

Scientific Integrity in Policymaking

**An Investigation into the Bush
Administration's Misuse of Science**

Union of Concerned Scientists
March 2004

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The Union of Concerned Scientists is a nonprofit partnership of scientists and citizens combining rigorous scientific analysis, innovative policy development, and effective citizen advocacy to achieve practical environmental solutions.

More information about UCS and the full text of this report is available at www.ucsusa.org.

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PREFACE

This edition of *Scientific Integrity in Policymaking: An Investigation into the Bush Administration's Misuse of Science* is an update of the UCS report of the same name released on February 18, 2004. Since the February release UCS has received additional relevant material on several of the incidents, which is incorporated in this update. The conclusions reached and recommendations made in the report have not changed. Supplemental information and clarifications can be found in Parts I and II on the following issues: climate change, mercury emissions, multiple air pollutants, abstinence-only education, airborne bacteria, endangered species, forest management, OMB rulemaking, and the drug abuse panel. For a full detail of the changes see Appendix C. To receive a copy of the February 18, 2004 edition, email rsi@ucsusa.org.

EXECUTIVE SUMMARY

Science, like any field of endeavor, relies on freedom of inquiry; and one of the hallmarks of that freedom is objectivity. Now more than ever, on issues ranging from climate change to AIDS research to genetic engineering to food additives, government relies on the impartial perspective of science for guidance.¹

— PRESIDENT GEORGE H.W. BUSH, 1990

The U.S. government runs on information—vast amounts of it. Researchers at the National Weather Service gather and analyze meteorological data to know when to issue severe-weather advisories. Specialists at the Federal Reserve Board collect and analyze economic data to determine when to raise or lower interest rates. Experts at the Centers for Disease Control examine bacteria and viral samples to guard against a large-scale outbreak of disease. The American public relies on the accuracy of such governmental data and upon the integrity of the researchers who gather and analyze it.

Equally important is the analysis of fact-based data in the government's policy-making process. When compelling evidence suggests a threat to human health from a contaminant in the water supply, the federal government may move to tighten drinking water standards. When data indicate structural problems in aging bridges that are part of the interstate highway system, the federal government may allocate emergency repair funds. When populations of an animal species are found to be declining rapidly, officials may opt to seek protection for those animals under the federal Endangered Species Act.

Given the myriad pressing problems involving complex scientific information—from the AIDS

pandemic to the threat of nuclear proliferation—the American public expects government experts and researchers to provide more data and analysis than ever before, and to do so in an impartial and accurate way.

However, at a time when one might expect the federal government to increasingly rely on impartial researchers for the critical role they play in gathering and analyzing specialized data, there are numerous indications that the opposite is occurring. A growing number of scientists, policy makers, and technical specialists both inside and outside the government allege that the current Bush administration has suppressed or distorted the scientific analyses of federal agencies to bring these results in line with administration policy. In addition, these experts contend that irregularities in the appointment of scientific advisors and advisory panels are threatening to upset the legally mandated balance of these bodies.

The quantity and breadth of these charges warrant further examination, especially given the stature of many of the individuals lodging them. Toward this end, the Union of Concerned Scientists (UCS) undertook an investigation of many of the allegations made in the mainstream media, in scientific journals, and in overview reports issued

¹ Remarks to the National Academy of Sciences, April 23, 1990. Online at bushlibrary.tamu.edu/papers/1990/90042301.html.

from within the federal government² and by non-governmental organizations.³ To determine the validity of the allegations, UCS reviewed the public record, obtained internal government documents, and conducted interviews with many of the parties involved (including current and former government officials).

FINDINGS OF THE INVESTIGATION

1. *There is a well-established pattern of suppression and distortion of scientific findings by high-ranking Bush administration political appointees across numerous federal agencies. These actions have consequences for human health, public safety, and community well-being.* Incidents involve air pollutants, heat-trapping emissions, reproductive health, drug resistant bacteria, endangered species, forest health, and military intelligence.

2. *There is strong documentation of a wide-ranging effort to manipulate the government's scientific advisory system to prevent the appearance of advice that might run counter to the administration's political agenda.* These actions include: appointing underqualified individuals to important advisory roles including childhood lead poisoning prevention and reproductive health; applying political litmus tests that have no bearing on a nominee's expertise or advisory role; appointing a non-scientist to a senior position in the president's scientific advisory staff; and dismissing highly qualified scientific advisors.

3. *There is evidence that the administration often imposes restrictions on what government scientists can say or write about "sensitive" topics.*

In this context, "sensitive" applies to issues that might provoke opposition from the administration's political and ideological supporters.

4. *There is significant evidence that the scope and scale of the manipulation, suppression, and misrepresentation of science by the Bush administration are unprecedented.*

RESTORING SCIENTIFIC INTEGRITY TO FEDERAL POLICYMAKING

This report calls on the president, Congress, scientists, and the public to take immediate steps to restore the integrity of science in the federal policymaking process.

The president should immediately request his science advisor to prepare a set of recommendations for executive orders and other actions to prohibit further censorship and distortion of scientific information from federal agencies, and put an end to practices that undermine the integrity of scientific advisory panels.

Congress should ensure that this administration and future administrations reverse this dangerous trend. To this end, Congress should: hold oversight hearings to investigate and assess the allegations raised in this report; ensure that the laws and rules that govern scientific advisory appointments require that all appointees meet high professional standards, and protect against the domination of such panels by individuals tied to entities that have a vested interest at stake; guarantee public access to government scientific studies and the findings of scientific advisory panels; and re-establish an organization able to independently assess and provide

² For instance, see House Committee on Government Reform, Minority Staff, Special Investigations Division, "Politics and Science in the Bush Administration," August 2003.

³ For instance, see Association of Reproductive Health Professionals, "Preserving Core Values in Science," 2003; Defenders of Wildlife, "Sabotaging the Endangered Species Act: How the Bush Administration uses the judicial system to undermine wildlife protection," December 2003.

guidance to Congress on technical questions that have a bearing on public policy, similar to the former Office of Technology Assessment.

Scientists must encourage their professional societies and colleagues to become engaged in this issue, discuss their concerns directly with elected repre-

sentatives, and communicate the importance of this issue to the public, both directly and through the media. And the **public** must also voice its concern about this issue to its elected representatives, letting them know that censorship and distortion of scientific knowledge are unacceptable in the federal government and must be halted.

*Part I***SUPPRESSION AND DISTORTION OF
RESEARCH FINDINGS AT FEDERAL AGENCIES**

Tinkering with scientific information, either striking it from reports or altering it, is becoming a pattern of behavior. It represents the politicizing of a scientific process, which at once manifests a disdain for professional scientists working for our government and a willingness to be less than candid with the American people.

— ROGER G. KENNEDY, FORMER DIRECTOR OF THE NATIONAL PARK SERVICE,
RESPONDING TO THE DOCTORING OF FINDINGS ON YELLOWSTONE NATIONAL PARK.¹

Political partisans have long disagreed over each administration's politics and policy. But there is little disagreement about the need for elected and appointed officials to have access to rigorous, objective scientific research and analysis, and to fully understand its implications for addressing the problems they are trying to solve. To be sure, politics plays an unavoidable and, at times, valuable role in policymaking because many factors in addition to science and technology must be weighed in decision making. To make policy choices, government officials must frequently balance the needs of one constituency against another. Consider, for instance, the policy quandary over nuclear waste from the nation's nuclear power plants. Politics and science both play a crucial role as policy makers try to balance the risk to public health and the environment from the proposed spent fuel repository at Yucca Mountain in Nevada versus the long-term health risks to people living near one of the country's numerous current nuclear spent fuel storage facilities. In health care, decision makers must weigh the funding of research on rare serious diseases against broad public health issues such as funding cholesterol screening or childhood vaccinations.

There is, however, a crucial difference between political fights over policy and the manipulation of the scientific underpinnings of the policy-making process itself. Distorting that process runs the risk that decision makers will not have access to the factual information needed to help them make informed decisions that affect human health, public safety, and the well-being of our communities.

The following section details the results of a UCS investigation into numerous allegations that the

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1 As quoted in E. Shogren, "Administration, Yellowstone Staff at Odds On Park Threats," *Los Angeles Times*, June 26, 2003.

current administration has undermined the quality of the science that informs policy making by suppressing, distorting, or manipulating the work done by scientists at federal agencies.

DISTORTING AND SUPPRESSING CLIMATE CHANGE RESEARCH

Since taking office, the Bush administration has consistently sought to undermine the public's understanding of the view held by the vast majority of climate scientists that human-caused emissions of carbon dioxide and other heat-trapping gases are making a discernible contribution to global warming.

After coming to office, the administration asked the National Academy of Sciences (NAS) to review the findings of the Intergovernmental Panel on Climate Change (IPCC) and provide further assessment of what climate science could say about this issue.² The NAS panel rendered a strong opinion, which, in essence, confirmed that of the IPCC. The American Geophysical Union, the world's largest organization of earth scientists, has also released a strong statement describing human-caused disruptions of Earth's climate.³ Yet Bush administration spokespersons continue to contend that the uncertainties in climate projections and fossil fuel emissions are too great to warrant mandatory action to slow emissions.⁴

In May 2002, President Bush expressed disdain for a State Department report⁵ to the United Nations that pointed to a clear human role in the accumulation of heat-trapping gases and detailed the likely

negative consequences of climate change; the president called it "a report put out by the bureaucracy."⁶ In September 2002, the administration removed a section on climate change from the Environmental Protection Agency's (EPA) annual air pollution report,⁷ even though the climate issue had been discussed in the report for the preceding five years.

Then, in one well-documented case, the Bush administration blatantly tampered with the integrity of scientific analysis at a federal agency when, in June 2003, the White House tried to make a series of changes to the EPA's draft Report on the Environment.⁸

A front-page article in *The New York Times* broke the news that White House officials tried to force the EPA to substantially alter the report's section on climate change. The EPA report, which referenced the NAS review and other studies, stated that human activity is contributing significantly to climate change.⁹

Interviews with current and former EPA staff, as well as an internal EPA memo reviewed for this report (see Appendix A) reveal that the White House Council on Environmental Quality and the Office of Management and Budget demanded major amendments including:

- The deletion of a temperature record covering 1,000 years in order to, according to the EPA memo, emphasize "a recent, limited analysis [which] supports the administration's favored message."¹⁰

2 National Academy of Sciences, Commission on Geosciences, Environment and Resources, *Climate Change Science: An Analysis of Some Key Questions*, 2001. Online at www.nap.edu/books/0309075742/html.

3 See www.agu.org/sci_soc/policy/climate_change_position.html.

4 P. Dobriansky, "Only New Technology Can Halt Climate Change," *Financial Times*, December 1, 2003.

5 US Climate Action Report, Department of State, May 2002.

6 K.Q. Seelye, "President Distances Himself from Global Warming Report," *The New York Times*, June 5, 2002.

7 See www.epa.gov/airtrends.

8 "Report on the Environment," U.S. Environmental Protection Agency, June 23, 2003. Online at www.epa.gov/indicators/roel/index.htm.

9 A.C. Revkin and K.Q. Seelye, "Report by EPA Leaves Out Data on Climate Change," *The New York Times*, June 19, 2003.

10 EPA internal memo, April 29, 2003. (See Appendix A.)

- The removal of any reference to the NAS review—requested by the White House itself—that confirmed human activity is contributing to climate change.¹¹
- The insertion of a reference to a discredited study of temperature records funded in part by the American Petroleum Institute.¹²
- The elimination of the summary statement—noncontroversial within the science community that studies climate change—that “climate change has global consequences for human health and the environment.”¹³

According to the internal EPA memo, White House officials demanded so many qualifying words such as “potentially” and “may” that the result would have been to insert “uncertainty...where there is essentially none.”¹⁴

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In a political environment now-departed EPA Administrator Christine Todd Whitman has since described as “brutal,”¹⁵ the entire section on climate change was ultimately deleted from the version released for public comment.¹⁶ According to internal EPA documents and interviews with EPA researchers, the agency staff chose this path rather than compromising their credibility by misrepresenting the scientific consensus.¹⁷ Doing otherwise, as one current, high-ranking EPA official puts it, would “poorly represent the science and ultimately undermine the credibility of the EPA and the White House.”¹⁸

The EPA’s decision to delete any mention of global warming from its report drew widespread criticism. Many scientists and public officials—Republicans and Democrats alike—were moved to decry the administration’s political manipulation in this case. Notably, the incident drew the ire of Russell Train, who served as EPA administrator under Presidents Nixon and Ford. In a letter to *The New York Times*, Train stated that the Bush administration’s actions undermined the independence of the EPA and were virtually unprecedented for the degree of their political manipulation of the agency’s research. As Train put it, the “interest of the American people lies in having full disclosure of the facts.”¹⁹ Train also noted that, “In all my time at the EPA, I don’t recall any regulatory decision that was driven by political considerations. More to the present point, never once, to my best recollec-

11 Ibid. Deleted reference: National Academy of Sciences, Commission on Geosciences, Environment and Resources, *Climate Change Science: An Analysis of Some Key Questions*, 2001.

