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ABSTRACT

The Task Force on Women, Minorities, and the Handicapped in Science and Technology was established by the U.S. Congress in Public Law 99-383 with the purpose of developing a long-range plan for broadening participation in science and engineering. Public hearings were held in Albuquerque (New Mexico), Atlanta (Georgia), Baltimore (Maryland), Boston (Massachusetts), Chicago (Illinois), Kansas City (Missouri), and Los Angeles (California) between Fall 1987 and Spring 1988. The final report of the task force was produced in December, 1989. This document is the verbatim transcript of the public meeting. Co-Chair Dr. Ann Reynolds conducted the meeting. Discussions include: (1) An opening statement; (2) a statement from President May of the University of New Mexico at Albuquerque; (3) reports from the subcommittees on social aspects, precollege education, higher education, research, employment and the National Agenda; (4) a progress report of the subcommittee in general; (5) logistics and procedural questions; and (6) preparations for a meeting in Chicago. (CW)

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2 IN SCIENCE AND TECHNOLOGY

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12 Public Meeting

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21 September 22, 1987

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1 _A_P_P_E_A_R_A_N_C_E_S_

2 TASK FORCE MEMBERS:

3 MR. JAMIE OAXACA, Co-Chairman
DOCTOR ANN REYNOLDS, Co-Chairman
4 MS. SUE KEMNITZER, Executive Director
DOCTOR HOWARD G. ADAMS, Member
5 MR. JAMES A. BIAGLOW, Member
MR. FERIAL BISHOP, Member
6 DOCTOR JO ANNE BRASEL, Member
DOCTOR ALAN CLIVE, Member
7 DOCTOR MARY E. CLUTTER, Member
DOCTOR JOSEPH G. DANEK, Member
8 MR. HERBERT FERNANDEZ, Member
MS. CLAIRE E. FREEMAN, Member
9 MS. STELLA GUERRA, Member
MS. AMORETTA H. HOEBER, Member
10 DOCTOR HARRIETT G. JENKINS, Member
MS. ANTOINETTE G. JOSEPH, Member
11 MR. ROBERT CYRUS LAUGHTER, Member
MR. ROBERT H. MORRIS, Member
12 MR. RAUL ERNIE REYES, Member
DOCTOR MIGUEL RIOS, JUNIOR, Member
13 MS. GLORIA R. SABATINI, Member
DOCTOR LAWRENCE SCADDEN, Member
14 MR. NATHANIEL SCURRY, Member
MR. ALVIN THOMAS, Member
15 MS. SONIA MEJIA-WALGREEN, Member
MS. MIRIAM (GULLY) WALTER, Member
16 DOCTOR LUTHER WILLIAMS, Member
MS. VERA (NINA) WINKLER, Member
17

18 * * * *

19

20 DOCTOR REYNOLDS: Good morning. Welcome to all members
21 of the Task Force. We are glad to see you here at this early
22 morning hour. It's earlier for some of us, like those of us
23 from west coast than those of you from the east coast, but you
24 all look fresh and bright. I have a couple of items I want to
25 cover before we move on into the agenda. I think most of the

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1 members of the Task Force are aware that this group is being
2 co-chaired by Mr. Jamie Oaxaca, who is to my right, and
3 myself, Ann Reynolds. To my left is Sue Kemnitzer, who is the
4 staff to the Task Force, and who with her colleagues has been
5 responsible for getting everything ready. See Sue if there
6 are any problems.
7 A couple of housekeeping details. At least one
8 co-chair of each subcommittee is expected to attend every
9 hearing. This individual needs to be here in order to report
10 on the progress of the subcommittees. If you are a member, we
11 agree to do a great deal of work of the Task Force by this
12 committee structure, and secondly, this individual is expected
13 to lead questions during the committee -- during the hearings
14 that represent concerns or the particular needs of the
15 subcommittee in developing its report.
16 Secondly, and this is one that this item has
17 caused some concern, but I think it's a very important one, if
18 appointed members of the Task Force do not attend, a
19 substitute or staff person to this member can attend but may
20 not substitute for the member. Only appointed members are
21 empowered to participate. That's because each of you on the
22 Task Force has been appointed by a representive agency. Your
23 input is, of course, critical both in deliberations and the
24 final report, and you are in a sense the appointee, the
25 designatee, the approved person from that particular agency.

1 I'm delighted that I believe we have twenty-eight members of
2 the Task Force here today out of forty-five members, which is
3 a very, very good attendance level at a busy time of the year,
4 and at some considerable travel distance and so forth, so I
5 feel we will be able to have enough major significant
6 participation to get our work done.
7 Thirdly, we would very much appreciate your
8 responding to the request for names of people to be informed
9 of the balance of the hearings who may wish to testify. I
10 know you are sympathetic with Ms. Kemnitzer's need to get
11 these names early so people can be contacted and coordinated
12 for the Task Force hearing such as the one today. I was very
13 impressed with the roster today, but it has taken a good deal
14 of coordination, so please let us get the names from you
15 either today or within the next week.
16 While we proceed with the hearings today -- I want
17 to phrase this delicately, but I know you will be sympathetic
18 to it. The hearings are to elicit information and to
19 understand viewpoints, and if you will, to enable us to sense
20 the pulse of the country on these important issues. We are
21 not here to challenge, argue, intimidate or correct people's
22 data base, so it's important we understand the good will of
23 the people testifying. Sometimes they may possess a bias or
24 some of their impressions may not be in accord with things you
25 know are true from your own work, but we do need to understand

1 the spirit in which these witnesses come forth.
2 I have been told by staff to impress upon all of
3 you that the hearings will start at nine thirty AM sharp this
4 morning and hereafter. We have a very heavy agenda, and we
5 must work long on it. I would like to break now to indicate
6 that President May from the University of New Mexico is with
7 us this morning. President May, would you like to -- I think
8 they can probably hear you. You are probably more used to
9 this room than I. We are glad you could come out in such an
10 early morning hour to welcome this group.
11 PRESIDENT MAY: My pleasure. Thank you very much for
12 coming, and I would like to say just a word of welcome to all
13 of you, and this particular subject that you are to address
14 here in the next -- will you be meeting here two days or just
15 one day?
16 DOCTOR REYNOLDS: Just today.
17 PRESIDENT MAY: A subject that is particularly close to
18 my heart, because as Dean of Engineering at the University of
19 New Mexico I tried to work this problem very hard for a number
20 of years, and I note some familiar faces around this table,
21 that we have worked together on this problem. I'm very glad
22 particularly to host you here at the University of New Mexico.
23 I think it's very appropriate that you're meeting here in New
24 Mexico because we have many cases of microcosm or perhaps even
25 an exaggerated portion of that problem here. You will find

1 Wayne Matthews telling you, from the Commission of Higher
2 Education, of our demographics in this state, how we are
3 forty-six to forty-eight percent minorities and how those
4 demographics are already changing. That in a few years that
5 minority will now be the majority, and obviously with the
6 National Laboratories of Sandia and Los Alamos and with the
7 missile range, with the very large base aerial scope and the
8 ground base, free electron laser and the observatories and so
9 on, I think that I can say that our very -- our single largest
10 business in this economy here in New Mexico is research and
11 development. So we have not only a large number of minority
12 resources, human resources, but we also have immense
13 opportunity here in this state.
14 Many years ago we recognized that this was a
15 specific problem in trying to get young people to participate
16 and to have the opportunity of having these attractive jobs in
17 science and engineering, and we obviously also know that those
18 are difficult fields. The math based fields are difficult
19 fields that require a great deal of motivation. We have
20 worked that problem for many years. You will hear from
21 Richard Griego from our university, how he has tried to work
22 the problem right down into the grade schools. We found as we
23 started to try to -- as we looked around, we saw how
24 underrepresented minorities were in these not only
25 professions, but also in our schools. We recognize that we

