand if they could lead to a completed NIF that would support our critical stockpile stewardship RAM.

On May 3, 2000, the Secretary selected the path forward for NIF with completion of possible—using the possible options I mentioned. The Energy Systems Acquisition Advisory Board proposed further refinements after looking at that path. The new guidance directed Lawrence Livermore lab to develop a detail project execution plan cost estimate and a cost profile that would complete a full capability NIF. To maintain a balanced stockpile stewardship program, funding was limited to no more than 95 million over the original request in 2001, no more than 150 million over the original request in 2002 and 2003, no more than 140 million in 2004, 130 million in fiscal year 2005 and a declining profile thereafter.

The allocation of funding to meet the fiscal year 2001 need of 95 million has been requested in the fiscal year 2001 budget amendment that is before you on June 27th this year. Successful completion of NIF with this funding profile will deliver first light or first operation of NIF lasers at the end of 2001, 3 years later than the original schedule, and full NIF capability in late 2008, 4 years later than the original schedule. At the time of full deployment the NIF staff will already have completed 1400 to 1600 shots, beginning to acquire the data in support of the stockpile stewardship program, which we look forward to.

The preliminary estimate—

Mr. RADANOVICH. Mr. Gioconda, pardon me, we do have a vote up on the board. I am going to have to run off and vote. Hopefully we can keep this going.

General GIOCONDA. One page and I am done.

Mr. RADANOVICH. Go for it.

General GIOCONDA. The preliminary estimate and total project costs for the option presented to NNSA is 2.12 billion with the related cost of approximately 1.14 billion in NIF readiness and technological base and facilities for approximately 3.26 billion through project completion. These estimates could be adjusted as a result of the detail planning and review and validation of the baseline and we are doing that right now.

In August, Defense Programs will conduct a detailed cost and schedule and scope review of the rebaselining plan, as recommended by the SEAB task force. Ms. Cathy Carlson, Manager of Nevada Operations, will chair this review, and the Deputy Chair will be Mr. Dan Lehman of the Office of Science, asking the rest of DOE to take a look at it. Burns & Rowe will conduct an independent cost review as part of this process. The combined review will give the Department a high level of confidence that the proposed baseline can be successfully executed as planned and will be formed in time to present the final baseline plan for approval prior to delivering the certified baseline to Congress in mid-September.

Mr. Chairman, with that overview I will be happy to answer any of the panel's questions.

Mr. RADANOVICH. Thank you very much. As you may have heard the bells, we have got votes coming on. It is one vote. We will be back. We will shortly have three votes after that. So we will try to get your questions in and get the testimony of the GAO in between things. So we will be winging it from here. If Mr. Gutknecht comes back before I have a chance to get back here, I will have him resume the hearing. So begging your indulgence, we will do a quick recess and we will be back here shortly.

Thank you.

[Recess.]

Mr. RADANOVICH. Thank you. We will go back into session. We do have another three votes coming up shortly, so I apologize. We are going to get through this just as much as we can. What I'd like to do is ask one question on each side and then invite the next panel up to give their testimony as well. So if we can start with the Savannah ITP project, Ms. Huntoon, please tell me who made the decision to cancel the ITP project and what information led to this decision that was different from the information presented in the past?

Dr. HUNTOON. Well, Mr. Chairman, the ITP project, as you probably know, began in the '80s, when the need to deal with this particular waste was identified. The technology that was put in place utilizing the ITP was canceled because of safety and production concerns with benzene. The Department, namely Environmental Management and Savannah River management, and Westinghouse all made the decision at varying times, within a few months of each other I think, to cancel it. The Secretary made the decision that the contractor involved would not continue managing the project. The decisions came after we had reviews from the National Academy of Sciences, as well as our own internal review process, that led us to conclude that we were not going to reach our goal with that technology.

Mr. RADANOVICH. All right. Thank you. Regarding Paducah, GAO says that Drum Mountain is one of the main sources of the serious groundwater contamination problems at that site. Removal began after the press accounts about the potential hazards to the workers because of Drum Mountain. What was the schedule for removing Drum Mountain before the press accounts and what changed about the safety threat that Drum Mountain presented to the public in the aftermath of press accounts that led to the accelerated schedule to remove it?

Dr. HUNTOON. Well, I am not exactly familiar with the GAO's report wording on that issue, but let me tell you a little bit about the way we have undertaken the work at Paducah. For a number of years we have been investigating the problems down there dealing with the groundwater issues, dealing with the regulators on prioritizing the work. Drum Mountain certainly is a very visible eyesore, as the pictures all indicate. These are my pictures over here I wanted to show you, because that is us taking down Drum Mountain. I wanted to let you know that has begun.

The increased emphasis came because we had some increased funding due to the visibility of the project. Drum Mountain wasn't the single biggest risk down there to people or the environment. Some of the groundwater issues are greater risks and certainly some of the contamination in the lagoons and streams are bigger risks. We are, of course, taking care of those too. Numerous studies had to be done to identify where these plumes were traveling and where they were coming from in the subsurface; that has required a lot of emphasis.

But, I do want to emphasize to you that the Commonwealth of Kentucky, the Environmental Protection Agency, and the Department of Energy have together deliberated on the prioritization of the work at Paducah. We were able to add work because of the increased funding, thanks to you all, and hopefully we will add more work next year if we can get the more funding to support that. Over the past 4 years, Paducah has not received the money that we have requested in our budget for Paducah, and that has affected our ability to take care of some of these problems as rapidly as we would have liked.

Mr. RADANOVICH. Thank you very much.

General Gioconda, what permanent changes with regard to reforms and safeguards have you made for a transient administration so that next year we will not be here discussing a revised time line with unforeseen costs with regard to the NIF facility.

General GIOCONDA. What we have done to regain confidence, is get a management team in place that we have confidence in, so you could have confidence in that management team. And what we did is allowed that management team to be successful by cleaning up the lines of communication, cleaning up the line accountability so the whole organizational structure is cleaned up.

Second thing that we have done is we have looked at the complexity of the project realizing what is world class within the laboratory, is the technical side of it, which they did magnificently. That is getting lost in this discussion. There are a lot of things that the laboratory has done very, very well—and hand over the integration, the project management parts to world class companies that do this for a living. We are about ready to release a contract for that ability. So they have an industrial partner that does the world class things that they are world class in.

The third part that we have done is we have instituted a series of milestones and planning such that we know not at the end or not because it is too late, but the planning is down to the detail that the only changes have to come up through the director, the DOE official or myself to make the changes if something should go

off, veering factor. So there is controls, if you would, at every part of the project.

And then the last part I would tell you is that we have also instituted in Defense Programs an ethic that had been missing in project management, more expertise brought in this project management, both internal training and external expertise, not only on this project but other projects that was missing before. We were focused so much on the technology that the integration and project management was not the focus, and it should have been.

Mr. RADANOVICH. Thank you very much. And please let me state too that for one I don't think the purpose of this hearing is to debate the merits of the NIF program because I think that there are a lot of other possible fusion alternatives and such I think are just wonderful. It is mainly the time delays and cost overrides that are of concern to this committee.

Also, Ms. Huntoon, I wanted to give you the opportunity to make available by testimony by the name of Mr. Magwood that is from the Office of Nuclear Energy and would like to ask unanimous consent for you to be able to submit that to the record if there is no objection. We needed to do that for the order of the business, and thank you.

[The prepared statement of William D. Magwood, IV, follows:]

PREPARED STATEMENT OF WILLIAM D. MAGWOOD, IV, DIRECTOR OF THE OFFICE OF NUCLEAR ENERGY, SCIENCE AND TECHNOLOGY, U.S. DEPARTMENT OF ENERGY

Mr. Chairman, and members of the Task Force, I am William D. Magwood, IV, Director of the Department of Energy's Office of Nuclear Energy, Science and Technology. My office is responsible for the uranium enrichment-related activities retained by the Department after the formation of the United States Enrichment Corporation (USEC) in 1993. I am pleased to have the opportunity to be here today to discuss the Department's uranium program responsibilities, and in particular, to discuss the Department's plans to convert the inventory of depleted uranium hexafluoride to a more stable form, and to update you on the ongoing actions taken by my office to address the safety concerns associated with the DOE Material Storage Areas at the Paducah gaseous diffusion plant site.

With the privatization of Government's uranium enrichment activities, the Department's remaining uranium enrichment-related responsibilities fall into five primary areas: management of the lease under which USEC Inc operates the government's enrichment facilities, management of related facilities not leased to USEC, management of various pre-existing liabilities, management of surplus uranium inventories, and management of the Department's inventory of depleted uranium hexafluoride. Today, I will focus my remarks on those aspects of our activities that address environmental issues at the sites.

DOE MATERIAL STORAGE AREAS CHARACTERIZATION AND MITIGATION

Our management of non-leased facilities at the two gaseous diffusion plants is designed to ensure that buildings and grounds not under the management of USEC are properly maintained. These activities include completing work started by the Department before the formation of USEC to address potential environmental hazards associated with buildings and materials at the site. For example, we maintain a system to collect and manage polychlorinated biphenyls (PCB) inside the plants and clean up spills of these materials when they occur.

One of the most important responsibilities retained by the Department has been responsibility for management of certain materials and equipment that are stored in 148 locations within the Paducah Gaseous Diffusion Plant. These areas—referred to as DOE Material Storage Areas (DMSAs)—are areas containing materials and equipment retained under the management of the Department in a stable, safe configuration, pending the final decontamination and decommissioning of the gaseous diffusion plant. Some of the equipment stored in the DMSAs includes spare parts and other items specially produced for use in the gaseous diffusion process and thus, represents a unique and irreplaceable asset to the Department and USEC.

As Dr. Michaels has testified, last summer, when concerns regarding health and safety at the Paducah Gaseous Diffusion Plant site were raised, Secretary Richardson ordered a full investigation into what had occurred. As part of this, a two-phase investigation was conducted at Paducah to evaluate environment, safety and health programs in place at Paducah since 1990, and the programs in place prior to 1990.

In October 1999, the Department issued a report on the first phase of the investigation, which examined existing health and safety programs. This report identified concerns associated with environmental cleanup, the safety and health programs at the site, DOE and contractor oversight of safety, and a specific safety concern with the manner in which materials and equipment were stored in several of the DMSAs.

Specifically, the investigation found that of the 148 storage areas at Paducah, the Department had insufficient records to verify that the materials and equipment in 11 of the areas did not contain quantities of fissile materials that might present a criticality risk under certain conditions. Although the concern raised did not present an imminent threat to worker safety, the investigation identified the need to expeditiously move forward with characterization and, if needed, remediation of the materials and equipment in those areas.

As a result, our initial actions were focused on ensuring that interim measures were sufficient to provide adequate protection for workers while longer term corrective actions were underway and on determining whether there were additional DMSAs of potential concern. Subsequently, two additional areas of concern were identified, bringing the total to 13 DMSAs.

Since that time, the Department, in conjunction with USEC and in close consultation with the Nuclear Regulatory Commission (NRC), has developed and is aggressively implementing a plan for characterization and mitigation, where needed, of the 13 DMSAs. Characterization of one of the 13 high priority DMSAs is now complete and was found not to present a risk of inadvertent criticality. The Department expects to complete characterization of the remaining 12 DMSAs by July 2000.

Until this work is completed, the Department has established and is enforcing special restrictions regarding access to and work around these DMSAs in order to ensure that employees at the site are not at risk. At the time in which the concern was identified, interim measures were put in place to mitigate the concern, pending completion of corrective actions. Once the characterization program is completed, the Department will have either eliminated these areas as a threat to worker safety or launched a program to remediate any threats that are discovered.

DUF6 MANAGEMENT AND CONVERSION PROJECT

A primary mission of the Department's uranium program is to manage the inventory of the approximately 57,600 depleted uranium hexafluoride storage cylinders located at Paducah and Portsmouth gaseous diffusion plant sites and the former K-25 gaseous diffusion plant at Oak Ridge's East Tennessee Technology Park. About 1600 of these cylinders will be received by the Department over the next 4 years. Overall, the cylinders contain approximately 700,000 metric tons of material. The objectives of the cylinder management program are to maintain the cylinders in an environmentally compliant manner and to proceed with a project to design, construct, and operate plants to chemically convert the Department's inventory of depleted uranium into a more stable form that would make it acceptable for reuse, if applications for the material are found, or for disposal.

For decades, as the Department continued its uranium enrichment program, it filled large 10- and 14- ton steel cylinders with depleted uranium hexafluoride. This material, which results from the enrichment of uranium for commercial nuclear fuel or defense, is relatively inert and easy to store. It is a granular solid at normal temperatures and the cylinders, if properly maintained, can safely contain this material for many years without causing a hazard to workers, the public, or the environment.

However, proper management of this inventory was neglected for many years. As the Department produced more and more depleted uranium over the years, it stacked the cylinders in a less than optimal manner. For example, the Department often stored these cylinders too close together to allow for periodic visual inspection, and some of these cylinders were in direct contact with the moist ground, resulting in corrosion.

Over the last several years, the Department has taken positive action to address this situation. We put in place a comprehensive program to maintain and monitor the inventory pending its disposition. In particular, the program performs activities such as:

- annually inspecting cylinders, repairing cylinders as required, maintaining operations procedures, and maintaining cylinder-related information data bases, including inspection data;

- relocating cylinders to permit 100 percent visual inspection and ultrasonic inspection and procuring concrete bases on which to place cylinders;
 - continuing the control of cylinder corrosion by surface cleaning and painting;
- and
- upgrading and maintaining the cylinder storage yards.

Management of the inventory of depleted uranium hexafluoride is consistent with the consent agreements with the involved states, and with Defense Nuclear Facilities Safety Board (DNFSB) Recommendation 95-1, "Improved Safety of Cylinders Containing Depleted Uranium." We are confident that this program has successfully corrected problems associated with the storage of the Department's depleted uranium inventory. In fact, on December 16, 1999, the DNFSB notified the Department that the Board considers the recommendation closed, because the Department has met all of the relevant commitments. In particular, the Board recognized DOE's efforts to develop a "workable and technically justifiable cylinder management program," and the Department's commitment to continuing implementation of the cylinder management program as part of the accelerated conversion program.

The President's FY 2001 budget request provides \$16 million to maintain the cylinders, about \$4 million more than was appropriated this year. Because of funding shortfalls in previous years, this increase in funding is needed to enable the Department to meet the commitments made to the States and the DNFSB, and is important to the safe and efficient management of the inventory in a manner that protects the workers, the public and the environment. I ask for your support for this budget request.

Even though the material is stored safely and managed effectively, the Department recognizes that it must deal with the final disposition of this inventory in an expeditious manner. Accordingly, and in compliance with the intent of Public Law 105-204 passed in 1998, the Department is proceeding with plans for a project to build and operate conversion facilities to chemically convert the inventory into a form better suited to both storage and ultimate disposition.

In fiscal year 1999, the Department's conversion project completed a Programmatic Environmental Impact Statement on the management of the depleted uranium hexafluoride inventory and concluded, in a Record of Decision, that it would seek to convert the Department's inventory of depleted uranium hexafluoride into a more stable form that would make it acceptable for reuse if applications for the material are found or for disposal. The Department also issued the "Final Plan for Conversion of Depleted Uranium Hexafluoride" to carry out this conversion as required by Public Law 105-204, as well as a draft request for proposals (RFP) to find a private sector firm to design and construct the conversion plants. The Department had planned on issuing the final RFP around the end of 1999.

As reflected in our FY 2001 budget request, the Department has delayed the issuance of its final RFP. During the final stages of our preparation of the RFP last year, the Department collected comments from and met with industrial companies interested in participating in the conversion plant program. We found that they were almost universally worried about how revelations of concerns about past practices at the gaseous diffusion plant sites might impact this project. They, and many experts inside the Department, have indicated, that before the Department can proceed responsibly with the design and construction of depleted uranium hexafluoride conversion plants, we must first know with certainty whether and how much of the inventory is contaminated with significant levels of transuranic materials.

As you know, the primary issue that arose during the last year regarding past practices at the gaseous diffusion plants was the concern that transuranic elements such as plutonium and neptunium contaminated the uranium feed materials normally managed by workers at the sites. To avoid repeating past mistakes, and to avoid placing project schedules ahead of worker safety, the Department made the only decision it could: to wait until we have a full assessment of the transuranic contamination of the inventory before proceeding with the project. To do less might endanger future workers' safety and jeopardize the overall success of the project. To deal with this challenge, we quickly set forward in November 1999 to define the contamination in the depleted uranium inventory. We first hoped that we could draw upon historical data to characterize the contamination. Unfortunately, our review to date of available data has not yielded sufficient information to enable us to ensure that future workers could be adequately protected.

As a result, we began, in December 1999, a sampling program to characterize the inventory and obtain the data required to design plants that will get the conversion job done while protecting the health of future plant workers. We will soon make public a detailed plan that we will use to complete the sampling program. Once the sampling program is complete this summer, we will gain an understanding of the

contaminants present in the cylinders such that we will be able to release a final RFP in October 2000.

The President's FY 2001 budget requests \$12 million for the depleted uranium hexafluoride conversion project; an amount that we plan to match with an additional \$12 million from funds obtained under the Memoranda of Agreement with USEC, bringing the total to \$24 million in fiscal year 2001. Another \$12 million from the Memoranda of Agreement is reserved for the conversion project and related activities. This funding will keep the project on track to issue the final RFP in October, award a contract early next year and begin design in fiscal year 2001. This will enable the Department to meet the requirements of Public Law 105-204. The President's FY 2001 budget request also includes funding for five additional staff at the Paducah and Portsmouth site offices to assist with management of conversion activities and to help address environment, safety and health issues.

CONCLUSION

Mr. Chairman, let me conclude by saying that the Department remains committed to meeting the goals and requirements of Public Law 105-204 for beginning construction of conversion facilities. I believe that the additional time to sample the cylinders is a prudent measure to ensure future workers protection and the ultimate success of the project. I look forward to working closely with the Subcommittee on this important project.

Overall, I should emphasize that the Department's strategy for our activities at all of our sites is risk-driven. The Department's highest priority is to address the most immediate threat to its workers and the public. We are working to characterize and manage the areas, materials and equipment under our control and mitigating the risk where needed. The Department's strategy and priorities for action are being developed in conjunction with USEC Inc, State and Federal regulators, and others with concerns at the site, and we will work to set priorities for the available funding each year to ensure that it is used to address the highest risks and support our long-term objectives.

Also, I believe we are making good progress with the resolution of the DMSA issue. We have worked very closely with USEC and the NRC to optimize the schedule for completing the characterization work. Once this work is completed in July, we will be able to assure our workers and the public about the safety of these storage areas.

I appreciate your attention and would be happy to answer any questions you have.

Mr. RADANOVICH. I would like to turn it over to Mr. Price for questions. Dave.

Mr. PRICE. Thank you, Mr. Chairman. Dr. Huntoon, General Gioconda, thank you for your testimony, for being here today, and for answering our questions in a forthright way. We, as you know, are between votes here on the House floor, so I may have to submit some questions for the record. But let me go as far as I can with a line of questioning mainly focusing on the ITP matter. If you want to bring any of these other cases in by way of illustration or elaboration, please do so. My question goes to the kind of process that you have in place or put in place with projects of this sort, the process of oversight and evaluation, this system for troubleshooting and catching problems before they get out of hand. I wonder what you have learned from that and what sorts of correctives you have made efforts to put in place.

The GAO report on ITP states that DOE oversight teams, the Defense Nuclear Facility Safety Board, and even Westinghouse knew quite early in the process that it was likely to go far over budget, yet these warnings were ignored. Why did it take DOE so long to determine that the cost of this project would be so much higher than the original estimates? Is it a matter of insufficient oversight or were there management problems? Are there other explanations that would you care to offer?

Dr. HUNTOON. Congressman, I believe in all honesty I could answer yes to your question. Hindsight is wonderful. The ITP project began in the '80s. At that time a process was identified, the contractor made a solid effort of trying to find the technologies that were available in the '80s to deal with this issue. We put it on a fast track because we thought we could do that, or the people in charge at the time thought they could do that. They went into design and construction at the same time they were doing research, and that is always a very dangerous, slippery slope because then you start trying to make things work, to engineer work, to engineer fixes as opposed to understanding the science. It was going along, I think, relatively well until one of the big tests showed there was a lot of benzene there. Then we started working toward resolving the benzene issue.

Finally, after many reviews we realized that we were not going to be able to engineer a fix there and decided to look for other technologies. I believe we are now on the right track to fix this problem. Of course, we have hindsight to thank but we also have technologies that are available today that were not present then. We have identified—started identifying 100 and some technologies, and we narrowed them down to four that we are studying collecting more data on. We have selected criteria that we will use to choose the technology, and that will be done by June of 2001.

What have we learned? We learned that we weren't paying enough attention to managing this. We learned that perhaps we did not have the right technical people on the government DOE side working with the contractor, and we have changed that. We also learned that when we have review teams come in, good review teams from outside of the government, outside of Department of Energy, come in and make recommendations we should pay attention to them, and we did not in the past.

I think we have had this past year two excellent reviews, one DOE-led review by experts across the complex looking at this ITP. We also had a National Academy review. Those two reviews led us to where we are today: looking at these new technologies. We have learned, and we put in place more discipline in project management. I added to my staff in Washington a project management office to help each of our sites with their projects and to identify when projects are having problems. I don't believe we were exercising enough oversight at headquarters. We didn't have full-up project reviews as we are now having quarterly on our big projects.

So, we have learned a lot and we have put a lot of what we have learned into practice. I think this is going to be a much more successful project because of it.

Mr. PRICE. As I understand your answer, it goes to the quality of management. It involves the capacities of your staff, the technical capabilities at your disposal, and it also involves a need for not only having outside evaluation but taking that evaluation seriously.

Dr. HUNTOON. That is right.

Mr. PRICE. When it comes to congressional oversight, as I understand it, the fact that this project was funded with operation funds rather than as a construction project did make it more difficult for Congress to conduct effective oversight and it did not appear as a

line item in the appropriations bill until the 1990s. I personally don't know the history of that from the congressional side. Surely this did have something to do with the failure of congressional oversight. Why was it handled in this matter? How was that decision made?

Dr. HUNTOON. Like you, I wasn't present for the history of the project but I have been told that in the '80s the rules that the deputy followed permitted experimental facilities in support of existing facilities at various sites. This was something that was going to work with the tank farm down at Savannah River to get rid of that waste. I think using operational funds was an acceptable procedure at that time to make additions to existing facilities. That is what I have been told, Congressman. I think the issue we ought to remember here, though, is that the problem, the big problem, was technical and it remains a big problem. That is why we have taken some down time to go back and look at some new technologies and find a better way to do it.

I don't think any amount of oversight would have foreseen the inability of ITP to deal with the large levels of benzene that it produced. In fact, only in the last few months have we understood the chemical processes that led to the benzene.

Mr. PRICE. I understand those technical aspects, but I am asking you to back off just a bit from that and think about the processes that apply beyond the Savannah River case and the political pressures that might be present. Is it possible, for example, that the agency's reluctance to abandon this less expensive method of waste separation was in part a political decision or at least that it was constrained by political factors, that perhaps the agency was reluctant to report failure to the Congress or to dramatically revise its budget estimates until it absolutely had to?

You know, it could be that we would have been better off spending a bit more money earlier to make some changes rather than what we are faced with now. Maybe independent oversight such as that conducted by the NAS eventually would have made it easier for DOE to justify revised budget numbers earlier. So maybe induction of independent oversight earlier would have saved some time and some money in getting to where we are now. It is hard to say to what extent there was a kind of politically constrained reluctance to face facts and to come clean about the situation and ask for exactly what you needed, but if you want to comment you may or the General, too, but I do think this case does raise those sorts of issues.

Dr. HUNTOON. I think I understand exactly what you are saying. Backing away from it, it is hard for me to imagine the climate in the '80s, when this was going on. Actually before the environmental management office of DOE was formed this issue was first dealt with in a production sense. I believe that there was a strong feeling of let's get on with it and move out. I can't accept that people were intentionally trying not to deal with the problems. But, you may well be right. Perhaps there was reluctance to face the problem, thinking it could be fixed. I think each day or each month it was prolonged, the people involved kept thinking they could engineer a fix for this problem.

Mr. PRICE. Finally, let me just ask you to elaborate on the comment you made about technically trained personnel. You say that one of your corrective measures has been to bring on skilled people who can understand the technical problems and deal with these issues more adequately, maybe another instance where spending a bit more money early on would save money later on the Savannah River project or perhaps NIF. What about that? What is your assessment of the extent to which personnel shortages and a lack of the proper training entered into these problems and to what extent has that been fixed?

Dr. HUNTOON. I think it entered into the problems quite a bit. Historically our sites were predominantly managed by M&O contractors and a minor part of the management structure was Department of Energy. I think we did not have the technical personnel. I know that the Defense Board has raised this as an issue. I think the Department has heeded these warnings and has tried to create positions in management to oversee these technical contractors. I know the current management down at Savannah River has paid a great deal of attention to having project managers that understood the technical complexities of what they were managing. But the problem you put your finger on is complex. Maintaining skilled technical people and managing these large technical projects are serious issues. It is hard to keep these people in the government, working on these sorts of projects.

Mr. PRICE. They have got lots of options in this economy.

Dr. HUNTOON. Today they do.

Mr. PRICE. Thank you, Mr. Chairman.

Mr. RADANOVICH. Thank you, Mr. Price, and thank you, both of you on this panel, and you are excused.

I would like to welcome up the next panel, which consists of one person, Ms. Gary Jones. Ms. Jones, may I ask you, since we did get a vote call, will your opening statements be more than, say, 5-8 minutes?

Ms. JONES. Probably about 7 minutes.

Mr. RADANOVICH. OK. We will be timing you. What we will do is allow you to offer your testimony and then we will have to recess, unfortunately, for about 3 votes. If you don't mind waiting until we get back, we deeply appreciate it.

Ms. JONES. That would be fine, Mr. Chairman.

Mr. RADANOVICH. Welcome. And Ms. Jones, of course, is the Associate Director for Energy Resources and Science Issues with the General Accounting Office. Welcome, and have at it.

STATEMENT OF GARY L. JONES, ASSOCIATE DIRECTOR FOR ENERGY, RESOURCES, AND SCIENCE ISSUES, GENERAL ACCOUNTING OFFICE

Ms. JONES. Thank you. We are pleased to be here today to discuss our reports on the cleanup of hazardous and radioactive waste at Paducah, Kentucky and the high level radio waste project at Savannah River, South Carolina. Rather than talk about the task ahead for Paducah, I think that Dr. Huntoon did that; what I would like to begin by showing you our picture of Drum Mountain. And the reason for showing our picture of Drum Mountain is because while they have begun to clean it up, I want to note that

after Drum Mountain has been cleaned up and taken away, there is still 57,000 tons, or 88 percent of the total amount of scrap metal on site, that will still need to be removed. Until then contamination washes from the scrap metal during rainstorms and the runoff carries contaminated soils and sediments into ditches and creeks.

DOE's current plan is to spend about \$1.3 billion to clean up Paducah by 2010. However, there are a number of technical, funding, and regulatory uncertainties that may affect DOE's ability to complete the cleanup within the targeted cost and schedule. Technical uncertainties include the use of technologies that are unproven or may not be well suited to the site condition.

For example, to treat groundwater contamination DOE plans to install permeable treatment barriers in the aquifer at depths of up to 120 feet. The treatment barriers are shown with the blue lines on the map with the groundwater plume. The technology is new and its success is uncertain because it is untested for the specific environment found at Paducah. If groundwater flows too quickly through the barrier and thus spends too little time in the treatment zone, the barrier may not have enough time to fully treat the TCE, which is a hazardous contaminant. In that case the actions of the barrier's treatment zone could change the TCE to vinyl chloride, which is even more toxic.

The cleanup plan is also built on some optimistic assumptions, such as assuming annual funding over the next 10 years that is on average three times what has been spent in the past. Further, the State is pushing for more stringent soil cleanup levels than DOE had planned for. If DOE receives less funding than assumed and/or eventually adopts the more stringent cleanup level, overall costs will grow.

The Congress and other stakeholders undoubtedly have expected that when the current cleanup plan has been completed the site will be clean. It will not. The plan does not include cleaning up nearly 1 million cubic feet of contaminated waste and scrap and 104 areas known as DOE material storage areas, or DMSAs.

As you can see from the pictures, there are barrels of waste, contaminated process equipment and scrap metal. Some are stored indoors, some are stored outdoors. The plan also does not include 16 unused buildings and structures that were originally part of the enrichment process. Some of the DMSAs pose a risk to the workers. DOE has announced they have assessed 11 of these areas and found them to be safe, but that is only about 10 percent of the 73 areas at risk.

In addition, before the site can be considered clean DOE will need to address almost 500,000 tons of depleted uranium stored on the site as well as decontaminate and decommission, or D&D, the uranium enrichment plant once operations cease. While no cost estimate has been developed for cleaning up the DMSAs or the 16 buildings, DOE estimates that addressing the depleted uranium and D&D may cost up to \$3.4 billion.

Subsequent to our report, DOE announced an integrated sitewide plan that will address all aspects of the site requiring cleanup as we recommended. We look forward to this plan as a first step in describing the full scope and cost of the actual cleanup task at

hand and expect that DOE will use this plan to analyze on a comprehensive sitewide basis the risks and set priorities for cleanup.

Let's turn to Savannah River. In 1983, DOE selected ITP to separate high level waste from the 34 million gallons of liquid waste stored at the site. DOE estimated that it would take about 3 years and \$32 million to correct the facility. In February 1998, after about a decade of delays and spending almost a half a billion dollars, DOE suspended the project because it did not work safely and efficiently as designed.

Let me spend a few minutes describing some of the problems that contributed to the failure of this project. Contractor management and DOE oversight of the contractor was ineffective and resulted in ITP problems not being adequately dealt with. For example, a DOE technical review team called the Red Team reported in 1993 that the contractor tended to react to problems after they occurred rather than working to prevent them in the first place. The team also found that DOE lacked the necessary personnel for adequate oversight and as a result DOE's guidance and responsiveness to the contractor was limited.

Further, although DOE identified weaknesses in contractor management in 14 of 16 evaluations of the contract over 8 years, problems continued. In addition, although DOE contractor and GAO reports all describe the risks and problems associated with designing and constructing the facility concurrently, DOE pushed ahead believing that any problems could be solved later. They were wrong. The management and oversight issues that I have described resulted in allowing the project to continue over 10 years, even though the cause of the technical problem that makes the process unworkable, benzene generation, was not understood.

As you can see from our time line, during the development of ITP, GAO in 1992, DOE's Red Team in 1993, and a recommendation from the Defense Nuclear Facilities Safety Board in 1996 all raised concerns about the workability of the ITP process. After formally suspending the process in 1998, DOE began a process to select an alternative technology. It is studying four alternatives and plans to decide on the preferred alternative in June 2001.

However, in the fall of 1999 in an interim report on DOE's selection process the National Research Council made a number of observations. They make it clear that the same problems that the ITP project had, that I described to you this afternoon, continue. For example, the Council found that Westinghouse still lacked an adequate understanding of the chemistry of the process it was developing to replace ITP. The Council had noted that to move ahead without adequate R&D carries a high technical risk and could result in a repeat of the ITP failure. As a result, as Dr. Huntoon mentioned, DOE has decided further R&D on each alternative was required to reduce the technical uncertainty.

Dr. Huntoon also mentioned that she felt that they were on the right road in terms of R&D. We found that the Council's report maybe found a bump in that road. The report notes that there was no well thought out R&D plan and that DOE and Westinghouse, when questioned by the Council, were unable to describe an R&D scope that would resolve outstanding issues. We understand that an R&D plan now exists, but the lack of good planning really

seems to have cost them a year without a sound R&D plan to move forward. The other question that comes to mind is why did DOE have to be told by the Council that these situations were occurring.

In summary, Mr. Chairman, the issues we have raised today concerning these two projects illustrate the types of issues that we have raised in the past about DOE activities. For example, we reported to the Congress in January 1999 that DOE has had difficulty completing large projects on time and within budget, DOE contract management remains vulnerable to risks, and DOE staff lacked technical and management skills. While DOE has made improvements in all of these areas, many of the issues are at the heart of DOE's culture as an organization and will take time and focused management attention to change. Continued oversight by this and other committees will continue to spotlight the progress made and challenges ahead to ensure that DOE continues to improve.

Thank you, Mr. Chairman.

[The prepared statement of Gary L. Jones follows:]

PREPARED STATEMENT OF GARY L. JONES, ASSOCIATE DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, U.S. GOVERNMENT ACCOUNTING OFFICE

Mr. Chairman and members of the Task Force, we are pleased to be here today to discuss management, oversight, and other challenges that the Department of Energy (DOE) faces in its efforts to clean up radioactive and hazardous materials at the Paducah, Kentucky, uranium enrichment site and to remove high-level radioactive waste from more than 34 million gallons of liquid waste stored at its Savannah River, South Carolina, site. DOE faces a number of challenges and uncertainties at Paducah as it attempts to address about 10 billion gallons of groundwater contaminated with radioactive and hazardous materials, contaminated surface water that is in creeks and ditches and leaves the site, contamination in soils that may be spread by rain, tons of buried waste, and the equivalent of about 52,000 barrels of waste stored on the site. From 1988 through 1999, DOE spent about \$388 million on the Paducah site's cleanup and plans to spend another \$1.3 billion over the next 10 years. At Savannah River, we focused on identifying the factors that caused delays and cost growth of the in-tank precipitation (ITP) project. In 1983, DOE selected the ITP process to remove high-level waste from the 49 underground tanks. DOE estimated that the construction of the ITP facility would be completed in 1988 at a cost of \$32 million. After years of delay and spending about a half billion dollars, in February 1998, DOE suspended the project because it would not work safely and efficiently as designed—large amounts of explosive, toxic benzene gas were produced by the process. Soon after the suspension, DOE began a process to find an alternative technology to replace the ITP project. The Department has narrowed the selection to four technologies.

Our testimony today is based on our April 28, 2000, report on the Paducah cleanup and our April 30, 1999, report on the ITP project at the Savannah River Site.¹ Our testimony describes the challenges and uncertainties facing DOE in cleaning up the Paducah site and the effectiveness of DOE's oversight and management of the ITP project. Our summary follows:

- DOE expects to complete the cleanup of the Paducah site by 2010 at a cost of about \$1.3 billion. However, numerous technical, funding, and regulatory uncertainties present challenges to DOE's ability to complete the cleanup within this time frame and cost estimate. For example, technical uncertainties include the planned use of technologies that are unproven or perhaps not well suited to the site's conditions. If they do not work as planned, or at all, costs will increase. In addition, even when the planned cleanup has been carried out, billions of dollars and many years will be needed to address areas at the Paducah site that are not in the cleanup plan. For example, the plan does not include cleaning up nearly 1 million cubic feet of

¹See "Nuclear Waste Cleanup: DOE's Paducah Plan Faces Uncertainties and Excludes Costly Cleanup Activities" (GAO/RCED-00-96, Apr. 28, 2000) and Nuclear Waste: Process to Remove Radioactive Waste From Savannah River Tanks Fails to Work (GAO/RCED-99-69, Apr. 30, 1999).

waste and scrap in areas known as DOE Material Storage Areas (DMSA) and 16 unused and inactive buildings and structures. Some of the waste and scrap material pose a risk of an uncontrolled nuclear reaction that could threaten worker safety.² By not including these areas in the plan, the Paducah cleanup managers cannot assess risk or plan cleanup on a comprehensive, sitewide basis. Therefore, the picture of the cleanup task at hand is distorted.

