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THE WHITE HOUSE

Office of the Press Secretary

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PRESS BRIEFING BY  
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OFFICE OF SCIENCE AND TECHNOLOGY POLICY

The Briefing Room

12:40 P.M. EDT

MR. LOCKHART: Good afternoon. Before Mike comes down for the regular daily briefing, we've asked some of our colleagues here to come in. As you know, the President begins a series of events today on the issue of global climate change which will lead up to the Kyoto meeting in December. He'll be meeting with some eminent scientists today including some Nobel laureates.

I've asked Katie McGinty, the Chair of the Council of Environmental Quality, to come down , along with Dan Albritton, the Director of the Aeronomy Lab at the National Oceanic and Atmospheric Administration; and Jerry Melillo, the Associate Director for Environment of the Office of Science and Technology Policy.

MS. MCGINTY: Thanks, Joe.

Q How are those Redwoods?

MS. MCGINTY: Good afternoon. Not to change the topic. As Joe has indicated, today the President launches his campaign to engage the American people on the important issue of climate change. Today we will hear from some of the most distinguished scientists in our country, and indeed, in the world, on these issues.

These scientists will tell us in clear and certain terms why it is that we can't stick our hand in the sand on this issue. Infectious diseases -- already we're seeing diseases like malaria and dengue fever at our borders; indeed, Russia has seen an incidence of malaria return. These diseases will only spread as the climate warms.

Rapid increases in deaths from heat stroke -- just two years ago we saw 400 people die in Chicago from a record-breaking heat wave. Increasingly severe storm systems -- and in just the last century, we've seen a 20-percent increase in the severity of storm systems here in the United States. Now, insurance companies will tell you that has meant billions of dollars in losses here in the U.S.

Rapid sea level rise -- we stand to see thousands of square miles of our coastal states -- Florida, Louisiana -- lost to inundation from sea level rise. Indeed, we may lose a third of the Everglades from sea level rise. Severe droughts also can be expected like the ones we saw in 1988 that cut U.S. agricultural production and productivity by a third.

As I've said, these things are not just theoretical. Some things are happening now. The heat waves that have killed people, 1993 outbreak of the Hanta virus in the southwest U.S. followed on the heels of severe droughts and then heavy rains.

What the scientists want to say today is that these kinds of things are exactly in line with the predictions that they would make -- could happen as a consequence of climate change. And these are the kinds of things that can become increasingly severe, common and widespread if, again, we stick our heads in the sand on this issue and just allow ourselves to continue with business as usual.

The President has identified this issue of one of extremely seriously moment for the United States from an environmental perspective, from an economic perspective as we've already seen -- damaging storm systems, for example -- and from a national security perspective because of the global disruption that could come from climate change. Having identified this as a serious issue for the United States and one that is important to our security, the President has also determined that the United States

will show leadership here to join all of the countries in the world to taking responsible steps to meet this challenge.

Now, having said that, the President has also said you can do these things dumb and you can do them smart. He is determined that we will pursue this issue as we have all of the environmental challenges we have addressed, and that is in a way that shows the interlinkages between environmental progress and economic progress. There's a \$400-billion market for environmental technologies and services to, in part, address this issue and it will be part of the President's effort that U.S. companies are seizing those opportunities as we take on the climate challenge.

The President will articulate and pursue policies that are flexible, that are market-oriented, and again, that enable us to take this challenge and turn it into economic opportunity. This launches our effort in the coming months. We will continue the effort to engage the American people in general, but also to bring in the business community; leadership from Capitol Hill, from the environmental groups, from state and local government to find and tease out those ideas that will help us again to change this challenge into a very significant opportunity for the United States.

Today is a very important first step in this campaign and I think it will open all of our eyes to the reality of this challenge and to the very serious consequences that would follow if we were to pursue a course of no action on this issue.

To flesh some of that out, let me turn it over to Dan Albritton, one of our leading experts in this issue.