1 couldn't sit and be passive, and as we started to work those
2 problems as far ago as ten years, why, we found that you
3 couldn't stand by passively and simply expect the problem to
4 cure itself. So we have started many programs, and through
5 the years we have tried many, many programs that have had
6 national affiliations that have tried to address the local
7 problems, and all of you who have tried to work that problem
8 around this table will recognize how very difficult that is,
9 how you start with building the proper kind of interest
10 structure, the proper kind of foundation.
11 We found that we had to provide the kind of role
12 models that young people from minority homes didn't have.
13 People like Herb Fernandez were very few and Jamie Oaxaca were
14 very few in our profession, and so our young people didn't
15 have those role models. The parents didn't know to direct
16 their young people into these math-based professions. The
17 teachers, the counselors, they weren't prepared adequately
18 when they came out of high school. They weren't motivated
19 properly. We found that we had to go down into the ninth and
20 tenth grade to provide summer programs that would try to
21 motivate these young people. We found that we had to.
22 Then even if they were successful in high school
23 and were motivated, you have to provide the free programs into
24 the colleges. We found that we had to put in special
25 retension programs to help them be successful once they came

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1 to college. We had to provide peer support. We had to
2 provide special counseling, all of those things. Finally we
3 had to provide special financial aid packages. We had to
4 finally provide links with industries so that they would then
5 be able to find positions once they graduated. It's a long
6 and hard road, and I think that what you will hear today will
7 be some success stories.
8 I hope you will hear from Jim Tarro. I see he is
9 on your schedule to tell you about a very exciting program we
10 started five years ago that was modeled along a California
11 program called MESA, Math Engineering Science Achievement, and
12 how we found that we had to go down into the ninth grade to
13 work with about six hundred young people in this community
14 starting in the ninth grade and try to get them attracted so
15 that they could be successful, and they are. The ones that
16 have already graduated, almost a hundred and fifty, a hundred
17 and seventy-five, ninety-seven percent of them are now in
18 higher education somewhere, and most of them in engineering
19 and science.
20 So we find that it's a very difficult problem in
21 working, but a very worthwhile problem. In fact, it's a
22 necessary problem. I don't need to tell you that we have to
23 do that for social reasons and for economic reasons. That we
24 have to make sure that we don't disenfranchise any portion of
25 our population. We have been -- in spite of all that work, we

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1 still are a long ways from being successful in the sense of
2 what we call success for parity participation. The University
3 of New Mexico, in our College of Engineering, we are at about
4 thirty-percent minority and about twenty-percent women, and
5 the women story is just as difficult in providing role models
6 and early counseling to help them to be -- to view engineering
7 and science as a viable alternative, so I'm sure you will hear
8 all that today in much more detail.
9 I hope that you will be able to help us as you
10 prepare your report, and as you go around the country to hear
11 these kinds of things wherever you go. I hope that you're
12 able to also impress on our national leadership how important
13 this problem is and how it has to be worked and how it has to
14 be supported at every one of our institutions. I don't think
15 I exaggerate also to say that our educational institutions are
16 at the forefront, are in the trenches of that battle of trying
17 to work that problem right where it starts, and that is
18 getting young people successful right from the start. So I
19 welcome you here. I welcome your participation. I hope you
20 have a comfortable stay, and if we can do anything for you, we
21 would be happy to do so. Thank you.
22 DOCTOR REYNOLDS: Thank you very much, President May. We
23 appreciate you coming by and we appreciate the hospitality you
24 have extended.
25 PRESIDENT MAY: Our pleasure.

1 DOCTOR REYNOLDS: I will keep going then because we have
2 a fairly good-sized agenda. That's the reason we got you all
3 up so early this morning. There will be a lunch break. You
4 are glad to hear this, I'm sure, at twelve thirty. When that
5 starts, if there are press here Mr. Oaxaca and I will be
6 meeting with them at that time if requested. We would ask
7 that if there are press questions they be deferred to the two
8 of us if at all possible. The hearings resume at one thirty
9 PM sharp. I have been asked to get my staff to make sure that
10 happens so that we can get everything achieved during this
11 very busy day. Any questions or concerns on these issues from
12 members of the Task Force? Very good. I would like to note
13 especially two members of the commission who are from New
14 Mexico. Mr. Herb Fernandez and Mr. Miguel Rios. One on each
15 side. We are counterbalanced on each side from our host
16 table. We really appreciate you being here.
17 Let us move on then to the subcommittee reports,
18 and I do need to keep each of you to ten minutes or less,
19 hopefully less if we can. Let's begin, first of all, with
20 social aspects, and that will be given by Mr. Clive.
21 MS. FREEMAN: I'm Claire Freeman.
22 DOCTOR REYNOLDS: I'm sorry, Claire. She gave me a quick
23 name here. Claire Freeman.
24 MS. FREEMAN: I'm the co-chair of the social aspects
25 subcommittee. To my left is the other leadership component of

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1 this subcommittee. We have held one meeting, and it was a
2 very stimulating, successful meeting I think. At that meeting
3 we discussed what we thought would be our agenda for the next
4 couple of months, and the first item on the agenda was to
5 review the literature. To our pleasant surprise, upon looking
6 at a study underway at the Department of Defense through the
7 Department of the Army we found that Huston-Tillotson College
8 in Texas had been funded to the tune of some two million or
9 more dollars to do a study of the social factors impinging on
10 minority students in staying in science and engineering
11 careers. They did a yeoman's job of compiling a review of the
12 literature with some three thousand or more pieces of
13 literature reviewed. Also, they are beginning the
14 intervention strategies of their particular study. They are
15 on the agenda today to report to the monument Task Force.
16 Secondly, I requested from the members of the Task
17 Force a list of three or more social factors that they
18 consider to be principally important in stymieing the career
19 of a minority female or handicapped person in the science and
20 engineering field. I received comments back from Gloria
21 Sabatini and also Alan Clive, and my office also submitted a
22 rather comprehensive review, so we need comments back from the
23 rest of the subcommittee with respect to those shortly and we
24 will be sharing the reports. However, let my office know,
25 Clive's office and Doctor Sabatini's office because the rest

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1 of the subcommittee and whoever else is interested. If there
2 are any questions, that's the gist of my report. Alan, do you
3 have anything to add?
4 DOCTOR REYNOLDS: Thank you. Questions?
5 MR. OAXACA: I have a question. Are we going to be able
6 to get the army folks to -- you know, that have some of that
7 corporate memory on the report? Can we put the arm on them to
8 perhaps help us a little bit after we start performing the
9 first draft to get the salient points out of that if it's such
10 a voluminous thing?
11 MS. FREEMAN: Yes, indeed. As I indicated, there will be
12 a representative of Huston-Tillotson College here today, and
13 the reason that we invited the college to present today was so
14 that we could get an idea of the breadth of their study and to
15 be able to pinpoint what areas we want to know more, so we
16 won't have access to that study as much we would like. Alan,
17 would you like to say a few words?
18 DOCTOR CLIVE: Well, Claire, I think you have really hit
19 on it. We are still in the formulative stages of our
20 thinking, and as you know, I haven't had a chance to look at
21 all the comments that have come in. Once we have all of those
22 in hand, I think one of the next things we will be doing is to
23 try to see if there are any practical solutions that can be
24 applied to dealing with these factors, and if not, try to
25 assess what kind of impact they are going to have on our