- A number of management and oversight problems caused DOE and Westinghouse Savannah River Corporation (Westinghouse), DOE's contractor, to spend almost a half billion dollars and to take about a decade before deciding that the ITP process would not work safely and efficiently as designed. For example, in 1993, a technical review team reported that the contractor tended to react to problems after they occurred, rather than working to prevent them in the first place. The team also found that DOE lacked the necessary personnel for adequate oversight. Moreover, DOE and the contractor encountered delays in starting up the ITP facility because they had begun construction before the design of the process was completed. DOE and the contractor also did not adequately understand the cause of the technical problems—such as a lack of understanding of the chemistry involved in the ITP process—that made the process unworkable. Some of the problems that led to the ITP failure may have continued in DOE's efforts to find an alternative. According to an October 1999 National Research Council report, a lack of understanding of the chemistry involved in the process continues, and the contractor appears to be focusing on an engineering solution on the basis of untested assumptions.³

CHALLENGES AND UNCERTAINTIES FACE DOE IN PADUCAH'S CLEANUP

In 1988, radioactive contamination was found in the drinking water wells of residences near the Federal Government's uranium enrichment plant in Paducah, Kentucky.⁴ In response, DOE began a cleanup program to identify and remove contamination in the groundwater, surface water, and soils located within and outside the plant's boundaries. Sources of the hazardous chemical and radioactive contamination included spills, leaks from contaminated buildings, buried waste, scrap yards, and waste lagoons. From 1988 through 1999, DOE spent about \$388 million on clean-up efforts.

DOE's plan for cleaning up the site includes activities, costs, and schedule that are estimated to cost about \$1.3 billion from fiscal year 2000 through fiscal year 2010. We identified a number of challenges to accomplishing the current cleanup plan, including uncertainty about the nature and extent of contamination, technical risks, and optimistic assumptions about funding and regulatory approvals. In addition, even when the cleanup identified in the plan is complete, billions of dollars and many years will be required to address items not included in the cleanup plan—such as about 1 million cubic feet of waste and scrap material in DOE Material Storage Areas.

DOE PLANS TO CLEAN UP SIX MAJOR CATEGORIES BY 2010 AT A COST OF ABOUT \$1.3 BILLION

DOE's January 26, 2000, Paducah cleanup plan focuses on six major categories of cleanup. The first category is groundwater contamination. About 10 billion gallons of groundwater contaminated with radioactive and hazardous materials are flowing toward the Ohio River. For example, trichloroethene (used as a degreaser and called TCE) has been found in the groundwater at levels of up to 700,000 parts per billion; far in excess of the Environmental Protection Agency's (EPA) drinking water standard of 5 parts per billion. As interim measures, DOE has connected nearby residences to municipal drinking water and constructed a system to pump some of the contaminated water out and treat it.

The second category is surface water contamination in surrounding creeks and ditches. One of the main sources of this contamination is the thousands of tons of contaminated scrap metal stored at the plant. During rainstorms, contamination

²In this case, an uncontrolled nuclear reaction could produce a burst of radiation that generally lasts several hours; it is, however, a localized event that is not expected to result in an explosion or release of radioactivity into the atmosphere.

³See "Interim Report—Committee on Cesium Processing Alternatives for High-Level Waste at the Savannah River Site," Committee on Cesium Processing Alternatives for High-Level Waste at the Savannah River Site, National Research Council (Oct. 14, 1999). The National Research Council, as the principal operating agency of the National Academy of Sciences and the National Academy of Engineering, provides the government, public, and scientific and engineering communities with services and research.

⁴A private company, the United States Enrichment Corporation, operates the plant today under lease and produces enriched uranium for nuclear power plants.

washes from the scrap metal, and the runoff carries contaminated soils and sediments into the ditches and creeks. By the end of 2000, DOE plans to have removed that portion of the contaminated scrap metal called "Drum Mountain," which is made up of about 8,000 tons of crushed drums that contained depleted uranium. But, after the crushed drums are removed, 57,000 tons, or 88 percent, of the total amount of scrap metal on site will still have to be removed. DOE also plans to dredge ditches and creeks and install basins to catch the contaminated water so it can be treated.

Under the third category, DOE has identified 72 areas with contaminated surface soils and has taken interim measures, such as installing erosion control fences, to prevent further migration of the contamination; the Department plans to excavate and dispose of about 35,000 cubic yards of soil. The fourth category includes 12 waste burial grounds containing a variety of radioactive and hazardous contaminants, including arsenic, beryllium, and polychlorinated biphenyls (PCBs). DOE is planning to excavate four or five of these areas and install a protective cover, or cap, over the remaining areas. The fifth category is the equivalent of 52,000 barrels of hazardous and low-level radioactive waste stored in various locations on-site—almost 25 percent of the barrels are stored outdoors and are deteriorating. Before it can ship this waste offsite, DOE must determine the nature and extent of the waste's contamination and repack most of the barrels to make them suitable for disposal. Under the sixth and last category, two buildings that were used in the uranium enrichment process until 1977, which are heavily contaminated, will be decontaminated and removed.

DOE FACES CHALLENGES IN ACHIEVING ITS PADUCAH CLEANUP PLAN

DOE faces many challenges to completing its cleanup within planned costs and schedules. Uncertainties about the extent, source, and nature of contamination yet to be cleaned up could increase cleanup costs. For example, the full extent of contamination in the surface water and soils within and outside the plant boundaries remains to be determined and could affect cleanup strategies and costs. While Kentucky prefers the installation of eight or nine sedimentation basins as part of the surface water cleanup, DOE has only budgeted for four.

Furthermore, uncertainties exist about the feasibility of available cleanup technologies. Some of the technologies are new, and others remain untested for the specific environment found at Paducah. For example, EPA officials told us that difficulties with steam injection—which DOE plans to use to treat the source of groundwater contamination—were encountered at another site, and there are questions about whether the technology will work at Paducah because of the site's complex geologic formation. DOE's ability to treat the contaminated groundwater is also uncertain. DOE plans to install about 4,000 feet of permeable treatment barriers across the paths of the highest concentrations of contamination. Installing the barriers involves injecting a gelatinous, gummy substance containing iron filings into the aquifer at depths of about 120 feet. The technology is quite new, and the potential for its success at Paducah is uncertain. For example, if groundwater flows too quickly through the barrier and thus spends too little time in the treatment zone, the barrier may not have enough time to fully treat the TCE. In that case, the actions of the barrier's treatment zone could change the TCE to vinyl chloride, which is even more toxic.

In addition to the technical uncertainties, the cleanup plan is built on some optimistic financial assumptions. The plan assumes that Federal funding for cleanup at Paducah will increase to an average of \$124 million annually over the next decade—ranging from \$78 million in 2001 to a high of \$307 million in 2008—compared with the annual average funding of \$43 million over the last 7 years.

The plan also includes optimistic assumptions about quickly reaching agreement with the regulators on cleanup levels, strategies, and priorities. In the past, regulators have disagreed with some of DOE's proposed approaches. For example, Kentucky objected to DOE's cleanup of PCBs in soils to EPA's standard of 25 parts per million for unoccupied space, saying that it wanted the soil cleaned up to 1 part per million. The more stringent EPA standard would allow for industrial or residential use. The resolution of this issue has been deferred until DOE submits its plans for surface water cleanup. If DOE receives less funding than assumed and/or eventually adopts a more stringent cleanup level than currently planned, total costs to complete the overall cleanup will grow.

DOE'S CLEANUP PLAN FOR PADUCAH DOES NOT ADDRESS ALL AREAS THAT REQUIRE CLEANUP

Even when DOE completes the cleanup that it has planned, billions of dollars and many years will be needed to address areas at the Paducah site that are not included in the cleanup plan because they fall under the purview of a different departmental program.⁵ The plan excludes nearly a million cubic feet of waste and scrap contained in 148 DMSAs located across the site. Materials in these areas include thousands of barrels of low-level radioactive waste, PCB waste, and asbestos waste; contaminated equipment; various items and containers whose contents are unknown; and scrap metal. DOE has not yet determined the exact nature and extent of contamination in these areas, but it has identified 73 of them as posing a risk of an uncontrolled nuclear reaction. In this case, such a reaction might produce a burst of radiation that generally lasts several hours but is not expected to result in an explosion or release of radioactivity into the atmosphere. At the time of our report, DOE officials said they planned to pay nearly \$5 million to conduct a nuclear criticality safety review on the 10 DMSAs posing the highest risk.

The cleanup plan also does not address 16 unused buildings and structures that were originally used as part of the enrichment process. These buildings and structures, as well as the DMSAs, are excluded from the plan not because they require no action but because they fall under a different departmental program—the Office of Nuclear Energy, Science, and Technology. DOE officials told us that they are hesitant to transfer any more areas to the Office of Environmental Management, the office responsible for cleanup, because this office already has a large workload and funding for cleanup is limited.

In addition, before the site can be considered clean, DOE will need to address almost 500,000 tons of depleted uranium stored on site as well as decontaminate and decommission the uranium enrichment plant, when it ceases operation. DOE estimates that it may cost between \$1.8 billion and \$2.4 billion to convert the depleted uranium to a more stable form and remove it from the site. In addition, according to DOE's January 1998 estimate, another \$1 billion would be needed for final decontamination and decommissioning activities when the United States Enrichment Corporation ceases operations at Paducah and the plant is returned to DOE.

To ensure that cleanup risks and priorities are established on a comprehensive, sitewide basis and that a more comprehensive picture of the cleanup is presented to the Congress, our April report recommended that the Secretary of Energy transfer the responsibility for the DMSAs and the unused buildings and structures from the Office of Nuclear Energy to the Office of Environmental Management. We also recommended that DOE address in the cleanup plan, regardless of the current organizational responsibility, any and all materials at the site that are potential health hazards and reexamine the sitewide contamination risks and cleanup priorities, costs, and schedules. In response to our recommendations, DOE officials announced, in July 2000, that it will prepare an integrated sitewide plan that will address all aspects of the site requiring cleanup. However, it has not transferred the responsibility for these areas to the Office of Environmental Management. Without doing so, it will be more difficult to establish priorities and conduct the cleanup in a comprehensive manner.

ITP FAILS TO WORK AFTER 10 YEARS AND A HALF BILLION DOLLARS

The ITP process was selected in 1983 as the preferred method for separating high-level waste from the 34 million gallons of liquid waste stored at the Savannah River site—a step considered necessary to effectively handle this large quantity of waste. In 1985, DOE estimated that it would take about 3 years and \$32 million to construct the ITP facility. After a number of delays, the ITP facility was started up in 1995, but safety concerns about the amount of explosive, toxic benzene gas that the facility generated halted start-up operations. In February 1998, after about a decade of delays and spending almost a half billion dollars, DOE suspended the project because it did not work as safely and efficiently as designed. DOE then directed that its contractor begin a process to identify and select an alternative technology. Although originally expected to be completed in the fall of 1999, that selection process continues today with additional research and evaluations being made on four alternatives. DOE's plan calls for making a decision on the preferred alternative in June 2001.

⁵The cleanup program is the responsibility of DOE's Office of Environmental Management, while the Office of Nuclear Energy, Science, and Technology is responsible for maintaining the site's infrastructure.

A number of factors combined to cause DOE and Westinghouse to spend almost a half billion dollars and take about a decade to decide that the ITP process would not work as safely and efficiently as designed. First, because of ineffective DOE and contractor management and oversight during the 1980s and early 1990s, ITP problems were not being adequately dealt with. In addition, DOE and the contractor experienced difficulty managing the project's start-up operations. Furthermore, there was limited oversight and visibility of the project because of the budgetary treatment it received. Lastly, the ITP process and the generation of toxic, explosive benzene were not fully understood.

WEAKNESSES EXISTED IN CONTRACTORS' MANAGEMENT AND DOE'S OVERSIGHT

The principal factors contributing to the delays and increased costs of the project were ineffective management and oversight by DOE and its operating contractors. A number of these problems were noted in 1993 by a DOE technical review team (referred to as the Red Team) that examined the project⁶ as well as in semiannual evaluations of contractor performance.

The Red Team reported that the contractor tended to use "reactive, discovery management" to react to problems after they occurred, rather than working to prevent problems in the first place. It found that this approach resulted in a high potential for inadequate process development, lengthening the project, and increasing its costs. The Red Team also reported that DOE oversight and support functions at the Savannah River site were not adequate because DOE lacked the necessary personnel. As a result, DOE's guidance and responsiveness to Westinghouse, the site contractor, were limited. Finally, the team found that DOE's organizational responsibilities appeared unclear and the DOE staff were forced to respond in a reactive manner to emerging issues.

Contractor management problems also surfaced repeatedly in the semiannual evaluations DOE performed to assess Westinghouse's eligibility for award fees. We found that in 14 of the 16 evaluations performed from April 1990 through March 1998, DOE identified weaknesses needing attention in contractor management or ITP planning activities. For example, a 1992 evaluation stated that performance against planned work was not adequately monitored and that technical documents had deficiencies indicating a lack of management attention. A 1995 evaluation noted that insufficient resources had been assigned to meet the project schedule. In addition, a 1996 evaluation noted that while safety concerns about benzene gas from the ITP process was a key issue, the implementation of a program to resolve the benzene issue had been fragmented and no single manager had been given overall responsibility for resolving it.

MANAGING THE PROJECT'S START-UP POSED DIFFICULTIES

The ITP project was managed on a fast-track schedule—concurrent design and construction—with an emphasis on pushing ahead in the belief that the problems could be solved later. Rather than expediting the ITP project, this approach caused a series of delays that prolonged the project for 10 years while costs mounted. A number of studies in the early 1990s noted this problem, as the following examples show.

- A 1992 Westinghouse management assessment concluded that a number of start-up activities were begun prematurely—before the foundation for an efficient program was in place.⁷ The key weaknesses observed included a lack of a technical baseline and a potential for inconsistencies among the project's various activities because they were not completely integrated.
- Our 1992 report on Savannah River's Defense Waste Processing Facility, which included the ITP project, cited the fast-track management method being used as contributing to the project's cost growth. We also stated that there was a risk associated with that method, especially when used with unique and complex facilities. We recommended that an assessment comparing ITP with an alternative technology be made.⁸
- The 1993 Red Team report noted that the project's start-up was not being managed as a first-of-a-kind chemical-processing system. It stated that Westinghouse was not following the accepted chemical engineering practice of completing process

⁶See "Independent Technical Review of In-Tank Precipitation (ITP) at the Savannah River Site," DOE Office of Environmental Restoration and Waste Management (June 1993).

⁷See "Management Assessment: In-Tank Precipitation Project," Westinghouse Savannah River Company (Mar. 1992).

⁸See "Nuclear Waste: Defense Waste Processing Facility—Cost, Schedule, and Technical Issues" (GAO/RCED-92-183, June 17, 1992).

development, demonstrating the operability of the process on a pilot scale, and assessing all long-term impacts and requirements for sustaining the process before beginning plant operations. The Red Team recommended that alternatives to the ITP process be considered.

In response to our 1999 report, Westinghouse acknowledged that the risks associated with new applications of existing technologies were not managed well on the ITP project—that is, enough time was not built into the schedule to allow for the kinds of technical problems that arose. DOE Savannah River officials noted that ITP was a first-of-a-kind process and that because of funding constraints, they were scaling up the technology from lab tests to full-scale without the benefit of additional test facilities. Furthermore, DOE officials said they considered alternatives to ITP as the project progressed. DOE said it determined that risks were inherent in ITP and the alternative processes but that costs still favored the ITP process, so the project proceeded. The DOE Savannah River High-Level Waste Division Director said the Department is now attempting to manage the high-level waste program, of which ITP is a part, using a systems engineering approach that dictates that more testing be done up front.

OVERSIGHT AND VISIBILITY WERE LIMITED BY BUDGETARY TREATMENT

DOE paid for the ITP project with operating funds that are subject to less oversight and visibility than capital construction funds. Capital construction projects are subject to periodic reviews and reports, and those costing \$5 million or more are shown as line items in the budget requests that DOE submits to the Congress.⁹ Projects paid for with operating funds do not receive such scrutiny. DOE officials said they used operating funds for the ITP project because, throughout the life of the project, they had expected the technical issues to be solved shortly, thus not warranting its conversion to a capital construction project, which would be funded as a line item in DOE's budget request.

This is not a new issue. We raised concerns about this practice in our 1992 report, noting that because projects associated with Savannah River's Defense Waste Processing Facility were being funded from operating accounts, the Congress was not receiving enough information to fully understand the magnitude of the continuing cost increases and delays.¹⁰

INADEQUATE UNDERSTANDING OF THE ITP PROCESS EXTENDED THE PROJECT

DOE and its contractors did not completely understand the ITP chemistry that caused excess benzene to be generated. Earlier in the project, the Westinghouse staff at the Savannah River Site identified the principal cause of benzene generation as the decomposition of the chemical (sodium tetrphenylborate) that was added to the tank waste during the ITP process to separate the high-level waste from the liquid waste solution. The benzene was thought to become trapped in the solution and be released with the addition of water and mixing. In 1997, after a recommendation by the Defense Nuclear Facilities Safety Board, additional research into the chemistry revealed that a catalyst or catalysts that produced large amounts of benzene were present in the waste solution.

The contractor based its initial belief on the results of the full-scale test conducted in 1983 and on subsequent smaller-scale tests. For the 1983 test, sodium tetrphenylborate was added to a tank with about 500,000 gallons of waste. During the test, a good separation of high-level waste occurred. However, a significant release of benzene was also observed—for 6 hours, the benzene levels were higher than the level that the instruments in the tank could register. As a result, additional studies were conducted.

According to many DOE ITP project employees with whom we spoke, the test in 1983 was viewed as successful and provided credibility for the project's technology. However, an ITP engineer told us that the fact that the benzene level went over the instrumentation scale for 6 hours was not widely known. The test results seemed to have been forgotten over time. For example, two ITP project managers involved with the project since 1997 told us they were unaware of this aspect of the test.

During the development of the ITP process, we and the Red Team raised concerns about unresolved technical issues and the level of understanding the ITP process, as shown in the following:

⁹Prior to fiscal year 1997, capital funded projects costing \$2 million or more were to be shown as budget line items.

¹⁰See GAO/RCED-92-183, June 17, 1992.

- Our 1992 report raised concerns about the ITP process's unresolved technical issues and delays and recommended that the Secretary of Energy direct that an assessment of an alternative technology (ion-exchange process) be prepared to determine whether DOE should replace the ITP process.¹¹

- In 1993, the Red Team noted that the chemistry of the ITP process was not adequately understood and that the ITP process appeared to cause more problems than it solved. These problems included a need to control benzene emissions; increased flammability risks; increased risk from aerosols, foams, and respirable particulates; increased chemical reactivity of high-level waste, leading to possible explosions; and the introduction of extremely complex organic chemistry.

- The Red Team also questioned whether the chemical used in the ITP process—sodium tetraphenylborate—was the best way to remove cesium from the liquid waste. It concluded that effective technologies were available and could be implemented. It noted that if the state environmental regulators adopted a more restrictive benzene emissions policy, the entire high-level waste complex, as well as the Savannah River Site itself, would be better served by a thorough reevaluation of alternative technologies.

In response to our 1999 report, DOE Savannah River officials told us that they considered the concerns raised but did not change their approach for a number of reasons. In their view, in 1992 and 1993, ITP was considered to be the best technology available for the type of high-level waste at the Savannah River Site. In addition, they believed that they understood the benzene generation problems and thought the problems had been identified, evaluated, and resolved. A number of modifications were made to the ITP facility, primarily to address the generation of benzene and to meet the more stringent safety standards that were adopted for all DOE facilities. Throughout this period, DOE Savannah River officials said that they considered the ITP process to have the lowest technical risk and the lowest cost of all the alternatives.

DOE IS EVALUATING FOUR ALTERNATIVES TO REPLACE ITP

Although pointed out by the Red Team, the Defense Nuclear Facilities Safety Board, and us, the lack of understanding of the chemistry of the ITP process may plague the selection of the replacement for ITP. In the fall of 1999, the National Research Council released an interim report on the alternative processes being considered for the high-level waste at the Savannah River site. Regarding one of the alternative technologies, called small-tank precipitation, which basically uses the same chemical to separate the high-level waste as the ITP process does, the report found that Westinghouse lacked an adequate understanding of the chemistry underlying the process responsible for benzene generation. The Council further reported that in place of such an understanding, Westinghouse appeared to be focusing on an engineering design solution that was based on untested assumptions about maximum likely benzene production. The Council believed it would be advantageous in terms of time and cost to undertake this research and development work before the process might be selected and deployed. The alternative—namely, to proceed with deployment immediately and engineer around the gaps in chemistry knowledge—carries a high technical risk and could result in a repeat of the ITP failure. As a result of the National Research Council report, DOE decided that further research and development on each alternative was required to reduce technical uncertainty prior to selecting a preferred alternative.

The National Research Council's report also suggests that Westinghouse may have a bias for its process, which is the small-tank precipitation alternative. The Council reported that the research and development resource allocations have been markedly inequitable for the four alternative processing options that DOE and the contractor are considering. It said that this funding disparity appears to be primarily responsible for the different levels of technical maturity of the four processing options, independent of their likelihood of success. The Council found in its discussions with the contractor and DOE staff that the contractor did not appear to be serious about pursuing research and development on any option but small-tank precipitation. These concerns were addressed when DOE removed research and development management responsibility from Westinghouse for the other options in October 1999 and limited its responsibility to the small-tank precipitation process. Although the Secretary of Energy had announced in April 1999 that a new contractor would be sought to continue work on separation processes at Savannah River, Westinghouse remained responsible for research and development on all the alternatives until October 1999.

¹¹ See GAO/RCED-92-183 (June 17, 1992).

In addition, DOE officials told us that first, DOE has developed an action plan and project schedule that includes the steps necessary for choosing a preferred alternative by June 2001 and designing, constructing, and operating the facility by 2010; second, DOE is developing selection criteria that will be used to pick the preferred alternative, which may include such factors as technical maturity, risk, life-cycle cost, and implementation confidence; and third, DOE is using a technical working group to oversee the research and development being undertaken.

In summary, Mr. Chairman, the issues we have raised today concerning these two projects illustrate the types of issues that we have raised in the past as part of the major performance and management challenges at DOE. For example, we reported to the Congress in January 1999 that DOE has difficulty completing large projects on time and within budget, that DOE contract management remains vulnerable to risk, and that DOE's staff lack technical and management skills.¹² These were touched on in the examples we provided today. While DOE has made improvements in all these areas, many of the issues are at the heart of DOE's culture as an organization and will take time and focused management attention to change. Continued oversight by this and other committees will continue to spotlight the progress made and challenges ahead to ensure that DOE continues to improve.

Mr. Chairman, this concludes our prepared statement. We will be pleased to respond to any questions that you or members of the committee may have.

Mr. RADANOVICH. Thank you very much. I appreciate you leaving me time to go vote as well. We will recess this hearing and apologize. We have three votes. But I will be back just as soon as I can. Thank you for your patience.

[Recess.]

Mr. RADANOVICH. We are back in session and thanks again.

Ms. Jones, I will ask a series of questions about all three projects, and if you care to respond, I would appreciate it.

Ms. JONES. OK.

Mr. RADANOVICH. How would you compare the management and oversight problems by DOE in the handling of Savannah ITP projects compared to problems that you have reported on in the past? How are they different from in the past?

Ms. JONES. The kinds of management problems that we saw at Savannah River for ITP are similar to what we have seen in a lot of other projects throughout our work at DOE. We saw lack of technical expertise at Hanford and at other places. The fact that you have an organizational structure that doesn't give you clear lines of accountability, so therefore the contractors really are not held accountable. We have seen that at Lawrence Livermore and Hanford and a number of different sites. So they are similar types of problems.

Mr. RADANOVICH. Reoccurring?

Ms. JONES. Yes, sir.

Mr. RADANOVICH. You said DOE has failed to respond to our reports that highlight management weaknesses. When you look at the changes that DOE has made at Savannah and other complexes, do they give you confidence that we will not be here a year from now with more unscheduled delays and finger pointing?

Ms. JONES. While DOE has made some progress in this area, we have noted recently, let me give you two examples. Looking at ITP, while I think the DOE witnesses told you they have made some changes in terms of their organizational structure for the ITP oversight, you basically have Dr. Huntoon, who is going to be making the decisions. That is a positive thing. It is also positive that DOE

¹²See "Major Management Challenges and Program Risks: Department of Energy" (GAO/OCG-99-6, Jan. 1999).

brought in the National Research Council. But when you look at the lines of accountability, it seems to me that it is being managed on a day-to-day basis by a technical working group, which is four people. Who is really accountable there? You have two laboratories involved and you have the operations office at Savannah River who is also involved. If something went wrong, who is accountable on a day-to-day basis? We also did a report looking at the tank waste project at Hanford in 1998 and talked about problems there in terms of lack of technical skills and oversight and just this last year an internal group saw the same kinds of problems. So, like Savannah River, there had been no move forward to try to make a change there.

Mr. RADANOVICH. In June 1999, reporting in the wake of the Wen Ho Lee spy case, the President's Foreign Intelligence Advisory Board said that the board is extremely skeptical that any reform effort no matter how well designed and effectively applied will gain more than a toehold at DOE given its labyrinthine management structure, its fractious and arrogant culture and its fast-approaching reality of another transition in DOE leadership.

Do you agree with that view? Are you confident that the cycle of problems has been stopped?

Ms. JONES. I am not confident that the cycle has stopped. Our past work at DOE has shown while they will react to the situation and put a plan in place, those plans are not always carried out. We will come back a couple of years later and see the same kinds of things are going on. There is a culture where there needs to be some change in terms of holding DOE employees and contractors accountable. I am not sure any changes put in place recently will solve that problem. The Secretary has put a killer clause in the DOE contracts where they can take away all of the fee, but I don't think that DOE has shown that they have the will to do that over time. They wait until something egregious happens and then they take it away rather than doing it all along to direct the contractor in the right way.

Mr. RADANOVICH. Moving on to Savannah River, after about 10 years and \$488 million, what does DOE have to show for its efforts regarding the treatment and disposal of the high level nuclear waste there at Savannah? Have we gotten our money's worth?

Ms. JONES. We know that the ITP process produces a lot of benzene. They still have a lot of R&D work to be done. The National Research Council report states that all three of the processes that they are looking at still require research and development, and we think that now that there is a plan in place, they can move forward and do the research that they need to make a good decision.

Mr. RADANOVICH. DOE's own documents indicate the potential for leaking at the tanks is real. In fact there has been a tank leak already. What confidence do you have that the Department is taking adequate steps to ensure the stability and safety of the tank farm?

Ms. JONES. We haven't looked at the issue of the leaking tanks at Savannah River, so I wouldn't be able to comment on that.

Mr. RADANOVICH. What are the potential costs associated with taking additional steps to prevent leaking if there are additional delays in the project?

Ms. JONES. I don't know about the leaking tanks. I do know if there is a delay in the project, you do still have high level waste being created that they are going to have to find a place to put it. At some point in time in the future they are not going to have a place and they will have to use old tanks, which have the potential for leaking and have to be retrofitted, or build new tanks which will also increase the cost. There is an issue of the timing of them; being able to develop this new process is critical.

Mr. RADANOVICH. Can you venture to say how much percentage-wise the \$488 million, how much was effectively spent and how much might have been a waste?

Ms. JONES. I don't know if I can characterize it from a dollar standpoint. What I would say is that 10 years seems to be a very long time to keep after the same technical issue. It seems, again hindsight is 20/20, but they had a lot of people telling them, as you can see from our timeline, that there was an issue and they seemed to believe that resolution was right around the corner. If they had stopped earlier, that would have helped.

The other issue is that we had been told a number of years ago when one of the other processes now being considered was being developed through DOE's innovative technology program, Savannah River was approached as well as other sites and asked, do you think this might work for your vitrification process? Savannah River said, no, we are going to go with ITP. Maybe if they had listened several years ago, they would have been further along in developing that process for Savannah River.

Mr. RADANOVICH. Correct me if I'm wrong, but the map behind the poster to the left was a cleanup site of Savannah River, wasn't it?

Ms. JONES. No, the map that we had up was Paducah. That was to show the plumes of ground contamination at Paducah.

Mr. RADANOVICH. I did have a question regarding that one. We will move to Paducah. A couple of questions. Figuratively speaking, how many drum mountains are out there? How many DOE sites have major environmental problems not generally known to the public like this?

Ms. JONES. I am not sure that I can answer that, Mr. Chairman. Certainly DOE has a lot of characterization to do at a number of their sites. I think this is a very complex undertaking. I know that at a hearing a week ago, when the Department of Energy was asked how many buildings and facilities were not part of the plan, they couldn't tell the committee the answer. So I don't know the answer to that.

Mr. RADANOVICH. Is funding just the issue on this? I know that one of the testifiers was reacting to the fact that they had just gotten some funding. Is this strictly a funding issue?

Ms. JONES. I am not sure that it is strictly a funding issue. While their plan assumes that they need more money, I think we have to look at the plan because from a technical standpoint, they are looking at several technologies that are innovative. So just throwing more money before they demonstrate their groundwater technologies may not be a good thing to do. Some of this cleanup has to be sequenced. You have to do certain things before you do other things. So again, I would want to look very closely at their budget

submissions to see that they could effectively spend increased funds.

Mr. RADANOVICH. On the map you show black dots forming a square around the site. That is a barrier that has been installed. Was that to further prevent the plumage that has taken place there?

Ms. JONES. No. The treatment barriers are actually the blue lines. The plume is the yellow and the dark red going out, and there is a blue line that goes across those. Those are the projected treatment barriers. They only have one installed, a small one, that they are trying to demonstrate whether the technology will work at Paducah.

Mr. RADANOVICH. But it just prevents the plume from moving any more?

Ms. JONES. That's correct, it prevents contamination from moving because it's designed to clean the water. There is stuff on the other side of the barrier that will continue to go to the river.

Mr. RADANOVICH. There is no plan to deal with that?

Ms. JONES. That's correct.

Mr. RADANOVICH. So the plan is just preventing more leakage?

Ms. JONES. It is trying to clean up the groundwater that will be coming through at some point in time. The stuff that has already passed those barriers will not be treated.

The other problem is that they have—the source of the groundwater contamination is also very difficult to clean up. It is TCEs at the bottom of the aquifer, and they are going to try to extract them, but that is also a technology that they are trying to demonstrate. Unless they can get that source out, it is going to continue to contaminate the groundwater over time.

Mr. RADANOVICH. What are the black dots?

Ms. JONES. That is the plant fence. I had to ask to make sure that I was right.

Mr. RADANOVICH. Which is not stopping much.

One more question. In your report you characterize DOE's approach to their efforts to reach an agreement with the EPA and the State on issues as optimistic. This optimism you say makes it uncertain that the cleanup can be done within the time frame and cost. Can you give us an example?

Ms. JONES. There are a couple of examples. One is the sedimentation ponds. Basically the State wanted to have, I think it is about seven, and DOE is only budgeted for four. So if the State gets what they would like to have, DOE is going to have to put more money in for that.

On soil contamination, right now DOE is assuming that they are going to clean up to EPA standards of 25 parts per billion, which is for unoccupied space, and the local community and the State is saying we want it 1 part per billion, which is residential and industrial. So they are putting off that decision until they come up with their plan.

Mr. RADANOVICH. Thank you.

Mr. Spratt.

Mr. SPRATT. Thank you very much. I am sorry that I wasn't here earlier. I have followed this for some time and it is not surprising. If we go out to Hanford, there are twice as many tanks, I believe?

Ms. JONES. Yes, sir.

Mr. SPRATT. And the chemistry in those tanks is still not understood?

Ms. JONES. That's correct.

Mr. SPRATT. Nobody has a solution. At one time I guess Rockwell was the goco at that time. They used ferrous cyanide and they had an adverse reaction and it started bubbling hydrogen and other explosives and combustible output and scared the dickens out of everybody.

Ms. JONES. That's correct.

Mr. SPRATT. Right now they have a witch's brew at Hanford and no progress at all.

Ms. JONES. They just cancelled the contract with BNFL, who was going to go forward and continue the design of that process. That project right now is being relooked at. They are trying to make a decision in terms of what kind of contract and funding they are going to go forward with.

Mr. SPRATT. The good fortune at Savannah River, Dupont were the original site contractors and Dupont are—is primarily a company of chemists and they understood the chemistry in these tanks better than anybody else, frankly. When you look at what happened, it is just—to some extent it is a measurement of how much we know and how much we are simply taking plunges in the dark as we try to resolve this problem.

To put it into context, the State of South Carolina was pressuring Savannah River-Dupont and Savannah River-Westinghouse because the tanks in South Carolina are single lined for the most part. They sit on the top of the Tuscaloosa Aquifer. If they established a plume like that, they could not only damage the immediate surroundings, they could have irreparable damage to one of the larger aquifers in the Southeast. So there was lots of pressure on the contractor to get something done.

We funded a defense waste processing facility, and once we got it underway, it followed that this process had to be brought along in line with it because it was clear to everybody we couldn't afford the cost of vitrifying 35 million gallons of liquid waste. We had to reduce its volume by a whole order of magnitude to make the project sustainable, and that is where all of this got started.

We say there has not been any oversight but I have been there half a dozen times, and I have been through this process a number of times. I don't know any chemistry, so before I would cast any stones at the lack of expertise of DOE, I would confess my own lack of expertise. I know that I can learn and listen and turn to other people, but it is difficult to follow the complexity of this.

We had a panel created on the Armed Services Committee at my instigation because I thought we, Congress, was woefully inadequate in our efforts to deal with oversight. The Energy and Water Subcommittee of Appropriations was not paying nearly as much attention to this as they were to civilian water projects, and on the Armed Services Committee we had one or 2 days of hearings and unless you had a dog in the fight, a project that was being funded, you probably didn't come to the hearing.

We put together a panel and we paid more attention particularly to the waste cleanup, environmental remediation problems than

anything else. In fact, we shifted over 3 years almost a billion dollars out of the regular defense budget into the DOE budget for environmental remediation. We created the new Facilities Safety Board because we saw the need for some outside oversight.

The person who probably described as well as anything what happened to the whole complex and why, why this accumulation of environmental problems, was a man named Richard Meserve in a report done for the National Academy of Sciences in the early 1990s, late 1980s. Basically they laid out very graphically how for 40 years production of nuclear materials had trumped everything. It had trumped cost considerations, environmental considerations; getting the materials ready for the bombs and warheads that were being built was imperative. It was a matter of national survival, and so few questions were asked other than is production on schedule.

We have inherited that. You can blame a lot of people, but that philosophy is probably more to blame than for any single individual or lack of due diligence of any contractor in any of these processes.

I simply make those comments. I think you have done an excellent job in your report of summarizing what has happened. I have followed it from some distance, and I understand it better after seeing what you have put together here. But I am still about as unclear as to where we go from here as I was before I picked up your report and read it.

Do you have any observations on how soluble this problem is, whether or not it can be done for reasonable cost in a reasonable period of time?

Ms. JONES. I don't think that we are going to know that until DOE does some more research and development on the processes that they are considering. The fact that they have widened the span of processes that they are looking at gives us pause in terms of maybe there is a solution. I think putting some more R&D dollars into it now to know what you are facing will give us a lot more confidence as we move forward.

Mr. SPRATT. Wouldn't you agree if the ion exchange technology would have been more complicated and less mature than this precipitation technology that they opted for?

Ms. JONES. My understanding at the time they were starting to look at all of these processes, in the early eighties, there was some issues with the ion exchange. You are correct, it was more costly.

Mr. SPRATT. Do you have any opinion about whether or not the small tank alternative is a viable alternative?

Ms. JONES. No, sir, I don't. Not at this time.

Mr. SPRATT. Thank you very much for your work and your testimony.