Q Why did you wait so long when this has been an issue now for several years?

MS. MCGINTY: Not to duck it, but why don't we continue with the presentations and come back for questions.

MR. ALBRITTON: Thanks. Katie's outlined the activities that are occurring today and why. From a scientific perspective, the reason that we are here today is basically that the Earth's climate system and humankind are co-involved. By that I mean, our activities, along with natural changes on the planet have the capability of changing the planet on which we live. It also implies that, as inhabitants of the planet, if the climate system were to change to unfavorable states, then we would be impactees.

And so, the issue before decision-makers in governments and industry is, on the one hand, our activities and lifestyle have the potential of changing the planet, and on the other hand, as impactees we would be involved in receiving the impacts of that change.

The complexity of that balance of cost and benefits approaches led governments to ask the expert communities around the

world to prepare their very best understanding of the climate system and our role in it and their understanding of the impacts to humankind of the climate system were to change.

Very large reports were prepared and delivered to governments last year. What we will be summarizing today for you in the way of context are the major points associated with our involvement with the climate system both on the front end and on the receiving end.

The scientific community, in addressing the question of how well do we understand the climate system and our role in it, have come up with perhaps five take-away messages. I'll summarize those five for you and my colleague, Jerry Melillo, will comment on the take-away messages associated with the impacts of climate change on humans.

I'll arrange those five points in the order of things that scientists are absolutely confident in down to things that we wish we had more information about. And I'll try to explain why the certainty and the uncertainty are both relevant to those wrestling with approaches and decisions on this.

The first point. There is a natural greenhouse effect on the planet, and we understand its basic principles very, very well, namely, we know that there are trace gases in the atmosphere that absorb part of the heat that would be radiated to space, and thereby have the potential for raising the temperature on the planet. In fact, those greenhouse gases have been part of our atmosphere as long as we've had an atmosphere. In fact, if it weren't for those greenhouse gases that are already naturally in the atmosphere, our planet would have an average temperature of six degrees Fahrenheit, not 60 degrees that we enjoy today. And so, the principles of trapped heat by a small set of gases is the rationale for us having the life on planet as we know.

Well, why is greenhouse then often deemed an issue? The issue arises is that in the last 100 years -- and this is point number two -- we've begun to change the composition of the atmosphere through our activities. That is we've been adding to, during the industrial area, the natural amount of greenhouse gases that were on the planet.

For example, CO<sub>2</sub> has increased 30 percent since the industrial era. And we know that it's because of the use of fossil fuel to generate energy and thereby develop the lifestyle that we enjoy. Other greenhouse gases are increasing as well. Scientists have impeccable measurements that demonstrate this steady increase of the amount of greenhouse gases since we gained the capability of altering the amount of greenhouse gases.

Third point, and this now is a forecast -- what I've mentioned up until now is what has happened in the past and at the present. The forecast is that, if greenhouse gases were to continue

to increase as they have been doing, our best understanding of how the planet is going to respond to that is that the average temperature of the planet will increase perhaps 3.5 degrees Fahrenheit by the end of the next century.

Associated with that would be an increase in sea level, because a warmer ocean and melted glaciers mean more water, more space occupied by the ocean. There will be an increase in sea level of perhaps 20 inches, which would add, of course, to storm surges and other things.

If the planet were to choose to change its temperature about 3.5 degrees, it would be larger than any natural change that's occurred since the last Ice Ages. This puts a scale on the nature of the change, and it would be more rapid than any change that we've seen since the last Ice Age.

The point that perhaps is the most policy-relevant about this is that the CO<sub>2</sub> that we use to get here today is going to be in the atmosphere long after we're gone; namely the resonance time of CO<sub>2</sub> in the atmosphere is longer than the human lifetimes, and therefore, if the planet starts changing climate, the long resonance time of these greenhouse gases means that it will be a very slow process to reverse.