1 problem, but at this point that's really all.
2 DOCTOR REYNOLDS: Thank you very much. We will look
3 forward to further reports from you. The second committee is
4 preccllege education, Doctor Larry Scadden.
5 DOCTOR SCADDEN: The two true co-chairs were unable to
6 come, and I was the designated as a member of the subcommittee
7 to report to represent the group officially here today, though
8 Bob Morris is also here. We had a meeting early in September
9 in Washington. We struggled with the fact that if we are
10 going to be an active subcommittee on a regular ongoing basis,
11 how best to bring in the information and the expertise of
12 committee members who are scattered all over the geography of
13 the country. We do plan to meet periodically in Washington,
14 but we also plan to meet whenever possible at a time of the
15 Task Force meetings. The core group, however, met at this
16 point, Washington based group early in September in Washington
17 to discuss what our objectives should be and will be for the
18 precollege subcommittee.
19 We seem to come to a consensus as a group that not
20 only do we want to identify the exemplary models, identify
21 models that President May was talking about which have been
22 implemented here in the Albuquerque, New Mexico area of
23 finding ways to encourage kids from grade school on up through
24 high school to encourage them to consider science and
25 engineering as careers, but also to reenforce that

1 encouragement with exemplary programs of support to ensure
2 that minority students, women and disabled students will be
3 able to have access to laboratory experiences, to be able to
4 formulate career ideas and be able to carry through with those
5 opportunities in the future.
6 We know that there are exemplary programs. We know
7 that they are often supported by the school districts with
8 augmentation from industry, with summer programs of industry
9 and federal laboratories and so forth. We want to identify
10 those exemplary models, learn as much about them as possible,
11 but simultaneously at the earliest possible time in the
12 existence of the subcommittee to begin to formulate ways in
13 which this information can be disseminated throughout the
14 country to groups and to individuals who can serve as agents
15 of change. We have identified these groups and individuals as
16 being located in both the public and private sector.
17 Obviously the federal government, the Department of Education
18 but probably more importantly, state and local educational
19 agencies, and industries within the local communities, and
20 their larger trade associations, I can encourage them to
21 participate providing mentor tutors and experiences, whether
22 it be weekend or summer-type experiences.
23 At this time, we have divided the sector of --
24 these various sectors, assigned them to individuals on the
25 subcommittee to establish contacts with these groups. We will

1 be meeting with them periodically. For instance, in October
2 we have been able to get key representatives from the -- I
3 don't remember the names of the organization, but it's the
4 Association of State Educational Administrators, Washington
5 based group as so many of the national groups are, and one of
6 the leaders will be talking with us on how best we can work
7 with them to use them for information dissemination group and
8 also stating in the education field that that meeting will
9 have a representative from another group that the name of
10 which I will not get exactly right, but it is the Association
11 of Large Local Education Agencies. I gather that the large
12 cities, the large school districts in the country have created
13 their own association, and we will have one of their leaders
14 to talk to us as ways in which we can hopefully, within the
15 period of the existence of this Task Force in the
16 subcommittee, begin to work with individual school districts
17 in replicating some of the exemplary models. If there's any
18 questions, I think Bob and I both will try to answer them.
19 DOCTOR REYNOLDS: Very good. Sounds like you are off to
20 a good strong start. The next subcommittee is higher
21 education, Doctor Danek and Doctor Adams.
22 DOCTOR DANEK: Thank you. Our subcommittee met one time
23 in September. A number of activities have been started. I
24 think we are off to a good start, also. We have developed a
25 charter or more appropriately I think you might call it a work

1 plan for the subcommittee, which we think is consistent with
2 the overall committee objectives, but speaks more directly to
3 the specific charge of the committee to take a look and
4 address the needs of minorities, women handicapped in higher
5 education. We view our ultimate objective as trying to help
6 initiate, put into place a series of actions which over time
7 will result in an increase in the participation of women,
8 minorities and the handicapped in pursuing science and
9 engineering careers.
10 What we have basically done, then, is to set forth
11 what we consider to be five basic objectives that we think
12 that we need to present some action programs. The first is
13 increasing awareness among higher education, industrial and
14 federal officials of the need of the current status of women,
15 minorities and the handicapped in science and engineering, the
16 need to join together to enhance opportunities for these
17 groups in higher education which lead to careers in science
18 and engineering, and we have begun to put together some
19 summary data. We do not believe that we need to do a full-
20 scale study. There is enough data which gives us a pretty
21 good picture. Betty Vetter over here is one of the experts on
22 women in minorities and science and engineering, and we don't
23 want to preempt her data base. We are going to look at that
24 very carefully, and the National Science Foundation collects
25 data, so we are going to be looking at putting together a

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1 summary of the current status of women, minorities and the
2 handicapped and we should be able to report to you on the
3 summary of that in October.
4 We think the next aspect that we would like to
5 look at which fits with the charge is the development of
6 better understanding among a greater number of people of the
7 real value of the fact that specialized programs and
8 intervention programs do really work, such things as mentors'
9 programs, scholarships, et cetera, and to take more careful
10 look at the relationship to these special activities to the
11 retension of minorities, women and the handicapped, and this
12 all relates to the first objective, more or less, which is
13 increased awareness. Certainly the existence of this
14 committee and these hearings are clearly one example of the
15 kind of activities that could be conducted.
16 The other aspect where we believe that we will
17 probably spend the greatest amount of our time is to identify
18 and disseminate information on exemplary programs. The same
19 sort of thing has occurred which exists in higher education
20 and within the federal government, focusing on women,
21 minorities and the handicapped, and I would like to report
22 that there really -- there are two things that have happened
23 since we have met last. NSF has just released a hundred and
24 fifty thousand dollar grant to AAAS, American Association for
25 Advancement of Science, the Office of Opportunities in Science

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1 and Engineering, to do a study of the fifty top research
2 institutions in the country, to take a look at what exemplary
3 programs we have for encouraging women, minorities and the
4 handicapped. We expect that within a year we will be able to
5 hold a national conference on that to bring people together.
6 The second thing is that the NSF, again, has and
7 partly in response to this committee, but partially because we
8 considered it a need prior to this, has put together two
9 programs that I think you all ought to know about, and that is
10 two programs for trying to encourage the dissemination and the
11 implementation of exemplary programs. We have two grant
12 programs which will provide seed money, small grants to people
13 to identify exemplary programs and to implement them and put
14 them in place in new settings, so those programs will be on
15 board in fiscal '88, and we would encourage all of you to take
16 a look at those. The other thing that we are doing is to try
17 to take a look at the federal agencies, and we have put
18 together a rather simple table that I think is going to get a
19 lot more complex as we go into the agencies which basically
20 says can you categorize all of your minority programs, your
21 women programs and handicapped programs, one sheet for each of
22 the groups.
23 It basically would display the program, the
24 position of the programs within each agency, along the
25 pipeline on one dimension and then along a second dimension