12 Revkin and Seelye, *The New York Times*. Discredited study: W. Soon and S. Baliunas. 2003. Proxy climatic and environmental changes of the past 1000 years. *Climate Research* 23(2):89-110. Study discrediting it: Michael Mann et al. 2003. On past temperatures and anomalous late 20th century warmth. *Eos* 84(27):256-257.

13 EPA internal memo.

14 Ibid.

15 *NOW with Bill Moyers* transcript, September 19, 2003.

16 Revkin and Seelye, *The New York Times*.

17 Author interviews with current EPA staff members, names withheld on request. See also “option paper” in EPA internal memo, Appendix A.

18 Author interview with EPA staff member, name withheld on request, January 2004. EPA internal memo.

19 Russell E. Train, “When Politics Trumps Science” (letter to the editor), *The New York Times*, June 21, 2003.

tion, did either the Nixon or Ford White House ever try to tell me how to make a decision.”²⁰

Were the case an isolated incident, it could perhaps be dismissed as an anomaly. On the contrary, the Bush administration has repeatedly intervened to distort or suppress climate change research findings despite promises by the president that, “my Administration’s climate change policy will be science-based.”²¹

Despite the widespread agreement in the scientific community that human activity is contributing to global climate change, as demonstrated by the consensus of international experts on the IPCC, the Bush administration has sought to exaggerate uncertainty by relying on disreputable and fringe science reports and preventing informed discussion on the issue. As one current EPA scientist puts it, the Bush administration often “does not even invite the EPA into the discussion” on climate change issues. “This administration seems to want to make environmental policy at the White House,” the government scientist explains. “I suppose that is their right. But one has to ask: on the basis of what information is this policy being promulgated? What views are being represented? Who is involved in the decision making? What kind of credible expertise is being brought to bear?”²²

Dr. Rosina Bierbaum, a Clinton administration appointee to the Office of Science and Technology Policy (OSTP) who also served during the first year of the Bush administration, offers a disturbing window on the process. From the start, Bierbaum contends, “The scientists [who] knew the most about climate change at OSTP were not allowed to participate in deliberations on the issue within the White House inner circle.”²³

Through such consistent tactics, the Bush administration has not only distorted scientific and technical analysis on global climate change and suppressed the dissemination of research results, but has avoided fashioning any policies that would significantly reduce the threat implied by those findings.

In the course of this investigation, UCS learned of the extent to which these policies seem to extend. In one case that has yet to surface in the press, the Natural Resources Conservation Service (NRCS) of the U.S. Department of Agriculture (USDA)

“In all my time at the EPA, I don’t recall any regulatory decision that was driven by political considerations.”

Russell Train, EPA Administrator under Presidents Nixon and Ford

sought in September 2003 to reprint a popular informational brochure about carbon sequestration in the soil and what farmers could do to reduce greenhouse gas emissions. According to one current government official familiar with the incident, the brochure was widely viewed as one of the agency’s successful efforts in the climate change field. The NRCS had already distributed some 325,000 of the brochures and sought a modest update, as well as proposing a Spanish edition.²⁴

Notably, even this relatively routine proposal was passed to the White House Council on Environmental Quality (CEQ) for review. William Hohenstein, director of the Global Change Program

20 Russell E. Train, “The Environmental Protection Agency just isn’t like it was in the good old (Nixon) days,” *www.gristmagazine.com*, September 22, 2003.

21 White House, President’s Statement on Climate Change (July 13, 2001). Online at www.whitehouse.gov/news/releases/2001/07/20010713-2.html.

22 Author interview with EPA scientist, name withheld on request, January 2004.

23 As quoted in N. Thompson, “Science friction: The growing—and dangerous—divide between scientists and the GOP,” *Washington Monthly*, July/August 2003.

24 Author interview with USDA official, name withheld on request, January 2004.

Exchange in the office of the chief economist at the USDA, acknowledged that he passed the request on to the CEQ, as he says he would “for any documents relating to climate change policy.”²⁵ While Hohenstein denies that he has been explicitly ordered to do so, he says he knows the White House is concerned “that things regarding climate change be put out by the government in a neutral way.”²⁶ As a result of the CEQ’s objections about the brochure, staff at the NRCS dropped their proposal for a reprint.²⁷ “It is not just a case of micromanagement, but really of censorship of government information,” a current government official familiar with the case noted. “In nearly 15 years of government service, I can’t remember ever needing clearance from the White House for such a thing.”²⁸

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CENSORING INFORMATION ON AIR QUALITY Mercury Emissions from Power Plants

The Bush administration has long attempted to avoid issuing new standards to regulate mercury emissions by coal-fired power plants based on Maximum Achievable Control Technology (MACT), as required by the Clean Air Act.²⁹ Mercury is a neurotoxin that can cause brain damage and harm reproduction in women and wildlife; coal-fired power plants are the nation’s largest source of mercury air emissions, emitting about 48 tons annually.³⁰

As a prelude to the current debate, published accounts to date have documented that senior Bush officials suppressed and sought to manipulate government information about mercury contained in an EPA report on children’s health and the environment. As the EPA readied the report for completion in May 2002, the White House Office of Management and Budget and the OSTP began a lengthy review of the document. In February 2003, after nine months of delay by the White House, a frustrated EPA official leaked the draft report to the *Wall Street Journal*, including its finding that 8 percent of women between the ages of 16 and 49 have mercury levels in the blood that could lead to reduced IQ and motor skills in their offspring.³¹

The finding provides strong evidence in direct contradiction to the administration’s desired policy of reducing regulation on coal-fired power plants and was, many sources suspect, the reason for the lengthy suppression by the White House. On February 24, 2003, just days after the leak, the EPA’s

25 Author interview with William Hohenstein, USDA, January 2004.

26 Ibid.

27 Ibid.

28 Author interview with USDA official, name withheld on request, January 2004.

29 E. Pianin, “White House, EPA Move to Ease Mercury Rules,” *The Washington Post*, December 3, 2003.

30 See “EPA proposes options for significantly reducing mercury emissions,” December 15, 2003. Online at www.epa.gov/mercury/mercuryfact12-15final.pdf. See also Mercury MACT Proposed Rule and other source material at www.nwfo.org/news.

31 J.J. Fialka, “Mercury Threat to Kids Rising, Unreleased EPA Report Warns,” *Wall Street Journal*, February 20, 2003.

report was finally released to the public.³² Perhaps most troubling about this incident is that the report may never have surfaced at all had it not been leaked to the press.

In a more recent development, the new rules the EPA has finally proposed for regulating power plants' mercury emissions were discovered to have no fewer than 12 paragraphs lifted, sometimes verbatim, from a legal document prepared by industry lawyers.³³ Chagrined EPA officials contend that the language crept into their proposed rules "through the interagency process." But Robert Perciasepe, who headed the EPA air policy office during the Clinton administration, stated the obvious when he called the wholesale use of industry language "inappropriate." As Perciasepe told a *Washington Post* reporter: "The regulations are supposed to be drafted by the staff—the people in the science program and regulatory branches."³⁴

Drawing upon interviews with no fewer than five current career employees, reporters at the *Los Angeles Times* have exposed in detail the process that led to the proposed mercury regulations. According to these and other sources, political appointees at the EPA completely bypassed agency professional and scientific staff as well as a federal advisory panel in crafting the proposed new rules.³⁵

Bruce C. Buckheit, who retired in December 2003 as director of EPA's Air Enforcement Division after serving in major federal environmental posts

for two decades, says that his enforcement division was not even allowed to review the mercury regulations prior to their release. As Buckheit puts it, "the new mercury rules were hatched at the White House; the Environmental Protection Agency's experts were simply not consulted at all."³⁶

In particular, EPA staff members say that they pointed out that comparative scientific studies of the effects of the proposed rules were required by EPA procedure. But these sources contend that they were explicitly told by Jeffrey R. Holmstead, head of EPA's Office of Air and Radiation, that such studies would not be conducted partly because of "White House concern."³⁷ Buckheit and other EPA veterans say they cannot recall another instance when the agency's technical experts were so thoroughly shut out of the process in developing a major regulatory proposal. According to Buckheit, the incident is representative of "a degree of politicization of the work of the Environmental Protection Agency that goes beyond anything I have seen in my career in government."³⁸

In the wake of these serious allegations, EPA administrator Michael Leavitt has reportedly ordered additional studies of the effects of the proposed mercury rule. Administrator Leavitt has also said information related to media reports on the agency's inclusion of industry-drafted language in its proposed rule has been forwarded to the EPA's inspector general for possible investigation.³⁹

32 "America's Children and the Environment: Measures of Contaminants, Body Burdens, and Illnesses," Second Edition, February 2003. Online at www.epa.gov/envirohealth/children/lace_2003.pdf.

33 See E. Pianin, "Proposed Mercury Rules Bear Industry Mark," *The Washington Post*, January 31, 2004.

34 *Ibid.*

35 Tom Hamburger and Alan C. Miller, "Mercury Emissions Rule Geared to Benefit Industry, Staffers Say," *Los Angeles Times*, March 16, 2004 and author interviews with two other current EPA staff members, names withheld on request, March 2004.

36 Author interview with Bruce Buckheit, March 2004.

37 As quoted in Hamburger and Miller, *Los Angeles Times*, March 16, 2004. It is also highly relevant to note that, prior to his appointment by the current administration, Jeffrey R. Holmstead served as an attorney representing industry interests on air pollution issues at Latham & Watkins, one of the firms responsible for the exact wording of the text in the EPA's proposed mercury rule.

38 Author interviews with Bruce Buckheit and with two other current EPA staff members, names withheld on request, March 2004.

39 "IG May Launch Investigation Into Industry Influence Over EPA Mercury Plan," *Inside EPA*, March 25, 2004.

Addressing Multiple Air Pollutants

As an alternative to the president's Clear Skies Act, Senators Thomas Carper (D-DE), Judd Gregg (R-NH), Lamar Alexander (R-TN), and Lincoln Chafee (R-RI) have proposed a measure that would control carbon dioxide in addition to sulfur dioxide, nitrogen oxides, and mercury. The EPA evaluated this proposal but long withheld important results on the costs and benefits of the alternative bill from the senators. Several months before the EPA finally provided them the results, a copy of an internal EPA briefing based on the study was leaked to *The Washington Post*.⁴⁰ According to the briefing, the EPA concluded that the Senate proposal would cut the three pollutants earlier and in larger quantity than the Clear Skies Act, result in 17,800 fewer expected deaths by 2020, save about \$50 billion more each year in health benefits than Clear Skies, and reduce carbon dioxide emissions at "negligible" cost to industry.

The suppression of research on air pollution is of serious concern because of its enormous impact on public health. The Clean Air Act, which passed during the Nixon administration and was strengthened in 1990 during the first Bush administration, has saved American lives. For the period up to 1990, the EPA found that, without the act, "an additional 205,000 Americans would have died prematurely and millions more would have suffered illnesses ranging from mild respiratory symptoms to heart disease, chronic bronchitis, asthma attacks, and other severe respiratory problems. In addition, the lack of the Clean Air Act controls on the use of leaded gasoline would have resulted in major increases in child IQ loss and adult hypertension, heart disease and stroke."⁴¹ In its 1999 study, the EPA projected that in 2010 alone, the 1990 strengthening amend-

ments "will prevent 23,000 premature deaths, and avert over 1.7 million incidents of asthma attacks ... 67,000 incidents of chronic and acute bronchitis ... 4.1 million lost work days."