Mr. RADANOVICH. I don't have any other questions. If nobody else does, this hearing is adjourned. I want to thank you very much for coming and also the people who testified before. Thank you very much.

[Whereupon, at 4 p.m., the Task Force was adjourned.]

Fire Safety Failures of the Park Service: Caretaker of the Nation's Treasures Ineffective in Addressing Hazards

WEDNESDAY, JULY 19, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
TASK FORCE ON NATURAL RESOURCES AND ENVIRONMENT,
Washington, DC.

The Task Force met, pursuant to call, at 10:12 a.m., in room 210, Cannon House Office Building, Hon. George Radanovich (chairman of the Task Force) presiding.

Members present: Representatives Radanovich, Herger, Gutknecht, and Price.

Mr. RADANOVICH. Good morning, and thank you all for being here.

Today's hearing of the Task Force on Natural Resources and the Environment will focus on fire safety within our national parks. Scheduled burns that rage out of control or catastrophic summer fires sparked by cigarettes that destroy thousands and thousands of acres of park land have been high profile in the news lately. Today though, we are going to discuss a different safety issue within the national parks, and that is buildings and structures that are used by the public within the national parks.

Over the years, the Federal Government has acquired some of the nation's most prime real estate, as well as many of its valuable historical and cultural assets and placed them under the purview of the National Park Service. In establishing a system that promotes access for all people to our national treasures, the Federal Government has assumed the responsibility of ensuring that they are enjoyed safely.

Unfortunately, in a report released several weeks ago, the General Accounting Office found that the Park Service is not doing all it can and should to protect the safety of park visitors and employees. Many of the parks that the GAO evaluated for the report lacked regular inspections, working fire suppression systems, and either their own fire brigades or arrangements with local fire companies, conditions that the Park Service acknowledges could be found throughout the 379 unit park system.

GAO has also cited a 1998 internal Park Service report which showed the Service's lack of attention to the issue. The internal report said, in part, there is widespread agreement that the structural fire program in the National Park Service lacks priority and

emphasis. There is little acknowledgement at the headquarters level of the structural fire program.

It is incumbent upon the Park Service to ensure two things: one, that fires be prevented to the extent possible; and, two, that in any case they do happen, there are proper measures in place to facilitate a quick and competent response to their occurrence. Apparently the Park Service is seeing to neither of these issues.

Joining us today are Jim Wells, who is the Director of Energy, Resources and Science Issues at the General Accounting Office, and Ms. Maureen Finnerty, the Associate Director of Operations and Education at the Park Service.

Again, thank you to both of you for being with us. Maureen, it is good to see you here again, and we look forward to hearing what you have to say about this matter.

I will say, too, that members have five legislative days to submit statements and other material for the record, and I would like to turn it over to Mr. Price before we hear any testimony to see if there is any desire to give an opening statement.

[The prepared statement of Mr. Radanovich follows:]

PREPARED STATEMENT OF HON. GEORGE RADANOVICH, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

Good morning and thank you all for being here. Today's hearing of the Task Force on Natural Resources and the Environment will focus on fire safety within our National Parks. We are not talking about scheduled burns that rage out of control, or catastrophic summer fires sparked by a cigarette butt that destroy thousands and thousands of acres of park land. We are instead going to discuss the safety of the structures in our National Parks.

Over the years the Federal Government has acquired some of the nation's most prime real estate, as well as many of its valuable historical and cultural assets, and placed them under the purview of the National Park Service. In establishing a system that promotes access for all people to our national treasures, the Federal Government has assumed the responsibility of ensuring that they are enjoyed safely. Unfortunately, in a report released several weeks ago, the General Accounting Office found the Park Service is not doing all it can and should to protect the safety of park visitors and employees. Many of the parks that GAO evaluated for their report lacked regular inspections, working fire suppression systems, and either their own fire brigades or arrangements with local fire companies—conditions that the Park Service acknowledges could be found throughout the 379 unit park system. GAO also cited a 1998 internal Park Service report which showed the Service's lack of attention to the issue. The internal report said in part "[T]here is widespread agreement that the structural fire program in the NPS lacks priority and emphasis * * * There is little acknowledgment at the * * * [headquarters] level of the structural fire program."

It is incumbent upon the Park Service to ensure two things: one, that fires be prevented to extent possible; and two, that in case they do happen, there are proper measures in place that facilitate a quick and competent response to their occurrence. Apparently, the Park Service is seeing to neither.

Joining us today are Jim Wells, Director of Energy, Resources, and Science Issues at GAO; and Maureen Finnerty, Associate Director of Operations and Education at the Park Service. Thank you both for taking the time to be with us. We look forward to hearing what you have to say about this matter.

Mr. PRICE. Thank you, Mr. Chairman.

I appreciate the chance to be here this morning, and I want to welcome the witnesses to the Task Force hearing. I look forward to your testimony.

I share with other members of this Task Force the view that our Park Service is a great national treasure and that we must strive to ensure that we are properly preserving and showcasing the natural wonders of this country.

In that regard, we should certainly work to ensure that Park Service facilities are safe for visitors, and that the risk of fire is reduced.

The subject matter for today's hearing bears some resemblance to last week's hearing and suggests a certain irony with respect to the mission of this Task Force. It is my understanding that the common theme in our hearings was to be the issue of waste, fraud, and abuse in the Federal Government, and that the goal was perhaps to save Federal dollars by rooting out such waste, fraud, and abuse. Of course, that is a worthy goal which I think is widely shared.

But one of the primary things we have established in our hearings is that effective management of government programs requires adequate funding and accurate funding requests. Effective management and oversight does not necessarily mean that we spend less or that we spend more. It is surely going to vary from one program to the next, and the main requirement is that we spend intelligently and strategically.

Effective management requires an accurate assessment of when money should be spent. More money spent early in the life of a program can save us from spending more later. I think we have learned that, and perhaps we will learn that again today.

In the case of fire safety, more money spent for prevention can save us from the cost of catastrophic fire later on.

Witnesses from the GAO, I realize, may introduce new information into today's hearing, but based on what we have now, I see no evidence in the GAO report that the Park Service is guilty of waste, fraud, or abuse. Instead, I see evidence that we and the Park Service must better evaluate the short term and long term funding needs of Park Service programs.

So I look forward to hearing what our witnesses have to say, and I hope we can have a good discussion of how Congress and the Park Service can work to improve fire safety preparedness at our national park facilities.

Thank you, Mr. Chairman.

Mr. RADANOVICH. Thank you, Mr. Price.

And we will begin with our first and only panel, first off with Mr. Wells of the GAO and then from Ms. Finnerty from the National Park Service.

Welcome, Mr. Wells, and please begin your statement.

STATEMENT OF JIM WELLS, DIRECTOR OF ENERGY, RESOURCES, AND SCIENCE ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, U.S. GENERAL ACCOUNTING OFFICE; MAUREEN FINNERTY, ASSOCIATE DIRECTOR FOR PARK OPERATIONS AND EDUCATION, NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR

Mr. WELLS. Thank you, Mr. Chairman and members of the committee.

Once again, we are pleased to be here today to discuss the Park Service structural fire safety efforts. Our comments today are based primarily on the report that was released in May 2000 of

this year addressing the Park Service's not meeting its structural fire safety responsibilities.

The report itself, the picture that it painted was not very pretty, 1,400 structural fires over the last decade. The Park Service is a national steward, as was referred to in the chairman's comments, for over 30,000 structures, including hotels, motels, cabins, visitor centers, historical buildings such as Independence Hall, and many of the former Presidents' homes.

Despite these stewardship responsibilities, our report raised serious concerns about the agency's commitment and its priority to ensure that the risks of the structural fires to visitors, employees, resources, and other assets were minimized as best as possible.

In summary, our report used words like "no fire plans," "low priority," "little commitment," "inadequate training," and "equipment." In short, structural fire safety efforts in national parks are not effective.

The structural fire activities at the six parks we visited lacked many of the basic elements needed for an effective fire safety effort. We're talking about such fundamental things as inadequate fire training for employees, inadequate or nonexistent fire inspections, and for many buildings inadequate or nonexistent fire detection and suppression systems.

These situations have led to many existing fire safety hazards. We found fire extinguishers that had not been checked for years, overnight accommodations that have not been inspected by qualified fire safety people, cabins without smoke detectors, and visitor centers that did not have fire suppression systems.

Furthermore, even when fire hazards are detected, they can go uncorrected and did go uncorrected for years. For example, during a visit to Ford's theater earlier this year, we noted that there were serious deficiencies concerning stairwell and stage doors that had not been corrected even though they were first identified in 1993.

If I could refer you to the Ford's Theater poster, this is an example, of a door that's a fire hazard. The bottom of the door had been cut off so that wires were run underneath the door. What safety fire hazard you have is the inability to close a door that will, in fact, slow down the progression of a fire to give visitors more time to get out of a building.

Here is another example of what we found in Ford's Theater. This is the roof of the building with installed sprinkler suppression systems. The requirements call for the sprinklers to work effectively. To do this they need a minimum of 18 inches of clearance for the sprinkler heads to disburse water. We are talking about finding storage boxes almost right on top of sprinkler heads.

Just 1 month before our report was released, we accompanied a DC Fire Department inspector to Ford's Theater to inspect the theater once again, and they found over 50 fire and safety concerns.

These types of deficiencies, Mr. Chairman, in our opinion, occur primarily because local park managers are not required to meet minimum structural fire safety standards and because structural fire activities, in our opinion, have been a low priority within the agency for many years.

Even though the Park Service issued policy to local park managers about how to address structural fire safety, park managers

are not required to follow the agency policy, nor are they required to even meet any minimum set of fire safety standards.

Instead, individual park managers are permitted to define the scope and emphasis given to the threat of structural fires locally. Our work shows that structural fire safety has been near the bottom of the park's priority list.

The Park Service has acknowledged problems in implementing its current structural fire safety program, and they have begun, to their credit, a number of positive initiatives to address them. I'll let Maureen of the Park Service discuss some of those initiatives.

But in closing, let me say that our report clearly got the attention of the Park Service. We made numerous recommendations, and the Park Service has indicated that they agree and are proceeding to take corrective actions.

Getting new initiatives started to correct the problem is a good thing. However, the bad thing is that fixing the problems takes time, and these initiatives have only recently begun. Until these initiatives are completed, the safety of park visitors, employees, buildings, and artifacts are still in jeopardy and are vulnerable to fire that could cause damage, destruction, severe injury, and even loss of life.

Until the agency takes action in these areas, the problems we identified will clearly persist.

I am going to close now. This concludes my statement. I will be glad to answer questions of the panel. [The prepared statement of Jim Wells follows:]

PREPARED STATEMENT OF JIM WELLS, DIRECTOR, ENERGY, RESOURCES, AND SCIENCE ISSUES, RESOURCES, COMMUNITY, AND ECONOMIC DEVELOPMENT DIVISION, U.S. GENERAL ACCOUNTING OFFICE

Mr. Chairman and members of the Task Force, we are pleased to be here today to discuss the Park Service's structural fire safety efforts.¹ Our comments today are based on our May 2000 report in which we evaluated:

1. Whether the parks were meeting their structural fire safety responsibilities;
2. If not, why not; and
3. What efforts were underway to address any identified problems.²

Our report raised serious concerns about the agency's commitment and priority to ensuring that the risks of structural fires harming visitors, employees, resources, and other assets were minimized.

In summary, we found:

Structural fire safety efforts in national parks are not effective. The structural fire activities at the six parks we visited lacked many of the basic elements needed for an effective fire safety effort. These gaps included such fundamental things as inadequate fire training for employees, inadequate or nonexistent fire inspections, and—for many buildings—inadequate or nonexistent fire detection or suppression systems. These situations led to many fire safety hazards. We found fire extinguishers that had not been checked for years, overnight accommodations that had not been inspected by qualified fire safety people, cabins without smoke detectors, and visitor centers that did not have fire-suppression systems. Furthermore, even when fire hazards are detected, they can go uncorrected for years.

These deficiencies occur principally because local park managers are not required to meet minimum structural fire safety standards and because structural fire activities have been a low priority within the agency for many years. Even though the Park Service issued policy to local park managers about how to address structural fire safety, park managers are not required to follow the agency policy, nor are they required to meet a minimum set of fire safety standards. Instead, individual park managers are permitted to define the scope and emphasis given to the threat of

¹ Structural fires include fires in buildings, dumpsters, and vehicles.

² *Park Service: Agency Is Not Meeting Its Structural Fire Safety Responsibilities* (GAO/RCED-00-154, May 22, 2000).

structural fire. Our work shows that structural fire safety is near the bottom of the parks' priority lists.

The Park Service has acknowledged problems in implementing its structural fire safety program and has begun a number of initiatives to address them. These include:

1. Developing new agency policies for addressing structural fire safety responsibilities;
2. Placing specific minimum fire safety requirements on park managers; and
3. Developing a process for structural fire inspections and performing assessments of structural fire risks at each unit of the national park system. However, these initiatives have only recently begun. Until these initiatives are completed, the safety of park visitors, employees, buildings, and artifacts are being jeopardized and are vulnerable to fire that could cause damage, destruction, severe injury, and even loss of life.

BACKGROUND

Today, the Park Service is the nation's steward for over 30,000 structures, many of them historic; many national icons, such as the Statute of Liberty; and over 80 million artifacts. These structures include hotels; motels; cabins; visitor centers; interpretative centers; and historical buildings, such as Independence Hall and many former presidents' homes. In terms of buildings alone, the Park Service is the Federal Government's third largest landlord—behind only the Department of Defense and the U.S. Postal Service.

The Park Service is responsible for ensuring that the buildings and artifacts entrusted to it are protected and that the people who visit or work in them are safe from undue hazards or risks. However, one risk—the threat of fire—has been a recurring issue. While much public and media attention has historically focused on spectacular wildland fires, like those that occurred in Yellowstone National Park in 1988, or around Los Alamos, New Mexico, earlier this year, building or structural fires within parks have not received much attention. Nonetheless, since 1990, more than 1,400 fires have occurred in national park buildings and other facilities. These fires have killed five people, caused serious injury to many others, and resulted in millions of dollars in property loss.

KEY ELEMENTS GENERALLY MISSING FROM PARKS' STRUCTURAL FIRE SAFETY ACTIVITIES

None of the six parks we visited had effectively addressed their structural fire safety responsibilities.³ In fact, most of the basic components necessary for addressing parks' structural fire risks were missing at each park. These gaps have resulted in significant and, in some parks, long-standing deficiencies that have seriously compromised fire safety. Although we visited only a few parks, according to the Park Service's Deputy Chief Ranger who is responsible for the agency's structural fire program, similar problems with park structural fire programs would be found whether we visited 6 or 60 parks.

According to structural fire safety experts from the National Fire Protection Association, U.S. Fire Administration, and fire experts from six other associations and government agencies we contacted, an effective structural fire safety effort has three essential components: fire prevention and protection, fire response, and funding. Both the fire prevention and protection component and the fire response component have a number of key elements associated with them. However, at each of the six parks' that we visited most of the key elements were missing.

FIRE PREVENTION AND PROTECTION

According to the structural fire experts we contacted, the key elements to effective fire prevention and protection are first, a fire plan for handling fire risks and incidents, second, fire inspections conducted by qualified staff, and third, an incident reporting system to analyze fire incidents and identify corrective actions to the fire safety program. However, the parks that we visited were lacking in most or all of these components.

None of the six parks that we sampled had adequate fire plans. At each park, the plans were either out of date or not coordinated with nearby community fire de-

³The six parks were Ford's Theatre National Historic Site in Washington, DC; Olympic National Park in Washington State; Prince William Forest Park and Shenandoah National Park in Virginia; and Sequoia-Kings Canyon National Park and Yosemite National Park in California.

partments or had some combination of these problems. For example, the fire plan at Shenandoah National Park was prepared in 1991 but has not been updated since that time to reflect the addition of new buildings or other changes in park operations. Updating the plan is particularly important at this park because, according to park managers, the park has an inadequate fire response capability and, therefore, must rely heavily on fire departments from local jurisdictions outside the park to respond to fires.

Similarly, regarding inspections, none of the parks we visited had their facilities regularly inspected for fire safety by qualified individuals. Examples of structural fire inspection deficiencies that we identified included the following:

- At Yosemite National Park, until 1999, none of the park's structures had a formal structural fire safety inspection, including the 123-room Ahwahnee Hotel—a national historic landmark. In fiscal year 1999, the park hired, for the first time, a trained structural fire inspector to begin fire inspections for its 800 structures.

- Sequoia-Kings Canyon National Park had not conducted any structural fire safety inspections, even though the park has about 250 buildings and other facilities, and has had 41 structural fires since 1988.

- During a visit to Ford's Theatre in Washington, DC, we noted that serious deficiencies concerning stairwell and stage doors had not been corrected even though they were first identified by a Park Service contractor in 1993. The contractor's report also raised concerns about the theater's sprinkler system and noted that, "If the sprinkler system fails or does not operate as designed, a fire in the stage area, particularly during a production, has the potential to kill several hundred people. * * * Fires in other theaters show that a severe fire can develop in a few minutes."

The remaining key element in fire prevention and protection is an incident reporting system to analyze fire trends and causes in order that corrective measures can be devised and initiated. Three of the six parks we visited did not participate in an agencywide fire incident reporting system. Failure to report this kind of information undermines the agency's ability to understand the scope of fire problems and vulnerabilities throughout the national park system as well as the agency's ability to set priorities for its safety needs.

FIRE RESPONSE

According to the structural fire safety experts that we contacted, two key elements are needed to effectively respond to fires, namely, first, fire detection and suppression systems and second, fire brigades and/or agreements with community fire departments. None of the parks in our sample had an adequate fire response capability.

Suppression systems, such as sprinklers, should be a key component in any structural fire safety effort, according to fire experts, and are especially important to the Park Service because of the remoteness of many facilities and the delayed fire response capabilities generally found in many parks. In addition, where fire detection and/or suppression systems are installed in buildings, experts agree that it is critical that these systems be maintained and tested periodically to ensure they are working properly. Each of the six parks we visited were either missing detection or suppression systems in key facilities, such as visitor centers and overnight lodging facilities, or were not being maintained and tested properly, if at all.

- At Prince William Forest Park, smoke detectors were not installed in many cabins used as overnight accommodations by visiting guests. Frequently, these guests are youth organizations.

- At Yosemite National Park, none of the sprinkler systems installed in park buildings have been tested since they were installed to make sure that they are operating properly. In addition, we found that park officials did not replace defective sprinklers involved in a well-publicized nationwide recall. A park manager told us that the park did not meet a 1999 deadline set by the U.S. Consumer Product Safety Commission and the manufacturer to qualify for the reimbursement of labor costs associated with replacing, parkwide, about 1,000 recalled sprinkler heads. These sprinkler heads are used in fire suppression systems in residences where park employees live. The defective sprinkler heads, identical to those installed at Yosemite, failed to function in at least 20 fires. Nonetheless, the park has not replaced these sprinkler heads and is still relying on them as a key part of its fire safety effort.

To complement fire detection and suppression systems, adequate fire response requires fire response crews that are properly trained and equipped. Within the Park Service, adequate fire response is frequently accomplished by the use of fire brigades. Fire brigades are similar to community fire departments and include fire-fighters, fire equipment, and flame-retardant clothing located in or near the park. The Park Service has come to rely on the use of fire brigades in parks that are some

distance from community fire departments. In parks that are not remote, the park managers frequently have agreements with nearby community or other fire districts for initial response or additional backup for responding to fires. Each of the six parks we visited either did not have a qualified or properly equipped fire brigade or their response capability was not fully coordinated with local fire departments. For example:

- At Yosemite, in 1999, 42 of 45 of the firefighters stationed in Yosemite Valley—the central and busiest area of the park—had not taken the agency’s annual 16 hours of required minimum training or had no record of any training.
- Shenandoah National Park does not have qualified personnel to respond to structural fires. The park has a collateral-duty fire brigade that has not been trained to enter a burning structure and lacks the necessary equipment to respond to vehicle fires. The park’s policy is to rely on local fire departments for entering burning structures. However, the departments’ response times range from 10 to over 45 minutes, in contrast to a much shorter response time—4 to 6 minutes—that is generally needed to respond to burning buildings.
- Olympic National Park has fire response agreements with only two of nine fire departments in the surrounding area. As a result, many areas of the park have no formal arrangements with local fire departments for a structural fire response.

FUNDING

Fire experts generally agree that sufficient, consistent funding is necessary to support an effective structural fire safety effort. However, there is no specific appropriation dedicated to structural fire activities in the Park Service. Individual park managers are permitted to determine the funding levels, if any, for structural fire activities. Park managers at the six parks we visited acknowledged that structural fire safety activities received insufficient funding.

Our findings on the gaps and problems in the parks’ structural fire safety efforts appear to be consistent with the Park Service’s own analyses. A 1998 Park Service report stated, “sooner or later the NPS stands to be seriously embarrassed (at a minimum) by the catastrophic loss, either of an irreplaceable historic structure or collection, or of human life, from a structural fire.” In addition, in December 1997, the Director of the Park Service expressed serious concerns when an internal agency report identified about 1,900 fire safety deficiencies associated with the agency’s museum collections—such as the storing of flammable liquids and materials near museum storage spaces. Yet, as of January 2000—over 2 years later—almost 75 percent of these deficiencies have not been corrected. According to the director, “These deficiencies can be corrected at a modest cost. To do otherwise would be negligence.”

KEY REASONS FOR THE AGENCY’S INEFFECTIVE STRUCTURAL FIRE EFFORT

The parks we visited lacked an effective structural fire safety effort because the agency first, has not fully specified the minimum structural fire safety standards individual parks must meet and second, has placed little emphasis on structural fire safety. As a result, managers at these parks gave this aspect of operations a low priority. This low priority is inconsistent with Park Service assertions that health and safety issues are a top agency priority.

Currently, the Park Service provides park managers with a generalized policy on what their fire safety efforts should include. However, the policy does not require parks to meet minimum fire safety standards. It places primary responsibility for daily management and compliance for structural fire safety with individual park managers. The extent to which such activities are implemented at each park, however, depends on how individual park managers define the scope, priority, and emphasis given to structural fire safety efforts.

While the policy places primary responsibility on park managers to carry out structural fire safety activities, little support or emphasis for the effort appears to exist at the headquarters or regional levels. Furthermore, the Park Service has no process for ensuring that plans for renovating existing facilities or constructing new structures is routinely reviewed for fire safety. The lack of agency attention to structural fire seems inconsistent with the Department of the Interior’s and the Park Service’s statements that addressing unmet health and safety concerns is a top priority. In April 1999, the Department of the Interior provided its component agencies—including the Park Service—with guidance that identified health and safety issues as a top funding priority. This guidance explicitly identifies violations of national fire protection standards as requiring immediate attention. Although the Park Service’s fiscal year 2001 annual performance plan stresses that employee and visitor health and safety are top agency priorities, in the case of structural fire safety, the Park Service’s practices and activities have not been consistent with this policy.

INITIATIVES TO ADDRESS PROBLEMS, BUT PRACTICAL RESULTS DEPEND ON EFFECTIVE
IMPLEMENTATION

The Park Service is aware that there are major weaknesses in its structural fire safety effort and has begun a number of initiatives to address them. It is unclear, however, whether the Park Service will follow through on these initiatives to ensure that an effective structural fire safety program is developed and implemented.

Park Service officials are aware that structural fire safety is a low priority at many parks, and the agency has begun a number of initiatives to revitalize and improve its effort. In 1998, the agency appointed a structural fire safety steering committee, which drafted a fire management policy and mission statement. These documents defined the purpose, scope, and general policy toward structural fire in the agency. Also in 1999, the Park Service hired a new structural fire chief and directed the individual to develop an agencywide structural fire safety program. This program is now being developed. Once implemented, these initiatives are likely to increase the level of structural fire prevention and response over that currently in place. Over time, such initiatives would shift the agency's focus from one that currently emphasizes fire response to one that emphasizes fire prevention—an approach that, according to program administrators, is much more cost-effective.

While the initiatives under way are certainly steps in the right direction, their success depends on their being effectively implemented. However, it appears that the planned levels of resources for these structural fire safety initiatives will not be sufficient to get several key initiatives completed, including one of the agency's most critical efforts—completing an overall assessment of the structural fire risks facing facilities and structures throughout the Park Service.

In closing, as a result of the findings in our report, we recommended that the Park Service complete and implement the various structural fire safety initiatives that have recently begun in the agency. This effort should include, among other things, establishing minimum structural fire safety requirements, developing and implementing a plan for correcting the fire safety needs and deficiencies, and ensuring that new and rehabilitation projects comply with generally accepted fire codes. In addition, to ensure that local park managers elevate the priority given to addressing structural fire safety needs and deficiencies, we also recommended that park managers be held accountable for meeting the agency's health and safety responsibilities by requiring them to develop and implement effective structural fire safety programs.

In commenting on our May 2000 report, the Park Service agreed with our findings, conclusions, and recommendations. The agency also indicated that it was continuing to work on its ongoing initiatives and considering plans to implement our recommendations. Until the agency takes action in this area, the problems that we identified will likely persist.

This concludes my statement. I would be happy to answer questions from you or other members of the committee.

Mr. RADANOVICH. Thank you for your testimony.

And, again, we will hear from Ms. Finnerty first, and then we will go to questions.

So, again, welcome, Ms. Finnerty, and please begin.

STATEMENT OF MAUREEN FINNERTY

Ms. FINNERTY. Thank you, Mr. Chairman.

I will summarize my remarks and ask that my full statement be incorporated into the record.

The National Park Service agrees with GAO's report on structural fire. We believe it accurately reflects the status of the structural fire program, and it will help us to develop a comprehensive strategy for dealing with it.

The National Park Service has given serious attention to this program for the last 18 months, well before the start of the GAO audit, which started November of 1999. In the last 18 months we have established an interdisciplinary steering committee to help us look at the program and design the program as it needs to be.

We have hired a full-time structural fire program manager. We have drafted a new policy, Director's Order 58, which mandates a

number of actions that need to be taken in the structural fire arena.

We have developed a structural fire building inspection and assessment process, and we have designed an incident reporting system to report on structural fire incidents.

GAO, as they indicated, did visit six parks, and they did look at seven key elements of a structural fire program. I will briefly highlight each of the seven elements and give a listing of some of the events that we have underway as a result of the findings.

The first thing the report called for is a dedicated funding source. This fiscal year, Fiscal Year 2000, we have already reprogrammed \$1 million out of our existing budget to start doing building inspections and assessments. That will be done by contract, and the work should start within a couple of weeks, and hopefully we will be finished by the end of September.

In Fiscal 2001, we are looking at reprogramming of funds to try to beef up some of the staffing needs, primarily in the regional offices that need to provide oversight to parks on structural fire.

And in the Fiscal Year 2002 budget process, we do have a package that is working its way through the priority system of funding needs for the year 2002, again, to provide oversight and staffing for the program, training, and those kinds of things.

The second item listed in the GAO report talks about lack of structural fire plans. Our new revised policy, Director's Order 58, does mandate that each park will have a structural fire plan, and those efforts will be underway. It specifically spells out the requirements of what should be in those plans, and parks will be required to do them.

The third element in the GAO report is the building inspection program, and again, as I indicated, we have reprogrammed \$1 million this year to do it. We do have standardized formats and methodologies that we are looking at. So we will be looking at the same kinds of things as we inspect these buildings.

Twenty-five parks will be visited over the next couple of months, and we will look at 180 building, giving primary emphasis to those where there are overnight accommodations, where there are multiple dwellings, historic structures, and places of assembly will receive the first priority for the inspections.

The fourth recommendation was that we develop an incident reporting system, and we do have a standardized structural fire report designed. We still need to put a system into place that will enable us to roll this information up on a Service-wide basis. So we have the start of it in that parks will be able to input information into the system on various incidents in structural fire, and we have a funding request, again, that is working its way through the process for the 2002 budget that will enable us to set up a Service-wide reporting system that will deal not only with structural fire incidents, but other incidents that we need to report on.

The fifth recommendation was the installation and maintenance of detection, prevention, and suppression systems, and again, our new Director's order adopts National Fire Protection Association codes and standards. That was one of the findings of GAO, that we were not applying any kind of consistent standards from park to park.

The inspection and the building analysis that will start very shortly will determine additional needs that we have on a Service-wide basis, and we do have at the present time 46 projects that are in line for approval and funding to remedy a lot of the detection problems, and those projects total \$6.6 million, and they cover the years 2001 to 2005. So they are already in the program; they are in the queue. Funding will be available. So we should be able to remedy some of these deficiencies.

The sixth recommendation called for trained and qualified personnel, and, again, our 2002 budget initiative has a request in there for a sustained annual funding source so that we can get our people adequately trained to oversee this program.

We will try to reprogram some funds in 2001 both to deal with the training and the hiring of people to provide oversight, and we are designing course work for superintendents, structural fire for park managers to get them, again, oriented and grounded in some of the requirements of managing a structural fire program.

We are looking at standardizing fire brigade training. Those parks where we do need to have fire brigades, we obviously first need to determine which parks need that, and then obviously we have to get those people trained in that particular event.

And the new Director's order and the resource manual that is being prepared will very clearly set out minimum requirements for both suppression and prevention training, and again, we have not had that in the past.

The final recommendation dealt with fire response capability. We do have 43 parks that have fire brigades. This is handled on a collateral duty basis. Part of the assessment that we are undergoing will determine how many of those parks really need fire brigades. We like to use these as a last resort. We prefer that the parks enter into agreements with surrounding communities and have fire suppression dealt with in that manner.

But we recognize that there are parks that because of the nature of the facilities and the isolation factor, will have to have brigades. So our first determination is which parks are those, and then secondly getting those folks adequately trained.

This concludes my formal remarks, and I certain will be happy to answer any questions that you may have. [The prepared statement of Maureen Finnerty follows:]

PREPARED STATEMENT OF MAUREEN FINNERTY, ASSOCIATE DIRECTOR FOR PARK OPERATIONS AND EDUCATION, NATIONAL PARK SERVICE, U.S. DEPARTMENT OF THE INTERIOR

Thank you for the opportunity to discuss with you the recently issued report by the General Accounting Office (GAO) on the National Park Service structural fire safety program. This report, entitled "Park Service: Agency Is Not Meeting Its Structural Fire Safety Responsibilities" (GAO/RCED-00-154), analyzes the National Park Service (NPS) efforts to prevent and respond to fires in the many structures in the national park system.

As Don Barry, Assistant Secretary for Fish and Wildlife and Parks, indicated in a letter to GAO dated May 17, 2000, overall, we found that the report accurately reflects the general status of issues in the National Park Service structural fire program. This report offers us an opportunity to begin the development of a comprehensive structural fire program. The implementation of these recommendations will benefit park visitors and the program in general.

BACKGROUND

The National Park Service has more than 20,000 buildings located in parks throughout the United States and we have the responsibility of protecting these buildings, and the people using them, from fire. Fire safety and the protection of people and property is essential to the mission of the National Park Service and is a significant component of our overall safety program.

We have been addressing structural fire issues for many years, but not until recently have we begun to develop a comprehensive structural fire program. Until 1987 most structural fire issues were addressed by individual parks. In 1987 the first National Park Service guidelines were developed to provide direction in addressing the complex issue of structural fire.

Our goal is to develop a comprehensive structural fire program based on preventing fires through engineering, education, and developing and maintaining fire departments and brigades in areas where we are unable to address the structural fire requirements through other means.

Prior to the GAO audit we had taken steps to address structural fire issues. These steps included:

- development of an interdisciplinary steering committee to provide direction for program development;
- hiring a structural fire program manager to design and develop a comprehensive structural fire program;
- drafting of a new agency policy for addressing structural fire;
- development of a structural fire building inspection and assessment process to identify needs and deficiencies; and
- design of a structural fire incident information reporting system.

In the spring of 1999 Congress requested, and the National Park Service collected, compiled and provided, information on past and current fire inspections. In November 1999 the GAO audit of National Park Service structural safety was initiated. The report concluded that the National Park Service is not meeting its structural fire safety responsibilities.

STEPS WE ARE TAKING

The audit consisted of using “seven key elements of a structural fire program” to evaluate the program in six park units. The seven key elements are requirements of a comprehensive structural fire program and were reviewed and agreed to by the National Fire Protection Association, U.S. Fire Administration, Department of Energy and General Services Administration. The GAO audit involved site visits to six National Park Service units. In the review of the parks none met the seven program requirements. I will go over each element and the steps that we are taking to implement the element on a service-wide basis.

1. *Consistent funding sufficient to support an effective structural fire safety effort.* Consistent funding is necessary to implement a comprehensive structural fire program. We have begun to identify the funding needs to address current and projected deficiencies within existing or likely funding levels. Estimates to address all parks and buildings must be based on information collected during building inspections and park analysis. We anticipate that the estimates for this more detailed tier of work will be proposed to support our fiscal year 2002 budget proposal.

2. *A structural fire plan that includes overview and key elements.* Completion of the NPS Director's Order 58, Structural Fire, and the corresponding reference manual will establish the minimum structural fire safety requirements for the National Park Service. The Director's Order has been drafted and circulated for agency and public review. The comment period ended on June 26, 2000 and comments are being evaluated and incorporated into the draft. When the comments and recommendations have been incorporated, the Order will be sent forward for the Director's review and approval. A portion of the Director's Order requires each park to develop structural fire plans.

3. *A defined building inspection program that identifies the scope and methodology including standards, frequency, and personnel.* We have allocated funding to implement our fire inspection and analysis system. Inspections and analysis will include high-risk buildings including, but not limited to, overnight accommodations, single and multiple person dwellings, places of assembly, and historic structures. This system, based on National Fire Protection Association standards, will identify safety needs and deficiencies and is being adopted as the standard for the National Park Service. Inspection and analysis of park buildings and infrastructure will be an ongoing process and three National Park Service employees have been assigned to the Structural Fire Program Manager to assist in accomplishing this task. It is our goal

to develop a structural fire program that includes sufficiently trained and qualified personnel to conduct these fire inspections.

4. *An incident reporting system including criteria, reporting methodology and analysis.* Incident reporting provides the foundation of information necessary to identify deficiencies, and take corrective action. Therefore, collecting specific and reliable information is crucial. A standardized NPS structural fire incident report has been designed based on nationally accepted structural fire reporting standards. Service-wide implementation of the report is waiting for the development of a mechanism for individual parks to input the information to a centralized location.

5. *The installation and maintenance of fire prevention, detection, and suppression systems.* The Director's Order adopts National Fire Protection Association codes and standards. These codes and standards are nationally recognized as minimum requirements for addressing structural fire safety. They include standards for installation and maintenance of fire alarms and detection systems.

The implementation of the inspection and analysis system is the first step in identifying fire safety deficiencies and what is required to correct them. A contract is currently being developed to conduct these inspections using qualified structural fire safety personnel. The information generated from the inspections and analysis will then be used to correct deficiencies that can be addressed immediately and develop plans for correcting more complex deficiencies.

Currently, we have 46 structural fire safety related projects that have been identified in PMIS and scheduled for implementation over the next 5 years. Included in these projects are the installation of fire suppression and fire alarm systems and upgrading fire hydrants. The cost for these projects is more than \$6.6 million.

6. *Trained and qualified personnel.* Structural Fire is a broad and complex issue. To develop an effective program will require establishing a foundation of personnel as well as adequate funding. The program involves a wide variety of elements and issues including building design, building construction, installing and maintaining detection and suppression systems in buildings, regular inspections of buildings and systems, training, establishing and maintaining fire agreements, and in some cases developing, maintaining and operating a fire-fighting force.