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1 which would be an education and training dimension through a
2 reserve function. That is, if the purpose of the program is
3 to enhance the capability of individuals at K through twelve,
4 it would be education slash training. If along the other end
5 of the line with regard to faculty, one would have faculty
6 enhancement programs to increase their mainstream to do
7 research here in the research category. So we are testing
8 this now in the Department of Education.
9 NSF has it, is taking a look at it. We have got
10 Kathy Perry looking at it in the Department of Energy. We are
11 doing it the NSF, and we would like your help in other
12 agencies to see if we can then pinpoint some of the
13 activities. I think if we do that, we then feel that we can
14 begin to talk to agency heads about where the gaps in their
15 programs or where the overlaps with other agencies were, some
16 opportunities that we might take advantage of. There is also
17 another area that we are looking at, and I will let Howard
18 report on that, and that is a survey of students in
19 engineering as to with regard to what sorts of interventions
20 they believe work.
21 DOCTOR ADAMS: Since one of our functions hopefully is to
22 enhance the participation of minorities and women and
23 handicapped in science and engineering, we thought we would
24 take a look at what students had to say to us. I am working
25 on an instrument that we will use to visually, actually,

1 survey students around the country on why they actually
2 majored in science and engineering, what some of their
3 problems are, what kind of interventions do they feel like
4 would have been beneficial to them, and then what kind of
5 recommendations would they make to us if they knew that there
6 was some organization who was looking at the kinds of issues
7 that we are looking at, what would they have to say, and we
8 hope to do this by using the instrument, one, with
9 organizations such as the Society of Women Engineers, the
10 AISES program, which is the American Indian Science and
11 Engineering Society, Mexican-American Engineering Society and
12 NSBE, National Society of Black Engineers. We are going to do
13 it with them.
14 We also -- my organization that I work with will
15 hold a series of ten conferences around the country this fall
16 on college campuses dealing with graduate education, so we are
17 going to be seeing a great deal of seniors and juniors who
18 will be coming to this workshop. Hopefully somewhere in the
19 neighborhood of about fifteen hundred. We hope to have this
20 instrument available at this time when these students register
21 to gather this data, so this particular report would not be
22 available for us at the October meeting, but surely we hope to
23 have this material ready for us by at least December of what
24 students have to say to us about what our activities ought to
25 be about.

1 DOCTOR REYNOLDS: Thank you. Questions? You're off with
2 a running start. That's excellent. The next subcommittee is
3 in the research arena. Doctor Clutter?
4 DOCTOR CLUTTER: Thank you. I don't know whether
5 everybody can hear me. Probably can, but I will use the
6 microphone, anyway. Like most of the other committees we have
7 held one meeting, and we were able only to get people in the
8 Washington area, but we thought we better get started. So on
9 August 24th we had a meeting at the National Science
10 Foundation. I was able to twist the arm of Eric Block, our
11 director, to join with us, and he gives us his full support,
12 and I think those of you who have heard him speak since that
13 time, and if you have the occasion to be hearing him speak
14 during the coming year, will notice that in every speech he is
15 going to talk about the need to attract more women, minorities
16 and handicapped to science and engineering careers. He has
17 made that his number-one priority over the coming year, so I
18 think that we can expect to get a lot of help from him.
19 At our meeting we decided, as the other
20 subcommittees have, to focus on the objectives that we feel we
21 can achieve during the coming year, and the first phase, of
22 course, is information and collection, and I brought along a
23 few examples of the kinds of things that we have been able to
24 collect. Now, remember that we are looking at programs that
25 offer research support, so that we are looking at that end of

1 the pipeline where people are already in careers as scientists
2 and engineers, but what we want to identify are those programs
3 that offer special support, and so, for example, at the NSF we
4 have some brochures that describe all the programs offering
5 the research opportunities for women. We have a brochure that
6 describes the research opportunities for minorities in science
7 and engineering and on and on.
8 So I think that at the foundation we won't have a
9 problem identifying all of the programs, and we are in the
10 collection phase, so we are collecting this information from
11 other agencies, but I think very importantly we are going to
12 try to get this information from private foundations, and
13 state and local governments and universities, and I have
14 assigned this task to one of the people at the NSF who is
15 responsible for our states' initiatives, and so we hope you
16 will be able to get that kind of information. I think in the
17 end, though, the upshot of this should be some information
18 about what the impact has been on all of these programs that
19 have been in place for a number of years now, and I think
20 that's where it's going to be a lot more difficult, because
21 very few of these programs have actually been evaluated to
22 full effectiveness, and I don't know whether we are going to
23 be able to do that, but we are going to take a shot at it.
24 The thing that we have already found is that there
25 is very little coordination, very little communication among

1 the various agencies of the federal government, and certainly
2 very little communication between private organizations and
3 government organizations that support these programs, and so I
4 think one of the best things we can do is try to increase the
5 communication and the coordination among these programs, but
6 another thing that we discovered at our first meeting was the
7 fact that in the federal agencies the peer review system that
8 is used is quite different from agency to agency, and so what
9 we are going to do at our November meeting, because we have
10 scheduled two full-scale full-day meetings of our subcommittee
11 in the months when we are not having hearings, and at the
12 first one in November, we are going to discuss peer review and
13 how it operates in the federal government for all of these
14 programs. So that is pretty much what we have done so far. I
15 would hope that we will be able, my subcommittee, to get
16 together at this particular meeting, and so I will take this
17 opportunity to invite everybody to have lunch with me because
18 I don't know when we will meet otherwise. Thank you.
19 DOCTOR REYNOLDS: Thank you very much, Doctor Clutter.
20 Any questions? I'm pleased with all -- with the beginning
21 that you have all achieved. You all met. You are starting to
22 come together. You are off and running. I almost forgot the
23 last and most critical one, employment. I was getting too
24 eager. I had in mind that if we kept moving at this pace, and
25 I'm sure we will, we will have a chance for a brief break

1 between now and when the hearings start. The major reason for
2 all of this, employment. Ms. Guerra, Mr. Thomas?
3 MR. THOMAS: Thank you. We have had one meeting, and the
4 purpose of that meeting was a planning session. Recognizing
5 that the Congress has identified some five objectives, we
6 thought it was best to try to scope in in terms of what we saw
7 were objectives. We have not had a meeting yet with the full
8 committee. Plans are to have one during the week of three,
9 October. We have essentially identified immediate goals and
10 we have also identified some data bases by which we hope to
11 collect data, and Stella will share with us some of that data.
12 MS. GUERRA: One of the things that as we sat around with
13 Sue and Alvin and myself planning, it became very evident that
14 if we are going to really open the door for minorities and
15 women, particularly in the area of employment, and look into
16 the problems that we are facing today that we definitely
17 needed to include one of our agencies that I see as playing a
18 very critical role in employment, and that's the Office of
19 Personnel Management, so we contacted Mr. Curt Smith, who is
20 the associate director for career entry programs at OPM, and
21 has joined the Task Force. To date he has sent a
22 representative, Fran Lopez, who is with us from Washington.
23 We consider it critical that if we are going to look at
24 opportunities or what needs to be done in the area of
25 employment, we need to look at the existing regulations that