Point number four, have we seen anything yet? Global temperatures have warmed over the last century, and the balance of evidence suggests that part of that warming is due to our activities. For example, we've been taking the temperature of the planet for about 125 years, beginning with seaboard thermometers, and now having the very sophisticated weather thermometers that we have, that data shows that the planet's warmer now. It's warmer by about a half to one degree Fahrenheit, compared to the middle of the last century. And, naturally, as weather and climate do, that warming has been up and down and up and down, but steadily upward over that long period.

Associated with that is an increase in sea level of about four inches to 10 inches, so there is a consistent picture. Associated with that warming is a retreat of mountain glaciers -- very obvious -- three aspects of the fact that we now live in a warmer world.

The key question is not whether we have a warmer world right now or not; the key is what caused the change. That half to one degree is about the size of what the natural changes have been since the last ice age. And so scientists have had the challenging job of looking for a half a degree needle inside of a half a degree haystack.

In this most recent statement by the World Science Community, they believe now that they see reasons that not all of that change has been natural, and they make that by looking at the pattern of the change compared to the pattern that you would expect from natural behavior or from CO<sub>2</sub> behavior. So the world is warmer.

We believe, at least in part, it's due to our having added greenhouse gases to the planet.

Fifth point -- and this states more about our level of knowledge -- fifth point is that it's a very complex planet and we do have imperfect knowledge of some of the details. That implies that we can't predict what the climate change will be in a given city or a given state or what the climate will be or a particular summer will be in any particular place.

The understanding of the smaller details of the climate system and the size of computers and our lack of observations in many areas means that our predictions are at the current time either globally or regionally. Now, regionally, though, can be important. For example, scientists are saying that large land masses will warm and dry out faster than smaller land masses or the oceans. And, obviously, that has implications to countries involved in large continents.

Secondly, higher latitudes will warm more than lower latitudes. This has implications for effects and things about farming and where that might shift. It's also fairly clear that the warming will occur largely at night. And this increase in that regime has to do a lot with impacts on animal populations and crops.

The question frequently comes up, what can you say about extremes? Extremes are probably the more difficult things for scientists to predict, but they can say some things. And it's this: that in a warmer world, there's more evaporation; more water in the atmosphere; more variable, in a sense, more tropical, and hence the hydrological cycle -- storms, clouds and so on -- will be a much more active system. It's summer in Washington compared to other times in Washington. This means that the rainfalls are likely in warmer world to be heavier rainfalls. There would be more frequency of hot, dry periods.

The question comes up frequently about hurricanes. The jury is still out scientifically. It's not clear whether hurricanes will be more intense or more frequent in a warmer world -- a very difficult call.

Finally, what about surprises? Scientists answer, yes, to that. We're entering a warmer regime of climate than we've had experience for. And as nature is inclined to do, it's going to reveal a process to us that we probably don't know now. And so, the probability of either rude or happy surprises in the century ahead are very high. And you only have to remember that we didn't predict the Antarctic ozone hole. It was a regime of chlorine in the atmosphere that we had never experienced. It triggered a process that we didn't know as scientists and we were rudely surprised by that. The climate system has such non-linearities for sure. And there will be surprises, both rude and happy surprises.

In summary, from an understanding of how well scientists

understand the climate system and our role in it, there are five points that I've tried to make. Number one -- this is a real issue; it's worth your time in explaining it, the government's time in debating it, industry's time in engaging -- it's a real issue. Secondly, some degree of human-influenced climate change now appears to be inevitable. Third, discernible signs that we are changing the climate are at hand at present. However, exactly what will happen in particular places at particular times will remain difficult to predict. And the fifth point, and probably one of the more important scientific points, is that any human-induced climate change that were to occur would be very, very long and slow in reversing it because of the lifetimes.

