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ONE HUNDRED SEVENTH CONGRESS

# Congress of the United States

## House of Representatives

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October 1, 2002

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The Honorable Christine Todd Whitman  
Administrator  
U.S. Environmental Protection Agency  
1200 Pennsylvania Avenue, NW  
Washington, DC 20460

Dear Administrator Whitman:

I am writing to protest that the Administration once again appears to be altering scientific and policy conclusions to accommodate Halliburton's interest in promoting the oil and gas drilling practice of "hydraulic fracturing." Specifically, it appears that technical information that the Administration provided to Congress last week during the energy conference was manipulated to change data on the risk that hydraulic fracturing could contaminate underground drinking water supplies. According to Halliburton's website, "Halliburton pioneered fracturing . . . and has consistently led in the technology."<sup>1</sup>

I first wrote Vice President Cheney about Administration efforts to alter reports in such a way as to benefit Halliburton over a year ago, on August 29, 2001. My letter followed a front-page article in the *Los Angeles Times* that reported that the final version of the energy plan assembled by the White House energy task force, which Vice President Cheney chaired, was altered to delete language critical of hydraulic fracturing. The *Los Angeles Times* revealed that a draft of the energy plan had discussed the environmental concern that hydraulic fracturing might contaminate drinking water wells and had indicated that EPA controls might be needed, but that these statements were dropped from the final version of the plan.<sup>2</sup> The article also noted that Halliburton had filed legal papers opposing EPA regulation of hydraulic fracturing on the grounds that it would "have a significant adverse effect" on Halliburton's business.<sup>3</sup> Unfortunately, the Vice President never responded to my letter.

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<sup>1</sup>Available online at [http://www.halliburton.com/oil\\_gas/sd0922.jsp](http://www.halliburton.com/oil_gas/sd0922.jsp).

<sup>2</sup>See National Energy Policy Development Group, *National Energy Policy* 5-6 (May 2001).

<sup>3</sup>*Bush's Energy Plan Bares Industry Clout*, *Los Angeles Times* (Aug. 26, 2001).

Now it appears that the Administration is again altering information to benefit hydraulic fracturing and Halliburton.

Two weeks ago, congressional staff working on the energy conference met with EPA officials to discuss the risks posed by hydraulic fracturing to drinking water sources. The congressional staff were seeking information about whether the energy bill should contain a provision that would potentially exempt hydraulic fracturing from EPA regulation. At that meeting, congressional staff who were skeptical of the merits of exempting hydraulic fracturing pointed out that data from an August 2002 report by EPA on hydraulic fracturing showed that hydraulic fracturing could result in benzene and other toxic chemicals in underground sources of drinking water at levels that exceeded federal drinking water standards. The EPA staff who were present agreed that the report projected benzene levels at the edge of the fracture zone (which EPA had selected as the point from which to estimate chemical concentrations) that were above federal drinking water standards.

A week later, however, EPA provided congressional staff with a new analysis, using changed numbers. This new analysis showed that hydraulic fracturing would not produce benzene levels in drinking water sources that were above the federal standards. The explanation of these sudden changes was that they were “based on feedback” from unidentified industry sources.

This is a disturbing development. In making policy decisions, Congress must be able to depend on the accuracy of the technical and scientific information that it receives from federal agencies. Yet too often, it appears that technical and scientific information given to Congress is being altered by this Administration to support predetermined conclusions that benefit powerful and well-connected corporate interests.

### **Background**

Hydraulic fracturing is used widely throughout the oil and gas industry to increase production from oil and gas wells. In this practice, fluid is pumped into a rock formation at high pressure to create fractures and prop them open. This allows more oil or gas to flow to the well.

Halliburton is one of the three largest oil and gas services companies providing hydraulic fracturing services. In fact, Halliburton says on its website that “Halliburton pioneered fracturing over 50 years ago and has consistently led in the technology.”<sup>4</sup>

While hydraulic fracturing is an effective technique for oil and gas production, it also has

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<sup>4</sup>Available online at [http://www.halliburton.com/oil\\_gas/sd0922.jsp](http://www.halliburton.com/oil_gas/sd0922.jsp).

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the potential to cause environmental harm. In particular, concerns have been raised regarding the use of hydraulic fracturing in coal-bed methane production. Most coal-bed methane fields in the United States are located, at least in part, in aquifers that are being used or may be used as sources of drinking water.<sup>5</sup> The potential harm to drinking water sources stems from the fracturing fluids that are injected into the aquifer during hydraulic fracturing. Some of these hydraulic fracturing fluids contain substantial quantities of highly toxic chemicals.<sup>6</sup>

In particular, diesel fuel is apparently commonly used as a hydraulic fracturing fluid, although we do not know the total quantities used.<sup>7</sup> Diesel contains a variety of toxic chemicals, many of which are known or suspected carcinogens. The toxic constituents in diesel include benzene, toluene, ethylbenzene, xylene, naphthalene, 1-methylnaphthalene, 2-methylnaphthalene, dimethylnaphthalene, trimethylnaphthalene, fluorenes, phenanthrenes, and aromatics.<sup>8</sup> Injecting these toxic chemicals into underground sources of drinking water presents an obvious risk of contaminating water supplies and threatening human health.