1 the federal agencies have to operate under. Oftentimes there
2 are things that are time consuming or that make it less
3 attractive, and particularly when we are talking about
4 competing with private industry in government. So this is
5 going to be a big area in looking at the current status.
6 One of the things that I will add is that since our
7 meeting, June 30th, I have had the opportunity to visit four
8 different countries, then different states and deliver about
9 twenty-two major addresses. I have taken the opportunity on
10 each occasion to talk about the Task Force and what we are
11 doing about employment in science and technology areas, and I
12 can't think of anything that is more timely than our getting
13 together, because there is great interest generated and great
14 concern for the future of the work force in America. I don't
15 have anything else to add, but if you have any questions, we
16 will be glad to answer them.
17 MS. FREEMAN: I have a question of the employment
18 subcommittee. The defense manpower data center is the
19 gatherer of all stats for the Department of Defense, and we
20 requested of them a compilation of the number of women and
21 particularly women. but women, handicapped persons and
22 minorities in the science and engineering careers so that we
23 can get a look at how they have won out, and they can do that
24 for us, but we ask that this Task Force further define the
25 pertinent series of jobs. That is, to further define what do

1 we consider to be scientific and engineering careers because
2 it makes a difference in how the stats fall out. For example,
3 computer technicians, you will find an awful lot of women in
4 the computer technicians field and on the health side of the
5 problem you will find a lot of women in the nursing career,
6 and they tend to fall at the bottom of the GS wage grade
7 level. So we need to kind of like fill those particular
8 occupations out and further clarify what occupation in the GS
9 ranking should we use in the analysis of scientific and
10 engineering careers. That would help us, and the social
11 factor of the subcommittee really get to the bottom to get a
12 clear idea of who is in the work force in scientific and
13 engineering careers in a much more articulate manner. Right
14 now it's kind of hit or miss because of the unclarity of the
15 job definitions.
16 MS. GUERRA: That's true, and also with the Department of
17 Labor statistics for other agencies. One of the things that
18 we know that we will be looking into as we progress in our
19 subcommittee is particularly for federal agencies we often
20 place a lot of emphasis, and since we are dealing with
21 research and higher education, precollege education, in the
22 recruitment of the people coming into the work force but we
23 find it of utmost importance to also look into how do we
24 establish career, congressional programs when we get to
25 retrain our own existing work force in our agencies, and in

1 order to keep our best and brightest within and not go through
2 the training that we occasionally see or has become a real
3 problem when we have federal government agencies competing
4 with private industry.
5 DOCTOR CLUTTER: Yes, I have a question. I wonder what
6 we are using as a definition for scientists and engineers or
7 people in that profession or those professions. For example,
8 are we talking about people who are technicians, you know, at
9 the BS level, are we talking about nurses, you mentioned, or
10 are we talking about -- are we going to effect this on people
11 with higher degrees? It's just a matter of focusing on the
12 issues that we want to address.
13 MS. FREEMAN: That's exactly the question that I would
14 like answered. Also that we really need to prioritize, so to
15 speak, the pertinent series, pertinent job series, what do we
16 consider to be the pertinent job series that we want.
17 DOCTOR REYNOLDS: Could I, perhaps, let Sue respond and
18 there's something I want to say about that.
19 MS. KEMNITZER: I think this is a very good point, and
20 let me jump ahead and say that we have on board the commission
21 staff now on a part-time basis, Betty Vetter, who is the
22 president of the commission on professionals in science and
23 technology, who is the premiere expert on working on the
24 statistics, and I would like to ask her to review all this
25 thoroughly and go to the standard definitions that are used by

1 NSF and all and DOD, and sort out some -- a path for us
2 through the statistical series that exist.
3 DOCTOR REYNOLDS: I would like to say, though, that I
4 personally -- I haven't had a chance to confer with my
5 co-chair, but I have a strong bias that we have to in some
6 fashion keep track of all of these categories, because it's
7 just pivotal to track them. In other words, the person with
8 the baccalaureate in biology that becomes a laboratory
9 researcher often goes on, and also the whole scientific
10 manpower effort, the whole research future of the country
11 depends on that intrastructure of trained scientific personnel
12 as well, so I see heads nodding and would hope.
13 MS. VETTER: I have been looking over the occupational
14 codes that the federal government uses, and it would appear to
15 me that we need separate data, but data on everything within
16 those set occupations, including trainee. There is one called
17 trainee in almost every set. I don't know what it means, but
18 probably most of you federal people do, but it must be an
19 entry-level problem, not degreed job, but I don't know whether
20 it's degreed or nondegreed. I think we need data for all of
21 those, but they have got to be kept straight.
22 DOCTOR REYNOLDS: Does that help?
23 MS. WINKLER: I just wanted to add this point. When you
24 are looking at opportunity aid data, which is very important
25 because increasing PELL grants which are targeted towards low

1 income students, postsecondary education is not necessarily
2 university or college education. It's often professional
3 training or some sort of technical training which is outside
4 the whole university world, and this is a very quickly --
5 rapidly growing field in which we at least have to consider
6 and look at because the implications for the pool of student
7 aid money and where it is going, that's quite an important
8 issue.
9 DOCTOR REYNOLDS: You know, you make a very important
10 point there, and one that, you know, may not be completely
11 within the purview of this subcommittee or this Task Force,
12 but I certainly hope we address it to some extent. If I'm not
13 mistaken, over half of all PELL grant money is now going to
14 proprietary schools. I think that's correct.
15 MS. WINKLER: I don't know the exact figure, but it is a
16 large and growing portion.
17 DOCTOR REYNOLDS: It is a large and growing figure.
18 Those of us in what I would call -- shall we call us the
19 nonproprietary schools? I mean, those of us in the -- can I
20 be so bold as to say mainstream higher education are deeply
21 concerned about this because a lot of those PELL recipients
22 are in schools of cosmetology and --
23 MS. WINKLER: We should be getting in the next six to
24 eight months much better data on where a lot of this money is
25 going.

1 DOCTOR REYNOLDS: But my point is a lot of those schools
2 are -- some of them probably very solid and well conceived,
3 and a lot of them somewhat ersatz with respect to students
4 being prepared for scientific careers. I would hope our Task
5 Force at least could take a brief look at that because it
6 could be helpful to this growing problem of so much PELL grant
7 money going to proprietary schools, and they claim to be
8 producing some of the scientific technicians or lab
9 technicians and so forth, and I think there's a very poor
10 employment history after training.
11 MS. WINKLER: Our inspector general is deeply concerned,
12 also.
13 DOCTOR REYNOLDS: We have a big problem there.
14 MS. WINKLER: Proprietary schools, I'm not sure what the
15 official definition is, but basically it's a postsecondary
16 institution other than a university or college which provides
17 job training of some sort. Some are very sophisticated and
18 some are not so sophisticated.
19 DOCTOR REYNOLDS: But the proprietary schools --
20 MS. WINKLER: They are privately owned.
21 DOCTOR REYNOLDS: They are privately owned and someone
22 makes a profit from them.
23 MS. WINKLER: Some of them are not for profit as opposed
24 to -- they are not just money-making outfits. It's a huge
25 range.

