STATEMENT OF
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BRIEFING ON THE 2007 IPCC ASSESSMENT

BEFORE THE
COMMITTEE ON ENVIRONMENT AND PUBLIC WORKS
UNITED STATES SENATE

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I thank Chairperson Boxer, Ranking Member Inhofe and the other Members of the Committee for the opportunity to speak with you today on the Working Group One report of the Intergovernmental Panel on Climate Change 2007 Report (IPCC, 2007). My name is Susan Solomon and I am a Senior Scientist at NOAA's Earth System Research Laboratory in Boulder, Colorado. I've been a scientist at NOAA for more than 26 years. Much of my work over that time has focused on understanding the cause of ozone depletion. In 2000, I received this nation's highest scientific award, the National Medal of Science, in recognition of that work. I've also been honored with membership in the U. S. National Academy of Sciences and I am a foreign associate of the French Academy of Sciences and the Acadamiae Europaea. In addition to my research on ozone depletion, I also do personal research on climate change, in particular on the range of chemicals that contribute to climate change. I'm the author or co-author of more than 150 scientific publications, and I've served as an author on various reports of the Intergovernmental Panel on Climate Change beginning in 1992.

In 2002, I had the honor of being formally nominated by the United States of America to co-chair Working Group One, the part of the IPCC that deals with physical climate science. I was selected by the IPCC Panel of governments to serve in that role, and for almost the past five years have accordingly co-chaired the process that resulted in the 2007 Working Group One Assessment Report, together with Dr. Qin Dahe of China. We are assisted by six able vice-chairs from around the world and by a technical support unit that provides logistical and related functions.

The Intergovernmental Panel on Climate Change was established under the auspices of the World Meteorological Organization and the United Nations Environment Program to provide regular assessments for policymakers of the scientific, technical and socio-economic aspects climate change. IPCC does not do or manage research. It provides assessment reports covering the state of scientific understanding based upon the scientific literature. Each report is written by international experts on a volunteer basis. IPCC has produced its major assessments every five to six years since 1990, and the 2007 report is the fourth in that series. The Working Group co-chairs and vice-chairs select

authors on the basis of their scientific publications and products from among nominees proposed by governments, with due regard for geographic balance. IPCC's reports have been highly praised by many organizations such as scientific academies around the world including our own U.S. National Academy of Sciences.

The 152 authors of the Working Group One fourth assessment report hail from every inhabited continent in the world. About 75% of these authors did not work on the previous 2001 report. About a quarter of the authors are young in the professional sense, having had their highest degree for less than 10 years at the time we began our work. Over 400 other scientists have served as contributing authors. Over 600 experts participated in two rounds of open review. In addition to the experts, dozens of governments also provided formal coordinated reviews. In total, the Working Group One assessment received over 30,000 comments. To put these numbers in perspective, a typical research paper published in a scientific journal is subject to review by 2 or 3 experts. It may receive a few dozen comments. A distinguished team of 27 review editors, who are independent of the author teams, played an oversight role ensuring that all substantive review comments were given appropriate consideration. It took over 2 years to write, review, revise and finalize the document. The product is unique in many ways, not least the fact that it is not the view of any one scientist or a few scientists but rather reflects an extremely broad-ranging synthesis of scientific viewpoints.

A different Working Group (Working Group Two), covers impacts and adaptation and another (Working Group Three) covers mitigation and policy options. The reports of these other two groups are due to be released later this spring. There will also be a Synthesis Report released in November, 2007, which endeavors to provide a synthesis of all three Working Group reports.

The Summary for Policy Makers of the Working Group One was approved by the governments of the IPCC Panel in Paris last week. That document is appended here as the scientific basis of my testimony.