In 1995, a citizens' group, the Legal Environmental Assistance Foundation (LEAF), filed suit against EPA for failure to require the State of Alabama to regulate hydraulic fracturing under the Safe Drinking Water Act. In 1997, the 11<sup>th</sup> Circuit upheld LEAF's claims, finding that hydraulic fracturing was required to be regulated under the Safe Drinking Water Act as an underground injection.<sup>9</sup> Pursuant to the court decision, Alabama now regulates hydraulic fracturing, but there are currently no controls on hydraulic fracturing under the Safe Drinking Water Act in any other state.

#### **August 2002 EPA Report**

In response to the decision of the 11<sup>th</sup> Circuit, ongoing citizen concerns, and requests from members of Congress, EPA is conducting a study of the potential threats to public health from hydraulic fracturing in coalbed methane wells.<sup>10</sup> After several years of work, EPA issued a

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<sup>5</sup>U.S. EPA, *DRAFT Evaluation of Impacts to Underground Sources of Drinking Water by Hydraulic Fracturing of Coalbed Methane Reservoirs*, 5-14 (August 2002) (EPA 816-D-02-006) (hereinafter "EPA Report").

<sup>6</sup>See EPA Report at 4-2 to 4-7, 4-15.

<sup>7</sup>EPA Report at 4-9; EPA briefing for congressional staff (Sept. 17, 2002).

<sup>8</sup>EPA Report at 4-5, 4-6.

<sup>9</sup>See *LEAF v. U.S. EPA*, 118 F.3d 1467 (11<sup>th</sup> Cir. 1997).

<sup>10</sup>EPA Report at ES-6.

report for public comment in August 2002.<sup>11</sup> Prior to its release for public comment, the report was peer reviewed by industry experts.

In the report, EPA states that based on the information collected, “the potential threats to USDWs [underground sources of drinking water] posed by hydraulic fracturing of CBM [coal-bed methane] wells appear to be low and do not justify additional study.”<sup>12</sup> EPA further states:

Although the threat to public health from hydraulic fracturing appears to be low, it may be feasible and prudent for industry to remove any threat whatsoever from injection of fluids. The use of diesel fuel in fracturing fluids by some companies introduces the majority of constituents of concern to USDWs. Water-based alternatives exist and from an environmental perspective, these water-based products are preferable.<sup>13</sup>

EPA based these proposed findings on an assessment of the likely concentrations of chemicals that diesel-based hydraulic fracturing fluids would introduce to an underground source of drinking water.<sup>14</sup> Specifically, EPA estimated the chemical concentrations at the point of injection to the underground source of drinking water.<sup>15</sup> EPA also considered the effects of recapturing a portion of the fluid and diluting the remaining fluid, and estimated the resulting chemical concentrations at the edge of the fracture zone.<sup>16</sup>

EPA estimated that a number of toxic chemicals are injected into underground drinking water sources at concentrations that far exceed federal standards for drinking water or state standards for groundwater cleanup (EPA used the state standards in cases where it had not yet set federal standards for the chemicals involved).<sup>17</sup> For example, EPA estimated benzene concentrations of 313 µg/L at the point of injection when diesel-based fracturing fluids are used. The drinking water standard for benzene is 5 µg/L.

EPA then estimated that after accounting for recapture of the drilling fluids and dilution, “the concentrations of constituents at the edge of the fracture zone are approximately 30 times

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<sup>11</sup>See EPA Report.

<sup>12</sup>EPA Report at ES-1.

<sup>13</sup>*Id.*

<sup>14</sup>*Id.* at 4-3.

<sup>15</sup>*Id.*

<sup>16</sup>*Id.* at 4-4.

<sup>17</sup>*Id.* at 4-5.

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lower than when introduced at the point of injection.”<sup>18</sup> EPA stated that “[i]n many cases, constituent concentrations were reduced to at or below ground water standards.”<sup>19</sup> EPA did not find, however, that all of the toxic chemicals introduced by hydraulic fracturing were reduced to at or below drinking water standards.

### **September 17 Meeting**

One of the issues being debated in the energy conference is whether to exempt hydraulic fracturing from government regulation. Specifically, the House and Senate conferees are currently negotiating a provision in the Senate energy bill that would require EPA to study hydraulic fracturing and make a finding as to whether it will endanger underground drinking water sources. Under this provision, if EPA does not find endangerment, the agency would be barred from regulating hydraulic fracturing or requiring states to regulate hydraulic fracturing under the Safe Drinking Water Act. The oil and gas industry strongly opposes EPA and state regulation of hydraulic fracturing under the Safe Drinking Water Act and is lobbying heavily for this provision.