1 DOCTOR REYNOLDS: The PTL was not for profit, too.
2 MR. WILLIAMS: I would like to make a response. That was
3 tempered by Mary, but what I would suggest is in the instance
4 of high education and proprietary college, I would make a
5 cautionary observation that while it is necessary to make
6 these rosters of support mechanisms that exist in various
7 federal agencies, the essential question is, as I view it,
8 with respect to the status of outcomes in those data are in
9 fashion, i.e., I don't think it's terribly interesting and
10 necessary that the following programs exist for research for
11 the effective groups to question, plus the quality of
12 participation by scientists or AGX and the way to manage that.
13 I simply wanted to emphasize that.
14 MR. FERNANDEZ: In regards to the relationship of the
15 employment definition for science and engineering versus the
16 higher education definition, if we are going to address the
17 total higher education question, which includes two-year
18 institutions, I think one, there's a very definite national
19 trend in pushing off a lot of the minorities and handicapped
20 into two-year institutions through raising the admission
21 standards and other things, tuition, and so I think that's a
22 very key issue that's going to have to be addressed through
23 the higher education subcommittee and again, it can be
24 addressed from the output standpoint and not necessarily by
25 categorization of jobs. Secondly, I think also in regards to

1 two-year institutions that probably the statistics show that
2 the supportive jobs for scientists and engineers might run
3 from one to five or more in every category of science and
4 technology, so therefore, from an employment standpoint it's a
5 very important question.
6 DOCTOR REYNOLDS: Yes. Any other comments?
7 MS. SABATINI: I would just like to make a comment. I
8 serve on the board of trustees of an institute of technology
9 who is proprietary but not for profit, and we are dealing with
10 this problem of those cosmetician schools getting grants where
11 we grant associate degrees, and I think in our subcommittee we
12 address the fact that there's a whole substrata of people with
13 associate degrees who are not going to college but are getting
14 a college education, and in essence, and they are not included
15 traditionally in any of these statistics, so we are going to
16 address that, too. In fact, I asked the president of this
17 institute to be a witness at one of these hearings to show
18 some of the things that are being done at that level.
19 DOCTOR REYNOLDS: I think that's very important because
20 we do have at the research level or at the educational level a
21 tiered intrastructure of people with various levels of
22 educational attainment, and they are all absolutely pivotal to
23 the research or educational enterprise, so we do want to look
24 at that, as well, and I have the notion with hopes of
25 broadening it, but also dealing with the problem that Ms.

1 Winkler raises where an enormous number of dollars are
2 probably inappropriately being spent. If they were focused
3 better on the appropriate training for individuals would yield
4 good results for the intents of this committee or this Task
5 Force.
6 MS. BISHOP: I would just like to ask a process question.
7 The information that Ms. Vetter is going to get for us, I
8 assume, will be sent out to all of the committee, all of the
9 members of the Task Force. That has to do with the scope of
10 defining what it is we are really talking about. Going back
11 to Claire's question as to what really are we talking about in
12 terms of science and technology, so I am going on the
13 assumption that once she has defined -- Ms. Vetter defined
14 what it is we think we are talking about, that that
15 information will then be disseminated to all the members of
16 the Task Force so that all of the subcommittees and members
17 will know exactly what is our scope.
18 DOCTOR REYNOLDS: Yes.
19 MS. FREEMAN: In addition to that I would like to request
20 that Ms. Vetter work directly with the defense manpower data
21 center staff, because that would really assist them in setting
22 up their survey methodology such that the outcome would be
23 most useful.
24 MS. VETTER: The CASET group, you mean?
25 MS. FREEMAN: To work with our subcommittee, yes, but

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1 more importantly to work directly -- I will put you in touch
2 with the defense -- the defense manpower data center, which is
3 located in Alexandria, Virginia, and the person's name is Rick
4 McGonavile who is doing the work, but we will put you in touch
5 so that we can really get the people who are going to be
6 punching the numbers and setting the survey up to be in sync
7 with what this Task Force is doing.
8 DOCTOR REYNOLDS: Let me understand this a bit. You are
9 going to arrange for Ms. Vetter's being with them because she
10 is really a very special resource? You will properly prepare
11 them for her level of expertise?
12 MS. FREEMAN: Exactly.
13 DOCTOR REYNOLDS: I'm comfortable with them.
14 MS. FREEMAN: They also have an extreme talent. They are
15 very, very talented in designing and doing surveys of this
16 sort, and so that's why it's critical for you and the staff
17 there to be talking on the same wavelength at this early
18 stage. I think that that would be very, very valuable in the
19 long-term.
20 DOCTOR REYNOLDS: Do you have a comment on that?
21 MS. VETTER: No. I think I was only going to add that in
22 relation to what I thought you were saying, I'm already
23 working with the Huston-Tillotson people at CASET to try to
24 get all the data together that they want, so I think there is
25 a close correlation with what they are doing and what you are

1 doing and ultimately we will see how it all fits together.
2 MS. FREEMAN: Thank you.
3 DOCTOR JENKINS: May I make an additional comment? I
4 would request that when each of our subtask force groups
5 finish that we have given some attention to not only looking
6 at the existing situation, the successful numbers and what you
7 might be multiplying, but what is increasing the numbers of
8 minorities of women, handicapped, double, triple, tens of
9 thousand. If you piled up every single one of the programs
10 now successful, it is not enough. It simply is not enough,
11 and the kinds of numbers we are going to need in the year 2000
12 and beyond will require extraordinary effort. We have a
13 charter -- developed a long-term plan to advance
14 opportunities, so I hope each of our groups give some
15 attention to that. We have to have more research, more people
16 graduating.
17 DOCTOR REYNOLDS: We are in total accord with you there.
18 That really is the intent of this. There is simply far too
19 much talent in this nation going to waste. Why don't we move
20 ahead then to the next agenda item. The progress report by
21 Ms. Kemnitzer.
22 MS. KEMNITZER: Thank you very much. The main thing I
23 wanted to do today was to introduce to you the people who are
24 now with the Task Force staff, and to give them some
25 recognition. First off, Mary Ann Orlando, who I see is still

1 busily working. She is not in the room. She is the one who
2 has helped in organizing the hearings and in turn, will
3 continue that role through the course of each of those events.
4 Betty Vetter, who we have already spoken with today. Betty
5 for thirty-five years has been the head of the Commission on
6 Professionals in Science and Technology, and is everybody's
7 expert, and we are very lucky to have her time for the Task
8 Force..
9 Let me ask each of the subcommittees to work with
10 her in the area of statistical analysis. I ask you to do that
11 for a couple of reasons. One, so we get the consistency of
12 definition, which is a point you have already identified, and
13 secondly, she really is the one person whom I know who knows
14 the most about these topics. I ask, however, that this is
15 done not in a manner of asking Betty to do all the work, but
16 rather using her as a counselor advisor in much the way we
17 have just worked out with Claire and her staff. I'm sure the
18 Department of Defense has significant computer capability for
19 doing analyses, and we should rely on that kind of expertise
20 in the agencies, but use Betty for general guidance and
21 insight.
22 And thirdly, I would like to introduce Debra
23 Chapley, who is in the black jacket in the front row here.
24 Debra is a distinguished writer, and she is going to help us
25 have a distinguished report. Again, Debra is not going to