To help us implement an effective program we will reallocate existing resources to support structural fire related positions. The position functions include program management, fire prevention, fire training, and program support. In addition, we are establishing structural fire management officer positions in each of our seven regional offices. We intend to accelerate our efforts by reallocating or reprogramming funds to fill the positions in fiscal year 2001. These positions will be responsible for implementing the structural fire management program and providing parks with structural fire expertise.

We will also reallocate funds for fire prevention and fire protection training. The U.S. Fire Administration, National Fire Academy, will be the main provider for fire prevention classes. Fire suppression training will be provided by contractors and outside agencies as we develop the capabilities within the agency.

We are working with the International Fire Service Training Association (IFSTA) to develop NPS structural fire brigade standardized training materials, lesson plans, and instructor guides. A structural fire for superintendents class is being developed. This class will provide superintendents with the background, program requirements and tools to effectively address structural fire at the park level.

Director's Order 58 and the corresponding reference manual identify minimum training standards for both fire prevention and fire suppression. We have collected employee structural fire training records and entered them into a database so we can use the information to identify employee training levels.

7. *Fire response capability including the necessary equipment and trained and qualified personnel.* Fire departments and fire brigades are complex and costly to operate. If a park requires a fire brigade or fire department because of location or lack of available local resources, it must meet national fire standards. Brigades and fire departments will be evaluated through the inspection/analysis system. This will identify personnel, equipment, training and funding requirements.

Currently, in approximately 13 percent of NPS areas, the structural fire response is accomplished by NPS fire brigades. These fire brigades are similar to volunteer fire departments in that they rely on persons working and or living in the area to work as firefighters. These people are not full-time firefighters but are trained as firefighters and respond when needed. We rely on fire brigades in parks that require the ability to respond to structural fire incidents and are located in areas that do not have structural fire fighting resources available from adjacent communities. In parks that are located close to communities that can provide structural fire suppression services, we encourage development of formal agreements for fire suppression

services. We do not want to increase the number of NPS fire brigades unless our park analysis shows that is the only viable option.

CONCLUSION

We have responded to the individual park deficiencies that were identified during the General Accounting Office audit and we are undertaking the development of a comprehensive structural fire program based on national fire standards. The standards are clear and they will be used to build a strong foundation for the program.

Only by implementing an agencywide building inspection and analysis program will we be able to identify the scope of our structural fire deficiencies. With this information we will be able to estimate the financial requirements necessary to meet our fire safety responsibilities.

This concludes my statement. I will be happy to respond to any questions that you may have.

Mr. RADANOVICH. Thank you very much. I will go ahead and start the questioning, and this will not just be one round of questions. I think we will be a little bit flexible, and if something comes up where members was to re-question, that should not be a problem.

Mr. Wells, when did issues come up? The date 1987 kind of rings a bell as I was going through the literature and the material on this. When questions started to arise, you know, about the adequate inspections or lack of them in the Park Service, this has been an ongoing problem. This has been something that just hasn't come to the surface recently and then has begun to be addressed by the Park Service. Do you agree to that?

And can you illuminate a little bit on the history of this?

Mr. WELLS. Yes, I can, and we would agree with that statement. When our auditors began the investigation, one of the first things that we do is we look at what has the agency itself done over the years in terms of identifying some of the deficiencies and the problems.

It is true that there was an internal assessment done in 1987 that you referred to that talked to somewhat of an immediate need for hiring full-time positions, people that had fire structure safety management type skills that needed to be placed throughout the Park Service to assist them in providing safety and health issues, particularly involving new projects and new construction.

Thirteen years later when we began the work, that recommendation had not been acted upon, and we understand that one of the items in their initiatives, is to put into the '02-'01 budget money to get those positions finally filled that were identified back in 1987.

But there were other instances. For instance, in 1997 the Park Service did an internal assessment involving their museum collection type items. At that time they identified over 1,900 safety and health deficiencies that they were concerned about, many of which were identified as being types of things that could be accomplished at minimal cost, and here it was 3 years later when we began our work. We found that over 75 percent of those deficiencies had not been corrected.

So there had been a period of time where even with their internal looks, the corrective action had not been fully implemented, yes, sir.

Mr. RADANOVICH. Thank you.

Ms. Finnerty, can you tell me? You know, the Park Service has been in existence what, 150 years now?

Ms. FINNERTY. Not quite that long.

Mr. RADANOVICH. Not quite that long?

Ms. FINNERTY. Eighty-four.

Mr. RADANOVICH. You know, in cities and in public places I understand the national parks are visited by about 240 million people a year. Many of them do spend time in public buildings and even spend the night in lodging facilities. Any city or small town or even an unincorporated town that you go into all across the United States has a fire marshal or somebody who is in charge of maintaining the local building fire and safety codes.

What has been the problem with the National Park Service over all this time for not directing that responsibility anywhere?

Ms. FINNERTY. Well, I think the GAO report is accurate. It, for whatever reasons, has not been a priority. It has not been staffed. At the present time we still only have one full-time person at the national level working on structural fire, and there are a couple of other experts in the organization, but that is it, and it has, for whatever reason, not come up high on the priority list and obviously we need to change that, and we intend to change that because it does affect property and lives and those kinds of things.

Some things are now coming to the top as things that we are obviously going to have to pay much more attention to and put more resources into, and this is certainly one of those. Speaking for the Director, I can say that he is very committed to doing this and has been very clear to the Regional Directors and others that we have got to turn this thing around, and we have got to do it as quickly as we can, not only shifting existing resources where we can this year and perhaps next year, but then putting together finally a good strategy.

We have to have some expertise out there in the regions to provide some oversight to parks, and in some parks, we also probably need to have some expertise in structural fire. It has got to come up on the priority list, and we have got to get these positions funded.

Mr. RADANOVICH. Correct. I think I am aware of at least in annual budgets the Park Service asks for anywhere between one to \$300 million for land purchases, and your annual budget is over \$1 billion.

Has there been, to your knowledge, any funding request made specifically for fire safety structure and safety code enforcement and the establishment of fire marshals?

Ms. FINNERTY. As I mentioned in my comments, we do have a package that is working its way through for 2002.

Mr. RADANOVICH. Right.

Ms. FINNERTY. I am not aware that we have had anything. I cannot speak more than the last 2 or 3 years, but it has not shown up, but clearly now it is, and it has gotten everyone's attention, and I think you will see it very high on the priority listing to get some of these positions funded.

Mr. RADANOVICH. I am most familiar with Yosemite National Park because I was born and raised right next to it, and the small town of Mariposa in some cases, well, of course, by law has a fire

marshal. Are there within the National Park Service now any agreements to utilize local fire safety authorities to actually cover the park as well, as possibly they do in building codes enforcement and such?

Ms. FINNERTY. Yes. This is part of the information database that we are just now starting to collect, finding out exactly what is going on out there in the field, and the information I got this morning was that there are 225 agreements that exist at the present time throughout the system that we are aware of. Some parks may have two or three agreements with different jurisdictions, but I think there is not a lot of consistency in them. Various standards are applied or not applied, as the case may be. Some of them are more closely adhered to and work better than others.

So we are sort of finding that we are all over the place on that, and one of our objectives is to get a handle on those, to do some good model agreements, and to be sure that where we do enter into agreements with locals to provide our fire suppression and to assist us with the program, that we are covering all of the things that we need to cover and that they are familiar with the structures and all that.

So we are very much aware that we have got to improve that whole arena, too.

Mr. RADANOVICH. All right. Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

I want to thank our witnesses and first turn to Mr. Wells and maybe concentrate on the GAO report in this first round of questioning.

We had a hearing, of course, earlier on the Park Service, and at that time we had an interesting discussion, I thought, somewhat inconclusive, about the benefits of centralized oversight and management within the Park Service versus the benefits of a more decentralized and flexible management structure. That, of course, comes up in these discussions, in terms of exactly what we are looking for here.

You know, we are dealing with a very diverse organization, a very diverse network of facilities. We are talking about Ford's Theater here in the same breath with Yosemite, and these obviously are very different kinds of facilities. They have very different kinds of fire risks. They have different resources available.

Are there limitations you would put or qualifications you would put on the centralized management recommendation that you basically urge in this report?

Mr. WELLS. Yes, Congressman Price. Let me respond by stating that clearly one shoe does not fit all, and no one is suggesting that command and control from the top is the way to go. It is not always the most effective, although it is sometimes the most direct and gets the most immediate attention.

The Park Service, as you clearly articulated, is a very decentralized organization, and rightfully so. Having local park managers sitting on the ground, they know best what is actually in their particular park. Clearly there are advantages to that.

GAO is not making the recommendation that centralized command and control is the way to go. I think what we tried to capture in our recommendations was a little bit of a common sense scenario

that is somewhere in between. Our recommendation was that clearly minimum requirements where there are none today would assist in providing some specific, identifiable, measurable guidance to the local park managers that says at a minimum you will ensure that your facilities that you have within your boundaries, someone will be looking at them, for instance, as part of an annual inspection.

That may be a minimum requirement imposed centrally, but clearly, if a local park manager has millions of visitors and has buildings that are in such positions that they may require more frequent inspections or more frequent follow-up to find out if deficiencies are corrected, again, it is that flexibility is what makes sense from a common sense perspective.

We are very encouraged that the Park Service has, in fact, issued their Directive 58 for the first time putting such minimum requirements, which does assist the local park superintendents getting the handle on what they are responsible for and measuring whether they are, in fact, doing it or not doing it. So we think we are encouraged. That is a positive step.

Mr. PRICE. Good. Let me turn to the question of funding, which of course centrally involves or concerns this committee.

Do you have any recommendation as to the appropriate level of funding for fire prevention at the parks, the kind of improvements, the kinds of measures you consider in your report? And do you have any estimation as to whether these levels of spending are feasible without reducing other essential park operations?

Are we looking at some kind of tradeoff here or are we not?

Mr. WELLS. Clearly, we do not have the answer to how much funding is going to be needed. Until the Park Service has the opportunity to go out and perform inspections at not just the 25 parks that they are beginning to do the work, but they have 379 parks that they need to make an assessment. Until you have an accurate look at what needs to be fixed, it is hard to predict what the money amount will be.

Regarding tradeoffs, the answer clearly has to be, yes, there will be tradeoffs. I would like to point out that it is clearly easy to jump to the conclusion that the solution is more money, but much of what we saw here clearly goes to a management issue; that these parks, as was indicated, do have \$1.5 billion worth of funding. They do have other sources of funding besides operating money.

They have recreation fee money that is now coming into the parks that they are able to retain, in the area of \$150 million there. They have regional and Service-wide initiatives that are available for prioritization and getting projects and getting some of these health and safety things done.

My point is that while everyone needs more money, there is a lot of money in these parks. Much of what we are talking about is some local management decisions about prioritization. What is more important? Do we prioritize trying to fix the safety hazard or do we construct something new or do we buy something new?

Those are not money issues. Those are management issues in terms of dealing with the dollars that you currently have, and I think that would be our recommendation and our first direction to encourage the Park Service to make some of those tradeoff calls.

Mr. PRICE. I do want to come back to some of those management issues in the second round.

Mr. WELLS. OK.

Mr. PRICE. But to close out this round, let me just give Ms. Finnerty an opportunity to comment on the cost issues and the competing funding priorities.

Do you have anything to add on that?

Ms. FINNERTY. Well, I guess I would essentially agree with Mr. Wells' comments. I think it is a question of priorities. I think there are some funding sources available, and he has indicated what some of those are.

We are starting to direct parks to use some of those pots of money, whether it is 5 year repair/rehabilitation funds or the recreation fee funds and start addressing some of these needs.

I also would agree with the statement that until we get a good baseline of information, I do not think we ought to be throwing a lot of money at the program until we find out exactly what is the scope of the problem. What is the issue? What are the needs? And that is why these building assessments and building this baseline database is so very important to us. Because once we have that, then we can start earmarking the funds that are available. And if, in addition to that, we need more funds, then we can certainly go after those.

We really think, and I do not know what the total amount is that we really need, and until we do these assessments we will not have that figure, but you cannot provide oversight for a program of this importance with one person working nationally, and that is why we need to fill these regional positions, at least one position in each region that can provide specific oversight for structural fire for the parks in that region.

And maybe we also need some positions in some of these bigger parks if you are truly going to get it all the way down to the front line because one person working nationally just cannot possibly do that.

So that is where the oversight needs to happen. It needs to happen at the regional level if we can get some of these positions filled.

Mr. PRICE. Well, back to the funding issue specifically though, you have not included specific funding requests, specific line items for fire prevention; is that right?

Ms. FINNERTY. We have a package that we put together for the 2002 budget that deals with training. It deals with professionalization. It deals with oversight in the regions. It deals with the inspections, the assessments, all those kinds of things, and that is working its way through the budget process that we follow in the department.

But it is very definitely there, and it is high priority at least for the Park Service. Now, a lot of people, you know, will look at those kinds of priorities, but it is very high for us.

Mr. PRICE. But you are telling us that there are no major competing priorities that should prevent the Park Service from dealing with this?

Ms. FINNERTY. I would like to say there are no competing priorities, but that is not the way the process works.

Mr. PRICE. Well, we know that is not the way the world works, but I am talking about specific tradeoffs, specific budget—

Ms. FINNERTY. I can assure you that this issue is extremely important to the Director. We discuss it frequently when we are talking about budget and putting the budget together for the next cycle, and this has always remained at the top of the list.

So I know, at least from his perspective, that he will make that case hopefully to the department and OMB, and that it will be retained in a high position.

Mr. PRICE. Thank you.

Thank you, Mr. Chairman.

Mr. RADANOVICH. All right. Thank you, Mr. Price.

Mr. Herger from California.

Mr. HERGER. Thank you very much, Mr. Chairman.

And, again, I thank you for having this hearing on this very important issue.

I thank both of our witnesses for being here. I represent an area in the West and northeastern California that has all of our parts of 11 national forests and a number of parks, national parks, within that, and certainly this is very important to us.

It is also an area, unlike the East and the Midwest, where the Federal Government owns a tremendous amount of our land base. I have counties, my ten counties, that have as much as 80 percent owned by the Federal Government. So there is a great deal of concern.

Over the years, I have been here in my seventh term, and our families had the incredibly great pleasure of being able to visit a number of our historic treasures here in this Washington area, including the Ford Theater, over the years, and I was very concerned to read here of the problems that the Ford Theater has had in the area of being basically unsafe because of fire problems and the fact that it has gone uncorrected for 7 years.

I think about how I hear from my constituents, my small business people on a continual basis how they feel they are harassed by the Federal Government on this, on them keeping up rules, and I guess I would have to ask you, Ms. Finnerty. How long do you think, if the Ford Theater were a private enterprise, how long do you think it would have gone without being closed down by local fire marshals if the same type of conditions had existed there?

Ms. FINNERTY. Well, certainly I do not know how long it would have gone, but certainly I think the deficiencies there and the fact that they have not been corrected is not defensible.

Mr. HERGER. Seven years.

Ms. FINNERTY. It is not defensible.

Mr. HERGER. What are you guessing? Another 6, 7 years or—

Ms. FINNERTY. Well, we can give you—

Mr. HERGER [continuing]. What do we have when you think they will be?

Ms. FINNERTY. I am aware of the fact that they are being addressed. Some of them have already been corrected. Others are planned to be corrected. Some others will take additional funding, but—

Mr. HERGER. Is there a timetable here? I mean, we are 7 years now. Is there any whenever?

Ms. FINNERTY. Well, I think those things that can be fixed quickly within existing funds are being taken care of. Those that may need more money we will have to reprogram or find it and get them done, but they are being addressed.

Mr. HERGER. Mannana some time maybe 10 years, I mean?

Ms. FINNERTY. I hope sooner than 10 years, Congressman.

Mr. HERGER. Now, you mentioned money a couple of times. Is money a problem?

Ms. FINNERTY. I think money—

Mr. HERGER. You haven't requested any money. I was just wondering.

Ms. FINNERTY. No, I think it is an issue as far as program oversight is concerned. I think it is an issue as far as program oversight.

Mr. HERGER. I see here that you have requested \$300 million to acquire more private land to take off the tax rolls, and many of our areas in the West that are already—but you have not requested any in 7 years of repairing some of these. Is this what we can expect when you use this \$300 million to purchase more property, that we will have buildings there that will also be unsafe for 7 years and no deadline for when they are going to be repaired?

Ms. FINNERTY. Well, we certainly hope not, Congressman, and that is why we are trying to use the recommendations, get a handle on where we are, assess where we are, reprogram funds to get stuff done this year and next, and then we do have a funding package that we hope will be funded in 2002 that will get this program back on line.

Mr. HERGER. But no great priority in setting some time period that 6 months, 3 months, a year, 7 years, 10 years it will be done?

Ms. FINNERTY. The Director—

Mr. HERGER. That has not been done yet?

Ms. FINNERTY. The Director—

Mr. HERGER. You have not seen fit to do that yet?

Ms. FINNERTY. The Director has made it very clear to the Regional Directors that this is serious, that they have got to correct these deficiencies.

Mr. HERGER. Right.

Ms. FINNERTY. They have got to do the inspections. We have got new guidance, mandated direction out there, and he has made it very clear to them. So—

Mr. HERGER. But did he make it clear 7 years ago or when exactly has he made it clear?

Ms. FINNERTY. Well, he made it clear this year.

Mr. HERGER. This year. Well, very good.

Mr. WELLS, do you have any comments on this?

I mean this seems unbelievable. Again, what would you say if this were the private sector? The Ford Theater owned by one of my constituents, how long would that have gone before it would have been shut down?

Mr. WELLS. Five minutes.

Mr. HERGER. Five minutes, not 7 years?

Mr. WELLS. Mr. Congressman, in April of this year we accompanied a DC Fire Marshal team into Ford's Theater. We were led to believe as we conducted that tour that they would have, had

that not been a Federal facility, they would have closed that building immediately.

Mr. HERGER. In other words, evidently the Clinton-Gore administration, what is good for the private sector is not good for our own Park Service buildings, and it is a priority, but not a priority high enough to be 5 minutes or certainly not 7 years.

Mr. WELLS. Clearly, within days of the release of the GAO report, the Director's press release, as well as the directive and memorandum announcing his Directive 58, included in there is a statement that he will look at the national standards and codes that exist and will make those minimum requirements in his facilities. So he has immediately announced that as soon as that order becomes final some of these things must be done.

Mr. HERGER. And, Ms. Finnerty, can you understand the dismay that I have?

Ms. FINNERTY. Certainly, certainly.

Mr. HERGER. And I believe that I am reflecting for the 700,000 people I represent in an area that the Federal Government already owns too much. It is a priority to appropriate \$300 million to buy more, but yet it is not a priority to even have in the appropriations system money to repair what we already have.

This is not to you personally, sincerely, but this is incredibly outrageous. It is unbelievable. It is something that I do not believe the American public should be tolerating. It is something that we should be doing—five minutes. I think it is that type of priority rather than just some time in the future. It is something we need to take care of right away, and I would urge you in the strongest terms to do so.

Ms. FINNERTY. We understand, and we clearly have gotten the message, and it has gotten folks' attention.

Mr. HERGER. And it is understood more now than it was 7 years ago?

Ms. FINNERTY. Yes.

Mr. HERGER. Thank you.

Thank you, Mr. Chairman.

Mr. RADANOVICH. Thank you, Mr. Herger.

I am going to ask both of you this question. Regarding the 379 national parks, each park has a superintendent. While the superintendents are given a lot of leeway as far as the implementation of the duties in those parks, there's a lot of autonomy given to each park superintendent.

Mr. Wells, if you would respond first, how do you in the scheme of the National Park Service or in the structure of it, how would you see the ability to mandate that each one of those provide uniform safety for the structures in each park in light of the autonomous nature the superintendents have?

Mr. WELLS. I would start to answer that question by clearly saying under the current practice the Park Service has decided that the superintendent will be accountable and responsible for everything, and unfortunately when you have a situation where you are accountable for everything, you end up not knowing what you are supposed to do, when you are supposed to do it or even having some kind of ability to assess whether all the requirements that you are accountable for, whether you even know what those re-

quirements are, and I think that is what we are seeing in the Park Service.

We attended a conference somewhere and learned that many times the Park Service superintendents are being asked to look at four long pages worth of laws and regulations with the stipulation that are you aware that you are accountable and responsible for the correct full implementation of four pages worth of these things.

And unfortunately, there is not clear minimum requirements. There is not a lot of guidance or detail in terms of the implementation plan that is available to the superintendent.

So, my answer is that—and it would be interesting to see how Maureen feels about this—the superintendents have a great responsibility, and as a result, they are not being held accountable when things do not work, and that is a problem.

Mr. RADANOVICH. Thank you.

And, Ms. Finnerty, it seems to me it is not a very difficult thing to give that authority to a Park Service superintendent, but also mandate that the fire safety code be assessed and enforced. I mean, it doesn't seem to be that hard to give the order.

But from what I understand, since even these problems were highlighted in 1987 and the fact that nothing really has been done or begun to happen until recently, that something so simple should not have been done sooner. So it makes me wonder. Why is there the problem that you cannot just tell your superintendents to enforce this?

Ms. FINNERTY. Well, I think it is an issue of priorities. I think Mr. Wells is correct. Park superintendents do have a lot of autonomy. They have a lot of authority. They also have hugely complex jobs and many, many issues to deal with.

So it is a question of sorting out those areas, those programs, those issues that are more critical perhaps, structural fire being one of them because of the potential impact that it has, and making that a very high priority. We are shifting from just giving them the general guidance to mandating that certain standards and codes and things be followed.

But then I think the key is on the front end you have got to make it a priority, but we have to have some kind of mechanism in place to monitor to see is it being followed, and I think so often that is where we struggle in the Park Service. We issue a lot of directives from the top, and they may or may not get complied with, and we are not out there at the back end finding out what is happening. Is it being complied with? There is apparently a breakdown in the implementation side at the field level.

So I think one of the things that we need to build in is mechanisms where we can assess and evaluate and monitor and be sure that these things actually are happening at the field level, and I think that can be done and it needs to be done for a program like structural fire.

Mr. RADANOVICH. Well, granted a Park Service superintendent has a lot of responsibilities, and I would think that giving that responsibility, the fire marshal type responsibility, to somebody else who would have, you know, some authority to go in and close structures down, limit access to various places when there are too many

people in buildings, those kinds of things, is giving away some of a superintendent's authority.

Is it an ego issue with superintendents? Is it the lack of the desire to want to give away the authority that has been given to them that causes this problem?

Ms. FINNERTY. Well, you know, having been a superintendent I can put that hat on. I mean, they like to maintain independence. They like to have a lot of authority to make decisions at the front line level, and I think that is important.

However, I think we have also got some programs that are critical and that are important from a service-wide basis, and this is probably one of them, where we may have to look at different ways on how we are going to provide oversight. We may have to pull some authority back. We may have to put some direction and guidance in there and be sure it is being complied with.

And the Director has indicated a willingness perhaps to do that in some of these programs, where we have really got to get the program back on track, and we have got to be sure we are providing safe buildings and accommodations for people.

Mr. RADANOVICH. Can you tell me what the National Park Service might view as higher priorities than public safety issues such as this that might get further attention or better attention in the way of funding?

Ms. FINNERTY. Well, certainly public safety issues have got to be right up there and important; preservation of resources, too. I mean, that is sort of our dual mandate, but clearly this is very important, and we have got to figure out a way to make it happen, to get ourselves up to standard, and then to maintain those standards over time.

Mr. RADANOVICH. You would agree with me then that there really is no other higher priority than public safety?

Ms. FINNERTY. Well, I would be hard pressed to say what. It has certainly got to be at the top of the list, I would think.

Mr. RADANOVICH. It has been neglected for a long time.

My concern, too, as was evidenced by the Forest Service and Park Service, not so much the Park Service, but the Forest Service change in management practices in the maintenance of fuels. Since the Forest Service has determined to use or cut back logging as a means of managing fuels on public lands, which of course will not necessarily affect the Ford Building downtown, but does affect parks like Yosemite and Kings and Sequoia and many of the other parks in the West because these parks adjoin Forest Service lands.

This management practice, I think, is going to turn out to be a nightmare that you will see a lot more Los Alamos situations because of bad forest management practices. Don't you see that if that is true, that there is more of a threat to structure safety within the national parks as well?

I mean even with this recent change in management practices and in the fact that the forests are more at risk in my view as a result of that would further hasten the Park Service to begin to properly monitor their structures.

You may want to respond to that or not, but I think that there is not very good management of our resources to the parks that are

joining Forest Service lands, and it just further heightens the critical need for this issue to be taken care of.

The other thing I do want to mention is that waste, fraud, and abuse is a mandate of this committee or part of its structure, but mismanagement of resources is one as well. And I think mismanagement is a good term that describes the lack of protection of the 280 million visitors to our national parks with no fire and safety code enforcement.

With that, Mr. Price, please.

Mr. PRICE. Thank you.

Mr. Wells, I'd like to return to the suggestion you made that while funding was important, that there were also questions of management that seemed to have very little to do with funding levels. I'd like to ask you to elaborate on that because in some of the more disturbing aspects of your report, it seems there was a failure to perform management tasks that really wouldn't have required funding one way or the other, for example, these defective shower heads at Yosemite and other examples.

It seems that one important element in reform is improved levels of accountability, greater performance incentives. I wonder if you could comment on that and elaborate on any suggestions you have for more effective implementation.

Mr. WELLS. Yes, sir. Let me start by saying that funding—there are a couple of different ways I want to go here. Much of what we saw are funding issues, but clearly there are things like nine cent batteries in smoke detectors.

At Prince William Park, which we visited, the comment was given, "The reason we do not have batteries in smoke detectors or fire extinguishers on the stands were that we suppose or suspect that they will be stolen."

That is really not a funding, lack of money issue. It is a management issue in terms of, there are ways, and we made recommendations. There are protective covers that can be placed over smoke detectors, minor things. Even billing the guest once they leave if, in fact, the fire extinguisher is missing. I mean, clearly, these are management type things, not necessarily dollars things.

In terms of the big picture dollars and what is more important, this is not a scientific study. I have had an opportunity to visit some of the parks looking at the recreation fee money that's a new permanent appropriation whereby through the collection of fees, the parks can collect a projected \$150 million worth of additional funds that 80 cents on every dollar that is collected can be given to the local park superintendent to make decisions about how he can use that money to assist and provide an enjoyable experience for the visitors to that park.

Quite frankly, I can say that I have looked at the list of the projects that were approved and how that money was going to be spent, and what I see is a lot of new things being done or constructed or bought and not necessarily repair or fixing things that need to be fixed. That is something that I think someone ought to be paying some attention to.

Those are the types of minor management issues that I think play into this.

Mr. PRICE. In terms of the structures of accountability, the incentives to people actually in operational roles to attend to these things, any suggestions along those lines?

Mr. WELLS. GAO has been a big proponent of GPRA results accounting, accountability, identifying measurements as to what is being achieved with the taxpayers' dollars that are given. Clearly I think safety and health is one of those issues that can identify itself. When you have 1,900 recommendations for deficiencies that need to be fixed, accountability ought to lie to someone somewhere who did not fix 75 percent of those things. That ought to be in a performance rating for a superintendent or a park manager as to whether they are accomplishing their job and spending the U.S. taxpayer dollars wisely.

Mr. PRICE. Thank you.

Ms. Finnerty, you, in your last remarks, returned to a theme that came up in the hearing on the concessions program, that is, the need to gather better data across the park system and the need to use that data to hold park managers more accountable for addressing agency priorities.

I gather both the GAO and the Park Service have noted this need for better information and a better use of information. I gather you would agree that this organizational problem is contributing to the performance problems both in the concessions area and in the structural fire safety area.

Could you address this directly in terms of corrective action?

Ms. FINNERTY. I would agree with that. The accountability piece is something that the Park Service struggles with in a number of program areas, and structural fire is just the latest. We had a number of efforts underway to fix this. Clearly the organization needs to and is struggling to perform in a more business-like manner, to be fully accountable for funding and resources and those kinds of things.

We have always had great difficulty rolling up information on a service-wide basis. We now have some systems that are starting to do that and we are getting standardized across the organization, and I think we will continue to build on those.

We have had a need and are working toward getting funding for an incident reporting system that would certainly help us in structural fire, but it would help us in a number of other programs, too, and again, just continuing to work to get databases built so you can make decisions, based on good data. You can move resources to meet GPRA goals, and then you can measure the outcomes.

You know, we are new to the GPRA business, too, and I think we are making some progress there and getting things standardized. So I think a lot of things are coming into play that are going to help us become more business-like and be able to measure and hold people specifically accountable for things that are and are not getting done.

Right now it is really more hit and miss. Some regions do a better job of it than others, and clearly I think that is ultimately where you need to be, is if there are problems and issues, then the person that is not dealing with that person or persons, they need to be held accountable.

And I think that is where we still have more work to do. We are moving in that direction, but clearly we have some more work to do in that area.

Mr. PRICE. Well, let me finally just ask both of you to suggest quite concretely what kind of data, what kind of information we are talking about here in this area of fire safety. I am not certain that that is clear, and I am not certain to what extent there is a kind of technical fix here that might actually be promising.

You talk about incident reporting. And Mr. Wells, too. What sort of data, what sort of information generation are we talking about here? Something that would be genuinely helpful.

Ms. FINNERTY. Yes. I mean, there are two things. One, the incident reporting system. That is something that we need on a Service-wide basis to do just that, report incidents that occur, fires that occur and those kind of things.

Mr. PRICE. I understand.

Ms. FINNERTY. So that you can track that kind of information and data and know where the issues are and where the problems are.

The other baseline of information though that we are going to start to compile here in the next couple of weeks starting in 25 parks is to actually build a baseline of what are the needs building by building throughout the Park Service. We have over 20,000 buildings. We are obviously not going to look at all of those buildings, and we are going to start with those where people are staying overnight, the overnight accommodations, the multiple dwellings, places where people assemble, places where people are in the most threat, and to see what is needed in those buildings.

Do they have needs for fire suppression? Do they have need for detection and those kind of things? Building that kind of a baseline, and then you can start channeling your resources to address some of those things.

You know it is difficult to start throwing money at problems when you really do not have a good idea what all the problems are. I mean, GAO looked at six parks. We have got 379 parks, and you know, we just need to get a better handle, and we are obviously going to start with the ones that potentially have the most impact on public safety.

Mr. PRICE. Well, and these needs are surely high priority, even emergency needs, in terms of the basic fire fighting, fire suppressing equipment. I would hope some of this would not await the assembling of a full data collection system.

Ms. FINNERTY. Oh, no. By the end of September, we should have a pretty good handle on 25 of our big operations and see what that is showing is. I mean, is that going to show some kind of a trend or pattern or that kind of a thing? And then we can certainly start addressing some of those needs because there are some funding sources available at the current time that we can start marshalling to do some of that work.

The other thing that we really need to get a handle on is this issue of how many parks do we really need fire brigades in, versus parks that we really should have good, strong agreements with the local fire departments, and then in those parks where we do have brigades, we have got to be sure those folks are trained because

this is a collateral duty, and we do not want to be sending people out to fight building fires if they are not trained at all.

So that is the kind of database and information that I think once we—we are already starting to get it, and I think in the next little bit, we will have even more of that information so that we can make better decisions and then hold people accountable for those.

Mr. PRICE. Mr. Wells, is this the sort of thing that GAO had in mind?

Mr. WELLS. Absolutely. Let me give you two specific concrete examples in terms of how important data is and what type of data would really make a difference. Let me just give you two specific examples.

Early on in my testimony I said we were able to show or say that the Park Service had reported 1,400 fires over the last 10 years. There is no system to collect how many fires they have. What they do is have someone monitor daily activity reports that come in.

If a local park had a fire, it may or may not be reported. It may or may not have been picked up. That is the type of data, looking at lessons learned in terms of what you're collecting that would be of benefit to other park superintendents. The type of fire that occurred, why the fire occurred, flammable material stored too close to something; these are lessons learned that someone can look at from a preventive standpoint.

The second point I would make is a lesson learned type thing. As referred to earlier, just something as simple as making good agreements with local communities to assist in fire inspection, we found parks that had no agreements, had never even thought about going out and asking for local assistance. Could it be possible that a local community could send their fire chief over and make suggestions for fire safety?

Other parks were making great use of that. Nine communities surrounding the parks all had been contacted. All were built in. Again, unevenness. Data collection allows managers to see what is going on elsewhere and say, "This makes sense. Why aren't I doing the same thing?"

That type of data will go a long ways not necessarily providing money, but just providing lessons learned that can correct a lot of these things.

Mr. PRICE. Thank you very much. Thanks to both of you for your testimony.

Mr. RADANOVICH. Thank you.

Mr. HERGER.

Mr. HERGER. Thank you, Mr. Chairman.

And, again, I do thank you, both of our witnesses, for being here, and it is obvious that we are all on the same side. I have to believe that our goals are the same. It is just getting in and taking care of a very serious problem that exists.

And, you know, as I look back at some internal Park Service memos, one from December 1997, the Director of the National Park Service expressed concern about 1,900 fire safety deficiencies, and then back in May 1998 in another internal Park Service report stated, "Sooner or later the National Park Service stands to be seriously embarrassed, at a minimum, by the catastrophic loss either

of an irreplaceable historic structure or collection or for human life from a structural first.”

And what I would like to ask is: realistically, Ms. Finnerty, when would you say, what is your estimate? I think we all need some guidelines or goals that we have.

What is your goal of when we can repair what we have been talking about and be able to have such problems as at the Ford Theater, these 1,900 fire safety deficiencies? Do we have a time line on this?

Ms. FINNERTY. Well—

Mr. HERGER. And if not, could you perhaps give us what you think would be a reasonable time?

Ms. FINNERTY. Why don't we do this, Congressman? Obviously those six parks that were identified in the report are all working on remedying those deficiencies. What I would like to do is prepare for you a detailed report of what has been done, what is planned to be done and a time frame and estimate for when that—because they are all at various stages.

Some of them will require funding, and in that case we are going to have to identify a funding source, whether it is repair/rehab or some other pot of money to be sure we get the work done, but clearly, I think that those deficiencies in those six parks we need to fix as quickly as we can within existing funding or to find other funding to do it.

And then this assessment that we are going to have done by the end of September that looks at 25 additional parks, anything that comes out of that, I think, clearly we need to look at see how serious those deficiencies are and identify ways to remedy those, and hopefully with some time frames built into that.

Mr. HERGER. And the concern I have, again, is that—which I would not want to have happen. I am sure you would not either—is 7 years from now we are back here with a hearing, and we are still reading reports of how we are working on it.

Again, I do not think I have heard a time line. I am not sure if I hear that this is really a priority sufficient enough at this time with the Park Service that someone is stating, “This is our goal. By the middle of next year, by the end of next year.”

Mr. Wells mentioned that the local fire marshal would shut down if it were privately held in 5 minutes the Ford Theater. I mean I do not think it is unreasonable to be asking what is a time frame that we are going to have the Ford Theater and other 1,900 fire safety deficiencies repaired, other than, “Well, we are working on it, and we are going to come up with something later on.”

I really do not know if that is going to be good enough that in 7 years from now we will not be in the same place.

Ms. FINNERTY. We will be happy to provide that for you. I do not want to throw a date out—

Mr. HERGER. Right.

Ms. FINNERTY [continuing]. That is not correct, and there are a number of deficiencies at Ford's Theater, for example, which you are very well aware of, and I would like to go back and look at all of those, itemize them, and give you some very specific concrete information that hopefully will get this situation remedied as quickly as possible.

Mr. HERGER. OK. As quickly as possible. Any guesstimate of what is quickly as possible?

And, again, I think it is important that the Park Service analyze this, all of these deficiencies, and come up with some time frame, whatever it is, that is reasonable, but I think it is very important that we have a time frame.

I mean we all work under time frames.

Ms. FINNERTY. I agree.