Let me quickly add -- and this will underscore what Jerry can summarize for you, too -- this is not the view of one scientist, this is the view of thousands of scientists who were asked to give their current statement of scientific understanding. I believe that those statements made by the entire scientific community are of high value to decision-makers in government and industry and those who acquaint the public with such complex things.

Number one, it's prepared by the expert communities. It is their vast, vast majority viewpoint, and it represents, since it goes from forcings to changes to impacts to options, it represents one-stop shopping on a complex, complex issue. Because of the large impacts associated with climate change, because of large impacts of doing anything to avoid it, a key element, we think, in this process is what we're doing here today, both at the White House and here, and that's dialogue. And that's why both Jerry and I really do appreciate the opportunity to lay out the scientists' viewpoint for these, and there is plenty of time afterwards; if I've hurried through any of these points, please do bring them up again. Thanks.

MR. MELILLO: Good afternoon. I'm going to try to be very brief so that we can get to questions. As Dan outlined, more than 2,500 scientists have come together to produce the Intergovernmental Panel on Climate Change Report that includes one large component on impacts.

The impacts range across issues of human health, water resources, agriculture and food supply, coastal zone integrity and management, forests and forestry, fisheries and natural areas. And we don't want to minimize the importance of natural areas, because they provide a whole suite of services to us that are absolutely critical for society's maintenance.

Now, very briefly, I want to indicate and underline some of the things that Katie said. The human health issue has been one that has been tremendously interesting to all of us. The prospect of climate change brings with it the prospect of a shift in the distribution of vector-borne diseases, such as malaria. There are model estimates that would suggest that with a doubling of CO<sub>2</sub> and the associated change in climate, we might see in the range of 50 million to 80 million more cases of malaria in a year.

With respect to water resources, water is a critical asset for all nations of the world, and -- disputed one in many regions. General circulation models would suggest significant changes in water availability and soil moisture in particular, which is essential for growing crops, and one model, the general fluid dynamics model at Princeton, would suggest that at four times current levels -- or pre-industrial levels of CO<sub>2</sub>, the soil moisture levels in the heartland of the United States could drop by as much as 30 to 50 percent, which would make agriculture in that area very difficult.

For natural systems, there will be many surprises, I'm sure. One of the concerns that ecologists have is that as climate zones shift, so, too, will vegetation distribution shift. However, it will not shift in an orderly fashion. Species will move at varying rates, and there could be long periods of reorganization in the world's vegetation. That could be very difficult for us to deal with and affect adversely some of those services that we count on natural ecosystems providing us, such as the cleansing of water, the stabilizing of landscapes against erosion, and the stabilizing of coastal zones against storm surges.

So I think there are an array of impacts that we can talk about, but as Dan mentioned, there's probably going to be a tremendous amount of regional and temporal texture in the degree of those impacts.

To begin to understand the regional consequences of climate change and to give some vision to what kinds of regional changes we might expect, the administration through the Office of Science and Technology Policy and the U.S. Global Change Research Program, has begun a series of 17 regional workshops on the climate change issue. And in these workshops we attempt to do four things. The first thing that we do is try to get an understanding outside of the climate change issue, either climate variability or climate change, what the current stresses are that regions are facing for their environment, their economics and their social structure.

The second question is, how would climate variability, if it were to increase, or climate change if it were directional, either amplify or dampen these current stresses. The third question is, what kind of information, in addition to the information that the people in these regions already have, what kind of additional information would they need to begin to think more clearly about the climate change issue. And that helps us to set a research agenda, by the way. And finally, what kinds of coping strategies could they think of that would be useful to deal with their current stresses and also have a positive effect on ameliorating the climate change issue.