1 write every word in the report, but she is going to help us
2 provide consistency and clarity from the products that the
3 subcommittees come up with. Debra has been on the staff of
4 "Science Magazine." She's been the Washington representative
5 for "Nature Magazine." She's written several major books on
6 her own through the Resources for the Future and the Center
7 for Strategic Studies at Georgetown University. She is just
8 about to come out with a book that is a biography on McNamara
9 to be published by Mora, and then she will be helping us with
10 writing our report. So again, here's an excellent resource
11 person who can help us put together our final report in a very
12 compelling way.
13 I feel very confident about the resources we have
14 available to do our work, and thank all of you for your
15 commitment and time, and assuring that we have a good product.
16 Let me mention one housekeeping matter. Being the executive
17 director I get to mention these lovely topics like lunch
18 money, things like that. If you each could give me a check
19 for thirty dollars that would cover all the refreshments we
20 are having today, because the way this works is I have to pay
21 for them personally and then get reimbursed from you all. It
22 puts a crimp in the family cash flow. You in turn can get
23 reimbursed through your mechanisms for this. I don't mean to
24 say that you are personally paying for it, but I would
25 appreciate it if before you leave today each give me a check

1 for thirty dollars, and if you have any questions about any
2 logistical matters or --
3 MS. FREEMAN: I would request that you let us know this
4 requirement in advance. For example, I don't have any checks
5 on me, and surely we can work something out.
6 MS. KEMNITZER: It appears that this will be a routine
7 practice at each hearing. That is, we will be bringing in
8 lunch and some breakfast items, and we have no way of paying
9 for those with the government funds that finance the Task
10 Force, so we ask you to pay for them and then get reimbursed
11 through your travel reimbursement mechanism.
12 MS. WINKLER: Thirty dollars for lunch?
13 MS. FREEMAN: You understand that most of us who are
14 traveling with the government have a twenty-five dollar
15 typically for meals, so you better eat well at lunch.
16 MS. KEMNITZER: If you would like to change the practice
17 in any way, I'm happy to entertain that consideration.
18 MS. FREEMAN: I don't think we need a thirty-dollar fare,
19 a bill-of-fare lunch.
20 MS. KEMNITZER: Eighty-four dollars in Albuquerque. It
21 changes by city. The hotel is forty-nine dollars, so that
22 made you have the balance for meals.
23 MS. WALTER: We have twenty-five above our hotel fare.
24 DOCTOR DANEK: That is if you are staying here. If you
25 are not staying here, it is half, so if you go home today it's

1 twelve dollars and fifty cents, I think. Is that correct?
2 MS. KEMNITZTER: I'm happy to talk about how we pay for
3 lunch, but one option is that we do have to pay, and so we
4 need to work out a mechanism that is fair.
5 MS. BISHOP: For future reference, though, the money that
6 has already been collected or will be collected from the
7 agencies, I presume that there will be a budget set up from
8 the monies coming in from the agencies. I have no idea what
9 our expenses will be, but I would like to suggest that perhaps
10 food at these hearings might be considered. I don't know.
11 MS. KEMNITZER: The National Science Foundation has sort
12 of a bank , the trustee. It is not possible. Indeed, it is
13 illegal for those federal funds to be used to pay for your
14 lunch.
15 DOCTOR DANEK: Do you want the check made to you
16 personally?
17 MS. KEMNITZER: Yes.
18 MS. SABATINI: Will you take cash?
19 MS. KEMNITZER: Sure. I would rather not carry around
20 that amount.
21 MS. SABATINI: Everybody brings a credit card instead of
22 your checkbook.
23 MS. KEMNITZER: I certainly trust all of you to send me
24 whatever you are able to send me over the next week because I
25 realize I have this problem of short notice.

1 MS. FREEMAN: So you need to know also that in terms of
2 the logistical processing procedures of the bureaucracies it
3 would be much easier for my finance guy to swallow paying the
4 National Science Foundation back as opposed to the kind of
5 questions that he will hit me with with a thirty-dollar check
6 to you, and I think that --
7 MS. KEMNITZER: I could get the name of the caterer for
8 you if you would like to make it out to the caterer.
9 MS. FREEMAN: That's not the point. I think we need a
10 set of process employees that will either associate paying in
11 advance to the National Science Foundation for them to do --
12 handle the catering, to collect the money in advance, because
13 then we can get our agencies to pay in advance perhaps for
14 these.
15 DOCTOR REYNOLDS: If I understand Sue right, I think she
16 is saying the NSF does not want to be involved in food
17 purchase for this group at all. That has to come out of
18 people's individual per diem.
19 DOCTOR JENKINS: Could it be made out to the Task Force?
20 You don't have an account for it?
21 MS. KEMNITZER: No.
22 MS. FREEMAN: The difficulty is paying an individual for
23 a meal versus paying an established organization.
24 DOCTOR REYNOLDS: Of course, if you were having lunch at
25 the airport cafeteria it really amounts to the same thing. I

1 think they expect you to simply turn in whatever amount.
2 MS. FREEMAN: The difference is anything is under fifteen
3 dollars, we do not have to turn in a sheet at all. If it's
4 over fifteen dollars, you have to document it. It's very
5 bureaucratic, and I don't want to take up time with the
6 committee.
7 DOCTOR REYNOLDS: Fine. Go ahead.
8 MS. KEMNITZER: I would be happy to work out whatever
9 arrangement works with your agency. I have learned in working
10 with the twelve agencies in getting the Task Force off the
11 ground that each group has their own rules. NSF won't pay for
12 any food, so I personally have to arrange for the food and pay
13 for it in advance, and let's work out a way where we can
14 essentially cover those expenses, either by making a check out
15 to the caterer or to the person, and if it varies for each
16 member of the Task Force based on their situation, well,
17 that's part of my job to try to make those things go smoothly.
18 DOCTOR REYNOLDS: Thank you, Sue. Other comments or
19 concerns over the overall work of the Task Force? All right.
20 DOCTOR ADAMS: Is that all of Sue's report, because
21 there's no date of an upcoming meeting, a December meeting.
22 Could we have that yet?
23 MS. KEMNITZER: I wanted to tell you or remind you that
24 the next Task Force meeting is October 29th in Chicago, and we
25 will be notifying you precisely of the arrangements there of

1 hotel and meeting space. I could tell you that we have a
2 tentative commitment, but I want to emphasize it's tentative,
3 that the Science Museum there in Chicago which does superb
4 work with Black science history programs and superb work with
5 the young people in the community may be able to sponsor the
6 hearing. They have another group that we have to shuffle
7 around, so that's not official, but if that can't be worked
8 out then we will have it downtown in the federal building, but
9 we will be in Chicago, the city itself, on October 29th. Same
10 drill as today, seven thirty meeting and hearing for the
11 balance of the day, and again, let me emphasize that if you
12 have people you would like to appear -- Howard Adams one day
13 gave me a whole good list of people that he thought should
14 appear, but I need to have them in writing, Howard. I urge
15 you to send those in because we really do want these to be
16 very substantive and a good learning experience, and in a way
17 a showcase. The programs have been successful.
18 DOCTOR REYNOLDS: You are talking about the Museum of
19 Science and Technology? It is one down near the zoo? There's
20 no museum near -- are you talking about the one down near the
21 University of Chicago, Museum of Science and Industry? Which
22 museum?
23 MS. VETTER: Academy of Science.
24 DOCTOR REYNOLDS: Chicago Academy of Science and
25 Industry. So people know which one.