Mr. HERGER. That we are not going to continue to be in the same situation we have been in.

Ms. FINNERTY. I think that is a reasonable request, and we will honor it.

Mr. HERGER. I appreciate that.

Mr. Wells, do you have any comments on this?

Mr. WELLS. In the spirit of fair, balanced and accurate reporting, GAO gets paid to point out deficiencies and things that are wrong. I think it is fair for us to say that 1 week before this hearing my audit team went to Ford's Theater to once again look to see what had been done between May and the date that I was going to appear for this hearing.

I can report to you that these wires that are now shown under the door had been removed. Those wires were not at Ford's Theater last week.

These boxes that you see in the ceiling that were covering those sprinkler heads are no longer there. The superintendent accompanied us when we did this inspection a week ago. The superintendent was not there in April when we went in with the DC Fire Marshal.

So there has been immediate corrective action. Prince William Park is buying smoke detector batteries. So there are immediate actions being taken, and that is encouraging.

Mr. HERGER. That is encouraging, and thank you.

But we have a number of others. As was mentioned, 1997, 1,900 just in this one report, and we owe it to the American public.

And I appreciate the fact that I believe I hear a commitment that you will get with your associates and come up with some time frame, realistic time frame that we can correct these.

Thank you very much.

Ms. FINNERTY. Thank you.

Mr. RADANOVICH. Thank you.

Mr. GUTKNECHT. Mr. Chairman, if I could, I apologize for being late. We had another hearing. In fact, I have got three hearings going on at the same time.

I just wanted to thank you for having this hearing. This is an ongoing effort by this budget committee to hold Federal agencies accountable, and I think, you know, it is something, I think, that our taxpayers, the shareholders of this company we call the Federal Government, expect some accountability, and I think the more we begin to turn over some rocks, the more questions that need to be asked, and I think it is our job.

And I apologize for not being here earlier, but I understand that you have had a vigorous hearing here today, and I think it is just one more step in bringing more accountability back to our Federal Government.

So I thank you for having the hearing, and I apologize that I have got too many other things going on today.

Mr. RADANOVICH. Thank you, Mr. Gutknecht. It is good to have you here. We appreciate you making it.

I would like to clarify one thing, if I could, Ms. Finnerty. Will you be submitting a timetable? Is that what I understand?

And will this be a timetable not just for the six parks that were mentioned in the report, but will be a timetable for the implementation of these initiatives?

Ms. FINNERTY. Yes. We need to go back obviously and gather the various—as I understood the request, it was looking at the six parks that were in the report and what progress was being made and what has been accomplished and what plans to be accomplished and when that is going to get done.

I also offered that once we had these 25 parks that we are going to be looking at over the next month or two, depending on what those assessments show, that we could have some discussion of how big an issue that is going to be and maybe set out some time frames for getting some of that resolved over the next year or so.

So I hear it is broader than just the six parks; is that correct?

Mr. RADANOVICH. Correct, yes.

What will be the consequences to the managers if they do not fulfill these, if they do not clean up the issues in their parks? Will there be accountability?

Ms. FINNERTY. Well, the Director has made it pretty clear in a recent memo, as recently as a week ago, that he fully intends this to be a top priority. These things need to be addressed and dealt with, and if they are not. Then the people will be held accountable, and their performance will be determined by how well they either comply or do not comply. So I think that is pretty strong.

Mr. RADANOVICH. You mentioned the Director many times. Is the Secretary engaged in this as well?

Ms. FINNERTY. The Secretary, of course, all of the reports go to the Secretary, and he is certainly well aware of this, and he may have had some discussions with the Director. All of my conversations have been with the Director. I can tell you it definitely has his attention.

Mr. RADANOVICH. In closing, I just have one question for both of you. Do you think Americans should feel safe when they are in these buildings in the national parks?

Mr. WELLS. Concerned, yes.

Mr. RADANOVICH. Safer?

Mr. WELLS. Concerned, yes.

Mr. RADANOVICH. OK.

Mr. WELLS. They should be concerned.

Mr. RADANOVICH. Ms. Finnerty.

Ms. FINNERTY. I would guess I would maybe be concerned depending on where they are and depending on what we find. I mean, I do not know that I could make a blanket statement because, again, we do not have the baseline information on everything.

I know many of our buildings are very safe, and I know that buildings that have had renovations and those kinds of things, a lot of these issues have been dealt with and addressed.

So obviously we need to be sure they are all in as good of shape as we can get them.

Mr. RADANOVICH. OK. Well, I want to thank you both very much for coming today and testifying and answering the questions.

I want to thank members of the panel for being a part of this hearing.

And with that, this hearing is closed. Again, thank you very much.

[Whereupon, at 11:23 p.m., the Task Force was adjourned.]

Controlling Wildfires in the Future: What Strategies and Resources Are Needed?

WEDNESDAY, SEPTEMBER 13, 2000

HOUSE OF REPRESENTATIVES,
COMMITTEE ON THE BUDGET,
TASK FORCE ON NATURAL RESOURCES AND ENVIRONMENT,
Washington, DC.

The Task Force met, pursuant to call, at 2:05 p.m. in room 210, Cannon House Office Building, Hon. George Radanovich (chairman of the Task Force) presiding.

Chairman RADANOVICH. Welcome to the hearing. I want to advise you that we are waiting for at least one more member to show up, so it will be a couple more minutes. Thanks. [Recess.]

Good afternoon and welcome to the final hearing on the Task Force for Natural Resources and the Environment.

As you know, a large portion of the western United States has been on fire this past summer. These fires have been nothing short of catastrophic, costing people their homes, their possessions and, in the case of some firefighters, their lives. In his radio address this weekend, President Clinton claimed that extreme weather and lightning strikes helped spark the many fires this summer. Others in the Clinton administration have made similar claims when explaining these fires. And while the claim may be true, it does not tell us why the fires have been so intense and so difficult to contain.

Extreme weather and lightning strikes in the West are not some sort of anomaly. Dry weather and lightning have been a presence in the West since time immemorial. So the question remains, just why are these fires so severe? As we will hear in later testimony, the role of the government management policy is a key element of this problem. This issue was addressed in a General Accounting Office report issued in April of last year, well before the fires started. To summarize, the report noted that an overaccumulation of vegetation leading to an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires were in part a product of the Forest Service's decades-old land management practices.

Those land management practices include an emphasis on roadless policies and an overreliance on prescribed burns, with little use of mechanical thinning and failure to heed the warnings of the past. The new plan we will be discussing presents an opportunity to reverse these trends and provide for greater public and private sector involvement in fuels reduction.

When the GAO released its report almost 18 months ago, the Forest Service recognized 39 million acres of forestland in the interior West was at high risk of wildfire.

Yet, it was not until just a few days ago that the President released his plan, accepting the recommendations of the Secretary of Agriculture and Secretary of Interior to reduce fuels on public lands. While we are pleased this proposal has finally been put forth, some of my colleagues and I remain skeptical that it will be implemented. After all, there has been a minimal response by this administration to the years of warnings by the GAO, the Forest Service, and others that fires like those burning now would happen someday.

Additionally, we have some concerns about a number of aspects of the plan. I expect that our discussion of the issues involved in this proposal will make for a fruitful dialogue this afternoon.

Finally, I want to thank the witnesses for taking the time to be here today. They are Barry Hill, the Associate Director for Energy and Science Issues at the General Accounting Office; Randy Phillips, Deputy Chief for Programs and Legislation at the U.S. Forest Service; and Robert Nelson, Senior Fellow for Environmental Studies at the Competitive Enterprise Institute and a professor of environmental policy at the School of Public Affairs at the University of Maryland.

We look forward to your input on this matter and with that, Mr. Price, I will invite you to make any opening statement that you wish to do.

[The prepared statement of Mr. Radanovich follows:]

PREPARED STATEMENT OF HON. GEORGE RADANOVICH, A REPRESENTATIVE IN
CONGRESS FROM THE STATE OF CALIFORNIA

Good afternoon, and welcome to the final hearing of the Task Force on Natural Resources and the Environment.

As you know, a large portion of the western United States has been on fire this past summer. These fires have been nothing short of catastrophic, costing people their homes, their possessions—and in the case of some firefighters—their lives.

In his radio address this past weekend, President Clinton claimed that “extreme weather and lightning” strikes helped spark the many fires this summer. Others in the Clinton administration have made similar claims when explaining these fires. And while the claim may be true, it does not tell us why the fires have been so intense and difficult to contain. Extreme weather and lightning strikes in the West are not some sort of anomaly. Dry weather and lightning have been a presence in the West since time immemorial. So the question remains—just why are these fires so severe? As we will hear in later testimony, the role of government management policy is a key element of the problem.

This issue was addressed in a General Accounting Office report issued in April of last year, well before the fires started. To summarize, the report noted that an “overaccumulation of vegetation” leading to “an increasing number of large, intense, uncontrollable, and catastrophically destructive wildfires” were in part a product of the Forest Service’s decades-old land management practices.

Those land management practices include an emphasis on roadless policies, an over-reliance on prescribed burns with little use of mechanical thinning, and a failure to heed warnings of the past. The new plan we will be discussing presents an opportunity to reverse these trends and provide for greater public and private sector involvement in fuels reduction.

When the GAO released its report almost 18 months ago, the Forest Service recognized 39 million acres of forestland in the interior West was at high risk of wildfire.

Yet, it was not until just a few days ago that the President released his plan—accepting the recommendations of the Secretary of Agriculture and Secretary of Interior—to reduce fuels on public lands. While we are pleased that this proposal has

finally been put forth, some of my colleagues and I remain skeptical that it will be implemented. After all, there has been a minimal response by this administration to the years of warnings by the GAO, Forest Service and others that fires like those burning now would happen someday.

Additionally, we have concerns about a number of aspects of the plan. I expect that our discussion of the issues involved in this proposal will make for a fruitful dialogue this afternoon.

Finally, I want to thank the witnesses for taking the time to be here today. They are Barry Hill, Associate Director for Energy and Science issues at the General Accounting Office; Randy Phillips, Deputy Chief for Programs and Legislation at the U.S. Forest Service; and Robert Nelson, Senior Fellow for Environmental Studies at the Competitive Enterprise Institute, and professor of environmental policy at the School of Public Affairs at the University of Maryland. We look forward to your input on this matter.

Mr. PRICE. Thank you, Mr. Chairman. I don't have a formal statement but I do want to welcome the witnesses here and thank them for appearing.

As we know, the 2000 wildfire season has been one of the most serious on record, with more than 6½ million acres of public and private land being burned. That is more than double the 10-year national average. We will be interested in learning more today about the reasons for this and the ways that we can protect ourselves in the future.

There are lots of allegations and accusations that have been raised, and naturally when a catastrophe like this occurs, you see some of that. We would like to know about the relationship of logging policy to this year's wildfires and their severity. What are the indications in terms of more or less commercial logging and its relationship to the potential for disaster? Are there relationships to the so-called roadless initiatives or any other policies currently in place? And what are the funding implications for these fire-related Forest Service programs, in terms of the direction in which they ought to go.

I am sure that you will help us understand the complexity of this issue. It is not a matter of simplistic solutions. But we await your testimony and look forward to your contributing to the ongoing deliberations over how to deal with this very serious national crisis. Thank you.

Chairman RADANOVICH. Thank you, Mr. Price.

Congressman Herger, do you have an opening statement you would like to make?

Mr. HERGER. I do. Thank you very much, Mr. Chairman.

I particularly appreciate you having this hearing on an issue that is so important to our Nation and certainly to the northeastern part of California that I represent, which has parts of or all of 11 national forests in it. It is the site, regrettably, of the Storrie Fire that was in the news, national news, for about a month and a half earlier this summer; some 40,000 acres burned there, about 80,000 acres throughout my district.

And again, this hearing is so important because the people of our Nation and certainly of our district deserve, I believe, accountability from those who are managing our forests.

If we look back, it is not like we did not know our forests were going to burn. It is not if they are going to burn, it is when they are going to burn unless we do something about it.

I am reminded of a report by the National Commission on Wildfire Disasters in 1994 which warned of an extreme fire hazard for

the extensive buildup of dry, highly flammable, forest fields across the West. That was 6 years ago. Then in 1995 the Forest Service itself in a report estimated that one-third or 39 million acres of interior West lands—I am quoting here—it manages were at risk of, quote, “large uncontrollable, catastrophic wildfires,” close quote. That is 5 years ago the Forest Service itself was aware of this. Today that has gone from 39 million to 56 million acres at risk.

I guess we are wondering why this is happening; why something has not happened over the last 5 or 6 years, and I am sure our witnesses will shed some light on that. What is important is that we change this, what I feel is a lack of policy, lack of implementing policy, including the Quincy Library legislation which I passed, or I authored, in this House a year ago; passed overwhelmingly, almost unanimously passed out of the Senate on bipartisan vote—Senator Feinstein carried it in the Senate—and which is a plan to help prevent fires and yet is being—the Forest Service is throwing every monkey wrench they can in the system not to implement that which Congress has overwhelmingly said to implement.

So there are a lot of these questions I have, and hopefully they will be answered by this hearing today. Thank you very much, Mr. Chairman.

[Material submitted by Mr. Herger follows:]

Hon. WALLY HERGER,
HOUSE OF REPRESENTATIVES,
Washington, DC, September 20, 2000.

Hon. JOHN KASICH,
Chairman, Committee on the Budget, Cannon House Office Building, Washington, DC.

DEAR MR. KASICH: Pursuant to the unanimous consent request made at the Task Force on Natural Resources and the Environment’s September 13, 2000, hearing, I hereby request that the attached report from the Congressional Research Service be made a part of the hearing record. The report relates to a line of questioning pursued during the hearing regarding the impact of cutting trees on the frequency of wildfires on public lands.

Thank you for your attention to this matter.

Sincerely,

WALLY HERGER,
Member of Congress.

[Memorandum from the Congressional Research Service]

SEPTEMBER 20, 2000.

From: Ross W. Gorte, Natural Resource Economist and Senior Policy Analyst, Resources, Science, and Industry Division.
Subject: Forest Fires and Forest Management.

Following release of an August CRS memorandum on timber harvests and forest fires, CRS has received numerous comments and requests for clarification and analysis. The earlier memorandum statistically explored the limited and possibly misleading question of a potential relationship between acres burned and timber volume harvested in the national forests, without providing background information: (1) on the context of the relationship between forest management and wildfires more generally; (2) on the limits of the data used for statistical analysis; or (3) on the limitations of the statistical techniques employed. This memo broadens the discussion with more complete recognition of wildfires as an enormously complex phe-

nomenon; for more information, see CRS Report 95–511 ENR, *Forest Fires and Forest Health*.¹

The volume of timber harvested is not the principal forest management question involved in assessing the extent and severity of fires. Public and private forestry practices and policies—commercial logging and slash disposal, thinning, road construction or obliteration (closing the road and attempting to restore it to near-natural conditions), roadless area protection, etc.—can alter a forest’s susceptibility and resistance to fire and other threats, and its resilience to changes. However, other independent variables, such as recent and past weather patterns (e.g., short-term and long-term drought, wind speeds and patterns) and site-specific factors (e.g., slope, aspect, and fuel loads) are critical factors in determining the extent and severity of any particular fire.

The extent to which timber harvesting from the national forests in any particular year, or even over several years, affects fire extent and/or severity in a given year cannot be determined from the available data, as suggested by the following table and figure that were included in the August 22 memorandum.² For example, two of the four worst fire seasons in the past 80 years—1987 and 1988—occurred in a decade with relatively high timber harvest levels, yet the other two worst fire seasons—1994 and 1996—occurred in a decade with relatively low timber harvest levels. In other years with high harvest levels (e.g., 1986 and 1989), the fire seasons were relatively mild, while other years with low harvest levels (e.g., 1995 and 1997), also had relatively mild fire seasons. Thus, these data suggest that one cannot draw conclusions about the severity of a fire season based on the level of timber harvested nationally.

Although one cannot draw conclusions at the national level, at the local level, on a specific site, timber harvesting can affect the extent and intensity of wildfires. The severity of a fire (rate of spread and level of damage) depends on numerous site-specific factors, such as the slope and aspect of the site and the flora and fuel load on the site, as well as on both general and site-specific weather factors, such as humidity and fuel moisture content, ambient temperature, and especially wind. Timber harvesting can alter the flora and fuels on a site, removing the relatively large diameter wood that can be converted into wood products, but leaving behind the “slash” (e.g., the branches and needles). Fire protection is one of the principal reasons for disposing of logging slash.³ Slash disposal following the timber harvest is standard practice on public and private lands, and in most national forest timber sales, the Forest Service requires purchasers to deposit funds into a special account (called “brush disposal”) which are then permanently available to the agency to pay for slash disposal.⁴ However, information on the extent of various slash treatments, and on the fuel reduction resulting from such treatments is lacking. In addition, other treatments, such as precommercial thinning and prescribed burning, are also used to reduce fuel loads, and might be as, or more, effective and efficient at reducing fuel loads as timber harvesting with slash disposal, depending on the site-specific circumstances.

Finally, it should be noted that the public’s attention generally focuses on the extent of fires (i.e., acres burned), but not on the severity or intensity of fires. However, intensity is of greater consequence for assessing the effects of fires. “Light” fires that burn surface fuels (e.g., grasses and needles) at relatively low intensity can produce significant ecological benefits, even if they cover large areas; recognition of these benefits led to modification of the policy of aggressive fire suppression efforts on all wildfires in the late 1970’s, and is the basis for today’s prescribed burning efforts. Areas with heavier fuel loads may burn more intensely than areas with lower fuel loads, and thus may cause more resource damage, as well as be more likely to burn structures. Timber harvesting (with effective slash disposal) and other treatments remove fuels. It is logical, and widely accepted, that reducing fuels will reduce the severity of wildfires, but no research literature documenting this rela-

¹A CRS long report updating and expanding on the information in *Forest Fires and Forest Health* is in preparation.

²These data are only for Forest Service protected lands. Of the 6.8 million acres burned to date in the 2000 fire season, 33 percent of the acres burned have been Forest Service protected lands. Other lands burned include other Federal lands (36 percent) and State and private lands (31 percent).

³David M. Smith, *The Practice of Silviculture*, 7th ed. (New York, NY: John Wiley & Sons, Inc., 1962), pp. 312–313.

⁴The U.S. General Accounting Office (Forest Service: Better Procedures and Oversight Needed to Address Indirect Expenditures, GAO/RCED–98–258, August 1998) found that, from 1993–1997, the Forest Service had spent nearly \$40 million (27 percent) of deposits to the brush disposal fund to pay for overhead and other expenses not directly related to the purposes of the brush disposal fund.

tionship has been found. Furthermore, damage appraisal methods are not adequate to quantify the magnitude of the benefits of various fuel treatments and their relationship to other factors contributing to wildfire area and intensity.

TABLE 1.—NATIONAL FOREST TIMBER HARVESTS AND ACRES BURNED ON FOREST SERVICE—PROTECTED LANDS

[In millions of board feet and total acres burned]

Fiscal year	Harvest volume	Acres burned	Fiscal year	Harvest volume	Acres burned
1980	9,178.2	308,400	1990	10,500.3	346,350
1981	8,036.2	209,631	1991	6,558.9	163,540
1982	6,747.3	44,622	1992	7,289.6	585,052
1983	9,244.0	66,498	1993	5,916.9	208,376
1984	10,548.7	141,139	1994	4,815.3	1,476,402
1985	10,941.3	568,297	1995	3,865.9	218,993
1986	11,786.5	353,128	1996	3,724.6	1,092,672
1987	12,712.1	1,162,757	1997	3,285.3	143,663
1988	12,596.4	1,549,955	1998	3,297.6	172,582
1989	11,950.9	475,799	1999	2,938.6	605,000

FIGURE 1. FOREST SERVICE ACRES BURNED IN RELATION TO MILLIONS OF BOARD FEET CUT



Chairman RADANOVICH. Thank you, Mr. Herger. We look forward to having some answers to these questions.

I would ask unanimous consent that all members and witnesses would be given 5 days to submit non-extraneous statements for the record. If there are no objections, it is so ordered.

Again, I want to welcome our guests and those testifying. We will allow every speaker to give their opening statement, and when we are done with Mr. Nelson, we will go ahead and open up for questions. If you read your statements first and then we will go to questions afterwards, that is how we will start this thing.

Chairman RADANOVICH. Welcome, Mr. Hill. And again, please begin your testimony. Let me properly introduce you as the Associate Director for Energy and Science Issues at the General Accounting Office.

Mr. Hill, please begin.

STATEMENT OF BARRY T. HILL, ASSOCIATE DIRECTOR FOR ENERGY AND SCIENCE ISSUES, GENERAL ACCOUNTING OFFICE

Mr. HILL. Thank you, Mr. Chairman and members of the committee. I will briefly summarize my prepared statement and submit the full statement for the record.

Chairman RADANOVICH. Sure.

Mr. HILL. It is very sobering to be here today to discuss the status of efforts to reduce the risk of catastrophic wildfires to communities and natural resources in dry, lower-elevation regions of the interior western United States. So far this year, such wildfires have burned over 6.5 million acres of public and private land, and that is more than twice the 10-year national average and more than in any other year in decades.

Lives have been lost, over 1,000 homes have been destroyed, and the estimated damage to human property and forest and rangeland and ecosystems totals billions of dollars. The cost to the United States Treasury to suppress these fires and to rehabilitate and restore burned areas will exceed \$1 billion in this fiscal year alone.

Reducing the future risk of catastrophic wildfires to human lives and property as well as to the forest and rangeland ecosystems will require development and implementation of a comprehensive management strategy that includes three components. Two of these components are reactive: Suppressing wild fires after they have become wildfires, and rehabilitating and restoring forests and rangelands after they have burned. The third component is proactive. That is, reducing the risk of future fires by removing accumulated hazardous fuels including small trees, underbrush, and dead vegetation.

As requested, my testimony today will focus on the proactive hazardous fuel reduction component. Specifically, I will discuss the following three points: First, why conditions on Federal forests and rangelands have reached the point that they now pose a significant risk to the nearby communities and to the ecological sustainability of lands and natural resources. Second, the history and status of efforts by the Department of Agriculture's Forest Service and the Department of Interior to reduce these risks. And third, budget-related issues that should be addressed to better ensure that the agencies spend effectively and account accurately for funds appropriated to reduce hazardous fuels. I may also add that my comments today are based primarily on GAO products that we have issued over the last decade.

In summary, the media and others have attributed much of the blame for this year's destructive wildfire season to the prolonged drought that has gripped the interior West. However, the Forest Service has observed that in hindsight, quote, "Uncontrollable wildfires should be seen as a failure of land management and public policy, not as an unpredictable act of nature," end quote.

Past land management practices that contributed to current conditions included harvesting timber by selectively removing the larger, more valuable, fire-tolerant trees or by clearcutting, which is removing all of the trees from a site at one time.

In addition, millions of acres of forest and wildlands were cleared for agricultural crops and livestock pastures, and grass cover and

soil were lost as a result of intensive livestock grazing. Moreover, during most of the 20th century, the Federal Government's policy was to suppress all fires, and for 75 years, Federal land management agencies were highly effective at implementing this policy.

The Federal Government's approach to reducing hazardous fuels has evolved over time in response to new information and events. From the 1950's to the 1970's, land managers within Interior experimented with allowing fires ignited both by lightning and by the managers themselves to burn under controlled conditions. By 1972, both Interior and the Forest Service had formally adopted the policy of using fire as a tool to reduce the buildup of hazardous fuels. Until recently both agencies continued to emphasize prescribed fire as the tool of choice in reducing the accumulation of hazardous fuels.

However, in the past several years, land managers have increasingly recognized that in many areas the volume of accumulated fuels has increased to the point that thinning and mechanical treatments must be used before fire can be reintroduced into the ecosystems.

Both the Congress and the administration now appear to be prepared to fund an aggressive campaign to reduce hazardous fuels. It is therefore imperative that the Forest Service and Interior act quickly to develop a framework to spend effectively, and account accurately for what they accomplish with these funds. For example, according to the Forest Service, priority for treatments to reduce hazardous fuels should be given to areas where the risk of catastrophic wildfires is the greatest to communities, watersheds, ecosystems, or species. Identifying these areas is particularly important in that even if the agency receives the \$12 billion it says it needs over the next 15 years to reduce hazardous fuels, it estimates that at the end of that time, 10 million acres would either remain at high risk of long-term damage or would have already suffered long-term damage as a result of catastrophic wildfires.

However, currently neither the Forest Service nor the Interior knows how many communities, watersheds, ecosystems and species are at high risk of catastrophic wildfires, where they are located, and what it will cost to lower this risk. Therefore, they cannot prioritize them for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended.

In addition, rather than allocating funds to the highest risk area, the Forest Service allocates funds for hazardous fuels reduction on the basis of the numbers of acres treated. Similarly, both the Forest Service and the Interior use the number of acres treated to measure and report to the Congress their progress in reducing the threat of catastrophic wildfires, rather than using the number of acres treated in the highest priority areas or reductions in areas at high risk of long-term damage from wildfires.

In closing, we are faced with a pay-me-now or pay-me-later situation in which paying me now is likely the most cost-effective alternative. However, restoring fire-adapted ecosystems and protecting the communities that have developed alongside and in these ecosystems will require that the resources for reducing the threat of catastrophic wildfires be well spent. To do so will require that the

Forest Service and the Interior clearly identify not only how they spend funds appropriated to reduce hazardous fuels, but also what they will accomplish with these funds.

Mr. Chairman, that concludes my statement.

Chairman RADANOVICH. Thank you.

[The prepared statement of Mr. Hill follows:]

PREPARED STATEMENT OF BARRY T. HILL, ASSOCIATE DIRECTOR FOR ENERGY AND SCIENCE ISSUES, U.S. GENERAL ACCOUNTING OFFICE

Mr. Chairman and members of the Task Force, it is very sobering to be here today to discuss the status of efforts to reduce the risk of catastrophic wildfires to communities and natural resources in dry, lower-elevation regions of the interior western United States. So far this year, such wildfires have burned over 6.5 million acres of public and private land—more than twice the 10-year national average and more than in any other year in decades. Lives have been lost, over 1,000 homes have been destroyed, and the estimated damage to human property and forest and rangeland ecosystems totals billions of dollars. The costs to the U.S. Treasury to suppress these fires and to rehabilitate and restore burned areas will exceed \$1 billion in this fiscal year alone.

Reducing the future risk of catastrophic wildfires to human lives and property as well as to forest and rangeland ecosystems will require development and implementation of a comprehensive management strategy that includes three components. Two are reactive—suppressing wildland fires after they have become wildfires and rehabilitating and restoring forests and rangelands after they have burned. The third component is proactive—reducing the risk of future fires by removing accumulated hazardous fuels, including small trees, underbrush, and dead vegetation. As requested, our testimony today will focus on the proactive hazardous fuels reduction component. Specifically, we will discuss (1) why conditions on Federal forests and rangelands have reached the point that they pose a significant risk to nearby communities and to the ecological sustainability of lands and natural resources, (2) the history and status of efforts by the Department of Agriculture's Forest Service and the Department of the Interior to reduce this risk, and (3) budget-related issues that should be addressed to better ensure that the agencies spend effectively and account accurately for funds appropriated to reduce hazardous fuels. Our comments are based primarily on GAO products issued over the last decade.¹

In summary:

- The media and others have attributed much of the blame for this year's destructive wildfire season to the prolonged drought that has gripped the interior West. However, the Forest Service has observed that, in hindsight, "uncontrollable wildfire should be seen as a failure of land management and public policy, not as an unpredictable act of nature." Past land management practices that contributed to current conditions included harvesting timber by selectively removing the larger, more valuable fire-tolerant trees or removing all of the trees from a site at one time (clearcutting). In addition, millions of acres of forests and wildlands were cleared for agricultural crops and livestock pastures, and grass cover and soil were lost as a result of intensive livestock grazing. Moreover, during most of the 20th century, the Federal Government's policy was to suppress all fires, and for 75 years, Federal land management agencies were highly effective in implementing this policy.

- The Federal Government's approach to reducing hazardous fuels has evolved over time in response to new information and events. From the 1950's to the 1970's, land managers within Interior experimented with allowing fires ignited both by lightning and by the managers themselves to burn, under controlled conditions. By 1972, both Interior and the Forest Service had formally adopted the policy of using fire as a tool to reduce the buildup of hazardous fuels. Until recently, both agencies continued to emphasize prescribed fire as the tool of choice in reducing the accumulation of hazardous fuels. However, in the past several years, land managers have increasingly recognized that in many areas, the volume of accumulated fuels has increased to the point that thinning and mechanical treatments must be used before fire can be reintroduced into the ecosystems.

- Both the Congress and the administration are now prepared to fund an aggressive campaign to reduce hazardous fuels. It is, therefore, imperative that the Forest Service and Interior act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds. For example, according

¹See app. I for relevant GAO products on hazardous fuels reduction.

to the Forest Service, priority for treatments to reduce hazardous fuels should be given to areas where the risk of catastrophic wildfires is the greatest to communities, watersheds, ecosystems, or species. However, currently neither the Forest Service nor Interior knows how many communities, watersheds, ecosystems, and species are at high risk of catastrophic wildfire, where they are located, or what it will cost to lower this risk. Therefore, they cannot prioritize them for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended. In addition, rather than allocating funds to the highest-risk areas, the Forest Service allocates funds for hazardous fuels reduction on the basis of the number of acres treated. Similarly, both the Forest Service and Interior use the number of acres treated to measure and report to the Congress their progress in reducing the threat of catastrophic wildfires rather than using the number of acres treated in the highest-priority areas or reductions in areas at high risk of long-term damage from wildfire.

THE INCREASING RISK OF UNCONTROLLABLE WILDFIRES REFLECTS AN UNINTENDED
CONSEQUENCE OF PAST LAND MANAGEMENT AND PUBLIC POLICY

The media and others have attributed much of the blame for this year's destructive wildfire season to the prolonged drought that has gripped the interior West. However, the Forest Service has observed that, in hindsight, "uncontrollable wildfire should be seen as a failure of land management and public policy, not as an unpredictable act of nature."²

More than a century ago, most forests in the interior West and their associated species were fire-adapted and some—known as short-interval, fire-adapted ecosystems—relied on frequent, low-intensity fires to cycle nutrients, check the encroachment of competing vegetation, and maintain healthy conditions. However, before the turn of the last century, these short-interval, fire-adapted ecosystems and species—such as ponderosa and other long-needle pines—began to be replaced by fire-intolerant ecosystems and species—such as Douglas and other firs. These changes resulted mostly from the nation's increased demand for fiber and food. As a result, (1) the larger, more valuable fire-tolerant trees were removed by selective timber harvesting or all of the trees from a site were removed at one time (clearcutting); (2) millions of acres of forests and wildlands were cleared for agricultural crops and livestock pastures; (3) grass cover and soil were lost as a result of intensive livestock grazing; and (4) burning by Native Americans was curtailed to accommodate other land uses. In addition, during most of the 20th century, the Federal Government's policy was to suppress all fires, and for 75 years, Federal land management agencies were highly effective in implementing this policy.

As a result of these human activities, the composition and structure of the forests changed from open, park-like stands of approximately 50 large, older-aged, and well-spaced fire-tolerant trees per acre to dense "dog-hair" thickets of more than 200 mostly small, fire-intolerant trees per acre. Unnaturally dense forests cause individual trees to compete for limited quantities of water, and during drought conditions, weakened trees become susceptible to insect infestations and disease outbreaks. Such trees die in unnaturally high numbers, adding to hazardous fuel loads.

The composition of many rangelands has also changed. Native grass species, including Idaho fescue and bluestem, have been replaced by invasive plant species, such as cheat grass, that fuel and thrive on wildland fires. These exotic species follow fire wherever it goes, are opportunistic, and repopulate a burned landscape faster than native species. Cheat grass grows earlier, quicker, and higher than native grasses and then dies, dries, and becomes fuel for the next year's fires.

As the composition and structure of public forests and rangelands in the interior West were changing, so too was their interface with human structures and other property. Communities have developed alongside and in these forests and rangelands, resulting in a patchwork of homes interspersed among public lands. These areas are collectively referred to as the "wildland-urban interface."

THE FEDERAL GOVERNMENT'S APPROACH TO REDUCING HAZARDOUS FUELS HAS
EVOLVED OVER TIME

The Federal Government's approach to reducing hazardous fuels has evolved over time in response to new information and events. From the 1950's to the 1970's, land managers within the Department of the Interior experimented with so-called "prescribed fire programs." Under these programs, fires ignited by lightning as well as

² Course to the Future: Positioning Fire and Aviation Management, U.S. Department of Agriculture, Forest Service (May 1995).

by land managers themselves are allowed to burn, under controlled conditions, so that the ecological benefits of fire can be reintroduced into fire-adapted ecosystems.

By 1972, both Interior and the Forest Service had formally adopted the policy of using fire as a tool to reduce the buildup of hazardous fuels. From then until 1988, Federal land managers allowed thousands of prescribed fires to burn in wildlands. This changed in 1988, when a number of fires started by lightning in and around Yellowstone National Park burned out of control, resulting in a controversy over what the media termed the government's "let burn" policy. In 1989, an interagency review team reaffirmed the benefits of fire and tasked Federal land managers to (1) reevaluate the use of management-ignited fires and other methods for reducing hazardous fuels and (2) develop fire management plans for each of their land units before allowing a prescribed fire to burn. However, some land managers continued to subscribe to the policy of suppressing all fires, and some land units were slow to develop the required plans.

During the early 1990's, both the Forest Service and Interior emphasized prescribed fire as the tool of choice in reducing the accumulation of hazardous fuels. As recently as in its fiscal year 1997 budget justification, Interior made no mention of other methods to reduce accumulated hazardous fuels, such as thinning dense stands of trees and mechanically removing underbrush. However, in the past several years, land managers have increasingly recognized that in many areas, the volume of accumulated fuels has increased to the point that thinning and mechanical treatments must be used before fire can be reintroduced into the ecosystems.

THE FOREST SERVICE AND INTERIOR MUST DEVELOP A FRAMEWORK TO SPEND EFFECTIVELY AND TO ACCOUNT ADEQUATELY FOR WHAT THEY ACCOMPLISH WITH FUNDS APPROPRIATED TO REDUCE HAZARDOUS FUELS

An aggressive campaign to reduce accumulated fuels will require money. However, before this fire season, neither the administration nor the Congress assigned a high funding priority to reducing the threat of catastrophic wildfires. Both the Congress and the administration are now prepared to fund an aggressive campaign to reduce hazardous fuels. It is, therefore, imperative that the Forest Service and Interior act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds.

A LACK OF FUNDS HAS BEEN A LIMITING FACTOR

For a number of years, both the Congress and the administration have been aware of the increasingly grave risk of catastrophic wildfires as well as the need to aggressively reduce hazardous fuels. However, until recently, neither had assigned a high funding priority to reducing the threat.

In a 1994 report, the National Commission on Wildfire Disasters stated that:

"The vegetative conditions that have resulted from past management policies have created a fire environment so disaster-prone in many areas that it will periodically and tragically overwhelm our best efforts at fire prevention and suppression. The resulting loss of life and property, damage to natural resources, and enormous costs to the public treasury, are preventable. If the warning in this report is not heeded, and preventative actions are not aggressively pursued, the costs will, in our opinion, continue to escalate."³

The Commission observed that: "The question is no longer if policymakers will face disastrous wildfires and their enormous costs, but when." To mitigate this risk, the Commission recommended, among other things, that Federal land management policies, programs, and budgets place a high priority on reducing hazardous fuels in high-risk wildland ecosystems "for at least a decade or more."