And I must say we've had four of these 17 workshops, and each one of them has been truly fascinating, with some surprising stresses surfacing to the top of the various lists. For example, in



Alaska, one of the greatest concerns is the melting of permafrost with global warming. This has tremendous implications for infrastructure in the state of Alaska. Approximately -- I think it's about 80 percent of the state of Alaska -- is under land by frozen soil. As this soil melts out, you can imagine what it does to building structures and the roads and airports. And we've been told that already, the permafrost in Alaska is warming; in some places in Central Alaska it's actually melting out. This could result in a slumping in those areas of anywhere between five and 10 meters, and present an array of problems, such as difficulty keeping rural airports functioning -- which is the link to civilization for many of these isolated places -- and tremendous difficulty in keeping roads flat so that you can move around this state.

I could go on with examples, but I think I'm going to stop and open it to questions.

Q You want the public to realize that there is a problem. What can the public do? Does the administration want the public to do things such as stop cutting their lawn with a combustion engine, stop barbecuing, eliminate the combustion engine? What do you want people to do?

MS. MCGINTY: Part of this dialogue will be to identify what the best solutions are. But in our mind, it won't involve the kinds of things you've just suggested, it will involve things like energy efficiency. Currently, if you think of energy, for every three units of energy we produce, we basically throw out two of them just through wasteful practices. That's money we're throwing out. It's also the leading contributor to this challenge.

So the idea is, what are the technologies we can employ that will reduce the pollution, and in that instance especially, save us money, improve our efficiency. Those are the kinds of things we know are out there that we want to identify and through this effort put into place.

Q You must have some examples. Can you give us any besides turning our thermostat down?

MS. MCGINTY: Sure. All of this week we have had the leading vice presidents for research of the three automobile companies in Washington. We have launched with them what we call a Partnership for a New Generation of Vehicles. Through this partnership, by the early years of the next century, we will produce a vehicle that achieves 300 percent the fuel efficiency of current vehicles -- 80 miles to the gallon. And we are on our way through that partnership with the Big Three to produce that kind of vehicle.

Q Have you come any closer to setting macro-goals for emissions of greenhouse gases? Because the U.S. has already rejected the European proposal to stabilize at 1990 levels. Where are we moving in terms of that?

MS. MCGINTY: We have outlined the framework for what the next steps on climate should look like. One, the United States has said the current voluntary approach hasn't fully worked. The world community needs to come together around binding emissions limits. We have put that forward.

The United States has also put forward the notion that, again, there are smart ways to do this and dumb ways. The smart way is that we use flexible approaches, we harness market forces, we use market mechanisms to achieve those emissions reductions.

Third, that all countries in the world, not just the developed countries -- and clearly, we in the United States have a responsibility here as do other industrial countries -- but developed

achieving that emissions level. We have not yet put forward those numbers in the international arena. This process is designed to enable us to do that by the mid, late fall when these negotiations internationally will reach that point and have to come to terms with that issue.

Q You described -- these two gentlemen described part of their presentation as a forecast of the bad things that would happen. Can you explain to us or can they explain to us how hypothetical this situation is or how concrete it is? And a second part to the question, you presented a very good sort of sky is falling scenario; it would seem that there would have to be some positive aspects of global climate change and I know that some countries think that their agriculture might work out better with climate change. Can you address any of those issues?

MS. MCGINTY: Dan, do you want to take that on?

MR. ALBRITTON: As I've mentioned, representing how the planet will respond is a very challenging scientific job. What the scientists have tried to do is evaluate the effect of their ignorance. The 3.5 degree warming for a doubling of CO<sub>2</sub>, which could occur some time in the next century, is in the middle of an uncertainty range which could be as high as six degrees warming, could be as low as 2 degrees warming. And so, with high confidence, the current scientific community is saying that for a doubling of CO<sub>2</sub>, which could occur sometime in the next century, the planet will warm somewhere between two degrees Fahrenheit and six degrees Fahrenheit.

They got those two ranges by pushing all of their known ignorance in one direction and pushing all of their known ignorance in the other direction. They are very confident that the planet will respond in that range for a doubling of CO<sub>2</sub>.

In terms of the pluses and minuses of that, Jerry can expand upon those points.