1 MS. BISHOP: One other point I would just like to bring
2 to your attention. If it's at all possible, if you know the
3 details of the next future hearings, place, time, et cetera,
4 it would be very helpful if you could recognize the mails in
5 the government agencies and try to get that out well in
6 advance. I happened to be at my office all day yesterday and
7 the afternoon mail brought the copy of what we have today. If
8 I had left earlier, I would have missed it, so I would like to
9 sensitize you to the fact that a lot of mail coming in the
10 government agencies doesn't come directly to my desk. It
11 makes many trips around before it gets to my desk.
12 MS. KEMNITZER: Please advise me if there's a shorthand
13 way we could get things to you, let me know. We are just
14 about to -- you should have gotten in the mail a handbook on
15 the new computer system we are setting up, electronic mail
16 system. Hopefully that will ease some of these problems with
17 the mail delivery. That will be the principal way in which we
18 communicate with people in the future.
19 DOCTOR REYNOLDS: Thank you. I would like to ask Mr.
20 Fernandez about the status of the National Agenda Committee.
21 Has anything further happened on that issue.
22 MR. FERNANDEZ: We have not met. I had planned to have a
23 subcommittee meeting next time I was back in Washington, DC,
24 but I have been going out to California instead. However, a
25 couple of things that I hope evolves out of this ad hoc

1 committee, one is that we do take the long-term look at the
2 projections towards the end of the century across the board
3 for science and technology. I think several people mentioned
4 the fact here that you can't ignore one segment against
5 another, especially in respect to the output of education, and
6 I think the committee has already made a determination that we
7 have to address the whole system of education down to
8 elementary school and probably preschool. So given that, I
9 hope that our outline of discussion in this subcommittee is
10 going to lead into an input-output-type of discussion at every
11 level of educational endeavor, and then at points in time
12 where they tie into employment that we seriously discuss the
13 projected needs through the end of the century, and hopefully
14 come up with key recommendations for the long-term plan, but
15 hopefully I will get back to Washington here in the next month
16 or so and we will have more serious discussion.
17 MR. OAXACA: In that particular vein, if you recall, the
18 reason for that ad hoc committee was to have those folks look
19 at how we get the right kind of horsepower for implementation
20 of what this very important report will come out and say. The
21 tentative view is that we will endeavor, and we sure need
22 input from you folks, to hit the candidates not only for
23 president, but those key folks that are running where you will
24 have -- I guess, the super Tuesday is sometime in March, and
25 it is in my mind very important that we start getting those

1 candidates that are running for president, et cetera, to think
2 about the importance of the issues that this Task Force is
3 addressing.
4 And as we start working with that wonderful help
5 we are going to get from this young lady here in front of us
6 on how to do the report, and we start looking at how we might
7 formulate the structure of the report so that it's a very
8 punchy-type report and not a voluminous-type report, and how
9 we get white papers out to the candidates as we progress and
10 how we structure the different editions of this report so that
11 we can use it as a mechanism to highlight before the election,
12 during the primaries, after the election and as a sort of a
13 living document that will culminate in the progress that has
14 occurred when the Task Force closes off in 1990. And so the
15 committees that now have reported and put together such a fine
16 start I think it's of paramount importance that the ad hoc
17 committee on what we will formulate as a national agenda take
18 the initial inputs from those committees and come together, so
19 I will hope, Herb, that you and your folks will have something
20 to report on in the October session. Thank you.
21 MS. WINKLER: Procedural question. I don't think we ever
22 talked about the order in which reports will be delivered,
23 assembled and turned into a final report. I kind of
24 understood, and just tell me if I'm right. Each subcommittee
25 will prepare it's own written report for the whole Task Force,

1 and then its findings will be summarized in the interim report
2 and I assume that we will -- that it will be circulated for
3 comment by the committees before publication so that all
4 members can review.
5 DOCTOR REYNOLDS: That's correct. Then let us continue
6 on. We are doing well on time. I would like to suggest that
7 if anyone has any special concerns or any questions from any
8 of the people testifying today there will be an opportunity to
9 do so. The way we plan to proceed is that each witness will
10 come forward, sit at that table. Each witness will have nine
11 minutes to present. We have a bell-ringing lady appropriately
12 with a kitchen timer, and we believe it's sophisticated
13 technology, and that bell will quietly go off at the end of
14 nine minutes to warn the witness. I will endeavor in a polite
15 way to bring each witness to a close at the end of ten
16 minutes. That will give members of the Task Force a five-
17 minute period to ask questions or to clarify something,
18 perhaps, that the witness has indicated. There is a long list
19 of people who are eager to testify today, and their times are
20 included with the roster. Then we hope, by moving at a brisk
21 pace, to be able to complete this shortly after noontime. Any
22 questions or concerns about the way we are going to move
23 forward this morning?
24 MR. OAXACA: I want to go on record that the men had
25 nothing to do with picking the woman to run the kitchen timer.

1 MS. FREEMAN: I have one housekeeping comment. Would it
2 be possible to get some xerox copies made of some material?
3 MS. KEMNITZER: I think we have to turn to the air force
4 for that. Kirtland Air Force Base has provided some support
5 help for us today of all manner, which we are very thankful
6 for, and between them and the University of New Mexico we will
7 check and find out if we can, yes.
8 MS. FREEMAN: Thank you.
9 DOCTOR REYNOLDS: Any questions on that? I think it
10 would be useful -- after today's hearing you will have ample
11 time, most of you will have ample time to ponder on the return
12 trip. It lets you all know what those of us in California
13 have to endure on these trips through or regularly to
14 Washington, those happy flights, to ponder the general
15 information, the drift, the content of the testimony today.
16 I'm pleased we have another week to ponder additional
17 witnesses because we want to make sure that we do get a
18 thorough review of the concerns that are there nationwide with
19 respect to future scientific manpower needs, and our special
20 concern of women minorities and the handicap in this group.
21 So I would urge all of you as you hear the
22 testimony today to think what is not there, what does this
23 group still need to hear about, what are we missing, what else
24 do we want to be exposed to, because we still have ample
25 opportunity to do that in creating the roster of people who

1 will present an additional hearing. I think that more or less
2 summarizes where we are.
3 DOCTOR SCADDEN: Procedural question. In reading the
4 materials it is clear that those who testify will also be
5 submitting in writing apparently a more lengthy report. Will
6 we have access to those reports?
7 DOCTOR REYNOLDS: Yes. Are you planning to circulate
8 them to every member of the Task Force or what are you
9 planning to do with those?
10 MS. KEMNITZER: If I might ask you to indicate interest
11 to me because I think we are going to have a very large pile
12 and that times fifty Task Force members is quite a job to
13 distribute, so please, if you have interest in any one
14 person's testimony or if you would like to see all of the
15 complete testimony, just let me know and we will be happy to
16 send them to you.
17 DOCTOR REYNOLDS: Is that agreeable, Doctor Scadden, in
18 order to keep a list of those you would have to have the more
19 detailed written testimony. I think then we are in good
20 shape. We want to start right on the dot at nine thirty.
21 Could I do that? Why don't we all get, which I think will be
22 welcome, a twenty-minute break, but I would like to ask that
23 you be back at your seats by nine twenty. We may have a few
24 additional comments or clarifying matters to go over by nine
25 thirty, to grab a quick cup of coffee and a good roll and we

will see you in twenty minutes. Thanks.

(THEREUPON, the meeting was concluded.)

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9 I FURTHER CERTIFY that I am not employed by any of the
10 parties to this action or attorneys appearing herein, and that
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12 WITNESS my hand this 23rd day of September, 1987, at my
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