Similarly, in 1995, the administration undertook a comprehensive interagency review of wildland fire policy. On the basis of the review, which was summarized in a 1995 statement,⁴ the Departments of Agriculture and the Interior predicted serious and potentially permanent environmental destruction and loss of private and public resource values from large wildfires.

In April 1999, we reported that 39 million acres on national forests in the interior West are at high risk of catastrophic wildfire and that the cost to the Forest Service to reduce fuels on these lands could be as much as \$12 billion over the next 15 years, or an average of about \$725 million annually. We observed that this was more than 10 times the \$65 million appropriated for reducing fuels in fiscal year

³ Report of the National Commission on Wildfire Disasters (1994). The Commission was established on May 9, 1990, by the Wildfire Disaster Recovery Act of 1989 (P.L. 101-286).

⁴ Federal Wildland Fire Management Policy and Program Review, Department of the Interior and Forest Service, Department of Agriculture (Washington, D.C.: 1995).

1999, and that the agency, contrary to its earlier plans, had requested the same amount for fiscal year 2000. We also observed that funding to address the increasingly grave risk of catastrophic wildfires may be too little too late.

In December 1999, the Forest Service estimated that it would need up to \$825 million a year and almost \$12 billion over 15 years to reduce fuels on 40 million acres nationwide.⁵ However, the agency's fiscal year 2001 budget justification, submitted to the Congress 2 months later, requested \$75 million.

Interior has not, to our knowledge, developed similar cost estimates. However, the Department spent about \$34 million in both fiscal years 1999 and 2000 to reduce hazardous fuels. It requested \$52 million for these activities in fiscal year 2001, even though, according to Interior, more than half of the 95 million acres of Federal wildlands identified as requiring periodic burning or other fuel treatment are on lands managed by the Department.

THE CONGRESS AND THE ADMINISTRATION AGREE THAT FUNDS SHOULD BE INCREASED
TO REDUCE HAZARDOUS FUELS

The Congress and the administration now agree that money should be made available to begin an aggressive campaign to reduce hazardous fuels. The Congress is considering appropriating an additional \$240 million—about \$120 million to both the Forest Service and Interior—in fiscal year 2001 to reduce hazardous fuels in high-risk wildland-urban interfaces. Similarly, for fiscal year 2001, the administration is now requesting an additional \$115 million for the Forest Service and an additional \$142 million for Interior.⁶ Thus, between \$367 million and \$395 million may be available in fiscal year 2001 to reduce hazardous fuels. Moreover, the Forest Service estimates that up to an additional \$325 million a year could be made available from within its existing budget to fund hazardous fuels reduction activities and research.

ACCOUNTABILITY MUST NOW BECOME A PRIORITY

With the Congress and the administration now prepared to double or triple the Forest Service's and Interior's funding for reducing hazardous fuels and with up to five times the current fiscal year's appropriation already available from within the Forest Service's existing budget for these activities and related research, we believe that the Forest Service and Interior must act quickly to develop a framework to spend effectively and to account accurately for what they accomplish with the funds.

For example, according to the Forest Service, priority for treatments to reduce hazardous fuels should be given to areas where the risk of catastrophic wildfires is the greatest to communities, watersheds, ecosystems, or species. However, currently neither the Forest Service nor Interior knows how many communities, watersheds, ecosystems, and species are at high risk of catastrophic wildfire, where they are located, or what it will cost to lower this risk. Therefore, they cannot prioritize them for treatment or inform the Congress about how many will remain at high risk after the appropriated funds are expended. According to the report on managing the impact of wildfires released by the administration last Friday, regional and local inter-agency teams will be assigned the responsibility for identifying communities that are most at risk.

Moreover, rather than allocating funds to the highest-risk areas, the Forest Service allocates funds for hazardous fuels reduction to its field offices on the basis of the number of acres treated. Thus, the agency's field offices have an incentive to focus on the easiest and least costly areas, rather than on those that present the highest risks but are often costlier to treat, including especially the wildland-urban interfaces. Similarly, both the Forest Service and Interior use the number of acres treated to measure and report to the Congress their progress in reducing the threat of catastrophic wildfires. For instance, they report that they have increased the number of acres treated to reduce hazardous fuels from fewer than 500,000 acres in fiscal year 1994 to more than 2.4 million acres in fiscal year 2000. However, they cannot identify how many of these acres are within areas at high risk of long-term damage from wildfire.

The Forest Service and Interior note that reducing the threat to communities, watersheds, ecosystems, and species can often take years and that annual measures of progress must, therefore, focus on actions taken. We agree, but believe that they

⁵Protecting People and Sustaining Resources in Fire-Adapted Ecosystems: A Cohesive Strategy (Draft), Forest Service (Dec. 1999).

⁶Managing the Impact of Wildfires on Communities and the Environment: A Report to the President in Response to the Wildfires of 2000, U.S. Departments of Agriculture and the Interior (Sept. 8, 2000).

must be able to show the Congress and the American public that these actions, such as the number of acres treated, occur within the highest-priority areas. Furthermore, over time, they should be able to show reductions in areas at high risk of long-term damage from wildfire.

Finally, although we have not examined this issue as thoroughly at Interior, our work to date at the Forest Service has shown that, over time, the link between how the Congress appropriates funds and how the agency spends them has weakened as the Forest Service's field offices have been required to address issues and problems—such as hazardous fuels reduction—that are not aligned with its budget and organizational structures. Forest Service field offices must now combine projects and activities from multiple programs and funding from multiple sources to accomplish goals and objectives related to reducing hazardous fuels. We have observed that the agency could better ensure that the up to \$325 million a year that may already be available from within its existing budget to fund hazardous fuels reduction activities and research will be used for these purposes by replacing its organizational and budget structures with ones that are better linked to the way that work is routinely accomplished on the national forests. We have also observed that the Forest Service's research division and state and private programs should be better linked to the national forests to more effectively address hazardous fuels reduction as well as other stewardship issues that do not recognize the forests' administrative boundaries.⁷ However, according to the Forest Service, it has no plan to replace its program structure with one that is better linked to the way that work is routinely accomplished on the national forests.

In closing, we are faced with a pay-me-now or pay-me-later situation in which paying me now is likely the more cost-effective alternative. However, restoring fire-adapted ecosystems and protecting the communities that have developed alongside and in these ecosystems will require that the resources for reducing the threat of catastrophic wildfires be well spent. To do so will require that the Forest Service and Interior clearly identify not only how they spend funds appropriated to reduce hazardous fuels but also what they accomplish with these funds.

Mr. Chairman, this concludes my formal statement. I will be pleased to respond to any questions that you or other Members of the Committee may have.

APPENDIX I.—RELEVANT GAO REPORTS AND TESTIMONIES ON REDUCING HAZARDOUS
FUELS ON FEDERAL LANDS

- Federal Fire Management: Limited Progress in Restarting the Prescribed Fire Program (GAO/RCED-91-42, Dec. 5, 1990).
- Western National Forests: Catastrophic Wildfires Threaten Resources and Communities (GAO/T-RCED-98-273, Sept. 28, 1998).
- Western National Forests: Nearby Communities Are Increasingly Threatened by Catastrophic Wildfires (GAO/T-RCED-99-79, Feb. 9, 1999).
- Western National Forests: A Cohesive Strategy Is Needed to Address Catastrophic Wildfire Threats (GAO/RCED-99-65, Apr. 2, 1999).
- Western National Forests: Status of Forest Service's Efforts to Reduce Catastrophic Wildfire Threats (GAO/T-RCED-99-241, June 29, 1999).
- Fire Management: Lessons Learned From the Cerro Grande (Los Alamos) Fire (GAO/T-RCED-00-257, July 27, 2000).
- Fire Management: Lessons Learned From the Cerro Grande (Los Alamos) Fire and Actions Needed to Reduce Fire Risks (GAO/T-RCED-00-273, Aug. 14, 2000).

Chairman RADANOVICH. Before we begin our next presentation, you might note that we have two bells, that there is a vote call going on. We will go ahead and go to the next presentation. If it is a little bit long, Mr. Phillips, I may need to cut you off, if that is OK. Then we will recess quickly. We will run off and vote and be back here and start up shortly after.

Chairman RADANOVICH. Our next speaker is Mr. Randle Phillips, who is the Deputy Chief for Programs and Legislation for the United States Forest Service. I believe we have met before under similar circumstances, Randle. Welcome to the hearing and please begin.

⁷ Forest Service: Actions Needed for the Agency to Become More Accountable for Its Performance (GAO/T-RCED-00-236, June 29, 2000).

STATEMENT OF RANDLE PHILLIPS, DEPUTY CHIEF FOR PROGRAMS AND LEGISLATION, UNITED STATES FOREST SERVICE

Mr. PHILLIPS. Thank you, Mr. Chairman. I want to thank you for the opportunity to speak today concerning the wildland fire situation and the GAO report on the need to develop a strategy to address these catastrophic threats. I will briefly summarize my testimony and ask that my full text be submitted for the record.

Mr. Chairman, this fire season is one of the worst in recent memory, and it is not over yet. Fire has burned, as previous people have said, more than 6 million acres not of just Federal land, but also State, tribal and private lands. The Forest Service to date has spent over 650 million in its attempt to contain these fires and prevent loss of life, property, and protect critical natural resources. Forest Service firefighters and their interagency partners, including volunteer fire departments, have done an outstanding job in very difficult situations. So far this year, they have put out 76,000 fires.

This year's fires also reflect a long-term disruption in the natural fire cycle that has increased the risk of catastrophic fires in our forests and grasslands. During the last century, the fires have been aggressively extinguished in the West. As a result, the annual acreage consumed by wildfires in the lower 48 States have dropped from 40 to 50 million acres a year in the early 1930's, to about 5 million acres in the 1970's.

Now, while the policy of aggressive fire suppression has successfully protected homes and forests for the most part during the last century, it has also inadvertently prevented fires from naturally clearing out brush, shrubs, and downed material that can fuel fires and make them hotter and more difficult to control. Invasive species such as cheatgrass, which is pervasive on today's western landscape, have also caused problems. It grows earlier, quicker, higher than native grasses; then dies, dries out, and becomes fuel for fires.

Decades of aggressive fire suppression have drastically changed the look, fire behavior, and ecological condition of western forests and rangelands and, ironically, increased the costs and difficulty of suppressing those wildfires when they occur.

In addition to the unnatural fuel buildup developing in our forest and rangelands, wildland firefighting has become more complex in the last 2 decades because of drastic increases in the West's population. Of the 10 fastest growing States in the United States, 8 are in the interior West. As a result, new development is occurring in fire-prone areas often adjacent to Federal land, creating a wildland/urban interface situation. Wildland firefighters today are often spending a great deal of more time in an effort to protect these structures than in earlier years.

The Forest Service and its interagency partners have increased their efforts to reduce risk associated with the buildup of brush, shrubs, small trees, and other fuels in the forest with a variety of approaches including controlled burns, the physical removal of undergrowth, and the prevention and eradication of invasive plants.

In 1994 the Forest Service was treating approximately 385,000 acres across the United States. Today we have successfully in-

creased that annual treatment almost fourfold. Last year we treated about 1.4 million acres of hazardous fuels.

The GAO report of April 1999 indicated, as has been stated, the most extensive and serious problem related to the health of national forests in the interior West is overaccumulation of vegetation. Regional forester for the Rocky Mountain Region, Lyle Laverty, lead a team that developed a draft report known as the Cohesive Strategy to Respond to Concerns Raised by GAO. The report is a strategic blueprint that utilizes national data to assess the problem of fuel buildup across the West. But it will be up to regional and local Forest Service leadership to collaborate with the public and use the best science to decide the most effective strategies in the context of determining the right balance of management among all the resources.

I think it is important to realize also the first round of forestland management plans that occurred in the early 1980's did not include fuel management strategies, with the exception of some of the southern forests, because the overall national policy at that time was still to extinguish all fires at all costs.

Now, during his trip to visit fires in Idaho on August 9, the President requested reports from the Secretaries of Agriculture and Interior, outlining the agencies' plans for immediate and short-term activities that will help rehabilitate burned areas and assist the rural communities to recover from the impact of fire.

The President's report covers five major areas: continuing to make the necessary firefighting resources available to protect communities and forests as the fire season continues; restoring landscapes and rebuilding communities impacted by the fires; investing in projects to reduce fire risk; working directly with communities to increase local firefighting capacity and reduce fire hazards; and being accountable through the creation of a Cabinet-level coordinating team.

The President's report builds on many actions that we have already undertaken and that were outlined in the draft cohesive strategy. However, given the magnitude of the fire season and its effects, there is clearly a need for additional action and resources that would otherwise, then, be possible within our baseline programs. Burned area emergency teams are already mobilizing and conducting preliminary assessments and projects needed to prevent further loss of life, property, and resources.

The recommendations in the President's report would also expand our efforts working with the National Association of State Foresters, National Fire Protection Association, and local firefighting organizations to help ensure that home protection capabilities are improved. Our FIREWISE program has been very successful in helping homeowners and communities reduce damage to their homes.

The President's report recommends increased resources to continue making progress in reducing fuels, particularly in the wildland/urban interface areas. The recommendations are entirely consistent with our draft Cohesive Strategy for Hazardous Fuels Reduction.

In the area of accountability, the President's report establishes a Cabinet-level coordinating team to ensure that actions recommended by the Department receive the highest priority.

Chairman RADANOVICH. Mr. Phillips, I am sorry to interrupt you. Mr. PHILLIPS. That's OK.

Chairman RADANOVICH. I want to make sure we have the full benefit of your testimony. Let's recess briefly now and then we will vote and we will continue with the conclusion of your statement.

Mr. PHILLIPS. OK.

Chairman RADANOVICH. Thank you very much. [Recess.]

Thank you very much. We are back in session and if you will please continue, Mr. Phillips, we would appreciate it. Thank you for waiting.

Mr. PHILLIPS. My pleasure.

I was going to wrap up by touching on the accountability aspect of the actions under the President's report in the draft cohesive strategy.

The President has called for a Cabinet-level coordinating team so that the Departments would receive the highest priority. And the integrated management teams in the regions that are also called for should take primary responsibility for implementing the fuels treatment, restoration, and preparedness programs.

The report to the President identifies a need for an additional \$1.57 billion per year for the Departments of the Interior and Agriculture, starting in 2001, to implement the recommendations. Increasing funding for the work that needs to be accomplished will require new investments beyond our current program capabilities.

In closing, I want to stress that it is important to recognize that as hazardous fuels in the West built up over many decades, restoring the health and resilience of these ecosystems while protecting nearby communities from the effects of catastrophic fire will take many years. Our strategic approach will be led by the Departments of Agriculture and Interior in concert with our partners and will treat areas that pose the highest risk to people, property, and natural resources. This will require working with a lot of people, will require resources and a commonsense approach to avoid needless controversy.

This concludes my statement. I will be happy to answer any questions at the appropriate time.

Chairman RADANOVICH. Thank you, Mr. Phillips.

[The prepared statement of Mr. Phillips follows:]

PREPARED STATEMENT OF RANDLE PHILLIPS, DEPUTY CHIEF, FOREST SERVICE, U.S.
DEPARTMENT OF AGRICULTURE

Mister Chairman and members of the Task Force, thank you for the opportunity to speak with you today concerning the wildland fire situation and the GAO report on the need to develop a strategy to address catastrophic wildfire threats in our western national forests. I am Randle Phillips, Deputy Chief for Programs and Legislation of the Forest Service.

I appreciate your interest in what the agency is doing with respect to catastrophic wildfire. The 2000 fire season is one of the worst in recent memory, and it is not over yet. Fire has burned over approximately 6.6 million acres of federal, State, tribal, and private land so far this year. The Forest Service has spent over \$650 million in its attempt to contain these fires and prevent loss of life and property, and protect critical natural resources. Six battalions of military have assisted our fire-fighting efforts, and specialists, equipment, and crews have been called in from several other countries to supplement our resources.

I would like to cover two major topics today:

- The GAO Report and the Forest Service's response;
- The President's request for a report strategizing restoration efforts and actions to reduce wildfire effects on communities;

Before I get into the details of these topics, I would first like to briefly discuss some of the reasons why we are in this dire situation today.

This fire season is a result of extremely hot and dry weather conditions in the west. The weather phenomenon known as La Nina, characterized by unusually cold Pacific Ocean temperatures, changed normal weather patterns when it formed 2 years ago. It caused severe, long-lasting drought across much of the country, drying out our forests and rangelands. The situation was exacerbated by the fact that the drought followed several seasons of higher-than-normal rain, which fueled the growth of grasses and other plants that quickly dried when the rains stopped. This left millions of acres susceptible to fires. To make matters worse, this weather pattern also spawned a series of mostly dry thunderstorms with heavy lightning across the West. Because of the drought conditions, lightning strikes have ignited more new fires than would normally be associated with such storms.

The current season corresponds to a historical pattern of extensive wildfires during similar unusual weather conditions. The result has been an extended, severe fire season with wildfires burning simultaneously across the western United States. Forest Service's fire fighters and their interagency partners have done an outstanding job in these difficult conditions. So far this year, they have put out a remarkable 76,000 fires.

This year's fires also reflect a longer-term disruption in the natural fire cycle that has increased the risk of catastrophic fires in our forests and rangelands. During the last century, fires have been aggressively extinguished in the West. As a result, the annual acreage consumed by wildfires in the lower 48 states dropped from 40 to 50 million acres a year in the early 1930's to about five million acres in the 1970's. During this time, firefighting budgets rose dramatically and firefighting budgets rose dramatically and firefighting tactics and equipment became increasingly more sophisticated and effective.

While the policy of aggressive fire suppression has successfully protected homes and forests during the last century, it has also inadvertently prevented fire from naturally cleaning out brush, shrubs, downed material, and small trees that can fuel fires making them hotter and more difficult to control. In some cases, peat management practices including timber harvesting and grazing practices may also have been a contributing factor to the loss of large, fire resistant trees and the over accumulation of brush. Invasive species such as cheatgrass, which is pervasive on today's Western landscape, have also caused problems. Cheatgrass is one of the first plants to establish after a fire, and it grows earlier, quicker, and higher than native grasses. Then it dies, dries, and becomes fuel for fires.

In short, decades of aggressive fire suppression have drastically changed the look, fire behavior, and ecological condition of western forest and rangelands and ironically increased the cost and difficulty of suppressing fires. Forests a century ago were less dense and had larger, more fire-resistant trees. For example, in northern Arizona, some lower elevation stands of ponderosa pine that once held 50 larger trees per acre, now contain 200 or more smaller trees per acre. In addition, the composition of our forests have changed from more fire-resistant tree species to nonfire resistant species such as grand fir, Douglas fir, and subalpine fir. As a result, studies show that today's wildfires, typically burn hotter, faster, and higher than those of the past.

In addition to the unnatural fuel buildup developing in our forests and rangelands, wildland firefighting has become more complex in the last two decades due to dramatic increases in the West's population. Of the ten fastest growing states in the U.S., eight are in the interior West. While the national average annual population growth is about 1 percent, the West has growth rates ranging from 2.5 to 13 percent. As a result, new development is occurring in fire-prone areas, often adjacent to Federal land, creating a "wildland-urban interface"—an area where structures and other human development meet or intermingle with undeveloped wildland. This relatively new phenomenon means that more communities and structures are threatened wildland. This relatively new phenomenon means that more communities and structures are threatened by fire. Wildland firefighters today often spend a great deal more time and effort protecting structures than in earlier years. Consequently, firefighting has become more complicated, expensive, and dangerous.

The Forest Service and its interagency partners have increased their efforts to reduce risks associated with the buildup of brush, shrubs, small trees and other fuels in forest and rangelands through a variety of approaches, including controlled burns, the physical removal of undergrowth, and the prevention and eradication of

invasive plants. In 1994 the Forest Service was treating approximately 385,000 acres across the United States to reduce hazardous fuels. Today, we have successfully increased annual treatment almost four-fold. Last year we treated approximately 1.4 million acres. Reversing the effects of a century of aggressive fire suppression will take time and money targeted to high priority areas of protecting people, homes, critical watersheds, and wildlife habitat.

Today, high-risk areas such as the wildland/urban interface have become our high priority for treatment. There are many opportunities to treat these high priority areas to reduce fuels. Our approach, with needed new investments, focuses on protecting communities at risk from unnaturally intense fires by removing small, generally noncommercial fuels through a combination of thinning, prescribed fire, and working with landowners to reduce fuel buildups and other hazardous conditions on their own property.

The work anticipated to address fuels reduction and other needs associated with the President's Report would be done under all existing environmental laws. Full public involvement will be done, with collaboration between the agency, cooperators, and with the public.

At the request of the New Mexico delegation, we recently outlined our approach for reducing fire risks by removing small-diameter trees and nonmerchantable material in the wildland/urban interface. I would like to submit for the record Chief Dombeck's May 23, 2000, letter to the New Mexico delegation.

THE GAO REPORT AND THE FOREST SERVICES RESPONSE

The General Accounting Office (GAO) issued a report in April, 1999, titled: Western National Forests: a Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats (GAO/RCED-99-65). The GAO asserted, "The most extensive and serious problem related to the health of national forests in the interior west is the over-accumulation of vegetation."

Regional Forester Lyle Laverty led a team that has developed a draft report, known as the cohesive strategy, to respond to the concerns raised by GAO. The report is not operational in nature, but rather is a strategic blueprint that utilizes coarse-scale national data to assess the problem of fuel buildup across the west.

In addition to this data, the draft report calls on the agency to consider fire management strategies that would be consistent with current forest plans or within the context of revising or amending forest management plans. The strategies mentioned in the report that may be useful for the agency to consider are those that remove brush, small trees, and other fuels through mechanical methods or controlled burning or a combination of both. It will be up to regional and local Forest Service leadership to collaborate with the public and use the best science to decide the most effective fire strategies in the context of determining the right balance of management among all of the resources within ecosystems. Two examples of this already happening are the planning efforts underway for the Sierra Nevada Mountains and the Interior Columbia River Basin.

With regard to implementation, it is important to realize that the first round of forest management plans that were written in the 1980's did not include fire management strategies, with the exception of some of our southern forests, because the overall national policy was still "extinguish all fires at all costs." Therefore, many innovative approaches to reduce fuels in forests and near communities are stymied by these outdated forest plans. However, the opportunity to change these plans has never been better. As required by law, the agency is presently revising or has plans to revise most of its 150 or more forest plans, a process that will take most of the next 5 years or more to complete. As Congress discusses the amount of money to be made available for fuel treatment, it must also consider the money needed to revise and amend forest plans. Innovative projects to fire proof communities and forests must be supported and in compliance with innovative forest plans.

In the past year, we have also issued reports addressing large fire costs and workforce capacity and configuration. Teams are in place to begin implementing the recommendations of these reports. As you can see, we have been working on many fronts to deal with fire management issues.

THE PRESIDENT'S REQUEST FOR A REPORT OUTLINING RESTORATION EFFORTS AND ACTIONS THE AGENCIES CAN TAKE TO REDUCE WILDFIRE EFFECTS ON COMMUNITIES

During his trip to visit fires in Idaho on August 9, 2000, the President requested a report from the Secretaries of the Interior and Agriculture outlining the agencies' plans for immediate and short-term activities that will help rehabilitate burned areas and assist rural communities to recover from the impacts of fires. In addition, the President asked us to develop actions to help protect communities and natural

resources from the risk of future unnaturally intense fires. The Secretaries have completed the report and the President has accepted the report (hereafter referred to as the President's Report) and its recommendations. I would like to share the major findings and points made in the President's Report with you today.

The President's Report covers five major areas:

- Continuing to make all necessary firefighting resources available to protect communities and forests as the fire season continues;
- Restoring landscapes and rebuild communities and landscapes impacted by the fires;
- Investing in projects to reduce fire risk by removing brush, shrubs, and small trees;
- Working directly with communities to increase local firefighting capacity and reduce fire hazards, and;
- Being accountable through creation of a cabinet-level coordinating team.

The President's Report builds on many of the actions that we are already taking. However, given the magnitude of the fire season and its effects, there is clearly a need for additional action and resources than would otherwise be possible within our baseline programs.

CONTINUING TO MAKE ALL NECESSARY FIREFIGHTING RESOURCES AVAILABLE

The President's Report's recommendations reinforce the need to have additional initial attack and extended attack resources. It also reinforces the need to address firefighter pay equity issues. As a first priority, the Departments will continue to provide all necessary resources to ensure that firefighting efforts protect life and property.

RESTORING LANDSCAPES AND REBUILDING COMMUNITIES

Burned area emergency rehabilitation teams are already mobilized and conducting preliminary assessments and rehabilitation projects needed to help prevent further loss of life, property, and resources from the first damage-producing storms that may cause excessive erosion, water quality degradation, and other damage from burned areas. In addition to this work, we will invest in landscape restoration efforts such as tree planting, watershed restoration, and soil stabilization and revegetation.

The recommendations in the President's report would also expand our efforts working with the National Association of State Foresters, the National Fire Protection Association, and local firefighting organizations to help ensure that home protection capabilities are improved and to educate homeowners in fire-sensitive ecosystems about the consequences of wildfires and techniques in community planning, homebuilding, and landscaping to protect themselves and their property. Our FIREWISE program has been very successful in helping homeowners and communities reduce damage to their houses.

INVESTING IN PROJECTS TO REDUCE FIRE RISK BY REMOVING BRUSH, SHRUBS, AND SMALL TREES

As stated earlier, we are steadily increasing our capacity to reduce hazardous fuels and are focusing these efforts on the wildland/urban interface, but the scale of the problem is beyond our current means. The President's Report recommends increased resources to continue making progress in reducing fuels, particularly in the wildland/urban interface areas. The recommendations are entirely consistent with our draft cohesive strategy for hazardous fuels reduction.

WORKING DIRECTLY WITH COMMUNITIES TO INCREASE LOCAL FIREFIGHTING CAPACITY AND REDUCE FIRE HAZARDS

Working with local communities is a critical element in restoring damaged landscapes and reducing fire hazards near homes and communities. This will be pursued through expanding community participation, increasing local capacity, and learning from the public.

BEING ACCOUNTABLE THROUGH CREATION OF A CABINET-LEVEL COORDINATING TEAM

The President's Report establishes a Cabinet-level coordinating team to ensure that the actions recommended by the Departments receive the highest priority. The Secretaries of Agriculture and the Interior will cochair this team, and integrated management teams in the regions should take primary responsibility for implementing the fuels treatment, restoration, and preparedness programs.

FUNDING AND BUDGET ISSUES

The report to the President identifies a need for an additional \$1.57 billion per year for the Departments of Interior and Agriculture starting in FY 2001 to implement the recommendations. This funding will be used for fire preparedness, fire operations, State and volunteer fire assistance, forest health management, and economic action programs related to accomplishment of the report's recommendations.

Increasing funding for the work that needs to be accomplished will require new investments. Congress and the Administration must work together to address this issue in order to help the agencies achieve this important goal of reducing the threat of catastrophic wildfire across the landscape and implement an effective recovery and rehabilitation program.

SUMMARY

The Forest Service and other Federal agencies with firefighting responsibilities are committed to minimizing the losses from future unnaturally intense fires such as those in New Mexico, Idaho, Montana, and across the interior West. The Forest Service is committed to working with communities to implement a strategy to restore and maintain healthy ecosystems on National Forest System lands. That means reducing hazardous fuels, while ensuring cautious and consistent protocols in any use of prescribed fire.

We will continue to provide the national leadership and to work with our federal, State, and local firefighting cooperators, and Congress to ensure that the Federal firefighting agencies and their cooperators have the resources needed to assist in educating home and land owners about fire risks, fire risk reduction strategies, and to protect the public, property, and resources when fires occur.

As I have stated before, it is also essential to recognize that hazardous fuels build-ups in the West occurred over many decades. Restoring the health and resilience of these ecosystems while protecting nearby communities from the effects of catastrophic fire will take many years. That reality, however, is no excuse for inaction. Our strategic approach, which will be led by the Departments of Agriculture and the Interior, will treat areas that pose the highest risk to people, property, and natural resources, and to do so in the most expeditious manner possible. This will require partnerships, resources, and common sense approaches that avoid needless controversy.

This concludes my statement. I would be happy to answer any questions you or the members of your Task Force might have.

Chairman RADANOVICH. Next up is Robert H. Nelson, who is the Senior Fellow in Environmental Studies with the Competitive Enterprise Institute and a professor of environmental policy at the School of Public Affairs at the University of Maryland.

Mr. Nelson, welcome and we look forward to your testimony. Please begin.

STATEMENT OF ROBERT H. NELSON, SENIOR FELLOW IN ENVIRONMENTAL STUDIES, THE COMPETITIVE ENTERPRISE INSTITUTE, PROFESSOR OF ENVIRONMENTAL POLICY, SCHOOL OF PUBLIC AFFAIRS, UNIVERSITY OF MARYLAND

Mr. NELSON. I am pleased to be here. I might also add that I worked from 1975 to 1993 in the Office of Policy Analysis, Office of Secretary of the Interior, so that is part of my background on this subject.

The principle conclusions are summarized in seven points which I will go over quickly. The first is that the forest fires of 2000 have shown the need to rethink some of the basic assumptions of Federal land management. Forest fire is partly an accident of the weather and other circumstances. It is also subject to extensive human influence. A forest can be managed to be much more or less susceptible to catastrophic fire. The management decisions made over many decades left the national forest in a tinderbox condition. So there were many administrations that were responsible. This in-

cluded many decades of suppression of fire. And then in the decade of the 1990's, far too little was done to redress the dangers created in the previous decades. All this failure calls for a broad review of the Federal forest management regime which created such unacceptable results over such a sustained period.

The problems of wildfires in the West this year to some extent are illustrative of broader problems of the Forest Service. Its land use planning system, by wide agreement, does not work well. The General Accounting Office has studied the decision-making process of the Forest Service on a general basis and described it as "broken." A state of gridlock is the normal characterization of the current Forest Service situation.

I think Congress itself can share in some of the blame for these broader problems, because it itself has been gridlocked in attempts to resolve some of the land use planning problems and to change some of the basic statutory framework for the Forest Service, despite abundant evidence that these problems exist.

Point number two is that actions are urgently needed to reduce excess fuel loads in order to restore the national forests and other western Federal forests to a healthier and less fire-prone condition. Since at least the early 1990's, various expert groups have been warning that excess fuel levels were building up on western forests, posing the risk of widespread catastrophic fire. Such warnings have been issued by the National Commission on Wildfire Disasters, the Forest Service, the Secretaries of Agriculture and Interior in a 1995 report, and the General Accounting Office in 1998 and 1999.

There was some, but nowhere near enough, response of the Federal forest agencies in comparison with the magnitude of the problem. They in effect gambled with the lives and property of the West. You might say they were hoping for good weather and low winds and lost the gamble in the summer of 2000.

We now at this point need a large-scale program of fuels reduction. Not all the acreage is going to require action, but the upper limit of activity involves 50 million acres in the worst condition, and another 50 million or so forest acres which are in deteriorating condition and which face abnormal fire-prone conditions.

Point three: States and local communities should take the lead in developing plans for reducing fire hazards in their vicinity, including Federal forests. Basic social values will be involved in resolving the best management strategy. Prescribed burning will require that nearby residents and property owners put up with smoke and possible health hazards and take the risk that the fire might get out of control, potentially even threatening their lives. Mechanical thinning will require a willingness to cut large numbers of trees on national forestlands, a position that has been anathema to many vocal environmental groups in recent years. Doing nothing may involve the fewest immediate costs but will pose the risk that the whole forest might burn up in a catastrophic fire.

We also have the problem that various studies and experiments have been conducted, but there are many large technical and ecological uncertainties that remain with respect to fuels reduction. The same treatment methods that work in one place may yield much different results in another place.

For many years the track record of the Forest Service has been to overstate the degree of scientific knowledge and then to seek to impose common answers from a national level in the service of a fictitious scientific consensus; the most recent example has been the emphasis on prescribed burning and resistance to mechanic thinning which dominated the response of the 1990's.

It is a time for a new approach and a new era. This will mean much more real decentralization of authority and much less unilateral assertion of Federal authority. It will be a continuation of existing trends already seen in the 1990's.

The watershed movement represents an important effort to decentralize. A 1996 report by the Colorado Law School documented and studied closely the role of 76 watershed groups that had formed to seek solutions to common problems at the local level. More of that will be needed.

Point four: The Forest Service should be directed to publish full forest fire risk assessments for each community in close proximity to a Federal forest, giving estimates of the likelihood of various fire outcomes within specified time frames. If communities are going to take the lead in developing fire and fuels management plans, they need to have better information. That is a role that the Forest Service can very effectively play, to provide that kind of information.

Point five: The cost of the fuels reduction program can be substantially held down by selling commercially marketable wood and other products resulting from fuels reduction efforts. A program of government-subsidized thinning, costing hundred of millions of dollars and at Federal taxpayer expense, is not needed. Contrary to a wide impression, the total volumes of wood on the national forest have been increasing steadily for many years. The composition of the national forests, however, has shifted radically to small-diameter and, thus, lower-quality trees. At present, these small-diameter trees have a limited commercial market. This can be a short-term situation, however. The demand for wood and paper in the United States continues to grow unabated. There has been a steadily growing use by the timber industry of low-quality trees across the United States.

The national forests now contain large supplies of this kind of lower-quality wood that can be used to meet the needs of the timber industry and can be sold even for positive revenue at a gain to the Federal treasury.

A large new program of selling small-diameter trees on a much larger scale can be a win-win situation, economically it saves the government money, helps the economy of small communities in the West, and environmentally reduces fuel loads, cuts the risk of fire, and saves the ecological harms that often result from current fires.

It will be necessary, however, to provide some certainty of future supply for mill operators and others involved in the utilization of low-diameter trees that does not exist at present. No one can be expected to invest money in a new small-diameter mill in the West that may take 10 years to earn a fair return when the supply of small-diameter trees from the national forests, where the largest concentrations exist, could dry up at any time under current

confrontational land use planning and other working arrangements on the national forests.

Congress needs to act in this area, because existing law will not allow the existing security of supply to provide the right incentives to get private sector behavior.

Point number six: I believe a cost-sharing formula should be implemented in conjunction with the much larger role of State and local governments, wherein the Federal Government shares the burdens of fuel reduction programs with participating State and local governments. Cost-sharing has many benefits and it is used in many Federal programs. It provides an incentive for States and local governments to seek cost solutions, and in many cases they are the ones who have the real authorities, such as zoning and so forth, that are necessary to managing these fire dangers.

And point number seven and the final point: Prompt action to reduce excess fuels on national forests will require limits on the existing ability of many parties to national forest decision-making to exercise in effect a unilateral veto power over future management actions. Because of all the appeals processes and procedural hurdles that now exist, the current system is in effect strongly biased in favor of those who favor a no-action alternative. It is possible for a group of concerned parties to discuss forest management options, develop a fuels reduction plan that has wide community support, and yet any one of those parties at the end of process can have the ability to prevent its implementation. It is an impossible situation for workable achievement of rapid response to a problem such as we are seeing now with western fires.

I believe that if Congress wants to see any action soon to address the problems of western national forests, it will have to confront this problem as well. And so, as I said at another point in my testimony, I think that Congress in various policy areas has to resolve certain disagreements within its own body, as well as the Forest Service taking much more effective action than they have in the past. But their problems are partly problems that have been forced on them by congressional inaction.

That concludes my testimony.

Chairman RADANOVICH. Thank you, Mr. Nelson.