MR. MELILLO: When I talked about the fact that there would be texture or place to place variation in response, that was part of what I was alluding to. Indeed, let's take the example of agriculture. The analyses would suggest that indeed, globally, there may be some winners and there may be some losers. As it turns out, the winners are most likely to be in the developed countries, and that is also the place, of course, where there is capital available to be able to respond and to adapt to changes in climate.

Those places where the climate currently is semi-arid, the agriculture is largely dry-land agriculture without the benefit of any kind of irrigation, and those places that are subject to periodic droughts -- and there is a large portion of the tropics that would fall into this category -- might well be the places where there would be real losses in agricultural productivity.

In fact, when the modelers do their analyses, the predictions about agricultural productivity changes under a two-times CO2 world -- that's both the climate and the fact that the carbon dioxide concentration of the atmosphere has doubled -- would be plus or minus 40 percent, depending upon where you were on the face of the Earth and what your conditions were.

A lot of the minus numbers fall into the tropics where, over the next 100 years, we expect at least a doubling of population. So indeed, there are winners and losers. To predict exactly where they'll be, as Dan pointed out, is currently beyond us, but what we can do is paint a picture of vulnerabilities, and this is clearly a vulnerability.

Q President Clinton made political points against George Bush because Bush denied global warming. And yet, this is the second term of President Clinton and there is no national theme for fuel conservation, miles per gallon and other things we could be doing. Why is that? Why is it only now?

MS. MCGINTY: We have been at this job since the beginning of the President's first term. The President reversed the policy of the previous administration and signed up to trying to achieve 1990 levels of emissions by the year 2000. We put together a very ambitious program of investments in energy efficiency and renewable energy technologies. We will fall short of that goal not because the President did not articulate it and not because we did not put together a thorough program of action, but because, for example, the Congress has cut by -- on the order of 50 percent the nation's investments in energy efficiency and renewable energy technology.

I just mentioned this Partnership for a New Generation of Vehicles. We've also been at that work for about two years or maybe even a little bit more. We have been moving forward on this agenda consistently since 1993.

Now, there are certain things, however, that now catalyze this work. First is, as Dr. Albritton noted, the science itself has gelled in a significant respect in just the last year and a half or so as the scientists, for the first time, have determined that there is -- to quote them -- "a discernable human impact" on the climate. That's only in the last year or year and a half that that determination has been made, and that has quickened the discussion.

Second, we do now face an international negotiation which will culminate at the end of this year, in December in Kyoto, Japan, 150-plus countries, nations in the world will come together to conclude a treaty on this issue. So we've been at it, but there are certainly things that have quickened the discussion in the last year, year and a half.

Q Is Senator Byrd's resolution consistent with your negotiating position in these talks?

MS. MCGINTY: Well, certainly, the notion that developing countries need to be part of the solution is something that we absolutely agree with. In fact, as I articulated, this has been an essential part of the U.S. position in these negotiations internationally. We are not supported on this point by, for example, many in the European Union and certainly not by many in the developing countries themselves -- the point being that as developed countries take the lead here, as we must, we need developing countries also to pick up the baton and help become part of the solution to this problem.

So we absolutely agree with the resolution in that respect.

Q Can you tell us what you're talking about when you say -- you refer to those who have their heads in the sand -- are you talking about members of Congress, people in industry, other scientists? Who are you talking about?

MS. MCGINTY: The point was that we can't -- it was a general point that the evidence is such that we take a very high risk if we decide to put our hands in the sand on this issue. Now, having said that, on this issue, like any other serious issue, there are the extremes. There are those who will say that this is nonsense, that we should do nothing, that we should let the dice roll here, it's okay that we currently have levels of greenhouse gases in the atmosphere that are higher than any we've seen in the last 200,000 years. What's the big deal? Let's roll the dice, let's see what happens. There are some who will say that.