According to *The New York Times*, EPA staff members recounted that they discussed the EPA's unreleased report indicating the advantages of the Carper-Gregg-Alexander-Chafee proposal at a May meeting with Jeffrey Holmstead, assistant administrator for air programs. As these EPA staffers contend,

The suppression of research on air pollution is of serious concern because of its enormous impact on public health.

Holmstead wondered out loud "How can we justify Clear Skies if this gets out?" although he has since stated that he did not "recall making any specific remarks."⁴²

DISTORTING SCIENTIFIC KNOWLEDGE ON REPRODUCTIVE HEALTH ISSUES Abstinence-only Education

Since his tenure as governor of Texas, President Bush has made no secret of his view that sex education should teach teenagers "abstinence only" rather than including information on other ways to avoid sexually transmitted diseases and pregnancy. Unfortunately, despite spending more than \$10 million on abstinence-only programs in Texas alone, this strategy has not been shown to be effective at curbing teen pregnancies or halting the spread of HIV and other sexually transmitted diseases.

40 G. Gugliotta and E. Pianin, "Senate Plan Found More Effective, Slightly More Costly Than Bush Proposal," *The Washington Post*, July 1, 2003.

41 See www.epa.gov/oar/sect812. See also data from the American Meteorological Society, online at ametsoc.org/sloan/cleanair/index.html.

42 J. Lee, "Critics Say E.P.A. Won't Analyze Clean Air Proposals Conflicting with President's Policies," *The New York Times*, July 14, 2003.

During President Bush's tenure as governor of Texas from 1995 to 2000, for instance, with abstinence-only programs in place, the state ranked last in the nation in the decline of teen birth rates among 15- to 17-year-old females.⁴³ Overall, the teen pregnancy rate in Texas was exceeded by only four other states.⁴⁴

The American Medical Association, the American Academy of Pediatrics, the American Public Health Association, and the American College of Obstetricians and Gynecologists all support comprehensive sex education programs that encourage abstinence while also providing adolescents with information on how to protect themselves against sexually transmitted diseases.⁴⁵ In fact, a recent systematic analysis of pregnancy prevention strategies for adolescents found that, far from reducing unwanted pregnancies, abstinence programs actually "may increase pregnancies in partners of male participants."⁴⁶

The fact that the Bush administration ignores the scientific evidence, troubling though that is, is not the primary concern of this report. Rather, it is the fact that the Bush administration went further by distorting science-based performance measures to test whether abstinence-only programs were proving effective, such as charting the birth rate of female program participants.⁴⁷ In place of such established measures, the Bush administration has required the government to track only participants' program attendance and attitudes, measures designed to obscure the lack of efficacy of abstinence-only programs.⁴⁸

**The Bush administration
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abstinence-only programs
were proving effective**

In addition to distorting performance measures, the Bush administration has suppressed other information at odds with its preferred policies. At the behest of higher-ups in the Bush administration, according to a source inside the CDC, the agency was forced to discontinue a project called "Programs that Work," which identified sex education programs found to be effective in scientific studies.⁴⁹ All five of the programs identified in 2002 involved comprehensive sex education for teenagers and none were abstinence-only programs. In ending the project, the CDC removed all information about these programs from its website. One scientist, recently departed from a high-ranking position at CDC, recounts that, on one occasion, even top staff scientists at the agency were required by the administration to attend a day-long session purportedly devoted to the "science of abstinence." As this source puts it, "out of the entire session, conducted by a nonscientist, the only thing resembling science was one study reportedly in progress and another

43 See "Science or Politics? George W. Bush and the Future of Sexuality Education in the United States," fact sheet published by Advocates for Youth. Online at www.advocatesforyouth.org.

44 Ibid.

45 *Welfare Reform: A Review of Abstinence Education and Transitional Medical Assistance, April 23, 2002: Hearing Before the Subcommittee on Health, House Committee on Energy and Commerce*, 107th Congress, 2002, testimony of David W. Kaplan, MD.

46 A. DiCenso, G. Guyatt, A. Willan, and L. Griffith, "Interventions to reduce unintended pregnancies among adolescents: systematic review of randomized controlled trials," *British Medical Journal*, Volume 324, June 15, 2002.

47 These former performance measures can be found at *Federal Register* 65:69562-65 (November 17, 2000).

48 The new Bush administration performance measures are detailed in U.S. Department of Health and Human Services, *SPRANS Community-Based Abstinence Education Program, Pre-Application Workshop* (December, 2002). Online at www.mchb.hrsa.gov/programs/adolescents/abedguidetext.htm.

49 Author interview with current CDC staff member, name withheld on request, November 2003.

Information suggesting a link between abortion and breast cancer was posted on the National Cancer Institute website despite objections from CDC staff, who noted that substantial scientific study has long refuted the connection.

not even begun.”⁵⁰ Despite the absence of supporting data, this source and others contend, CDC scientists were regularly reminded to push the administration’s abstinence-only stance. As he puts it, “The effect was very chilling.”⁵¹

HIV/AIDS

Along similar lines, at the instigation of higher-ups in the administration, fact-based information on the CDC’s website has been altered to raise scientifically questionable doubt about the efficacy of condoms in preventing the spread of HIV/AIDS.

A fact sheet on the CDC website that included information on proper condom use, the effectiveness of different types of condoms, and studies showing that condom education does not promote sexual activity was replaced in October 2002 with a

document that emphasizes condom failure rates and the effectiveness of abstinence.⁵² When a source inside the CDC questioned the actions, she was told that the changes were directed by Bush administration officials at the Department of Health and Human Services.⁵³

Breast Cancer

Similarly, in a case *The New York Times* labeled “an egregious distortion of the evidence,”⁵⁴ information suggesting a link between abortion and breast cancer was posted on the National Cancer Institute website despite objections from CDC staff, who noted that substantial scientific study has long refuted the connection. After public outcry on the matter, the information has since been revised and no longer implies a connection.⁵⁵ While the correct information is currently available on the website, it is troubling that public pressure was necessary to halt this promotion of scientifically inaccurate information to the public.

SUPPRESSING ANALYSIS ON AIRBORNE BACTERIA

One particularly dramatic and well-documented case involves Dr. James Zahn, a research microbiologist at the USDA who asserts that he was prohibited on no fewer than 11 occasions from publicizing his research on the potential hazards to human health posed by airborne bacteria resulting from farm wastes.⁵⁶

50 Author interview with former CDC staff member, name withheld on request, March 2004.

51 Ibid.

52 A. Clymer, “U.S. Revises Sex Information, and a Fight Goes On,” *The New York Times*, December 27, 2002. A comparison of the two versions of the CDC website about condoms can be seen online. The original website, CDC, *Condoms and Their Use in Preventing HIV Infection and Other STDs (September 1999)* is available online at www.house.gov/reform/min/pdfs/pdf_inves/pdf_admin_bhs_info_condoms_fact_sheet_orig.pdf; the current CDC fact sheet, CDC, *Male Latex Condoms and Sexually Transmitted Diseases (October 2003)* is available online at www.cdc.gov/nchstp/od/latex.htm.

53 Author interview with current CDC staffer, name withheld on request, November 2003.

54 “Abortion and Breast Cancer,” *The New York Times*, January 6, 2003. For a detailed account of this issue, see K. Malek, “The abortion-breast cancer link: how politics trumped science and informed consent,” *Journal of American Physicians and Surgeons*, Summer 2003. Online at abortionno.org/pdf/breastcancer.pdf.

55 “Summary Report: Early Reproductive Events and Breast Cancer Workshop,” National Cancer Institute, March 2003. Online at www.cancer.gov/cancerinfo/ere-workshop-report.

56 Author interview with James Zahn, January 2004. See also P. Beeman, “Ag Scientists Feel the Heat,” *The Des Moines Register*, December 1, 2002. Online at www.dmregister.com/business/stories/c4789013/19874144.html.

Zahn's research had discovered significant levels of antibiotic-resistant bacteria in the air near hog confinement operations in Iowa and Missouri.⁵⁷ But, as Zahn recounts, he was repeatedly barred by his superiors from presenting his research at scientific conferences in 2002.⁵⁸ In at least one instance, a message from a supervisor advised Zahn that, "politically sensitive and controversial issues require discretion."⁵⁹

Zahn says USDA officials told him his work was being discouraged because it dealt with human health, an issue outside his unit's mission.⁶⁰ Yet the website for the research unit at the USDA where Zahn worked states that its mission "is to solve critical problems in the swine production industry that impact production efficiency, environmental quality, and human health."⁶¹ Dr. Alan DiSpirito, a microbiologist at Iowa State University who collaborated with Zahn on this research, claims that Zahn was careful never to make unwarranted claims about the health effects of his research. As he puts it, Zahn's "data concerned careful measurements of odor-producing compounds. All the measurements were very straightforward." According to DiSpirito, Zahn "found evidence of airborne toxic substances and antibiotics, which certainly raised health questions, but as a careful and very competent scientist, he never commented on these in his work except to suggest that someone else ought to look into them."⁶² Zahn had accidentally stumbled on the issue of airborne antibiotic resistance while researching a related topic and, prior to the start of the Bush administration, was initially encouraged by his

supervisors to pursue the work. But he says that with the change in administration, he soon came to feel that his research was being suppressed because it was perceived to be politically unpalatable.

The suppression of Zahn's research results seems to be part of a larger pattern within the USDA of squelching findings that conflict with the Bush administration's agenda. Notably, a directive issued in February 2002 instructed USDA staff scientists to seek prior approval before publishing any research or speaking publicly on "sensitive issues" including

Dr. James Zahn, a research microbiologist at the USDA ... asserts that he was prohibited on no fewer than 11 occasions from publicizing his research on the potential hazards to human health posed by airborne bacteria resulting from farm wastes.

"agricultural practices with negative health and environmental consequences, e.g. global climate change; contamination of water by hazardous materials (nutrients, pesticides, and pathogens); animal feeding operations or crop production practices that negatively impact soil, water, or air quality."⁶³

Zahn, who has since left the USDA for an industry

57 B. Harder, "Antibiotics fed to animals drift in air," *Science News*, July 5, 2003. (The article reports on Zahn's research.)

58 Among these was his request to present a paper at an international joint meeting of the American Society for Agricultural Engineering and the 15th World Congress of CIGR (Commission Internationale du Genie Rural), Chicago, July 28–31, 2002.

59 J. Lee, "Neighbors of Vast Hog Farms Say Foul Air Endangers Their Health," *The New York Times*, May 11, 2003.

60 Author interview with James Zahn, January 2004.

61 "USDA Agricultural Research Service Swine Odor and Manure Management Research Unit," USDA. Online at www.nsrhc.ars.usda.gov.

62 Author interview with Alan DiSpirito, March 2004.

63 "Lists of Sensitive Issues for ARS Manuscript Review and Approval by National Program Staff—February 2002 (revised)," USDA, February 2002. (See Appendix B.)

position, offers a harsh critique of the agency. He contends that USDA officials censor controversial research by forcing it through an extended approval process, prevent researchers from publicizing sensitive findings in scientific journals and at public meetings, and cooperate with industry groups to suppress research results that don't meet those groups' satisfaction. In particular, he says, the aforementioned directive represents "a choke hold on objective research" at the government agency.⁶⁴

A directive issued in February 2002 instructed USDA staff scientists to seek prior approval before publishing any research or speaking publicly on "sensitive issues."

MISREPRESENTING EVIDENCE ON IRAQ'S ALUMINUM TUBES

Recently the press has devoted much coverage to the Bush administration's use of faulty intelligence in making its case for war against Iraq. One particular case shows that the administration knowingly disregarded scientific analysis of intelligence data that contradicted its case.

In the weeks leading up to the war, senior administration officials repeatedly stated that Iraq had attempted to acquire more than 100,000 high-strength aluminum tubes for gas centrifuges to be used for enriching uranium. Highly enriched

uranium is one of the two materials that can be used to make nuclear weapons.