[The prepared statement of Mr. Nelson follows:]

PREPARED STATEMENT OF ROBERT H. NELSON, SENIOR FELLOW IN ENVIRONMENTAL STUDIES, THE COMPETITIVE ENTERPRISE INSTITUTE, PROFESSOR OF ENVIRONMENTAL POLICY, SCHOOL OF PUBLIC AFFAIRS, UNIVERSITY OF MARYLAND

My name is Robert H. Nelson. I am a Professor of Environmental Policy at the School of Public Affairs of the University of Maryland and a Senior Fellow of the Competitive Enterprise Institute. From 1975 to 1993, I worked in the Office of Policy Analysis in the Department of the Interior. This office is the principal policy office serving the Secretary of the Interior. I served on assignment as the senior economist of the Commission on Fair Market Value Policy for Federal Coal Leasing (1983–1984), as research manager for the President's Commission on Privatization (1988), and as economist of the Senate Select Committee on Indian Affairs (1991). I am the author of three books on public land management, *The Making of Federal Coal Policy* (Duke University Press, 1983), *Public Lands and Private Rights: The Failure of Scientific Management* (Rowman & Littlefield, 1995) and *A Burning Issue: A Case for Abolishing the U.S. Forest Service* (Rowman & Littlefield, 2000). I received a Ph.D. in economics from Princeton University in 1971.

The principal conclusions of my testimony can be summarized as follows.

1. The forest fires of 2000 have shown the need to rethink basic assumptions of Federal land management.

2. Actions are urgently needed to reduce excess fuel loads in order to restore the national forests and other western Federal forests to a healthier and less fire-prone condition.

3. States and local communities should take the lead in developing plans for reducing fire hazards in their vicinity, including Federal forests. They should work in conjunction with the Federal land agencies, environmental groups, the timber industry and other elements of "civil society."

4. The Forest Service, Bureau of Land Management and other parts of the Federal Government should serve primarily to facilitate discussion, to provide information and other technical assistance, and to handle administrative implementation of resulting fuels reduction plans on their own lands.

5. The Forest Service should be directed to publish full forest fire risk assessments for each community in close proximity to a Federal forest, giving estimates of the likelihood of various forest fire outcomes within certain specified timeframes.

6. The costs of the fuels reduction program can be limited by taking steps to facilitate the sale of commercially marketable wood and other products resulting from fuels reduction efforts. A program of thinning costing hundreds of millions of dollars at Federal taxpayer expense is not needed.

7. A cost-sharing formula should be implemented whereby the Federal Government does share any public burdens of excess fuels reduction with participating state and local governments.

8. Prompt action to reduce excess fuels on Federal forests will require limits on the existing ability of many parties to national forest decision making to exercise a unilateral veto power over future management actions.

I will address each of these six points in turn.

RETHINKING FEDERAL LAND MANAGEMENT

Almost a century of fire suppression on the national forests and other western forests has led to a build-up of large loads of trees and wood. Suppressing fire paradoxically results in an increase in fuel loads in the future and increasing fire hazards. Since the 1970's, the extent of wildland fires in the West has been growing and these fires have been less controllable; have burned at higher temperatures; have been more likely to be crown fires; and have often occurred outside the range of previous wildland fire experience. The economic losses have included destruction of homes and other structures, soaring Federal expenditures for fire fighting, loss of tourism, loss of potentially harvestable wood, and other costs. Catastrophic wildfires have also caused sterilization of the soil, excess siltation and runoff into streams, destruction of remaining large trees, loss of biodiversity and other environmental damages.

These trends culminated in the fire season of 2000. Thus far, more than 6.5 million acres (about equal to the land area of the State of Maryland) have burned, more than twice the normal amount for this time of year. At least 1,000 homes have been destroyed. Fire fighting costs to the Federal Government will very likely exceed \$1 billion in 2000. The State government of Montana was forced to limit recreational access to forests covering one quarter of the area of Montana. The environmental costs are more difficult to quantify but they are large and will be visible in the years to come.

Forest fire is partly an accident of the weather and other circumstances; it is also subject to human influence. A forest can be managed to be more or less susceptible to catastrophic fire. The management decisions made over many decades of the 20th century left the national forests in a tinderbox condition. Such a management failure—sustained over many decades, and including the 1990's when much too little was done to redress the dangers created by suppression in previous decades—call for a broad review of the Federal forest management regime which created such unacceptable results over such a sustained period.

Early on, the general policy of fire suppression was initially resisted by many local communities but was forced on them by a Forest Service determined to implement a single vision of "correct" forest management. This reflected the ethos of "scientific management" in which the Forest Service was conceived in 1905 and the normal expectation in science that there is a one "right answer." In the 1990's, following the more recent recognition that fuel loads had built up to very dangerous levels on the forests, there was again an attempt to formulate a single correct policy extending over the national forest system. The Forest Service determined that prescribed burning was the superior method—more "natural"—of reducing fuel loads on the national forests. The level of prescribed burns on the national forests rose by a factor of three or four from 1994 to 1999 (although still small relative to the overall acreage of fire prone forest). Although many communities and expert groups out-

side the Forest Service strongly advocated the use of mechanical thinning of the national forests as well to reduce fuel loads, very little thinning took place.

The track record of the Forest Service shows that its “scientific” determinations are often influenced by intellectual fads, political pressures and other nonscientific elements. Where the science is incomplete and the knowledge base weak, the agency has often sought to make stronger claims for scientific knowledge than were justifiable. The experience and record of forest fire management illustrate that an approach of trial and error will have to play a larger role in the future than has been the traditional Forest Service understanding of “scientific management.”

Recent theorists of “adaptive management” have called for much greater flexibility in natural resource management. It will be difficult or impossible to apply forms of adaptive management to address forest fire concerns without significant decentralization of authority and other basic changes in the institutional arrangements for Forest Service management of the national forests.

EXCESS FUEL LOADS MUST BE REDUCED

Since at least the early 1990’s, as shown in Figure 1, various expert groups have been warning that excess fuel levels were building up on western forests, posing the risk of widespread catastrophic fire. Such warnings have been issued by the National Commission on Wildfire Disasters (1994); the Forest Service itself (1995); the Secretaries of Agriculture and Interior (in a joint 1995 report); and the General Accounting Office (1998 and 1999). There was little response of the Federal forest agencies in comparison with the magnitude of the problem. The predictions of impending catastrophic fire have been realized in the 2000 fire season—and in 1994 and 1996 devastating fires had already raged across large areas of the West.

In February 2000 the Forest Service published the first reliable data on the extent of the forest health problems and the excess fuels buildup on the national forests. As shown below, 28 percent of the forested lands in the national forest system are rated as very unhealthy and fire prone—characterized by large numbers of smaller trees outside the historic range of variability, and representing a large fuel load buildup. In total the national forests include 169 million acres of forested land. The total area of national forest land posing the largest fire risk thus equals 47 million acres. Lands in deteriorating condition where excess fuel loads and fire risks are currently building up and pose an abnormal fire hazard cover another 60 million acres.

Not all of these fire prone lands will require fuels reduction treatment. Some are in remote areas where fire poses little danger to human habitation, the costs of forest treatments would be large and the environmental damages from forest fire would not be too great (or fire might be beneficial). Mechanical thinning to reduce fire risks would be illegal in formally designated wilderness areas. It would be difficult to undertake thinning in roadless areas (according to Forest Service figures, more than half of the 43 million acres recently placed under a road building moratorium are unhealthy and fire prone). Prescribed burning is limited in its applicability because of the many hurdles it faces, including the risk the fire will get out of control; air pollution concerns; administrative costs; and the necessity for the right weather conditions. Prescribed burning is not feasible at all in many national forest areas because the fuel loads are already so great that any fire would soon become a large conflagration that might well spread rapidly to other forests.

TABLE 1.—STATE OF FOREST HEALTH, FORESTED LANDS IN NATIONAL FOREST SYSTEM, BY U.S. FOREST SERVICE REGION

FS Region	Healthy	Deteriorating health	Very unhealthy
Region 1	20%	41%	39%
Region 2	41%	43%	15%
Region 3	15%	42%	43%
Region 4	59%	34%	7%
Region 5	24%	28%	48%
Region 6	14%	47%	39%
Region 8	70%	22%	8%
Region 9	43%	26%	31%
All FS Lands	37%	35%	28%

Source: USDA Forest Service, Rocky Mountain Research Station, Fire Sciences Laboratory, Historical Fire Regimes by Current Condition Classes (Missoula, Montana: February 15, 2000).

Note: “Healthy,” “Deteriorating Health,” and “Very Unhealthy” correspond to the Forest Service categories of “Class 1,” “Class 2,” and “Class 3” lands, respectively.

There are three options for national forest lands where excessive fuel loads pose a large forest fire risk: prescribed burning, mechanical thinning, or do nothing (and simply take the chance that no fire will break out). There is not likely to be any one answer that is universally applicable across the national forest system.

DECENTRALIZE DECISION MAKING

Basic social value choices will be involved in resolving the best management strategy to deal with existing unhealthy forests and excess fuels loads. Prescribed burning will require that nearby residents and property owners put up with smoke (and possibly attendant health hazards) and take the risk that the fire might get out of control and damage their properties or even threaten their lives. Mechanical thinning will require a willingness to cut trees on national forest lands—contrary to the positions of many vocal environmental groups in recent years. Doing nothing may involve the fewest immediate costs but will pose the risk that the whole forest might burn in a catastrophic fire.

The science of forest treatments to reduce fuel loads and fire risks is still on an early part of the learning curve. Various studies and experiments have been conducted but there are many large technical and ecological uncertainties that remain. The scientific difficulties are compounded by the site-specific character of the problem. The same forest treatment methods in one place may yield a much different forest outcome at another location. The science of ecology at present lacks the ability to make precise predictions.

For many years the track record of the Forest Service has been to overstate the degree of scientific knowledge and then to seek to impose common answers from the national level in the service of a fictitious scientific consensus. It is time for a new approach and a new era. This will mean more decentralization of authority and less unilateral assertion of Federal authority.

It will be a continuation of existing trends already seen in the 1990's. The "watershed movement" already represents an important existing effort to decentralize management in the West. In some cases it has been driven by the intermingling of state and private lands with lands of the Forest Service and other Federal agencies. No one land owner is in a position to plan and manage for the interconnections among such diverse properties, requiring the development of new collaborative mechanisms. A 1996 report by the University of Colorado Law School documented the existence of 76 watershed groups that had formed to seek solutions to common problems at the local level. The Western Water Policy Review Commission in 1998 recommended the development of new governance "mechanisms that help integrate the management of river basins and watersheds across agencies, political jurisdictions, functional programs and time."

In Southwest Colorado, the Ponderosa Pine Forest Partnership was formed in the mid 1990's to plan actions to restore forests in the area to a healthier condition and to reduce fire hazards on the national forests and adjacent state and private lands. The predominant method selected was mechanical thinning of the forests, to be followed by prescribed burning. The participants in the effort included local government, the San Juan National Forest, Fort Lewis College, the Colorado timber industry and the Colorado State Forest Service. Because of the broad participation and range of local support achieved, a mechanical thinning program was carried out on a test basis, an outcome that would probably have been impossible at the initiative of the U.S. Forest Service alone.

The effort was initiated and much of the leadership came from the Montezuma County Commission and its Federal Lands Program. Commission leaders were confronted with finding new management approaches over 250,000 acres in mixed Federal and nonfederal ownership that had been harvested for timber early in the 20th century. In the absence of fire over the course of the 20th century, these lands had now evolved into fire prone forests of small diameter, stagnated, second growth ponderosa pine. The county government decided it would be necessary to involve various other groups as well in fact finding, technical education, and discussions of fuel reduction options and the formulation of plans.

A NEW FEDERAL ROLE: FACILITATION AND ADMINISTRATIVE ASSISTANCE

The many mistakes of past Federal forest management require a new Federal modesty of aims and prescriptions. Instead of the controlling force (who may listen to others but in the end acts alone), a new Federal role is required in which the Federal Government becomes merely one participant in a larger group process of decision making. Federal officials may bring certain special capacities to the table. These may include the money to fund research and other studies, knowledge of var-

ious technical forestry subjects, and the administrative instruments and capabilities to implement elements of group decisions and plans on their own lands.

Traditionally, the Federal Government also held the final decision making authority for national forests and other Federal lands. However, in a new role the Federal Government will be constrained from acting in the absence of wider agreement. When many individual lives and property are at stake, and the economic and environmental future of the surrounding area depend so much on land management decisions, Federal land managers should not presume to possess unique decision making capabilities. This is especially the case when the existing state of forestry and ecological science at any given time may be capable of justifying a wide range of possible options.

New instruments of cooperation and governance will be necessary for the management of Federal forests. Here as well, there is no single answer. The Second Century report, the result of a collaborative study effort involving the timber industry, environmentalists and other parties, recommended in 1999 that five models be considered in reorganizing the basic framework for national forest management and decision making. All involved significant decentralization. One model involved the creation of what would amount to a public board of directors to oversee the management of individual national forests. Another model would put less emphasis on participative decision making and achieve local accountability by requiring individual national forests to charge fees and otherwise raise revenues to cover their costs. The discipline of the market would act to insure that national forest managers do in fact serve public demands. Excess fuel loads would be reduced, for example, because this action would increase long run revenues—in terms of future timber sales, recreational fee collections, hunting and fishing access charges, etc.

COMMUNITY RISK ASSESSMENTS

In the role of facilitator, a first key step will be for the Forest Service to provide communities throughout the West with more complete information on forest conditions and fire risks in their vicinity. A full “risk assessment” should be prepared and widely distributed for each community, giving the probability of different types of fires and damages over different time frames. This risk assessment should also relate risk projections to possible future changes in forest conditions that might result from management actions.

At Los Alamos, New Mexico, the Los Alamos National Laboratory in December 1999 identified “wildfire as the greatest threat to Los Alamos operations.” In mid April 2000, Diana Webb, the chair of the Los Alamos Ecology Group, told a small meeting of concerned citizens that “It’s not a matter of if but when wildfire will again threaten the Lab, Los Alamos and surrounding areas. We can’t stress this enough.” Yet, this risk information was not available in a quantitative form and not widely enough disseminated to the Los Alamos community. If more citizens had known more precisely and earlier of the real large risks to their community, they might have demanded earlier and more effective action to reduce fire risks in nearby forests. The Los Alamos fire broke out on May 4, 2000, destroying 400 homes and doing other large damage.

The Congress would need to establish a schedule with tight deadlines—perhaps first drafts by next summer, final documents by the summer of 2002—for the publication of full risk assessments for forest fire for each western community in close proximity to a Federal forest. Legally fixed deadlines are desirable because the publication of such risk assessments is bound to be a sensitive and controversial matter. Without an outside forcing action, the Forest Service or other Federal agency is likely to be taken up in a long internal discussion and debate, possibly delaying for many years any publication of results.

COMMERCIAL SALES OF SMALL-DIAMETER TREES

Contrary to a widespread impression, the total volumes of wood on the national forests have been increasing steadily for many years—the result of fire suppression acting to build up wood loads, at the same time that levels of timber harvests have been below net growth of wood each year. The composition of the national forests, however, has shifted radically. As many larger and older trees were harvested as part of the traditional timber program, and with fire suppression, western forests have increasingly been stocked by stands of small-diameter trees. In ponderosa pine forests 100 years ago, for example, there might have been 30 to 50 large old trees each three to four feet in diameter. Today, the same forest might have 300 to 500 trees—including ponderosa pine, white fir, grand fir, and lodgepole pine, among other possibilities—packed together in dense stands, most of the trees in the range of 4 to 12 inches in diameter. It is these new conditions of densely packed stands

of small-diameter trees—virtual kindling wood for fires—that create the much greater fire hazard currently being faced.

At present, the small-diameter trees have a limited commercial market. This can be a short term situation, however. The demand for wood and paper in the United States continues to grow unabated. The national forests now contain large supplies of wood fibres that can be used to meet these needs. At the same time, large reductions in the excess fuel loads of small-diameter trees in the national forests are needed to reduce fire risks and improve forest health. It can be a win-win situation economically and environmentally. With appropriate government policies, forest health can be improved, fire risks reduced, and large supplies of wood provided for home building and other purposes. Rural communities in the West—some depressed economically—can also receive a significant income and employment boost.

Much increased utilization of small-diameter trees can also bring in substantial revenue to the Federal Government. There are various suggestions being made at present for large new commitments of Federal funds for a program of thinning of overstocked western forests. This large expenditure of public money is unnecessary and undesirable. There is no need to create a new large drain on Federal revenue sources and national taxpayers—and a large accompanying bureaucratic apparatus—when small diameter trees themselves have a large commercial potential. A recent study published in August 2000 in the *Journal of Forestry* found that in southwest Colorado, for example, “forest restoration projects can achieve ecological objectives and pay for themselves.”

The potential uses of small diameter trees are numerous. Various wood products—including oriented strand board, house logs, laminated lumber, studs, excelsior products, waferboard, posts and poles, and firewood—are possible. Oriented strand board was minimally produced until the early 1980’s but now supplies 11.2 billion board feet of sheet and other wood products per year, equal to 63 percent of the volume of total U.S. plywood production. The timber industry in the United States has generally been shifting in many areas toward the use of chips and particles from lower quality trees and wood—for example, making increasing use of hardwoods as a wood fibre source. Better glues and other technology make it possible to create newly strong and attractive wood products from such lower quality sources. In 1950, the total wood outputs represented 70 percent by weight of the wood inputs going into the production process. Today, because of increased utilization of all parts of trees, this figure has increased to 95 percent.

Small trees can also supply pulp for paper production. Still another important and potentially profitable use of small-diameter trees is as a source of biomass to generate electricity.

As with any new product area, it will take time to develop the technology of utilization of small-diameter trees and to find the most suitable and profitable uses. The development of new wood processing technology has been most rapid in areas such as hardwoods where much of the wood supply is on private land. In the case of the western United States the supply uncertainties and other problems of doing business with the Federal Government on Federal forests have inhibited a similar pace of technological and industrial infrastructure development. If every computer manufacturer had had to depend on a Federal “chip” supplier with the same bureaucracy and reliability as the U.S. Forest Service supplies wood “chips,” the U.S. personal computer industry would likely still be back somewhere in its infancy.

Small-diameter trees also are limited in their marketability in the West at present because there are few contractors with the best harvesting equipment for these trees and few local mills with the capacity to handle them. The small-diameter trees thus are often harvested inefficiently and then sent to distant markets where the transportation costs can be half or more of the total costs.

The best future role of the Federal Government—focused on technical assistance and other facilitation efforts—in forest management is illustrated by the work of the Forest Products Laboratory in Madison, Wisconsin, a joint effort of the University of Wisconsin and the Forest Service. In recent years it has conducted various studies of the economic potential of small-diameter trees and explorations of potential markets. For example, the Forest Products Laboratory is working with the Watershed Research and Training Center in Hayfork, California. Experience to date has shown that removal of small-diameter trees costs \$208 per thousand board feet for sale as green raw logs and that these logs can earn \$200 in revenue per thousand board feet—thus involving a small loss but much lower net costs than simply paying for removal of the logs with no subsequent commercial sale. Use of the trees for processing and sale as flooring increases the costs to \$800 per thousand board feet; the revenues, however, rise to \$1,200 per thousand board feet, yielding a substantial profit surplus in this form of utilization of small-diameter trees.

The Los Alamos fire this year focused new attention on similar fire prone forests in the watershed area for the nearby city of Santa Fe, New Mexico (the Los Alamos fire started as a prescribed burn on Bandelier National Monument but then escaped and soon spread to the Santa Fe National Forest where it erupted in the tinderbox conditions of this forest and where most of the actual burning occurred). If a similar fire were to burn in the Santa Fe watershed, massive siltation and runoff might threaten the city water supply. Seeking protection against this outcome, the city and its water board are working with various groups to plan a thinning program. Given the large procedural hurdles and delays facing actions on Federal lands, the first thinning efforts planned in the watershed will take place on private lands. It is expected that some of the thinned trees will be sold commercially, thereby reducing the expected bids from contractors to complete the job.

It will require new legislation to achieve the full large potential for utilization of small-diameter trees. The legislation will need to authorize planning for forest thinning over a longer time frame and government commitments to make sufficient wood volumes available to justify new local mills designed for processing of small-diameter trees. The supply commitment might have to cover a five to 10 year period in order to allow for a sufficient period to pay off an investment in a mill and other facilities. Similar considerations have dictated long term contracts of up to 10 years duration with concessionaires in the National Park System. Transfer of the park concession model to fuels reduction programs on the national forests might prove appropriate in other respects—for example, a specific large area for tree thinning could be designated (perhaps as a result of a local collaborative process) in an area surrounding a community and then a long term contract might be awarded to a “concessionaire/tree harvester” to do the job, including the building of a new mill to process the small-diameter trees.

COST-SHARING OF FUELS REDUCTION

Although commercial sale of small-diameter trees can significantly reduce the public costs of thinning forests to reduce fire hazards, many fuels reduction efforts may still require some element of public funds. The state and local government partners in the planning and development of these efforts should also contribute a share of the costs. Much of the benefit of excess fuels reduction will accrue to the citizens of the states and localities. It is often their actions in building homes and other structures in forested areas that increase the dangers of wildland fire and the costs of fire fighting. States and localities have the regulatory authority to control the location of such development in fire prone areas. In general, states and localities will have an incentive to plan for a more cost-effective approach to fuels reduction in surrounding forests, if they are contributing a share of the costs.

An equal division, 50 percent Federal and 50 percent state and local, might be an appropriate cost sharing formula.

CURBING UNILATERAL VETO POWER

Numerous observers have described the current decision making process for the national forests as “broken.” The land use planning system, by most accounts, does not work. It promotes conflict and polarization as much as agreement. The process of planning takes long periods and causes many delays. In the end, the land use plan often fails to provide the basis for actual management decisions. Land use planning thus becomes more a matter of public relations, or litigation strategy, than the basis for rational decision making that was originally the goal of Congress in mandating planning in the 1970’s.

The land use planning and other procedural requirements afford so many opportunities for appeals and other delays that outside groups in effect can often exercise a unilateral veto power—if not forever, at least for the duration of the appeal process, and then perhaps through continuing rounds of further appeals. Litigation then often arises which involves its own burdens and delays.

The effect of the current system is often to impose a de facto management decision of no action. Reforming the current system has been complicated by the fact that some groups have in fact preferred the no action alternative, and thus have strenuously resisted any efforts to curb the existing opportunities for delay and obstruction. It may have seemed that no action was a reasonable approximation to a policy of achieving “natural” conditions on the forests—if no management actions were taken, then the human role would seemingly be minimized and natural forces might appear to be driving the system.

However, the forest fires of 2000 have shown the limitations of a no action strategy, and the fact that it will not achieve “natural” conditions on the forests. Because of a century of fire suppression, the fires that have burned have been much more

intense and otherwise far out of the range of “natural” fire. They in fact have imposed a substantial human-caused change on the ecological condition of the national forests. There is in fact probably no management strategy at this point in time—including no action—that could validly be described as achieving a “natural” result.

Yet, the current system in effect is strongly biased in favor of those who prefer the no action alternative. It is possible for a group of concerned parties to discuss forest management options and develop a fuels reduction plan that has wide community support, and yet any one of these parties will have the ability to prevent its implementation. Indeed, marginal parties who may disagree and who may not have participated in the management decision process will also have this unilateral veto power, if they possess a minimum of money and legal skill.

The existence of an outside veto power partly reflects the distrust of the Forest Service and other Federal agencies on the part of many people in the West. They are reluctant to let the agencies act on their own when the agencies have made so many mistakes in the past. However, if management decisions on Federal forests reflect a much wider range of participation and buy-in, the existence of an outside veto power is less justifiable and in fact becomes a serious obstacle to effective management actions.

If a veto power on the actions of Federal agencies is necessary, it should in any case not be a unilateral veto power available to anyone. It should be assigned to a state or local official who in fact represents politically a much wider segment of public opinion. The approval of the governor of a state, for example, might be required in order to implement any fuels reduction plan on the national forests. Or a similar requirement for approval might be given to the mayor of the community in the immediate vicinity of a national forest where a prescribed burn or thinning were being planned.

In any case, if the Congress wants effective action to improve forest health and reduce forest fire hazards at any time in the near future, it will have to address the problem of the procedural hurdles to management action created by numerous past statutory requirements for planning, environmental impact statements, and other decision making requirements.

FIGURE 1.—1990’S WARNINGS OF CATASTROPHIC FIRE

1993—A panel of leading American foresters meets in Sun Valley, Idaho. Its report states that the policy of suppressing forest fire, as has been followed in western forests for most of the twentieth century, has resulted in a large buildup of “excess fuels” As a consequence, “Wildfires in these ecosystems have gone from a high-frequency, low-intensity regime which sustained the system, to numerous high-intensity fires that require costly suppression attempts, which often prove futile in the face of overpowering fire intensity. High fuel loads resulting from the long-time absence of fire, and the abundance of dead and dying trees, result in fire intensities that cause enormous damage to soils, watersheds, fisheries, and other ecosystem components.”

1994—The National Commission on Wildfire Disasters, created by Congress, declares that “millions of acres of forest in the western United States pose an extreme fire hazard from the extensive build-up of dry, highly flammable forest fuels.”

May 1995—The U.S. Forest Service publishes *Course to the Future: Repositioning Fire and Aviation Management*, declaring that under current policies “the potential for large, catastrophic wildfires continues to increase” and when they occur, as they inevitably will, “it will directly conflict with our ecosystem goals.”

December 1995—The U.S. Secretaries of Agriculture and of the Interior jointly issue a report on Federal Wildland Fire Management, stating that “millions of acres of forests and rangelands [are] at extremely high risk for devastating forest fires to occur.” The Secretaries declare that many forested areas are “in need of immediate treatment” to reduce fire hazards.

1997—A panel of leading foresters reports to Congress that “fires in the [wetter] Pacific Northwest occur less frequently than in the inland West, but can be even more catastrophic because of the high fuel volumes (dead trees). The limited road system and infrastructure make Federal lands in this region increasingly susceptible to catastrophic fires.”

1998—Barry Hill, Associate Director for Energy, Resources, and Science issues of the General Accounting Office, testifies to the Congress that as a result of past policies of fire suppression in the interior West, “vegetation accumulated, creating high levels of fuels for catastrophic wildfires and transforming much of the region into a tinderbox.”

1999—The General Accounting Office issues a report on *Western National Forests—A Cohesive Strategy is Needed to Address Catastrophic Wildfire Threats*. The

report finds that the Forest Service “has not yet developed a cohesive strategy for addressing several factors that present significant barriers to improving the health of the national forests by reducing fuels. As a result, many acres of national forests in the interior West may [still] remain at high risk of uncontrollable wildfire at the end of fiscal year 2015.”

Chairman RADANOVICH. I appreciate the comments from all three members of the panel. I will begin with a few questions and then we will open it up for questions from other members.

Mr. Hill, given the fact that there was a report in 1994 by the National Commission on Wildfire Disasters, 1994, I will say again, why did the Forest Service need a report from you highlighting a lack of a cohesive strategy even in April 1999 in order to force the Service to produce such a report? Why did it take that long?

Mr. HILL. Well, that is a good question. I don't know if I have the right answer. My speculation would be that, hopefully at least, our report served as a catalyst to kind of bring it all together into one document, what the problem was and the need for a strategy. Certainly, as you point out, there have been a number of studies done over a number of years since 1994 that have pointed out the seriousness of the problem and the fact that it would take priority efforts and funds in order to address it.

And the other thing I think is since the early 1990's, the trend has been an increasingly growing number of fires each year, an increasingly growing number of acres that are burned each year, a significantly increasing number of catastrophic wildfires that have occurred year after year. And certainly it culminated this summer in the disastrous fire season that we have had this year.

So I think there are a number of factors that have gotten the Forest Service to the point where they realize this is a desperate situation that perhaps requires some bold action at last.

Chairman RADANOVICH. Did the administration react directly after the release of your report in April 1999? Or maybe you can educate us as to what the difference was or maybe the possible reaction when your report came out and then the reaction by the President who recently toured—I guess it was Montana and Idaho and the fires there just recently, and his call for another strategic plan or something?

Mr. HILL. Right. In our April, 1999, report, we did recommend that the Forest Service develop a cohesive strategy that would deal with the problem. Shortly thereafter—they agreed with the recommendation, and shortly thereafter they set to work to develop such a cohesive strategy, and we saw an early draft of that late last year. To my knowledge, they have been continuing the work on that draft. We have not seen the draft come out in final yet. We understand it still is in draft. Certainly the President's action that occurred recently triggered the report to the President has been the most formal action that has been taken since our report was issued.

Chairman RADANOVICH. Mr. Phillips, what happened between 1994 and this fire season this year?

Mr. PHILLIPS. The draft cohesive strategy is not the first study. It probably culminated several studies that had taken place previously, one by regional forester Bob Jacobs and Michael Raines that looked at individual fires, large fires that had occurred and identified where some problems were. So we had a lot of informa-

tion that, when the GAO took a look at the situation and said you need to bring it all together in a cohesive strategy, a lot of that information was there. We had identified the existence of high-risk areas across the country. So the work that we did after the GAO report was not the first effort. But I would compliment the GAO on helping us bring it all together with the way they looked at it.

Chairman RADANOVICH. As I understand, in the President's plan it emphasizes local decisionmaking as part of the decisions on management of forests. Yet that reminds me of a California forest plan called the Quincy Library Group which, as you know, was a forest plan that was put together by the three adjoining forests in Mr. Herger's district not long ago that included timber harvesting as an effective management tool to manage the environment within the three national forests in that area, a plan that the President encouraged the development of when he toured the effort during the Spotted Owl wars I think during 1992.

The community took him seriously, put together a plan that included timber harvesting, came to the Congress with it and met stiff opposition from the administration until they realized that that is what they were out there encouraging in the first place, and then it passed by 426 votes in the Congress, and eventually the President signed it into law.

Now that we have accomplished—those of us that believe that timber harvesting is part of a good management tool for the forests believe that we have had a victory. It then met to be stymied by the administration through its policies and is currently not being enacted and has almost run out of its charter in Quincy. How do you respond to that when the President or at least in part of this plan is encouraging local decisionmaking and local input when, to this point, it has been demonstrated it has been ignored so far?

Mr. PHILLIPS. I have had a particular interest in this. I have met with Congressman Herger on a couple of occasions to look at where some of the stumbling blocks were to get this moving along.

I started my career on the Plumus, either marking timber or fighting forest fires, so I have a large interest in the success of this.

Let's look at what has happened since Congress passed the bill that I am aware of. They had about, I think, 300 days to complete the EIS and came pretty close to meeting that, maybe a couple of days over. So they are really in their first year of implementation in terms of getting the projects out. A big part of that was defensible fuel profile zones, testing a lot of those concepts. This year they will have accomplished somewhere between 17 and 19,000 acres. They are also working on an additional 25,000 acres of projects for next year.

We are talked about getting the funding strategy together that they need to fund those projects. So I think they are making some progress. They are doing a lot of the work on the east side, low elevation east side. If you look at a fire map—

Chairman RADANOVICH. Isn't that where none of the timber is, though? You are really talking about areas and acreage where there is very little, if any, forest; and you are talking about the area within these forests that are nonproductive for timber purposes.

Mr. PHILLIPS. But a big part of this strategy is to reduce fire hazard.

Chairman RADANOVICH. Isn't a part of the strategy of the administration to squelch any idea of selective timber harvesting in any of the Nation's forests? Even when it was law that was passed and signed into law by the President, he is still using that administrative force or the administrative authority to stop the implementation of a plan that encourages local control?

Mr. PHILLIPS. I don't believe so.

Chairman RADANOVICH. You are talking about areas within that forest that are not productive forest-wise at all, very simple to maintain because there is very little forest there.

Mr. PHILLIPS. Again, they are trying to concentrate where the defensible fuel profiles need to be placed. There are issues over viability of the owl that we are having to work through with Fish and Wildlife Service. I think we are making progress there.

Chairman RADANOVICH. Isn't the implementation of the owl standards more focused on the areas of the Quincy Library Group than there are more so than any other part of the forests in California or Oregon simply because the harsher standards are put there to stop the implementation of the Quincy Library Group plan?

Mr. PHILLIPS. I don't think so. I have seen documentation from leading owl biologists that say that there is a large concern over viability; and what we are trying to do under the law which said we had to comply with all Federal laws, we are trying to meet that intent.

Chairman RADANOVICH. Isn't the implementation, though, of that plan in that area to stop what some environmental groups perceive or desire and that is lack of footprint or management or harvesting in any way as far as the management of forest health or forest maintenance?

Mr. PHILLIPS. Not by the Forest Service. But it is no secret that there is not a unanimous agreement among the public that this is a good project. But our intent is to implement the law.

Chairman RADANOVICH. Thank you.

Mr. Nelson, I was just out in my district in California and took a tour of the Manter fire, which was a fire that was recently happening in the Sequoia National Forest. It burned thousands of acres. I am not sure of the total. But I had an interesting discussion with some of the Forest Service employees in that area who had mentioned with regards to the use of fire as an understory, as a maintenance tool in the management of forests.

Their statement was—if you are not familiar with the Sierra forest system, there are 10 national forests in the Sierra Nevada mountains; and their statement was that in order—if you had to depend solely on fires for maintenance of understory and such and not rely on timber harvesting, that you would have to harvest or, excuse me, burn a total of 20,000 acres per each of those 10 forests in order to keep up with the fuel load buildup. And that, on an average year, there is about 5,000 acres that burn per forest, not just in the forest but down lower elevations in BLM land and in private land.

So for the Sierra Nevada system, as you know, it is right next to a very large basin, the San Joaquin Valley, which has an inversion layer and over a million people in the basin that might suffer air quality problems if 20,000 acres per forest of the 10 forests were burned every summer in order to keep up with the fuel load. I guess my question is, when are people going to realize that you can't depend on fire as a means of forestry management and understory load and that timber harvesting of big and small trees in addition to controlled burns is really the best fire forest management tool available?

Mr. NELSON. Well, of course, as you probably know, I can't answer exactly when people are going to realize that, but I think you have put your finger on the problem. Why hadn't we done anything after, say, the National Commission on Wildfire Disasters came out with its report in 1994, which itself was actually part of the follow-up to the 1988 Yellowstone and other fires across the West. So in the year 2000, we already had indications 12 years ago that we were getting into a new kind of fire regime with much hotter and more rapidly spreading fires.

I think that the answer really at the fundamental level goes to certain attitudes which have been very prevalent in the environmental movement, that the goal of national forest management should be to achieve a natural form of management. And it is hard to figure out what natural actually means in practice, but people have been making the effort.

One conclusion they reached, applying this general philosophy, was that prescribed fire was at least an approximation of natural—although, if you set it, fire really wasn't exactly natural. But that thinning was not natural and, in fact, that thinning came in the same category as timber harvesting. Also, a lot of the environmentalists—to tell you the truth, it was not a big surprise—don't trust the Forest Service. And they were concerned that if you let thinning in the door, it would be the opening wedge for what they regarded as a large new program of logging the forests. So, the environmental movement in this country has basically been very strenuously opposed to a thinning program.

Then, as I mentioned earlier, there are all the loopholes in the law which allow for unilateral veto powers on the part of a lot of people when it comes to Federal management actions.

So if you have an important group with a fair amount of money, a lot of political clout, some good lawyers, their wishes can often dominate the final outcome. And, in effect, for a lot of environmentalists, they preferred no action. They preferred it even though in fact no action can lead to burning down the forests and all kinds of negative environmental consequences. Once we had all these years of suppression, no action could never be truly natural. Still in the way a lot of environmental groups think—and, of course, they had a lot of influence on the administration—they thought of no action as being natural. So for them, they weren't that unhappy with the idea of a system of unilateral vetoes that basically produced no action.

So when is that going to change? I think actually the fires this summer are causing a reassessment, even within the environmental movement. A lot of the change has to take place there,

given its large influence. It is partly because these fires have driven home the recognition that by just sitting there and doing nothing, it in fact may produce an extremely undesirable result.