There are some that will say the sky is falling or the

sea level is rising and we have to all run for the hills, and let's take drastic action, 15 percent cuts by tomorrow in our emissions. That would drastically hurt our economy.

The President is saying this is a serious issue; it's an issue on which we will not stick our head in the sand, but it is an issue on which we will take responsible action and action that can very well provide us economic opportunity if we do it right.

Yes, sir.

Q If I can take advantage of you being here to ask a quick question on Saturday's environment summit. Is the President going to go to Tahoe with the commitment that's been requested by the Governors of Nevada and California for the \$300 million? And, secondly, is he going to have an answer for them on the low-intensity burn?

MS. MCGINTY: The President will -- and I don't want to -- I mean, these announcements are for him to make -- however, we have participated in and organized in the region a series of intensive discussions with local and state leaders to say Lake Tahoe is a priceless national jewel; what are the threats to it and what needs to be done to help it. Whether it's water quality, transportation or forest health issues, very real ideas came out of that dialogue. The President will have very real and concrete measures he will announce and to which the federal government will contribute when he is out there.

Q But if I can follow, Governor Miller and Governor Wilson this week said that they didn't want the President coming out there empty-handed, is the word that Governor Wilson used.

MS. MCGINTY: And he will not.

Q He will have some commitment on --

MS. MCGINTY: I will not announce what they are, but let me just say again, we have heard some very real and concrete suggestions as to what we need to do around Lake Tahoe, and the President will have some very real and concrete initiatives that the federal government will undertake to be a positive partner with others in the region in saving and restoring Lake Tahoe.

Q Related to that, Babbitt has endorsed the low-intensity burn in previous conferences earlier in July. Can you give any assurances that that will work and that it will be safe to the residents there?

MS. MCGINTY: Let me just say our forest policy will be dictated by the best science. What the science has told us is that in some respects, the Smokey Bear campaign has been overly successful, and the consequence of stamping out every fire, including naturally-occurring fires has been that we now have a tinderbox in

many places of the country.

About a year ago, in the face of that, we made what might be considered a bold determination, but a determination driven by the science that we would increase the use of what's called prescribed burns to begin to thin out some of that tinderbox kindling that has built up over the decades. That will certainly be part of our approach to enhancing and trying to improve forest health in the Lake Tahoe region. The degree of it, the intensity of it will be driven by the science.

Q Doesn't that clash in any way with your endorsement of this Quincy Library Group plan to take trees out before you burn?

MS. MCGINTY: Not at all, and to say that there will be use of some prescribed burn is not to preclude the possibility that there also will be thinning of some trees, taking them out before you do the prescribed burn. You can, and should, do both.

Q What would the administration like to see coming out of Kyoto related to the developing countries? What kind of language should be in that agreement?

MS. MCGINTY: We very much want to see an agreement that shows real participation on the part of developing countries in becoming part of the solution to this challenge. We have suggested ideas along the following lines: It's our position that a new category of countries should be created under the treaty, that instead of just developed and developing countries, maybe we should recognize that Bangladesh, for example, is in a very different place and situation than Singapore is, for example, and that maybe there should be a third category of countries recognizing the economic development that has occurred in some developing countries.

Related to that, that those countries would take on binding obligations probably not equivalent to the obligations of developed countries, but more than the obligations of developing countries.

Also related to that, that we would think about an automatic graduation process, so that as a country reaches a certain level of economic growth and development, they automatically would flip into the developed country category and take on legally binding obligations.

Q Do you envision specific targets and timetables for that category -- countries at that point?

MS. MCGINTY: For that third category of countries, at that point, yes, absolutely, right.

Q Do you think it's feasible to do a cost benefit analysis -- domestically, the United States -- of putting in limits on carbon or fossil fuel emissions? And will you attempt to do that

before setting the targets for the December treaty?