This claim was made by National Security Adviser Condoleezza Rice, Vice President Dick Cheney, and finally by President Bush on September 12, 2002, in his address to the United Nations (UN) General Assembly. The president repeated this claim on several occasions, including his State of the Union address to Congress in January 2003. The contention was also featured in Secretary of State Colin Powell's speech to the UN Security Council on February 5, 2003, regarding Iraq's weapons of mass destruction.⁶⁵

The question before the intelligence community was whether these tubes, which in fact never reached Iraq because of a successful U.S. intervention, were meant to be used for centrifuges or for another purpose: motor casings for short-range rockets. The Central Intelligence Agency (CIA) advocated the view that the tubes were intended for centrifuges, and argued that the tight tolerances on the tubes' dimensions and finish could have no other interpretation. However, a set of technical experts from the Department of Energy's (DOE) Oak Ridge, Livermore, and Los Alamos National Laboratories reviewed the CIA analysis and disagreed with this interpretation because the tube dimensions were far from ideal for this purpose. In fact, the dimensions and the aluminum alloy were identical to those of tubes acquired for rockets by Iraq in the 1980s. Furthermore, the Iraqis had developed and tested centrifuges before the first Gulf War that were much more capable than those that could have been built with the imported tubes. The DOE experts also pointed out that if these tubes were actually intended for centrifuges, there should be evidence of attempts

⁶⁴ Author interview with James Zahn, January 2004.

⁶⁵ D. Albright, "Iraq's Aluminum Tubes: Separating Fact from Fiction," December 5, 2003. Online at www.isis-online.org; B. Gellman, "Search in Iraq Fails to Find Nuclear Threat," *The Washington Post*, October 26, 2003; J. Cirincione, J. Mathews, and G. Perkovich, "WMD in Iraq: Evidence and Implications," Carnegie Endowment for International Peace, January 2004. Online at wmd.ceip.matrixgroup.net/iraq3fulltext.pdf.

Powell's speech dismissed this disagreement by lumping the U.S. experts with the Iraqis: "Other experts, and the Iraqis themselves, argue that they are really to produce the rocket bodies for a conventional weapon, a multiple rocket launcher."

by the Iraqis to acquire hundreds of thousands of other very specific components, but no such evidence existed. This critique of the CIA interpretation was seconded by the State Department's intelligence branch and, independently, by an international group of centrifuge experts advising the International Atomic Energy Agency (IAEA).⁶⁶

The claim that the aluminum tubes were intended for the manufacture of uranium for nuclear weapons was central to Secretary Powell's case to the UN that Iraq had a nuclear weapons program. He had been briefed by the IAEA about its disagreement with the CIA analysis, and was aware of a controversy inside the U.S. government about the administration's claim because the DOE and State Department had both commented on the draft of his speech, which even mentioned that there was disagreement among experts. However, Powell's speech dismissed this disagreement by lumping the U.S. experts with the Iraqis: "Other experts, and the Iraqis themselves,

argue that they are really to produce the rocket bodies for a conventional weapon, a multiple rocket launcher."⁶⁷ Many experts, especially at the DOE, felt "that was really a slap in the face...my friends in DOE felt shocked...we were thrown in the same camp as the Iraqis."⁶⁸

As Dr. David Albright, a weapons expert and president of the Institute for Science and International Security in Washington, DC, has noted, "It bespeaks something seriously wrong that a proper technical adjudication of this matter was never conducted. There was certainly plenty of time to accomplish it."⁶⁹

MANIPULATION OF SCIENCE REGARDING THE ENDANGERED SPECIES ACT

A wide array of scientists, government officials, and environmental groups has charged that the Bush administration is engaged in a systematic attempt to weaken the Endangered Species Act.⁷⁰ The administration has supported pending amendments before Congress that would make it harder to list threatened and endangered species, in particular by greatly limiting the use of population modeling.⁷¹ This technique is the most credible way to assess the likelihood that a small species population will survive in a given habitat.⁷² Perhaps most troubling, however, has been the way in which the Bush administration has suppressed or even attempted to distort the scientific findings of its own agencies to further its political agenda. These actions go well beyond a policy fight over the Endangered Species Act and represent a manipulation

⁶⁶ Ibid.

⁶⁷ Ibid.

⁶⁸ *Four Corners*, Australian Broadcasting Corp., October 27, 2003. Online at www.abc.net.au.

⁶⁹ Author interview with David Albright, January 2004.

⁷⁰ B. Mason, "Ecologists attack endangered species logjam," *Nature*, December 11, 2003. For a detailed report, see also Defenders of Wildlife, "Sabotaging the Endangered Species Act," December 3, 2003.

⁷¹ Testimony of Craig Manson, Assistant Secretary for Fish and Wildlife and Parks, U.S. Department of the Interior, before the House Resources Committee, regarding H.R. 4840, June 19, 2002. Most recent proposed legislation includes H.R. 1662, "Sound Science for Endangered Species Act Planning Act of 2003." See also, E. Buck, M.L. Corn, and P. Baldwin, "Endangered Species: Difficult Choices," CRS Issue Brief for Congress, Congressional Research Service, May 20, 2003.

⁷² See July 10, 2002, letter from over 300 scientists with expertise in conservation and ecological fields to Congress warning against efforts to weaken the science provisions of the Endangered Species Act (available from the Union of Concerned Scientists).

of the scientific underpinnings of the policy-making process itself.

Missouri River

The management of the Missouri River, the nation's longest, has long been a contentious issue. To be able to navigate the river and get grain to market, farmers and barge owners want the river's flow to be uniform in the spring, summer, and fall. Conservationists and others concerned about the health of the river's ecosystem favor a more natural management scheme in which the water fluctuates with the seasons, thereby aiding the spawning of fish and nesting of birds. In late 2000, a group of scientists that had been studying the river flow issued its final biological opinion on the matter, which was to take effect in 2003. This team had already issued preliminary findings that favored seasonal fluctuations in river flow, based on more than 10 years of scientific research. Such a river management system, they contended, would comply with the Endangered Species Act by helping to protect two species of birds (the threatened piping plover and the endangered interior least tern) and one species of fish (the endangered pallid sturgeon). The findings of this team had been confirmed by independent peer review as well as by the National Academy of Sciences.⁷³

At this point, however, the Bush administration intervened, apparently to maintain the status quo that favors strong political interests in the lower section of the Missouri River Basin,⁷⁴ by creating a new team to revise the earlier biological opinion.

Craig Manson, assistant interior secretary for fish, wildlife and parks, authorized the replacement in a memo describing the new group as "a SWAT team" that would review the situation and reach a swift judgment on the matter.⁷⁵

"Swift" and "new" are the operative words here, as Assistant Secretary Manson demanded an unusually expedited process, requiring a new biological opinion in one-third the normal time from the 15-member "SWAT team" that included

The Bush administration created a "review team" made up of predominantly nonscientists who proceeded to overrule a \$12 million science-based plan for managing old-growth forest habitat and reducing the risk of fire.

only two scientists from the original team and region, and co-leaders with little expertise on the Missouri River or its issues.⁷⁶ In December 2003, the team released its "amendment" to the 2003 biological opinion. This amendment has not been peer reviewed by independent experts.⁷⁷

In contrast to the original, the amended biological opinion concluded that there was no jeopardy to piping plovers and least terns from current Missouri flows, but agreed that the proposed water levels for 2004 would jeopardize the pallid sturgeon.

73 A detailed National Academy of Sciences news release about the report, *The Missouri River Ecosystem: Exploring the Prospects for Recovery* (2002), online at www4.nationalacademies.org/news.nsf/isbn/0309083141?OpenDocument; the report can be found online at www.nap.edu/catalog/10277.html. See also L. Quaid, "Bush administration yanks Missouri River scientists off project," Associated Press, November 5, 2003.

74 See M. Grunwald, "Washed Away: Bush v. the Missouri River," *The New Republic*, October 27, 2003.

75 Craig Manson memo to the director of the U.S. Fish and Wildlife Service, October 29, 2003.

76 U.S. Fish and Wildlife Service news release, November 12, 2003 identifying team members online at <http://news.fws.gov/newsreleases/r9/15C72D64-3BB1-49C1-AB7C048EC2B44D60.html>, and author interview with Chad Smith, Director Nebraska Field Office of American Rivers, March 2004.

77 Grunwald, *The New Republic*, October 27, 2003.

The amendment's proposed "reasonable and prudent alternatives" were significantly less stringent than the original biological opinion but did require the Army Corps of Engineers (the federal agency that manages water flows on the Missouri River) to do some river flow modifications.⁷⁸ Taking into account the amended biological opinion from the Fish and Wildlife Service, the Army Corps then developed its environmental impact statement and new Master Manual (the plan that guides river management), which was released in March 2004. The Corps' plan does not restore the more natural ebb and flow of the river to protect threatened and endangered birds and fish, as recommended by the scientists on the original, peer-reviewed biological opinion, but creates instead a plan to build new habitat for endangered pallid sturgeon by July 1, 2004.⁷⁹ Absent independent peer review for the amended biological opinion, it is difficult to ascertain whether this opinion and plan will be sufficient to effectively protect the species at risk. What is clear, however, is that the Bush administration's political agenda has interfered with the scientific integrity of the policymaking process in this case. Allyn Sapa, a recently retired biologist with the U.S. Fish and Wildlife Service who supervised the Missouri River project for more than five years, commented about this whole affair: "It's hard not to think that because our findings don't match up with what they want to hear, they are putting a new team on the job who will give them what they want."⁸⁰

"It's hard not to think that because our findings don't match up with what they want to hear, they are putting a new team on the job who will give them what they want."

MANIPULATING THE SCIENTIFIC PROCESS ON FOREST MANAGEMENT

In an incident involving the management of national forests, the Bush administration created a "review team" made up of predominantly non-scientists⁸¹ who proceeded to overrule a \$12 million science-based plan for managing old-growth forest habitat and reducing the risk of fire in 11 national forests. This so-called Sierra Nevada Framework, which was adopted by the Clinton administration in 2001 after nine years of research by more than 100 scientists from the Forest Service and academia, had been viewed by the experts who reviewed it as an exemplary use of credible science in forest policy.⁸²

The Bush administration's proposed changes to the plan include harvesting more of the large trees, which may double or triple harvest levels over the first 10 years of the plan.⁸³ Other changes call for relaxing restrictions on cattle grazing in some areas where the original plan significantly reduced grazing due to the potentially critical impact on sensitive species.

78 U.S. Fish and Wildlife Service, "2003 Amendment to the 2000 Biological Opinion on the Operation of the Missouri River Mainstem Reservoir System, Operation and Maintenance of the Missouri River Bank Stabilization and Navigation Project, and Operation of Kansas River Reservoir System," December 16, 2003. Available online at www.fws.gov/feature/pdfs/FinalBO.pdf.

79 All Army Corps documents are available online at www.nwd-mr.usace.army.mil/rec/index.html.

80 As quoted in A. Griscom, "They blinded me with pseudo science: the Bush administration is jettisoning real scientists in favor of yes men," *Grist*. Posted online at salon.com, November 14, 2003.

81 Author interviews with Jay Watson, former regional director of the Wilderness Society, February 2004, and Emily Roberson, California Native Plant Society, October 2003. See also www.cnps.org/federalissues/PDFs/CAScientistLetter.pdf and www.fs.fed.us/r5/snfpa/review/review-report/index.html.

82 U.S. Forest Service. September 2003. Science Consistency Review Report, *Draft Supplemental Environmental Impact Statement*, Sierra Nevada Forest Plan Amendment.

83 U.S. Forest Service, Pacific Southwest Region. March 18, 2003. Press release, "Top Forest Service Official in State Accepts Sierra Nevada Review Recommendation, Starts Environmental Analysis Process." Estimates of the timber harvest for the first decade under the revised plan are 448 million board feet, whereas the timber harvest under the original plan was estimated at 157 million board feet. The difference is due to a relaxation of the rules regarding the diameter of harvestable trees, from 20 inches under the original plan to 30 inches under the proposed revisions.