Chairman RADANOVICH. Thank you very much, Mr. Nelson.

Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

I would like to get at this association or a lack of association between logging practices and susceptibility to these devastating fires.

As you know, the Congressional Research Service recently analyzed the relationship between the level of logging and the number of forest acres burned and found a basically nonexistent relationship. It found there is very little correlation between the volume of timber harvested in national forests and the acres of forests that burned over the period 1960 to 1999. In fact, for some years within that period they found a positive relationship, that more timber harvest had correlated with more acres burned. But basically they found no relationship.

I would like to invite all of you to comment on that, whether that is a credible finding and, if not, how you would dispute it.

And, Mr. Phillips, I would like to ask you in particular the follow-up on the underlying question. Are this year's wildfires the result of reduced logging in our national forests and would allowing more commercial logging—and by commercial logging I mean the removal of large, commercially valuable trees—would that reduce the threat of catastrophic wildfire?

Mr. PHILLIPS. Since this fire season, there have been a lot of reports issued by a variety of different organizations. A lot of it is anecdotal. What is really important in the forest in terms of the effect on wildfire is how much fuel you have and where it is located. Is it located on the forest floor? Is it located at the midstory that allows the flames to jump into the overstory? Or is all that fuel biomass located in, in fact, the overstory?

I would say that, from my experience timber harvesting, as long as you deal with the fuels that are left, the logging slash, as long as you treat that, you are probably not going to create a situation that is going to exacerbate a fire when it comes through there.

I will refer to—probably one of the best examples was when I was a ranger in Denver we did a lot of harvesting and allowed fuel, that was really the demand at that time, to be used as the by-product from that harvesting. So the forest floor was left fairly clean. We would also go back in and do a prescribed burn on the needles and the limbs that were left.

This summer, early this summer, the high meadows fire burned through that area. I went back and looked at that about a month ago. You could see where the fire burned in the untreated area, in other words, lots of stems per acre, lots of trees per acre. When it hit the area that had been managed, where there was fuel reduction that had taken place, the fire basically fell out of the tops of the trees on the ground; and they were able to control it a lot better. So it is really a function of how you treat the area when you are in there managing it.

Let me just—if one of the staff could take these pictures, I will show you an example of where on the Shasta Trinity National For-

est, Congressman Herger, where we went in and did some mechanical treatment and what this looks like after we did it. Category III areas, that we classified Category III, high hazard fuels, you are going to have to do some level of mechanical treatment in most cases. You can't go in and prescribe-burn it.

Mr. NELSON. If I could answer your question about that CRS study, technically, in terms of the calculations, there was nothing wrong, but the question posed was simply the wrong question; and the result in terms of the issue that we are addressing here was bordering on meaningless. The study basically asked, is there a correlation between the level of timber harvesting in this year and the level of fires in this year. Nobody, even the most severe critics of the administration that I am aware of, has ever suggested that that is the relationship.

These critics claim that a predisposition against logging got transferred over by environmentalists into a very negative attitude about mechanical thinning. As a result of the antagonism to logging that was reflected in the fact that logging in the national forests fell from 12 billion board feet in 1989 to less than 3 billion board feet in 1999, there was an associated reduction, there was an unwillingness, a refusal to expand the thinning program. Thinning is what would have been necessary, as has just been mentioned, to expand the fuel reduction effort on the national forest system.

So as far as logging itself, in any given year the total logging program of the Forest Service has never involved more than about 500,000 acres at a time. And we are talking in terms of a magnitude of the total national forest acreage which is exposed to fire hazard of about 100 million acres. So obviously 500,000 acres, whatever you do on it, even if the logging promoted or didn't promote fire, wouldn't have much effect on the level of fire in that year. In fact, the magnitude of fires this year is something like 15 times the total area logged in the normal timber harvest season.

Mr. PRICE. Yes, but we are talking, aren't we in this study—and I don't want to quibble over this. Maybe you could submit something for the record if you wish to. But we are talking here, not talking 1 year at a time, we are talking about a cumulative period from 1960 to 1999, is that not true?

Mr. NELSON. I don't think so. Unless I misunderstand the analysis—and it wasn't perfectly clear—but I believe what it did was a statistical correlation as to whether there was a relationship between the level of timber harvesting in 1 year and the level of fires in 1 year, looking at a 20-year period.

Mr. PRICE. That is not the way the findings were presented.

Mr. NELSON. I think that there may have been some motivation on the part of people to take the study title, which is no relation between logging and harvesting, and not look in detail into the actual analysis done. As I say, it wasn't explained with a crystal clarity. But at least to the extent I was able to understand it, and I looked at it and spent some time studying it, what was actually done was a correlation—a statistical correlation or regression analysis, if you want to call it that—where the explanatory element was the level of logging in any given year, and the dependent variable, or the number that was being correlated with, was the level of fire or acreage burned in that year.

I think anyone who knows how these kinds of statistics work would understand there is not going to be any relationship of that nature. The real question is, to what degree over a number of period of years have we engaged in a thinning program to reduce the level of excess fuels on the national forests? If someone could show that, well, there are certain areas where there were excess fuel reductions over a certain period of time and that had no effect on the levels of fire in those areas, well, that would be a significant analysis. But I don't believe this is what was done.

Mr. PRICE. The study aside, do you agree with what I understand Mr. Phillips to be saying, namely, that whether or not the removal of large, commercially valuable trees is taking place is not the critical variable? That what the critical variable is is whether these smaller trees and other materials are removed. That is the critical variable.

Mr. NELSON. Absolutely. That is the question. The argument that is being made is that these forests have developed these very large numbers of very small diameter trees, between 4 and 12 inches, let's say, which historically have been marginal commercially but increasingly are being used on a commercial basis because the industry finds they need to turn to this. And those trees are virtual kindling wood and they built up because of fire suppression over many decades, the danger was recognized by the 1970's in some circles. But by the 1990's, on a widespread basis in the forestry profession, people were saying, this is a kindling wood situation out there. These forests are going to burn if you don't somehow get rid of this wood.

The Clinton administration knew about it, but they were tied to the idea of prescribed burning as opposed to mechanical thinning because thinning, in the lingo of these perceptions, became logging and logging was bad. We had just been through the spotted owl episode. The environmental movement had won a great victory in their mind. They had sharply reduced logging in the Pacific Northwest, and then similar environmental pressures caused it to decline all over the West.

All of a sudden, from their perspective, they were confronted with the possibility that this surrogate policy called fuels reduction, which they had never heard of until recently, was going to be used as a way of sneaking back into the Forest Service and the national forests a massive new timber program. That was anathema to many leading environmentalists so they used every means at their disposal to resist this effort to, as they saw it, reestablish a logging program in the name of fuels reduction program, by going in and taking these 4- to 12-inch trees, of which there is an enormous volume.

Contrary to most perceptions on the national forests, in the West the volume of wood on the national forests has increased steadily over the decades. Taking the Intermountain West—I actually looked it up here just before I came here or else I wouldn't have the number right at hand—but the volume of wood on the intermountain national forests—that is where all these fires have burned this summer—was 57 billion cubic feet in 1952. In 1992, it was 70 billion cubic feet. And there are projections that if we don't increase our levels of harvest way above what we are thinking of

in terms of this environment of no timber harvesting that we are in right now, we are going to see continuing increases, as much as 20 or 30 percent more in the next 20 or 30 years.

What will probably happen, of course, is that some of that wood, the volume won't increase, because it will actually burn instead of increasing. But that is part of the choice we have to make at this time.

Mr. PRICE. Mr. Phillips, let me get back to you. I know we have limited time here.

Apart from whatever allegations anyone wants to make about people's motivations, I would like to just return, if we could, to what the fact of the matter is here. And the fact of the matter seems to be that whether we are or are not removing these large, commercially valuable trees is basically not related to the fire hazard. The critical variable is the smaller trees, the brush, the material closer to the ground. Is that right?

Mr. PHILLIPS. Those are the critical variables. But I also want to be clear that if you remove the large trees and don't treat the limbs and such, the fuels that are left over that you don't take out of the woods, if you don't treat those, then you do run the potential of increasing the fire hazard.

Mr. PRICE. Absolutely. That seems very clear.

Mr. PHILLIPS. I would also say, the reduction of the fuel hazard situation around the country, I hate to see it turn into a logging/no logging debate. It is really about removing fuels, treating the hazardous fuels that need to be treated.

Mr. PRICE. I think it is very important to get past the logging/no logging debate. That is exactly where I would like to take us today in the line of questioning I am trying to pursue.

There is a problem, isn't there, though, that most of these small trees, the other materials that need to be removed in the thinning operations, have very limited commercial value? What are the possibilities of devising commercial uses, for stimulating the development of commercial products that rely on these materials? Any comment on that?

Mr. PHILLIPS. As I mentioned earlier, when I was a district ranger in Denver, there was a high demand for fuel wood. We could sell it for a lot of money. Unfortunately, that demand is not what it was then. However, we have been doing a lot of work in trying to find new products, and the President's report actually addresses the need to do more of that.

We have a project called the Four Corners Project where we are working with local communities to better sort the products, to make them more available. Our research program is doing some really—what I call unique work, consider unique work on the development of small diameter materials into products that are more usable. I will send this up for you to look at. But it is basically using what we see in 2 by 4s today, joining them in finger joints on a circular plane, so you can take material, especially a lot of the large pole pine that you find in the West, and join that and make a more valuable product out of it.

Mr. PRICE. Thank you. I will pick up on this in the second round of questioning.

Chairman RADANOVICH. Mr. Herger, you are up.

Mr. HERGER. Mr. Chairman, thank you very much.

I want to again thank each of our witnesses for being here today, Mr. Hill, Mr. Phillips, Mr. Nelson. I really appreciate the fact that we are getting into what I believe is some of the crux of the problem.

I would like to invite my colleagues to join us in what—we have an annual woods tour in our district. It is usually at the base of 14,000 foot Mount Shasta in which we do what we term, as Paul Harvey says, tell the rest of the story. And a lot of the questions I think that have been asked are answered during this period of time of this woods tour. We have had approximately 40 Members of Congress over the years in 10 different tours that have been there.

I would like to address just some of what I see as the crux of this challenge we have. I remember back when I was first elected in my first term in 1987, I was in a hearing in the Agriculture Committee in the Forestry Subcommittee and one of the witnesses, one of my friends from the environmental community, made a statement that 90 percent of the trees had been cut.

Having flown and driven through our district, which is 96,000 square miles in our area, you can drive for hours and fly for hours and all you see is forest. I asked him, I said, let me make sure I understand this. Ninety percent. That means nine out of every 10 trees has been cut. There is only one left out of 10? Kind of think a little bit.

But I think this really is an example of the misinformation that we have been hearing for years concerning what our challenges are out in preserving the health of our national forests. I think it really stems as something that is relatively simple, I believe.

I heard a comment used earlier, I believe it might have been from you, Mr. Phillips, which I certainly agree with, and that is returning to the natural process. I think probably all of us would like to do that. But I would like to address that a bit.

We do not have a natural process going in the forest now. We should all be aware of that. Those of us who aren't—the reason we don't is, starting at the beginning of this century, very well-meaning people, as we began building more and more homes out in our forests, began preventing forest fires. As a matter of fact, we prevented all of them—the Smokey the Bear program which has been very successful over the years.

What has happened is that, unlike the natural process, which even the American Indians, the Native Americans, would promote because they would set fires out in which you would have regular fires going through our forests where the brush, the smaller trees would be thinned out and you would have the large trees, the commercial trees, as my colleague Mr. Price was pointing out, that would be large, and it would be a positive thing. What has happened when we prevented all these forest fires is that now we have fire ladders. We have forests that are not 90 percent missing. Just the opposite is true. We have forests that are three and four times denser than they have been, as was alluded to.

These are interesting statistics. In 1952, was it you, Mr. Nelson—I was trying to write this down—we have 57 billion board feet.

Mr. NELSON. In the intermountain West.

Mr. HERGER. In the intermountain. That had increased to 70 billion. We have some forests that are two to three to four times denser because we have eliminated fires.

Now in addition to that, what we have now are fire ladders. So now when we get the natural process, when we get a lightning strike or when a fire starts or when our own government goes out, as we saw happen in New Mexico and has happened in my district up around the Lewiston fire just last year where we actually go out and set the fires ourselves, a so-called, quote, control burn which ends up burning hundreds of thousands of acres because it gets away from us, we have these fire ladders that we can't control. It is not natural anymore.

The only way we can return to that is to begin going in and thinning this out, removing the brush, returning it to the way it was historically. We can't do it by just setting a match there and starting it, because everything burns down, we have a catastrophic fire. But what we do do is go in and do it in the right way.

That is what the Quincy Library bill is about, which is bipartisan, which passed this House in 1998, a bill that I authored, 429-1. You might say it was unanimous. We had a former Libertarian who votes no on everything, was the only no vote. Everyone voted for this bill. It was bipartisan.

In the Senate, Senator Feinstein, a member of the other party, sponsored the bill over there. It passed overwhelmingly there. It was signed by the President.

But that is where we get into the controversy here, Mr. Phillips. Because, as Mr. Radanovich was asking questions earlier about its implementation in the district, I can represent—I can tell you that those people who wrote the bill—and I didn't write it. We had the local community write it, the local environmentalists wrote it, local people worked in the forest products, locally elected individuals.

The reason it was called Quincy Library is that is where they met, because they thought that is the only place they wouldn't yell at each other. Therefore, they met for several years, worked out a plan that they all agreed on.

This is impossible, what happened. But they did the impossible. It was a plan that was environmentally safe that they worked on. It was a plan that protected the environment. It implemented all the current science and all the current laws in a way that they could go in and begin restoring these forests the way they were historically, going in and thinning.

Mr. Price, let me mention what they do there is not go in and take out all the commercial trees. They basically are thinning. And as was pointed out by Mr. Nelson, Mr. Phillips and others is, fortunately, we are beginning to learning how to use the smaller trees as we thin them out. We see an example of that. But we also occasionally need to take a larger tree here and there, not clear-cut them but thin them out so as to make sure that the plan that they came out with—guess what; this is unbelievable—it doesn't cost the taxpayer money. As a matter of fact, it makes \$3 for every \$1 they invest.

These are environmentalists that are working. It is just some common sense that they used to make it—so there is a little bit of

incentive there, and the taxpayers aren't paying for it. But, actually, it is a win-win-win, something almost unheard of in this environmental logjam, everybody disagreeing with everybody else like we are living in today. Therefore, just a little bit of background, a little bit of history.

Mr. Price, I would like to personally invite you to our next woods tour where we go out and look at all of this and allow you a chance to ask questions. We have it every year, so if you can't make it this next spring, the invitation is open to you. We would love to have you and your wife come out and see the rest of the story.

With that, let me ask a question, if I could, Mr. Phillips. And I want to thank you and I want to thank what I hear now coming from the administration right now of they are beginning to talk about thinning. I think those of you have explained it very well, how it is beginning to evolve. Hopefully, we are getting now where we can work together to save the environment. There aren't any Spotted Owls can live when we have these catastrophic burns we have. Nothing can live there. And we lost—what is the number—about 6.2 million acre feet of burn this year. That is more than double or triple the national average.

It is not like it is something we didn't know was coming. It has been projected since 1994, at least—even by the Forest Service itself. But maybe it takes this little bit of extra push to get us all working together to do this. As you mentioned, hopefully the environmental community itself will begin working with us rather than against us.

I do have to refer, though, to this Quincy Library plan which passed virtually unanimously. I can tell you that these individuals—and I would like to have you comment again if you would like to—but the individuals who wrote it, who live in these communities, could not be more unhappy—and I am putting that very mildly. They do not agree with your comment earlier that Mr. Radanovich asked you how it was being implemented. And you felt it was being implemented—I think you said, basically, well, you gave some statistics of what they had been working.

I would just like to remind you that this is only a third of what the law says that you would treat, that we were talking about east side. East side of the Sierra Nevada mountains is where it is being implemented. Most people have no idea what that means but let me, being born and raised around there, tell those who are listening what it means.

The east side is the desert side of the mountain, as you know. As the rain comes off the Pacific or the clouds come off the Pacific Ocean and work their way up the mountains, it falls. We have very healthy, fast-growing forests. As it gets around to the east side, there isn't any more rain anymore, and so you have basically a desert. You have trees that basically don't grow.

So to be treating in that area, I am not going to say it is a waste of time, but, comparatively, it is almost a waste of time. And where we need to be treating is where we have this three and four times growth. Yet the Forest Service, for whatever reason, the Clinton-Gore administration for whatever reason, the direction coming down is not allowing the Quincy Library plan to be implemented where it has this greatest need.

If that weren't bad enough, the forest right around these three, they are cutting two and three times more in those areas than they are an area that we need to be treating. And the big forest fire that we read in the news and saw the story fire, that is 40 or 60,000 acres that have burned within this same area.

Again, it is tragic. We do have a plan that has been worked out. I think we have a model that we can work on that everyone agreed on and the Congress said you will implement, but yet for some reason the Forest Service is not implementing. I would certainly appreciate your comment.

Mr. PHILLIPS. I would just reiterate my earlier comments. I talked to the forest supervisors out there. I feel that they are working very hard to implement it.

The east side, if you look at a fire history map of the Plumas and the Lassen, the east side and the lower elevation west side is where most of the fires occur. I understand also the need to treat the center part of that around Quincy, Greenville and those towns also. They are trying to work through the environmental concerns that are raised in order to implement that. It doesn't do us any good to get tied up in court. They are trying to do a product that allows them to move forward. There is already one lawsuit on the project right now that they are trying to work through.

Mr. HERGER. That lawsuit is probably suing because you are not enforcing it enough, I believe.

Let me also make a comment about working hard. I want to commend the Forest Service, the people, my constituents, who live in that area that work very hard, that are dedicated people. My concern is these policies that are coming down from the Clinton-Gore administration that tend to not allow them to implement or do what I feel they would like to do and as they are trained to do. But I just want to let you know that the people who wrote this legislation, the real experts, not me but them, who live there, environmentalists as well, are very unhappy with the near lack of the implementation of the Forest Service. I am just telling you that is what they tell me.

Mr. PHILLIPS. I talk with them, also.

Mr. HERGER. You must hear the same thing I do.

Mr. PHILLIPS. I talk with them. I hope to get out there after Congress adjourns and look closer at the implementation.

Mr. HERGER. I can assure you they are not happy campers.

Again, thank you. I thank each of you. Hopefully, we are beginning to turn the corner where we can begin doing the type of thing that will preserve these forests and doing it in a way that we don't cut down all the commercial trees, just a few of them, along with the thinning which we are learning to be able to utilize as well and make it a win-win.

By the way, I have 42 mills that have closed just in the 10 counties that I represent, in an area where my statistics are probably higher than what you mentioned in the Rocky Mountains as far as the amount of trees, that we have more today than we had back in the 1950's.

Mr. NELSON. If I could make just a comment.

Mr. HERGER. Please do.

Mr. NELSON. When the Congress deals with these situations like the Quincy Library and it finds that it is unable to get the results that it is looking for, as I said, I think that these fires and the whole situation of excess fuels has created a situation where Congress needs to look at the whole framework and a lot of the basic assumptions of public land management.

But one option, and I don't think—it certainly wouldn't work for the Forest Service as a whole—but on, say, an experimental basis, possibly five areas or something like that, would be to take something like Quincy Library and go much further in actually decentralizing the authority and move into the role of thinking about actually empowering local groups in a much more vigorous way than we have seen so far. Having the Federal Government move out of the role of the final controlling manager and more into the facilitator, source of information, source of technical assistance and maybe implementor of some of the actions on their own lands but where you might have, for example, a board of directors that would actually have some kind of legal authority that would be composed of local government officials and timber people and environmentalists.

There are many ideas that are floating around. Lots of study groups and so forth have been looking at some of these out of the box solutions in terms of traditional forest management. As I say, I can't imagine that anyone would propose them at this point for the Forest Service system as a whole, but it seems to me that the time may at least be getting close where these things could be done experimentally for particular situations.

Mr. HERGER. Thank you, Mr. Nelson.

Of course, that was the whole purpose of Quincy Library. It was a pilot plan over parts of three national forests, 5 years, to see whether it works. What is so—we feel it will work. I think we can look at examples, places that we can see where parts of it has been, where we have thinned out, how it has worked—several of you have given examples of that—but to see how—at least through the Clinton-Gore administration has been disallowing this 5-year program to go forward is incredibly distressing to our area, and I think is very harmful to our Nation and to our natural resources.

Thank you.

Chairman RADANOVICH. Thank you, Mr. Herger.

I, too, want to reiterate Wally's concern for Forest Service and the great job that they have done in fighting the fires. The rank and file of the Forest Service are incredible people, including you, Mr. Phillips, and the work that you do.

The problem I do have is with the administration and the powers that be that influence that administration on forest policy. I am really kind of concerned about this idea that if you buy fuels management as a means, commingle it with fires for maintaining fuels management and forest health that you have got to leave the big trees out of that. What is the long-term objective if you are going into the forest consistently clearing out underbrush and taking out small trees and leaving big trees? Don't you end up with a forest of big trees that is less dynamic, that all die at once, that you are all back in the same situation at one time where you have fuels buildup and it is just in the form of dead big trees? That is a pretty

undynamic way of looking at forest management, wouldn't you agree, Mr. Phillips?

Mr. PHILLIPS. In some respects, yes. In others, it really depends on the objectives you have for that piece of land. If your objective is to manage that land for commercial purposes, then you might do both of them simultaneously. If your objectives are to manage it for some other type of use, you may go in for an action just to reduce fuel. It really depends on the objectives for that area. Those objectives are determined by the public through the land management plans, and then the local people on the ground who are trained determine the best way to manage that.

Chairman RADANOVICH. Mr. Nelson, do you want to comment on that?

Mr. NELSON. Yes. I think that, as most everyone here knows, in the 1990's the Forest Service has been implementing the idea of ecosystem management which is a somewhat fuzzy idea, but you can say that it shifts the attention from the old multiple-use idea, which was that basically the forests existed to serve human uses, to an idea that the goal of management now is to actually achieve a certain forest condition, ecologically speaking.

So that raised the question, well, OK, what are we trying to accomplish by our ecosystem management? If it is not maximizing human uses like we used to do, taking all the uses into account, figuring out how to maximize the value, what is our ecosystem target?

The people in the field have kind of struggled, and out of a struggle that has gone on a few years has basically come the following idea, that what we are trying to do is establish something which is natural. We don't exactly know what natural is. So as a practical matter, if we have to implement something, we will define natural to be the forest condition prior to European settlement in the West. That means before human action came along in a heavy-handed way and started changing the forests, fire suppression and all the rest.

So, actually, if you look at what the Forest Service is doing now and other Federal agencies, they have extensive research teams out there which are trying to figure out what the condition of the forest was in approximately 1870 or 1880 or maybe 1850. It depends on the place that you are talking about; and then the goal of management is going to be to return the forest and the ecological system to about where it was in 1870.

I consider that that is a pretty radical shift in the nature of management for the national forests, which are, after all, 10 percent of the United States. In a State like Idaho, 40 percent of the land area of Idaho is in the national forest.

Some people who look at this in a somewhat cynical way say we are almost creating theme parks out there. It is like Williamsburg or something, except a natural version of this, and that we are recreating something real, even assuming we can do it, which in many cases is quite questionable. It may actually be more of a fantasy that we have accomplished this than we have actually accomplished it. But let's even assume we can do it. Is it really true that we want to take 10 percent of the land in the United States and try to manage it according to what its condition was in 1870?

It certainly raises some questions in my mind, and I would also think that before we would do that as an operational basis for management that the U.S. Congress ought to give some fairly clear and explicit instructions rather than the Forest Service just go ahead to do this on its own, which is the way things have been working out.

Chairman RADANOVICH. Thank you.

Mr. Hill, is there evidence to suggest that parts of the areas covered under the President's roadless policy are near urban areas? And what would be the impact of that agency's ability to fight fires in roadless areas?

Mr. HILL. Yes, there is evidence that there are some roadless areas near urban areas. But most of them—most of the roadless areas are in remote areas. There is not sufficient information—I think that is part of the problem we have noted in terms of this issue, is there is not a lot of clear information as to where these urban interface areas are in relation to some of these more open areas and where the roads are and where the high-risk areas are and how it all kind of fits together. That is part of the problem here.

As far as the impact on fighting these fires in these roadless areas, yes, they are currently fighting them in the roadless areas. It is a little more difficult, a little more costly. The fact is they can fight them, but it is just more costly and more difficult.

Chairman RADANOVICH. Mr. Phillips, I am not sure of the area, but as you know a few years ago there was a bark beetle infestation. I think it was during the drought. It seems to me it was responsible in part for the intensity, say, of the Boise National Forest fire, I think the Yosemite fires which I was involved in back in 1989, 1990. During that time the Congress I think passed a law that would allow the burned areas to be logged in order to get a lot of the dead debris out of there, keep it from falling, number one, harvest it while it was good for commercial purposes before it fell on the ground and rotted but also to prevent fuels buildup in the future.

Yet the administration I think—I know that passed the Congress, and I understand that the administration held that up as well. I believe that the lack of the harvesting of some of the dead and dying trees that were due to the bark beetle infestation, it was very likely the cause of some of the fire buildup that has been happening even this year. Do you anticipate the same type of administration reaction when the concern about going in and logging up some of that dead and burned trees come before the Congress?

Mr. PHILLIPS. I think it is reasonable to expect that there will be some commercial sales, whatever is needed in many cases to restore the land to the way it needs to be, to a healthy condition. So I don't anticipate there will be any direction prohibiting commercial sales.

I would also point out that in the last couple of years we did in Idaho go in and assist the forest with policy to harvest some insect salvage that they had there. So we are trying to help there where we can.

Chairman RADANOVICH. By and large, most of those infested trees were left rotting on the ground, though.

Mr. PHILLIPS. Where is this?

Chairman RADANOVICH. By and large, on the average, I think most of those trees were left dead and dying.

Mr. PHILLIPS. Are you talking about from the 1990 situation?

Chairman RADANOVICH. Yes.

Mr. PHILLIPS. Are you referring to the salvage rider?

Chairman RADANOVICH. Yes.

Mr. PHILLIPS. I may not have my facts correct. I was the forest supervisor in North Carolina at the time. I know that we implemented that there. Nationally, I can't really respond.

Chairman RADANOVICH. I think nationally the evidence would show—and we will both have to go look up our facts, that it was effectively stopped, at least in the Sierra and Stanislaus National Forests, the areas that I represent.

Mr. PHILLIPS. I know there was a volume target associated with that. I believe there was. And I had heard that nationally that target was met by the agency, but, again, I can't say that for sure.

Chairman RADANOVICH. Mr. Price.

Mr. PRICE. Thank you, Mr. Chairman.

I suspect we are not going to settle here today some of the underlying issues that have been addressed. Suffice it to say that, on the question of whether it is necessary or even desirable to include the harvest of these large, commercially valuable trees as part of these management plans is open to active question and dispute.

I would like to refer in the record here to testimony of three professors of forestry from the western States, Professors Morgan, Neuenschwander and Swetnam, last year before the Subcommittee on Forests and Forest Health, Committee on Resources, where they say, and I am quoting, it is very important to leave the large trees in the forest when we thin or burn. These trees are the insurance for the future. They are critical to ecosystem resilience. Foresters call the needed prescription thin from below because it removes the smaller trees and their crowns while leaving the bigger trees. If there are few tree crowns of low bulk density near the ground and there is little vertical continuity between the crowns of the small and big trees, forests can often withstand surface fires even in dry, windy conditions. This will limit the development and spread of crown fires, particularly if the horizontal continuity of the crown bulk density in the principal canopy layer is also broken. It is the small trees that contribute the most to fire risk as they provide ladders for the fires to climb from the surface into the crowns.

So perhaps at least we can agree on that. We are talking essentially about clearing out these smaller trees; and that is a challenge in terms of commercial viability, as you begin to describe, Mr. Phillips. You say there are some commercial uses for these materials, some possibility for developing commercial products. That is where I would like to pick up here in this period of questioning.

I just wonder, we have had here a minor reflection, I suppose, of the timber wars today with some of the claims back and forth. I wonder if this September 8 report to the President from the Interior and Agriculture Departments represents something of an opportunity to get past this conflict between the environmental communities and the logging communities. To what extent does an increased and aggressive effort to reduce fuels in the national forest

offer the prospect of commercial development, of employment opportunities for communities that have depended on logging in the past?

Mr. PHILLIPS. Do you want to go ahead?

Mr. PRICE. Mr. Phillips first, then I will hear from the others.

Mr. PHILLIPS. I think it offers some good potential for contracts. Again, I will go back to when I was working on a Ranger district, we had a situation like that and made contracts available to local people who came in and did the thinning and gained some employment from that. So I think there is a lot of potential. Whether you have a merchantable product or not, you still have a need to go in and treat the fuels, and we will do a lot of that through contracts.

Mr. NELSON. Well, the small-diameter trees, I think there is a very large potential market out there. I would cite, for example, a product called oriented strand board, which was virtually zero in terms of national production as recently as 1980 and is now up to about 11 billion board feet a year. The production of oriented strand board, which has some similarities in use to plywood, is up to two-thirds of the level of plywood in the United States. So it has actually become just in 20 years a major part of the wood supply of the United States, and one of its attractions is that oriented strand board can be made from these small-diameter trees.

There are other things that are going on. Again, partly because of the pressure of reductions in traditional softwood harvests, the timber companies have been making increasing use of hardwoods as a source of supply. And, again, they often use it—these are inferior quality woods—by chipping it, they make it into particles. They now have superior glues.

I think actually we are only really at the beginning of these technologies, and the technology responds to the demand. As long as lumber was cheap and we had abundant supplies, the industry did not have the incentive. But now that we are getting to a situation where these low-quality trees may be one of our main sources of wood fiber supply in the United States, I think that there are many more technological developments out there that have not even been discovered. However, at least as far as the Federal lands are involved, the incentive is still not there right now.

No one is going to invest in a mill in Colorado or Idaho, a new mill, in the current supply situation. They need 10 years to recover their investment. And right now who would know whether they would even get 1 year of supply. And to the extent that the technologies are fairly site-specific, they have to have local adaptations, they are not even going to invest in the research and development effort to find the best technologies to work in Colorado or Idaho.

The Forest Service, which does not have to worry about making a profit, actually has done some very valuable work in this area in Madison, WI. For the last 5 or 10 years, their Forest Products Laboratory has been devoting increasingly large amounts of time to both the technological and also the economic aspects of small-diameter trees. And they have put out a series of reports that are available for anyone who wants to look at them, basically talking about what the current economic situation is, but also what the prospects are. And in general if you read through the reports, they are very

optimistic about the potential economically of this form of wood utilization.

Mr. HILL. If I may add a quick comment to that. Our past work has also demonstrated the lack of a commercial use for some of the smaller undergrowth. And regardless of whether you take the big trees down or not, aside from that debate, you will have to take the smaller trees out. And there really is no commercial market right now for using a lot of that biomass. And I think that is something that has to be encouraged and provide incentives and developed, because if we can develop the commercial industry to use this smaller biomass, that will help pay for a lot of the expense of doing the work that is needed to be done.

Mr. PRICE. Thank you. I know we have a vote on the floor, and we are trying to wrap up. I again thank you all for being here. It has been very enlightening testimony.

Chairman RADANOVICH. Thank you, Mr. Price.

Mr. Herger.

Mr. HERGER. Are we starting a new round?

Chairman RADANOVICH. No. You are finishing up the second round, if you would like.

Mr. HERGER. Sure.

Mr. NELSON, do you have any estimate about the government revenues that might come in if we were to begin?

Mr. NELSON. Well, I have tried to figure this out. I do not have any definitive numbers. These are sort of back-of-the-envelope calculations. So the Forest Service or somebody can do a more definitive study, but I would think if we could provide assurances of continuity of supply so that someone could invest in a mill, and they would be assured that they would have enough supply to continue for 10 years, we could probably get maybe \$25 to \$50 a thousand board feet in stumpage fees for a lot of these small trees.

And we are talking about enormous amounts of boardfeet. I mean, if this industry develops, it will not be a minor fringe industry. It will be a major contributor to the total wood supply in the United States, because as I mentioned before, just in the intermountain West there are 70 billion cubic feet of wood in the intermountain West. No one is saying we will cut it all, but even if we cut 10 or 20 percent in the areas where fire hazards are the greatest, we are talking about large supplies of wood, and I believe it can actually earn revenue. I would say in the future we could certainly be talking about a half-billion dollars a year or something like that in revenue.

Mr. HERGER. We are talking about net over expenses?

Mr. NELSON. I am talking about stumpage fees. I am assuming we would still sell by competitive bid like we have under the old timber program, but now we would be selling the small-diameter trees.

I think our bidding procedures have to be looked at and revised. I think Congress will have to take a look at that, because I don't think the existing bidding system for timber sales works very well when you don't have a mill there. So you are going to have to combine the investment aspect of the situation with making the timber available in a more integrated way. When someone agrees to buy the timber, they also need an assurance of long-term supply. They

need enough supply to be capable of building a mill. Or at least they need to know where they will send any purchased small-diameter timber to a mill. If they have to send it 250 miles away, they will not be willing to bid anything. But if a lot of policy changes are made, and a lot of these will be in the hands of Congress, to revise its timber sale policy and then the Forest Service implement them, I could certainly see \$500 million a year or something like that in sale revenues. Again, this is a back-of-the-envelope calculation.

Mr. HERGER. Let me try to clarify, if we can. So we are talking about not just spending hundreds of millions of dollars, of taxpayer dollars, to go out and thin out these small trees in the brush so as to make our forests more fire-resistant, but we are actually talking about an industry, if it is done right, that we can actually produce dollars—

Mr. NELSON. It can be a major new wood product industry.

Mr. HERGER [continuing]. For the economy and help open up some of these 42 mills that have closed in my area.

Mr. NELSON. It is a win-win situation all the way around. It is environmentally beneficial, forestry beneficial, economically beneficial to the Treasury, and produces jobs and income for rural communities, some of which have suffered a lot. But the question is whether we can move fast enough.

Mr. HERGER. Before it all moves down.

Mr. NELSON. And people all move away, and even the existing mills close, which I doubt right now. I don't think that under the existing system that it is capable of moving fast enough.

Mr. HERGER. Thank you very much.

The Chairman said we were running out of time. I thought he was talking about the vote. But he was really referring to we are running out of time before the forests burn down before we do this. So it just emphasizes how important it is that we all work together, and I think this example that was set in Quincy, a small little town of a few hundred people in the Sierra Nevada Mountains maybe 60 miles north of Lake Tahoe where the environmentalists and the wood products people and everyone got together and worked out a plan, that this, I think, is an example of what we can do nationally to solve these very real problems we have of our forests completely burning down and having no environment left. So hopefully we can all work to do that again.

Mr. Chairman, thank you very much.

Chairman RADANOVICH. Thank you.

Forgive me. We are just closing up our meeting before we have to go scamper off and go vote.

Last I checked, every American runs into wood products every day of their lives, and I think it is a little disingenuous for us to have a national policy of a no-cut policy in the National Forest when it is a part of our daily lives and we are all consumers—even the most ardent environmentalist is a consumer—of wood products. As long as we can harvest and maintain forest health and a dynamic forest, I see nothing embarrassing about making a buck off of trees in our forests. I think that needs to be reiterated as we close this hearing.

Mr. Hill, thank you.

Mr. Phillips, good to see you again. Thank you for being here.
Mr. Nelson, thank you for contributing to what I think is an excellent hearing.
Thanks again, and we will adjourn the hearing.
[Whereupon, at 4:05 p.m., the Task Force was adjourned.]