MS. MCGINTY: Well, certainly what we will do and will be essential in figuring out the best approach to this is to do a cost-benefit analysis, if you will, of the various policy approaches we might take. So, for example, if there is a suggestion that comes out of these dialogues that says, one-third of our emissions are due to inefficient buildings. And if we would just invest in X, Y or Z-building technology, we can improve the situation. We will have to do a cost-benefit analysis of how much we want to invest, and if we invest, what's the benefit? Emissions reductions. How close does it get us to meeting an overall objective? We will do that we might pursue a policy initiative.

Q But will you have to analyze the cost of global warming to the U.S. economy or to some other standards here in the United States?

MS. MCGINTY: Whether we'll do it independently or just look at the plethora of literature and scientific information, economic information that is out there -- there are many different people around the country that have models that are analyzing those kinds of things. And I very much expect we will engage some of those folks in looking at that, yes.

Q Could I ask about a scientists comment on the question of the temperature change since the last Ice Age? You mentioned in the last 100 years or so, there had been a one or half degree increase, which is equal to what had changed since the last Ice Age. What was the change then in that period, that previous period since the last Ice Age, as far as you know? Up or down or around or what?

MR. ALBRITTON: The temperature record that we have going back, say, 15,000 years, back to the last Ice Age times is based on, first of all, tree rings -- other proxy indicators, but they are accurate to show that over that period the Earth, itself, has changed its temperature over long, slow undulations of about one-half to one degree. And so, in looking backwards on what the size of natural variation can be, we can confidently say, it's in the range of part of a degree Fahrenheit, up to a degree Fahrenheit.

Now, since the industrial period, we have very carefully, of course, measured the temperature change. And since the preindustrial times, that one degree warming can be stated also with high confidence.

The third thing I mentioned was, of course, a forecast that when CO<sub>2</sub> doubles, what will be the added temperature from that is the 3.5 degrees Fahrenheit. So there's the scale factor. The planet changes its own temperature on the range of a half a degree to a degree or so. A change of that size we have seen in the last 150

years. We believe part of that is due to greenhouse gases.

Q The original change from the Ice Age to the last century, you don't know whether that was up or down, or does it just sort of vary --

MR. ALBRITTON: It varies. For example, about 600 years ago, the so-called "Little Ice Age," that's when grapes and wine-producing in England ended and the Greenland colonies stopped for the Nordics -- it was a half to three-quarter of a degree below the average. So the natural range the planet swings its own temperature is plus or minus a degree.

Q Twice, you mentioned during your discussions that you were looking for binding agreements. How would you enforce binding agreements, and how realistic are they considering we can't control nuclear weapons, we can't control drugs -- how are we going to enforce any binding agreement?

MS. MCGINTY: Just take the example of other environmental treaties we've had. The Montreal Protocol on the chemicals that deplete the ozone layer, chlorofluorocarbons -- how you make that binding is when countries sign up to it, as the United States signed up to the Montreal Protocol. You come back home and you go to your respective legislature, parliament or diet, and you proscribe legislation that is legally binding and that will enable you to meet that target. So that in the United States, we came back and, under the Clean Air Act, then implemented a set of requirements that basically phased out and ended the production and use of

chlorofluorocarbons in the country. And you would have to do a similar thing here. You would have to come back and whatever the goal was that was agreed to, come back and implement legislation of one kind or another that would get you there.

Q I don't mean to argue, but a lot of countries in the world don't have legislative processes. There are dictatorships or whatever form of government. And we also do have a problem of the smuggling of CFCs right now, even though that's supposed to be a legally-binding treaty.

MS. MCGINTY: No, I absolutely agree. In every kind of international exercise that you undertake there is always the problem of ensuring that you will have 100 percent compliance. It's always a difficult challenge. We have no reason to expect that this will be any less of a challenge to ensure 100 percent cooperation and compliance. Having said that, though, we do know what the mechanisms are that you put in place, and the President's commitment will be that this country, giving its word, will live up to its word.

Okay, thank you all very much.

END

1:28 P.M. EDT