Forest Service officials justified these changes in part by stating that the original plan relies too much on prescribed burning and would fail to “...effectively protect the general forest areas from fire.”⁸⁴ Indeed, ecologically sustainable thinning that minimizes risks to threatened and endangered species may also be an appropriate tool for reducing risk of catastrophic fire in these forests.⁸⁵ The Forest Service claims that these changes are “grounded in the best available scientific information.”⁸⁶ However, a scientific review panel put together by the Forest Service found that the revisions failed to consider key scientific information regarding fire, impacts on forest health, and endangered species.⁸⁷

OMB RULEMAKING ON “PEER REVIEW”

There is also concern about government-wide rule changes proposed by the White House or Congress that would alter the way the federal government gathers and reviews scientific and technical information. Such a rule change has recently been proposed by the White House’s Office of Management and Budget (OMB), and, if adopted, promises to have dramatic effects on the promulgation of new government regulations.

The proposed rule would centralize control of review of scientific information relied upon in policy making at federal agencies at OMB, even though the OMB fails to identify any inherent flaws in the review processes now being used at these agencies.

The proposed rule would prohibit most scientists who receive funding from a government agency from serving as peer reviewers, but would permit scientists employed or funded by industry to serve

The new rules therefore imply that only scientists with private funding—primarily those who receive industry funding—will be considered “independent” by the federal government.

as reviewers (unless they had a direct financial interest in the issue under review). These provisions would create a serious imbalance in the selection of peer reviewers, giving regulated industries much greater influence over the formulation of new regulations.

Both individual scientists and scientific associations have expressed concerns that this would lead to increased costs and delays in promulgating new health, safety, and environmental regulations. According to Dr. Anthony Robbins, professor of public health at Tufts University School of Medicine, co-editor of the *Journal of Public Health Policy*, and former director of the National Institute for Occupational Safety and Health, the OMB’s proposed rule change “would radically restrict access to scientific advice at the government agencies on whom we rely to protect public health. The White House could restrict open discussion and tilt the balance of residual discussions towards commercial interests. In the hands of the Bush administration,” Robbins warns, “these could be the tools that could ultimately destroy integrity in science as we know it.”⁸⁸

Dr. Bruce Alberts, president of the National Academy of Sciences, stated that “the highly

84 Pacific Southwest Regional Forester Jack Blackwell, as quoted in U.S. Forest Service press release, March 18, 2003.

85 Personal communication from two members of the Science Consistency Review Team responsible for reviewing the draft SEIS, names withheld on request, March 2004.

86 U.S. Forest Service Sierra Nevada Forest Plan Amendment, Final Supplemental Environmental Impact Statement, Record of Decision, January 2004. Online at www.fs.fed.us/r5/snfp/final-seis/rod/the-decision/index.html.

87 U.S. Forest Service. September 2003. Science Consistency Review Report, *Draft Supplemental Environmental Impact Statement*, Sierra Nevada Forest Plan Amendment.

88 Author interview with Anthony Robbins, October 2003.

prescriptive type of peer review that the OMB is proposing differs from accepted practices of peer review in the scientific community, and if enacted in its present form is likely to be counterproductive.”⁸⁹ Concerned about the impact on the FDA, the Pharmaceutical Research and Manufacturers

of America told the OMB that its proposed rule “would contribute little value and would add to the time and expense of a gatekeeper function that has historically been criticized for obstruction and delay.”⁹⁰

89 NAS comments online at www.whitehouse.gov/omb/inforeg/2003ig/ig_list.html.

90 PhRMA comments online at www.whitehouse.gov/omb/inforeg/2003ig/118.pdf.

Part II

UNDERMINING THE QUALITY AND INTEGRITY OF THE APPOINTMENT PROCESS

The real issue here is that we are allowing scientific advisory committees to be contaminated by people who have clear bias, clear financial conflicts that will not allow them to make unbiased scientific decisions.

— BRUCE LANPHEAR, DIRECTOR OF THE CHILDREN'S ENVIRONMENTAL HEALTH CENTER AT CINCINNATI CHILDREN'S HOSPITAL MEDICAL CENTER, WHOSE NOMINATION TO AN ADVISORY COMMITTEE WAS SCUTTLED BY THE BUSH ADMINISTRATION IN FAVOR OF CANDIDATES SUGGESTED BY THE LEAD INDUSTRY.¹

Roughly 1,000 committees, panels, commissions, and councils advise the federal government on everything from how to allocate federal research dollars to what should be considered permissible levels of pesticide residue on produce.² Traditionally, appointments to these advisory groups have been relatively nonpartisan and merit-based. Politics has always played a role in the selection process, but the federal government has traditionally avoided overt bias by relying predominantly on the nominations of agency staff who, in conjunction with colleagues outside of government, tend to favor candidates widely recognized for their scientific expertise and reputation as leaders in their fields.

The balancing of scientific advisory positions in government is not only a matter of tradition but also one of law. According to the Federal Advisory Committee Act of 1972, the membership of federal advisory committees must be “fairly balanced in terms of the points of view represented and the functions to be performed by the advisory committee.”

In addition, the advisory process must “contain appropriate provisions to ensure that the advice and recommendations of the advisory committee will not be inappropriately influenced by the appointing authority or by any special interest, but will instead be the result of the advisory committee’s independent judgment.”³

The balancing of scientific advisory positions in government is not only a matter of tradition but also one of law.

The current Bush administration has repeatedly contended that it is upholding the spirit of balance. Responding to questions about irregularities in the appointment process early in 2003, for example, White House spokesperson Ken Lasaius stated that President Bush makes appointments “on the basis

1 As quoted in “Lead Poisoning Science Panel ‘Contaminated’ by Bias, Critics Charge,” Gannett News Service, November 26, 2002.

2 For a full accounting, including a listing of members and other pertinent information, see the online database of the Federal Advisory Committee Act at www.facadatabase.gov.

3 See Federal Advisory Committee Act, 5 U.S.C. Appendix 2, Section 5(b) 2 and 3.

of putting the best qualified person into a position.”⁴ The record often shows otherwise; the current administration has repeatedly allowed political considerations to trump scientific qualifications in the appointment process. As this section will detail, the administration has picked candidates with questionable credentials for advisory positions, used political litmus tests to vet candidates for even the least political of its government review panels, and favored the candidates put forward by industry lobbyists over those recommended by its own federal agencies. This last charge of favoring candidates put forth by industry is particularly troubling, as executives from these industries are quite often large campaign contributors.

INDUSTRY INFLUENCE ON LEAD POISONING PREVENTION PANEL

Lead poisoning has long been recognized as a serious threat to children. The CDC estimates that more than 400,000 children in the United States under the age of five have elevated levels of lead in their blood, which can cause many serious ailments including brain damage and central nervous system disorders.⁵ As authorized by Congress, the CDC has impaneled a group of experts since the 1970s to advise the government on how to best protect children from lead poisoning—one of some two dozen advisory committees within this agency alone.⁶ Thanks in part to this committee’s recommendations, the incidence of elevated lead levels in children has been reduced substantially over the past several decades.⁷

Just a few weeks before the committee’s scheduled meeting, at which the question of toughening the standard further would be discussed, the Bush administration intervened.

In the summer of 2002, the CDC Advisory Committee on Childhood Lead Poisoning Prevention was preparing to consider whether to revise the federal standard for lead poisoning set most recently in 1991. Initially, in 1975, the CDC had officially defined “lead poisoning” as the presence of more than 30 micrograms of lead per deciliter of blood. Over time, as emerging scientific evidence showed a health threat from even lower levels of lead exposure, the CDC altered its standard. The lead poisoning threshold was lowered in 1985 to 25 micrograms per deciliter and, in 1991, was further reduced to 10 micrograms, where it stands today.⁸

According to numerous sources familiar with the committee’s work, the advisory group at this time was likely to rule in favor of a more stringent federal standard for lead poisoning, reflecting the latest research linking ever-smaller amounts of lead exposure to developmental problems in children.⁹

Just a few weeks before the committee’s scheduled meeting, at which the question of toughening the standard further would be discussed, the Bush

4 Ken Lasaius, January 23, 2003.

5 See www.cdc.gov/nceh/lead/about/about.htm.

6 Information provided by CDC Press Office, December 2003.

7 For evidence of the decline in lead levels in children since the 1970s, see www.cdc.gov/nceh/lead/research/kidsBLL.htm.

8 For example, see Centers for Disease Control and Prevention, Preventing Lead Poisoning in Young Children: A Statement by the Centers for Disease Control, Report No. 99-2230, Atlanta, GA: CDC, U.S. Department of Health and Human Services, 1991.

9 Author interviews with Michael Weitzman and others, November 2003.

administration intervened. Tommy Thompson, secretary of Health and Human Services (HHS), took the unusual step¹⁰ of rejecting nominees selected by the staff scientists of a federal agency under his own jurisdiction. According to Dr. Susan Cummins, who chaired the CDC's lead advisory committee from 1995 to 2000, this was the first time an HHS secretary had ever rejected nominations by the committee or CDC staff.¹¹ In place of the respected researchers the CDC staff had recommended,¹² Thompson's office appointed five individuals who were all distinguished by the likelihood that they would oppose tightening the federal lead poisoning standard.¹³

Furthermore, a review by congressional staff members soon uncovered the fact that at least two of the new appointees had financial ties to the lead industry.¹⁴ One of them, Dr. William Banner, an Oklahoma-based toxicologist and medical director of the Oklahoma Poison Control Center, had previously testified in court on behalf of the Sherwin-Williams paint company in a lead poisoning case. In his capacity as an expert witness for this manufacturer, Banner declared that, in his view, studies had never adequately demonstrated a link between lead exposure and cognitive problems in children

As one medical researcher explains it, Banner's position either ignores or willfully misreads some four decades' worth of accumulating data on lead exposure in children.

at any level below 70 micrograms per deciliter.¹⁵ In this respect, Banner holds what several leading medical specialists on lead consider a "fringe" view in his field (far from even the normal extremities of mainstream expert scientific discourse). As one medical researcher explains it, Banner's position either ignores or willfully misreads some four decades' worth of accumulating data on lead exposure in children.¹⁶

Researchers may well reasonably debate whether the government should tighten its standard for lead poisoning. The public needs and deserves such an informed debate. In this case, however, the Bush administration effectively denied the public an informed policy recommendation by tampering with the integrity of the advisory panel nominating process.

10 Author Interview with Susan Cummins, December 2003.

11 Ibid.

12 The nominees recommended by the CDC but overruled by Secretary Thompson's office include: Dr. Bruce Lanphear, Sloan Professor of Children's Environmental Health at the University of Cincinnati and a former member of the Lead Poisoning Prevention Task Force in the Monroe County Health Department; and Dr. Susan Klitzman, associate professor of urban public health at the Hunter College School of Health Sciences and the former head of the New York City Health Department's lead poisoning prevention program. Both have published multiple papers on lead poisoning in peer-reviewed medical literature.

13 The Bush administration nominees to the panel were William Banner, Kimberly Thompson, Sergio Piomelli, Tracey Lynn, and Joyce Tsuji. Dr. Tsuji ultimately withdrew her nomination. For more on their qualifications and links to the lead industry, see the Office of Representative Edward J. Markey, "Turning Lead Into Gold: How the Bush Administration is Poisoning the Lead Advisory Committee at the CDC," October 8, 2002. Online at www.house.gov/markey/Issues/iss_environment_rpt021008.pdf.

14 Ibid. At the time of his nomination, Dr. Banner, an attending physician at Children's Hospital at the University of Oklahoma College of Medicine, was retained by the Lead Industries Association as an expert witness in an ongoing legal case between the State of Rhode Island and the lead paint industry. Dr. Kimberly Thompson, an assistant professor of risk analysis and decision science at the Harvard School of Public Health, has no fewer than 22 funders with a financial interest in the deliberations of the CDC panel and at least two—Atlantic Richfield Corp. and E.I. Dupont de Nemours and Co.—named as defendants in the Rhode Island case against the lead paint industry. Despite their industry connections, a standard government vetting of Drs. Banner and Thompson found no financial conflict of interest that would legally prohibit them from participating in the new advisory committee. See minutes of the committee meeting, October 15-16, 2002. Online at www.cdc.gov/nceh/lead/ACCLPP/meetingMinutes/minutesOct2002.htm.

15 Deposition of Dr. William Banner, Jr., June 13, 2002, in *State of Rhode Island v. Lead Industries Association*, C.A. No. 99-5526 (Superior Court of RI, April 2, 2001) as cited in Politics and Science report, p. 23.

16 Author interview with prominent lead poisoning expert, name withheld on request, December 2003.

To make room for his appointees, Secretary Thompson's office dismissed Dr. Michael Weitzman, a highly respected lead expert who had served for four years on the panel. Weitzman is chief of pediatrics at the University of Rochester School of Medicine and executive director of the American Academy of Pediatrics Center for Child Health Research. Unlike Banner, Weitzman has conducted research on lead exposure and published widely on the subject in peer-reviewed journals. Weitzman states that shortly before he learned of his rejection by Secretary Thompson, CDC staff told him they planned to nominate him to chair the advisory committee.¹⁷

The dismissal of Weitzman and the rejection of other CDC-recommended candidates came via direct intervention from HHS Secretary Thompson's office. Department spokesperson William Pierce explains that some 258 advisory panels fall under the purview of HHS and, under the Bush administration, the department "closely and actively oversees" the appointment of some 450 scientists to these panels annually. HHS, Pierce continues, does not consider itself bound by any particular agency nominations for committee positions; rather, Secretary Thompson's staff "takes into consideration recommendations from people inside and outside of the federal government."¹⁸

"We've seen a consistent pattern of putting people in who will ensure that the administration hears what it wants to hear," says Dr. David Michaels, a research professor in the Department of Environmental and Occupational Health at George Washington University's School of Public Health and former assistant secretary for environment, safety and health at the DOE during the Clinton

administration. "That doesn't help science, and it doesn't help the country."¹⁹

As Michaels points out, political appointees may be hired to further a given political agenda, but scientific advisory committees have a distinctly different role: namely to "advise agencies and the public about what is the best science." When the process becomes politicized, he notes, "the committee's role will be hampered, the nation's best scientists will shun involvement, the government's credibility will suffer, and the public will lose vital input to the government on behalf of its safety and health."²⁰

"We've seen a consistent pattern of putting people in who will ensure that the administration hears what it wants to hear."

Dr. David Michaels, George Washington University's School of Public Health

In the case of the CDC Advisory Committee on Lead Poisoning Prevention, the stakes for public health are high: millions of the nation's children, and their parents, depend on lead poisoning policies based on the best available scientific evidence and technical information.

POLITICAL LITMUS TESTS ON WORKPLACE SAFETY PANEL

In a well-documented case involving HHS, Secretary Thompson dismissed three well-qualified experts on ergonomics from a narrowly focused

17 Author interview (via email) with Michael Weitzman, November 2003.

18 Author interview with William Pierce, U.S. Department of Health and Human Services Press Office, November 2003.

19 Author interview with David Michaels, October 2003.

20 Ibid. See also David Michaels et al., "Advice Without Dissent," *Science*, October 25, 2002.

peer review panel at the National Institute for Occupational Safety and Health (NIOSH).²¹ The three nominees in question had been selected to join a so-called study section of the Advisory Committee on Occupational Safety and Health that evaluates research grants on workplace injuries.²² Based on their credentials and reputations in the field, the three had been chosen by the committee chair and panel staff, and had initially been approved by the director of NIOSH. Study sections such as this one are responsible for offering peer review of ongoing research, not for advising on policy matters, and therefore have almost never seen their service affected by a change of administration. Traditionally, scientists in such positions have always been chosen strictly for their expertise, just as their peer review work requires them to assess research solely based on its scientific merit.

In this case, however, at least two of the rejected nominees believe that the Bush administration denied them positions because of their support for a workplace ergonomics standard, a policy opposed by the administration. Dr. Laura Punnett, a professor at the University of Massachusetts at Lowell, states she has little doubt that she was removed from the study section for political reasons. There were no complaints about her work during the year she served in an *ad hoc* basis on the study section and she was told upon her dismissal by the chair of the study section that her removal had nothing to do with her credentials or the quality of her work.²³ “I was shocked,” Punnett told the press after her rejection. “I think it conveys very powerfully that part of the goal is to intimidate researchers and limit what research questions are asked.”²⁴

Another rejected nominee, Dr. Manuel Gomez, former director of scientific affairs at the American Industrial Hygiene Association, says he was not informed why his nomination was rejected after having been endorsed by NIOSH staff. Gomez says an agency staffer did tell him, however, that he “had never before seen this kind of decision coming in contravention of the agency’s recommendation.”²⁵

Here again, the circumstances of the case strongly indicate a politically motivated intervention. Such concerns are heightened by the fact that another prospective member of the study section—Dr. Pamela Kidd, associate dean of the College of Nursing at Arizona State University—charged

Traditionally, scientists in such positions have always been chosen strictly for their expertise, just as their peer review work requires them to assess research solely based on its scientific merit.

publicly that someone from Secretary Thompson’s staff, while vetting her nomination, had asked politically motivated questions such as whether she would be an advocate on ergonomics issues.²⁶ As one person close to this incident put it, taking all the above details into consideration, “I don’t know for sure why these respected scientists were kicked out, but it sure smelled foul.”²⁷

21 D. Ferber, “HHS Intervenes in Choice of Study Section Members,” *Science*, November 15, 2002.

22 A. Zitner, “Advisors Put Under a Microscope,” *Los Angeles Times*, December 23, 2002.

23 Author interview with Laura Punnett, January 2004.

24 Ferber, *Science*.

25 Author interview with Manuel Gomez, November 2003.

26 Zitner, *Los Angeles Times*.

27 Author interview, name withheld on request, November 2003.

NON-SCIENTIST IN SENIOR ADVISORY ROLE TO THE PRESIDENT

Congress established the Office of Science and Technology Policy (OSTP) with a mandate to “advise the President and others within the Executive Office of the President on the impacts of science and technology on domestic and international affairs,” and to “lead an interagency effort to develop and implement sound science and technology policies and budgets.” Thus, the OSTP is the highest-level scientific advisory body in the federal government; the director of the OSTP also serves as the president’s official science advisor. There are currently two associate directors, one with responsibility for science, the other for technology. All three positions require Senate confirmation.²⁸

Richard M. Russell is the associate director responsible for the OSTP’s technology portfolio, which includes telecommunications and information technology as well as space and aeronautics. He is also senior director for telecommunications and technology at the National Economic Council. Mr. Russell holds the most senior White House advisory position devoted specifically to technology, yet he has only a bachelor’s degree in biology, no graduate or professional training of any kind, and no experience in a technology-related industry.²⁹ Although he has served on the professional staff of the House of Representatives Committee on Science, it is not clear that this experience qualifies him to serve in a senior scientific capacity. This appointment is especially perplexing considering that there is no shortage of highly qualified scientists and technologists to fill this post.

UNDERQUALIFIED CANDIDATES IN HEALTH ADVISORY ROLES

The FDA’s Reproductive Health Advisory Committee

In several cases, the Bush administration’s candidates for advisory positions have so lacked qualifications or held such extreme views that they have caused a public outcry. One such case involves the appointment of Dr. W. David Hager to the U.S. Food and Drug Administration’s (FDA) Reproductive Health Advisory Committee, which advises the agency on contraceptives, abortion, and other potentially controversial medical issues such as hormone replacement therapy. The Bush administration initially suggested that Hager, an obstetrician-gynecologist with scant credentials and highly partisan political views,³⁰ chair the FDA advisory committee. But, after widespread public outcry, he was installed simply as a committee member. His nomination represents a dramatic departure from any past appointments to this committee. He is best known for co-authoring a book that recommends particular scripture readings as a treatment for premenstrual syndrome³¹ and, in his private practice, Hager has reportedly refused to prescribe contraceptives to unmarried women.³²

Presidential Advisory Council on HIV/AIDS

Another high-profile appointment of a scientist with questionable credentials is the selection of Dr. Joseph McIlhaney to the Presidential Advisory Council on HIV/AIDS. McIlhaney is a Texas-based doctor known for his published disdain for

28 See www.ostp.gov.

29 See www.ostp.gov/html/bio_russell.html.

30 See K. Tumulty, “Jesus and the FDA,” *Time*, October 5, 2002. According to this article: “Though his resume describes Hager as a University of Kentucky professor, a university official says Hager’s appointment is part-time and voluntary and involves working with interns at Lexington’s Central Baptist Hospital, not the university itself.” By way of comparison, consider the credentials of at least two nominees proposed by FDA staff for Hager’s position: Donald R. Mattison, former dean of the University of Pittsburgh School of Public Health, and Michael F. Greene, director of maternal-fetal medicine at Massachusetts General Hospital, as reported by OMBWatch at www.ombwatch.org/article/articleview/1384.

31 For example, see W.D. Hager, *As Jesus Cared for Women: Restoring Women Then and Now*, Old Tappan, NJ: Fleming H. Revell, 1998.

32 Tumulty, *Time*.

the use of condoms to prevent the spread of HIV and other sexually transmitted diseases and his continued advocacy of abstinence-only programs despite negligible evidence that they actually reduce pregnancy rates among young people.³³ Despite McIlhaney's dearth of published, peer-reviewed scientific research or endorsement by any established medical societies, the Bush administration has selected him to serve in a new capacity during a four-year term on the Advisory Committee to the Director of CDC.³⁴

LITMUS TESTS FOR SCIENTIFIC APPOINTEES

National Institute on Drug Abuse

Political litmus tests have been applied by representatives of the Bush administration to candidates for scientific advisory positions at the National Institute on Drug Abuse. One well-publicized assertion involves Dr. William R. Miller of the University of New Mexico. Miller, a distinguished professor of psychology and psychiatry, the pioneer of a leading substance abuse treatment, and author of more than 100 articles in peer-reviewed scientific journals, says that his 2002 interview for a slot on a National Institute on Drug Abuse advisory panel included questions about whether his views were congruent with those held by President Bush and whether he had voted for Bush in 2000. Presumably based on his answers, Miller was denied the appointment.³⁵

Despite McIlhaney's dearth of published, peer-reviewed scientific research . . . the Bush administration has selected him to serve in a new capacity during a four-year term on the Advisory Committee to the Director of CDC.

Army Science Board

In another incident, William E. Howard III, an engineer from McLean, VA, reported in a letter to *Science* that he was told by a member of the Army Science Board (ASB) staff that his nomination to the ASB, a Defense Department advisory panel, was rejected because he had contributed to the presidential campaign of Senator John McCain (R-AZ).³⁶ Howard says he never made such a contribution; instead, as it turns out, someone with a similar name (William S. Howard) had contributed the money. The mix-up only compounds the administration's ill-considered practice. As Howard puts it, "The country is not being well-served by any administration's policy of seeking advice only from a group of scientists and engineers who have passed the administration's political litmus test."³⁷

33 See "The Assault on Birth Control and Family Planning Programs," Planned Parenthood, October 2003. Online at www.plannedparenthood.org/library/birthcontrol/031030_birthcontrol_report.pdf. See also C. Connolly, "Texas Teaches Abstinence with Mixed Grades," *Washington Post*, January 21, 2003.

34 CDC press release, "Secretary Thompson appoints nine to CDC Advisory Committee," February 20, 2003.

35 Rather than focusing on Miller's scientific qualifications, a White House liaison to the Department of Health and Human Services grilled Miller about his views on abortion, capital punishment, and many other topics. See E. Benson, "Political science: allegations of politicization are threatening the credibility of the federal government's scientific advisory committees," *Monitor on Psychology: Journal of the American Psychological Association*, March 2003. See also K. Silverstein, "Bush's new political science," *Mother Jones*, November-December 2002.

36 W.E. Howard III, "Advice without dissent at the DOD" (letter), *Science*, November 15, 2002.

37 Ibid.

DISMISSAL OF NUCLEAR WEAPONS AND ARMS CONTROL PANELS

National Nuclear Security Administration Panel

The National Nuclear Security Administration (NNSA) is the agency within the DOE responsible for maintaining the nation's nuclear weapons stockpile, and the ability to design and test new nuclear warheads should the president decide to acquire them. When Congress established the NNSA in 2000, it also created an independent, external technical advisory committee. This committee, formed in 2001, had a membership that included a number of distinguished physicists and technical experts with extensive knowledge of nuclear weapons, as well as former government officials and retired senior military officers. The committee was summarily abolished in June 2003.³⁸

Some of the physicists on the committee had published articles explaining that nuclear weapons have only a limited capability to destroy deeply buried targets and, furthermore, that such attacks would inevitably produce a great deal of radioactive fallout. This is not a controversial opinion; experts at the national nuclear weapons laboratories agree that it is a relatively simple and well-understood consequence of basic physics.³⁹

Nevertheless, a senior NNSA official expressed displeasure about the articles to the authors, presumably because the administration's 2001 Nuclear Posture Review called for development of such

weapons and President Bush's FY04 budget included funds for research on these so-called nuclear "bunker busters." The NNSA administrator has justified the abolition of the committee because there is "no shortage of advice" and "there are a lot of physicists who work" at the weapons labs.⁴⁰ That, of course, has always been true, and yet Cold War presidents from Eisenhower to Nixon understood that such a serious and dangerous subject requires the advice of outstanding experts independent of the government.

ARMS CONTROL PANEL

After the Bush administration came into office, the scientific committee that advised the State Department on technical matters related to arms control was dismissed. The committee had been chaired by physicist Richard Garwin, who has served on the Presidential Scientific Advisory Committee and the Defense Science Board under administrations of both parties, and has for decades been a consultant to the national nuclear weapons laboratories and intelligence agencies. The committee also had members with expertise on biological and chemical weapons. After the committee was dismissed, Under Secretary of State for Arms Control and International Security John R. Bolton told Dr. Garwin that a new committee would be formed,⁴¹ but that has not happened.

38 J. Dawson, "Disbanding NNSA Advisory Panel Raises Concerns," *Physics Today*, September 2003.

39 R. Nelson, 2002, Low-Yield Earth-Penetrating Nuclear Weapons, *Science and Global Security* 10(1):1-20.

40 Dawson, *Physics Today*.

41 Author interview with Richard Garwin, January 2004.

*Part III***AN UNPRECEDENTED PATTERN OF BEHAVIOR**

No administration has been above inserting politics into science from time to time. However, a considerable number of individuals who have served in positions directly involved in the federal government's use of scientific knowledge and expertise have asserted that the Bush administration is, to an unprecedented degree, distorting and manipulating the science meant to assist the formation and implementation of policy. The following are accounts from a number of authoritative sources including political appointees from past Republican administrations, senior science advisors who have served both Republican and Democratic administrations, and long-term civil servants from federal agencies.

DISSEMINATING RESEARCH FROM FEDERAL AGENCIES

William Ruckelshaus, the first EPA administrator under President Nixon, and his successor, Russell Train, have spoken out about the matter. Specifically, Ruckelshaus told the press, "Is the analysis flawed? That is a legitimate reason for not releasing [a science-based analysis]. But if you don't like the outcome that might result from the analysis, that is not a legitimate reason."¹ Train commented, "My sense is that, from the beginning of the Bush administration, the White House has constantly injected itself into the way the EPA approaches and decides the critical issues before it. The agency has had little or no independence. I think that is a very

great mistake, and one for which the American people could pay over the long run in compromised health and reduced quality of life."²

Scientific advisors to government also weigh in on this matter. Dr. Wolfgang K.H. Panofsky, a distinguished physicist who worked on the Manhattan Project and served on the Presidential Scientific Advisory Committee and in other high-level scientific advisory roles in the Eisenhower, Kennedy, Johnson, and Nixon administrations, states that the current administration has isolated itself from independent scientific advice to an

"Is the analysis flawed? That is a legitimate reason for not releasing [a science-based analysis]. But if you don't like the outcome that might result from the analysis, that is not a legitimate reason."

William Ruckelshaus, EPA Administrator under President Nixon

unprecedented degree.³ Dr. Marvin Goldberger, a former president of the California Institute of Technology who has advised both Republican and Democratic administrations on nuclear weapons

1 Lee, *New York Times*, July 14, 2003.

2 Train, *www.gristmagazine.com*.

3 Author interview with Wolfgang K.H. Panofsky, January 2004.

issues, compares the attitude of this administration to those he has served by stating, “Politics plays no role in scientists’ search for understanding and applications of the laws of nature. To ignore or marginalize scientific input to policy decisions, where relevant, on the basis of politics is to endanger our national economic and military security.”⁴

According to Dr. Margaret Scarlett, a former CDC staff member who served in the agency for 15 years, most recently in the Office of HIV/AIDS Policy, “The current administration has instituted an unheard-of level of micromanagement in the programmatic and scientific activities of CDC. We’re seeing a clear substitution of ideology for science and it is causing many committed scientists to leave the agency.”⁵ Scarlett also points out that, “Ronald Reagan was very uncomfortable with the issue of sex education and the transmission of HIV, which was still largely stigmatized at the time. Nonetheless, with the help of CDC, his administration got factual information out to every household in the country about the problem. His actions stand in dramatic contrast to the sorry record of the current administration on informing the public about issues related to sex education and HIV transmission.”⁶

REP America, the national grassroots organization of Republicans for Environmental Protection, has also raised concerns about the administration’s approach to scientific research: “Withholding of vital environmental information is getting to be a bad habit with the Bush administration.”⁷

IRREGULARITIES IN APPOINTMENTS TO SCIENTIFIC ADVISORY PANELS

Donald Kennedy, editor of the journal *Science*, former president of Stanford University, and a former FDA commissioner, remarked in early 2003, “I don’t think any administration has penetrated so deeply into the advisory committee structure as this one, and I think it matters. If you start

“Withholding of vital environmental information is getting to be a bad habit with the Bush administration.”

Republicans for Environmental Protection

picking people by their ideology instead of their scientific credentials you are inevitably reducing the quality of the advisory group.”⁸

Dr. D. Allan Bromley, science advisor in the first Bush administration, noted at a meeting of former OSTP directors that nominees are likely to face detailed questioning about their positions on issues ranging from global warming to stem cell research. “There are too many litmus tests,” Bromley asserts.⁹

Professor Lewis M. Branscomb is a highly regarded scientist who served as director of the National Bureau of Standards (now the National

4 Author interview with Marvin Goldberger, January 2004.

5 Author interview with Margaret Scarlett, October 2003.

6 Author interview with Margaret Scarlett, October 2003.

7 Press release, REP America, July 2, 2003. Online at www.repamerica.org.

8 As quoted in Zitner, *Los Angeles Times*.

9 A. Lawler, “Former Advisers Fret over OSTP Vacancy,” *Science*, May 13, 2002.

Institute of Standards and Technology) in the Nixon administration, vice president and chief scientist at IBM, and president of the American Physical Society. Dr. Branscomb recently stated, “I’m not aware that [Nixon] ever hand-picked ideologues to serve on advisory committees, or dismissed from advisory committees very well-qualified people if he didn’t like their views.... What’s going on now is in many ways more insidious. It happens behind the curtain. I don’t think we’ve had this kind of cynicism with respect to objective scientific advice since I’ve been watching government, which is quite a long time.”¹⁰

Dr. Lynn Goldman, a pediatrician and professor at the Bloomberg School of Public Health at Johns Hopkins University and former assistant administrator of the EPA, makes the same point emphatically about policymaking in the previous administration: “The Clinton administration did not do this.... They did not exclude people based on some sort of litmus test.” She adds that this kind of activity represents “a threat to the fundamental principle that we want to make decisions based on the best available science.”¹¹

¹⁰ *Christian Science Monitor*, January 6, 2004.

¹¹ J.R. Peggs, “Bush Stacking Science Panels,” *Environmental News Service*, October 9, 2003.

CONCLUSIONS AND RECOMMENDATIONS: WHAT'S AT STAKE

Science and scientific knowledge have played a large part in the policies that have made the United States the world's most powerful nation and its citizens increasingly prosperous and healthy. For science to play this positive and rational role in governance, the processes through which science influences government must be free of distortion and misrepresentation.

This report has, however, provided substantial evidence that objective scientific knowledge is being distorted for political ends by the Bush administration, and misrepresented or even withheld from Congress and the public at large. At high levels of government, the administration's political agenda has permeated the traditionally objective, nonpartisan mechanisms through which the government uses scientific knowledge in forming and implementing public policy.

This behavior by the administration violates the central premise of the scientific method, and is therefore of particularly grave concern to the scientific community. But it should also concern the American public, which has every right to expect its government to formulate policy on the basis of objective scientific knowledge in policies that affect the health, well-being and safety of its citizens.

The administration's actions have a harmful effect on policies related to public health, the environment, and national security. Consider just a few of the examples mentioned in this report:

- In 2002, just as an expert advisory committee to the CDC appeared ready to consider a more stringent federal lead standard, HHS Secretary Tommy Thompson rejected highly qualified experts nominated by CDC staff scientists to

serve on the committee, instead appointing two with financial ties to the lead industry—effectively blocking debate on the more stringent standard.

It should also concern the American public, which has every right to expect that its government formulates policy based on objective scientific knowledge in policies that affect the health, well-being and safety of its citizens.

- In an apparent attempt to block a pending report that would recommend changes in the flow of the Missouri River to comply with the Endangered Species Act, the administration removed scientists from a study years in the making.
- A microbiologist recently left the USDA claiming he had been prohibited from publishing his research on potential human health hazards posed by airborne bacteria emanating from farm wastes.
- In a clear effort to forestall mandatory limits on emissions of carbon dioxide and other heat-trapping gases, the Bush administration has consistently sought to undermine the public's understanding of the scientific consensus that consumption of fossil fuels and other human activities are contributing to global warming.

This pattern of behavior, if unchallenged, will amplify the cynicism about government that undermines democracy.

In the long term, one of the most profound effects of the administration's injection of politics into the government's handling of scientific knowledge may well be the demoralization of researchers at federal agencies, many of whom feel that their integrity as scientists has been compromised. World-renowned scientific institutions such as the CDC and the National Institutes of Health take decades to build a team of world-class scientific expertise and talent. But they can be severely damaged in short order by scientifically unethical behavior such as that displayed by the current administration. Top-flight scientists can readily find posts elsewhere, and once an exodus of scientific expertise starts, it becomes much harder for an agency to retain its remaining staff and attract outstanding talent to replace those who have departed. That such demoralization is already setting in is immediately discernible on an anecdotal basis in interviews with disaffected and departed staff. These individuals express a deep concern about the many actions by the Bush administration that have distorted or undermined the analysis and reporting of scientific information; they also state that many of their colleagues share their views. This is confirmed by reports from scientific staff at federal agencies who are distressed that their nominees for advisory posts have been subjected to political litmus tests, and by reports of such tests from nominees themselves.

Ensuring that the government's leading scientific institutions are of the highest quality, effectiveness, and credibility will lead to better breakthrough research and more effective public policies to protect the health and safety of the American public and our communities. Actions that undercut the effectiveness of these institutions are a grave disservice to all Americans.

World-renowned scientific institutions such as the CDC and the National Institutes of Health take decades to build a team of world-class scientific expertise and talent. But they can be severely damaged in short order by scientifically unethical behavior.

RESTORING SCIENTIFIC INTEGRITY TO FEDERAL POLICYMAKING

The damaging practices of the Bush administration documented in this report range across a wide front and will only be redressed by an effort of comparable proportions and persistence. If the nation is to fully benefit from its heavy investment in scientific research and education, and if the public is not to lose faith in the rationality of its government, immediate steps must be taken to restore the integrity of science in the federal policymaking process. To that end, the president, Congress, scientists, and the public at large must engage in these efforts.

The president should immediately request his science advisor to prepare a set of recommendations for executive orders and other actions to prohibit further censorship and distortion of scientific information from federal agencies, and put an end to practices that undermine the integrity of scientific advisory panels.

Congress must ensure that this administration and future administrations reverse this dangerous trend, and should:

- Hold oversight hearings to investigate and assess the allegations raised in this report.
- Ensure that the laws and rules governing scientific advisory appointments require that all appointees meet high professional standards, and protect against the domination of such panels by individuals tied to entities that have a vested interest at stake.
- Guarantee public access to government scientific studies and the findings of scientific advisory panels.
- Re-establish an organization able to independently assess and provide guidance to Congress on technical questions bearing on public policy, similar to the former Office of Technology Assessment.

Scientists must recognize their fundamental obligation to take a lead role in raising awareness on this issue. They should:

- Encourage their professional societies and colleagues to become engaged, voice their concerns directly to elected representatives, and

communicate the importance of this issue to the public both directly and through the media. In doing so, they must make it clear that the misuse of science can exact heavy costs by causing preventable illness and loss of life, avoidable damage to the environment, delay in the development of cleaner and more energy-efficient technologies, and other negative impacts on our society and economy.

- Provide constructive guidance on how the American political system can begin restoring the integrity of science in the formation and implementation of public policy.

The public also has a crucial role to play because these issues have an enormous impact on our health and well-being and that of our children and grandchildren. The public must voice its concern about these issues to its elected representatives, letting them know that censorship and distortion of scientific knowledge by the federal government will not be tolerated, and reminding them that the public trust is difficult to regain once lost.

Appendix A

**EPA MEMO ON CLIMATE SECTION
OF THE REPORT ON THE ENVIRONMENT**

N O T E :

The following document is an internal EPA decision paper that addresses staff concerns about White House edits to the Report on the Environment, as well as options for responding.

The paper is dated April 29, 2003.

4/29/03

**ISSUE PAPER:
WHITE HOUSE EDITS TO CLIMATE CHANGE SECTION
OF EPA'S REPORT ON THE ENVIRONMENT**

The White House (CEQ and OMB) has made major edits to the climate change section of the EPA Report on the Environment, indicating that "no further changes may be made." The Administrator plans to release the report by early June. She intends it to be a hallmark achievement in identifying indicators that can be used to measure EPA progress in protecting human health and the environment.

Issues

1. The section does not address the effects of climate change on human health and the environment. This will be conspicuously different from other chapters of the ROE.
 - a. The summary sentence has been deleted from 3-1, line 3: "Climate change has global consequences for human health and the environment."
 - b. The sections addressing impacts on human health and ecological effects are deleted. [p. 3-4]. So are two references to effects on human health.
 - c. Sentences have been deleted that called for further research on effects to support future indicators [p. 3-5, lines 12-13].

2. Most important, the ROE no longer accurately represents scientific consensus on climate change. A few examples are:
 - a. Conclusions of the NRC (2001) are discarded, that multiple studies indicate recent warming is unusual. The 1000 year temperature record is deleted (Attachment A: deleted Exhibit 1-8 from p. 3-3) Emphasis is given to a recent, limited analysis supports the Administration's favored message. (See p. 3-2, lines 32 and 35)
 - b. Natural variability is used to mask scientific consensus that most of the recent temperature increase is likely due to human activities. (See p. 3-2 and 3-3.)
 - c. Uncertainty is inserted (with "potentially" or "may") where there is essentially none. For example, the introductory paragraph on climate change (See p. 3-1) says that changes in the radiative balance of the atmosphere "may" affect weather and climate. EPA had provided numerous scientific citations, and even Congressional testimony by Patrick J. Michaels, to show that this relationship is not disputed. (Similar insertions in p. 3-2 line 32; p.3-5 line 14.)
 - d. Repeated references now may leave an impression that cooling is as much an issue as warming. (See p. 3-1, line 18; p. 3-2, line 22.)

3. Numerous technical details, incongruous with the rest of the ROE, make the section confusing and seem more uncertain, rather than presenting balanced conclusions about what scientists do and do not know. (See p. 3-2, line 37 to p. 3-3, line 9).

OPTION PAPER

- **Action Item:** Accept CEQ and OMB edits, or formulate an alternative response.

OPTION 1: Accept CEQ and OMB edits.

Pro: This option is easiest in terms of EPA-White House relations. It ends a multi-month negotiating process that has regressed substantially with the last round of comments.

Con: EPA will take responsibility and severe criticism from the science and environmental communities for poorly representing the science. EPA will have to decide who will respond and how to questions. This will undermine the ROE and the EPA for an extended period. It also undercuts key science assessments, such as by the National Research Council and Intergovernmental Panel on Climate Change. This option also provides specific text to attack and the potential to extend the period of criticism. Early review drafts were circulated to other agencies, States and Regions, and can be expected to surface for comparisons.

OPTION 2: Remove climate change section from the ROE.

Pro: This provides little “meat” for attacks on EPA’s science. It may be the only way to meet both White House and EPA needs. It does not expend more EPA resources on the product. EPA can explain the omission by pointing to the scientific disagreements and explaining that it is inappropriate for EPA to create its own version of the science.

Con: EPA will take criticism for omitting climate change. This weakens EPA’s role on this issue. The White House may not easily accept this option. There will be no foundation for further improvement of climate change indicators for future ROEs.

OPTION 3: Do not accept “no further changes” and try to reach compromise.

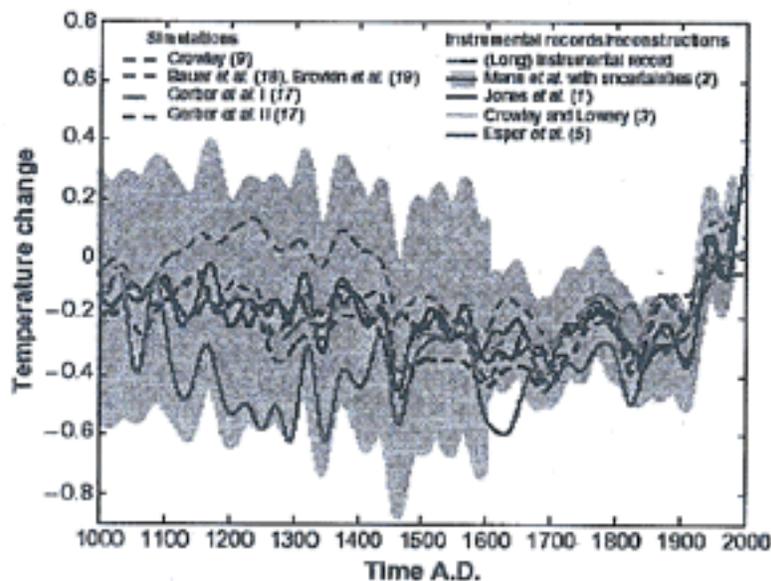
Pro: This is the only approach that could produce a credible climate change section in the ROE. It may antagonize the White House more than the other two options.

Con: It is likely not feasible to negotiate agreeable text. It will expend more resources on the section and possibly delay the ROE further.

ATTACHMENT A

Proposed Exhibit 1-8

Reconstructions of average surface temperature of the Northern Hemisphere for the past 1,000 years, including 95 percent confidence range in the data.



Northern Hemisphere temperature histories. Comparison of multiproxy reconstructions of the NH annual mean temperature (1-3) with model simulations (9, 17-19). Gerber I, 1.5°C for CO₂ doubling; Gerber II, 2.5°C for CO₂ doubling. Also shown is a reconstruction of summer extratropical continental NH temperatures (5). All reconstructions have been scaled to the NH instrumental record (20) over the 1856 to 1980 period, and have been smoothed on time scales of >40 years to highlight the long-term variations.

Source: Manne, Michael E. "The Value of Multiple Proxies" *Science* Vol. 297 p. 1481, Aug. 30, 2002

ATTACHMENT B

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*Appendix B***USDA “SENSITIVE ISSUE” LIST**

The following is an internal USDA document issued in February 2002 that accompanied a directive to USDA staff scientists to seek prior approval before publishing any research or speaking publicly on “sensitive issues.” The document was supplied by Dr. James Zahn, then on staff at USDA.

**List of Sensitive Issues for ARS Manuscript Review and Approval by
National Program Staff - February 2002 (Revised)**

1. Creation of transgenic food or feed organisms by genetic engineering.
2. Studies of genetically engineered organisms in the field.
3. Cloning of animals by somatic cell nuclear transfer.
4. Somatic cell fusion to recombine DNA in ways that cannot be achieved through sexual crossing.
5. Dioxin research.
6. Plant, microbial and animal patent policy.
7. Agricultural practices with negative health and environmental consequences, eg., global climate change; contamination of water by hazardous materials (nutrients, pesticides, and pathogens); animal feeding operations or crop production practices that negatively impact soil, water, or air quality.
8. Boll weevil eradication program.
9. International plant germplasm policies.
10. Research findings and recommendations that are contrary to current dietary guidelines or may be used in food labeling.
11. Megadoses of nutrients that may be beneficial to human health/nutrition.
12. Radiolytic products in food.
13. Harmful microorganisms and their products (e.g., aflatoxin, mycotoxin, fumonisin, Salmonella, E. Coli) in agricultural commodities.
14. Pesticides or animal drugs in foods above approved tolerance levels.
15. All transmissible encephalopathy (TSE) research including BSE research.
16. Herbicide-resistant crop plant research.
17. Animal well-being/animal use.

18. Biological items that may affect trade and export negotiations, e.g., fire blight in apples, TCK smut, karnal bunt, insect infestations in export products, etc.
19. Narcotic plant control.
20. Methyl bromide topics that relate to policy and/or regulatory actions.
21. Medfly/Malathion replacements.
22. Antibiotic/Antimicrobial Resistance.
23. Bioterrorism/Attacks on Agriculture.
24. Glassy-winged sharshooter/Pierce=s disease.
25. Sudden Oak Death.
26. Citrus Stem Canker.
27. Anthrax.
28. Emerging diseases or pest research that relates to policy and/or regulatory actions.

*Appendix C***SUPPLEMENTAL INFORMATION AND CLARIFICATIONS
IN MARCH 2004 EDITION**

p. 6

The new text includes a minor change to reflect that, while former EPA administrator Christine Todd Whitman discussed the climate change episode at length in the interview cited, her quote reflects more broadly on the political environment during her tenure.

p. 9

The new text was added to incorporate some of the revelations that have come to light subsequent to the publication of the original report about the process leading up to the promulgation of proposed rules on mercury emissions.

p. 10

The new text reflects the fact that Senator Lamar Alexander is also a cosponsor of the multi-pollutant bill and that the EPA analysis was eventually provided to the senators after its central findings had been made public in the press.

p. 11

A minor deletion to the original text clarifies the fact that, while changes in the evaluation of performances have taken place, the particular program in question—SPRANS (Special Projects of Regional and National Significance) Community-Based Abstinence Education Program—is administered not by the CDC but by the Health Resources Services Administration, a separate agency within the U.S. Department of Health and Human Services.

p. 11–12

The new text was added to incorporate additional new information about how the administration pushed an “abstinence-only” policy at the CDC despite the lack of scientific evidence of its efficacy.

p. 13

A quote was added from an independent researcher who collaborated with Dr. Zahn on his research.

p. 15

A passing reference to legal action was deleted, clarifying that most efforts to constrain the scientific standard used in Endangered Species Act determinations originate from the U.S. Department of the Interior. A citation to direct congressional testimony from the assistant secretary for Fish and Wildlife and Parks was added, as well as the July 2002 letter from more than 300 scientists to Congress, warning against efforts to weaken the science provisions of the Endangered Species Act.

p. 15

Information about the number of new species listed as threatened or endangered by the Bush administration was deleted because, although factually correct, it was not germane to showing abuse of science in the policy-making process.

p. 16

A minor error in the text that describes the threatened and endangered species in the Missouri River case was corrected.

p. 16–17

The new text reviews several important developments that have occurred in the Missouri River case subsequent to the notice from Assistant Secretary Manson establishing the “SWAT team.” Information was added about the SWAT team’s composition, the unusually expedited timeline for the SWAT team to carry out its work, and to show that the SWAT team’s amended biological opinion has not yet been subjected to independent peer review, even though policy decisions are being made based on the amendment. The differences between the original biological opinion and the amendment, and the steps the Army Corps has taken thus far to develop policies for Missouri River management based on the amended biological opinion, was described.

p. 17

A reference to the number of individuals on the review team was deleted as written accounts stated there were five members, but participants recall the review team had more members.

p. 17–18

The original report text was supplemented in order to expand on the discussion of scientifically sound approaches to address the risk of catastrophic fire in the Sierra Nevada forests, and on the role that science played in the final policy choice. Specifically, information was added from interviews with two members of the Science Consistency Review (SCR) team who noted that while the SCR team made available the latest forest science, that ultimately, this science was not explicitly used. Additional citations were included to more fully reference sources.

p. 18

The original text was changed to remove any ambiguity about where scientific review would be centralized in the proposed OMB rules.

p. 26

The original text was changed to remove any ambiguity about the fact that the litmus test in Dr. Miller’s case was applied by Bush administration staff and not by staff at the National Institute of Drug Abuse.

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