To better understand this issue, congressional staff asked to be briefed on EPA’s August 2002 report. This meeting was held on September 17, 2002. At the meeting, congressional staff who were skeptical of the merits of exempting hydraulic fracturing, including my staff and others, used data from the August 2002 report to illustrate the potential dangers of hydraulic fracturing.

For example, congressional staff indicated that applying EPA’s estimate that concentrations are reduced by a factor of 30 at the edge of the fracture zone, benzene concentrations at the fracture zone would still be above ground water standards. In fact, applying EPA’s methodology laid out in the report, benzene concentrations would be projected at 10.44 µg/L even after dilution, which is double the drinking water standard.

The EPA staff present at the meeting confirmed that this was a correct application of the data and methodology in EPA’s report.

### **September 23 Revised Data**

Last week, however, EPA provided revised data on hydraulic fracturing to congressional staff. In the new analysis, EPA confirmed that the calculations EPA used for the August 2002 report produced an estimate for benzene concentrations after dilution that were above the

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<sup>18</sup>*Id.* at 4-4.

<sup>19</sup>*Id.*

drinking water standard.<sup>20</sup> However, the new analysis changed this calculation to produce a new estimate for benzene concentrations after dilution of 2.62 µg/L, which is below the drinking water standard.<sup>21</sup>

The only explanation for this change was that, “based on feedback” from unidentified “industry sources,” EPA “changed the point-of-injection concentration to more accurately reflect the actual density of the gel-water mixture.” In the August 2002 report, which EPA had spent several years developing and which had been peer reviewed by industry experts, EPA estimated the density of the gel/water mixture to be 1 g/mL. In its September 23 submission, EPA apparently changed that estimate, but EPA did not state the new assumed density of the gel/water mixture or provide any technical justification for the change.

### Conclusion

This incident requires immediate investigation. Congress needs to be able to rely on the technical and scientific information provided by federal agencies. It is hard to do so, however, when technical and scientific data that has been carefully assembled over several years is suddenly cast aside as soon as it becomes inconvenient or embarrassing. Yet that is exactly what appears to have happened in the case of hydraulic fracturing.

Moreover, this is not the first time that the Administration has apparently changed inconvenient information. Articles over the last year have documented a number of similar incidents with respect to the way this Administration has handled information on environmental concerns. For example, last October, Interior Secretary Norton was widely criticized for changing the Fish and Wildlife Service’s responses to Congress regarding caribou migration and breeding patterns in the Arctic National Wildlife Refuge to omit information suggesting negative impacts from oil development.<sup>22</sup> In January 2002, it was revealed that although the Fish and Wildlife Service had drafted critical comments on a proposal by the Army Corps of Engineers to relax wetlands protection rules, the Interior Department never gave those comments to the

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<sup>20</sup>EPA, *Calculations for Estimating Fracture Zone Concentrations for Three Scenarios* (Sept. 18, 2002).

<sup>21</sup>EPA stated that these numbers provide order-of-magnitude estimates only, but did not apply this caveat in its own interpretation of the numbers. Instead, EPA stated that the estimated concentrations of benzene are less than the drinking water standard. If EPA had used the estimated concentrations as order-of-magnitude estimates, the estimates would support only a statement that the benzene concentrations were at, not below, the drinking water standards.

<sup>22</sup>*Departmental Differences Show Over ANWR Drilling; Interior’s Norton Rebuffs Wildlife Service in Senate Testimony*, Washington Post (Oct. 19, 2001).

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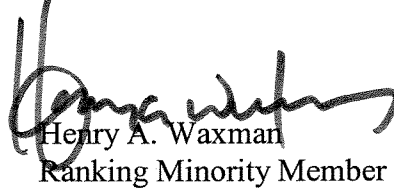
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Corps.<sup>23</sup> Two weeks ago, we learned that the Administration was eliminating some science advisory committees that were coming to conclusions at odds with the President's views.<sup>24</sup> Last week, we learned that the Interior Department had changed its comments on an EPA rule to regulate snowmobile emissions.<sup>25</sup> The final draft omitted the suggestion that the EPA rule should regulate particulate matter and nitrogen oxides to address air pollution problems at Yellowstone National Park.

Many Bush Administration officials have proclaimed their support for “sound science” and fact-based decision making. I agree with these principles, but they need to be applied consistently. It undercuts one of our government’s most cherished assets — its credibility — if facts like the potential damage from hydraulic fracturing are revised to meet a predetermined political agenda.

Sincerely,



Henry A. Waxman  
Ranking Minority Member

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<sup>23</sup>*Interior’s Silence on Corps Plan Questioned*, Washington Post (Jan. 14, 2002).

<sup>24</sup>*HHS Seeks Science Advice to Match Bush Views*, Washington Post (Sept. 17, 2002).

<sup>25</sup>*Democratic Senator Says Interior Watered Down Snowmobile Views*, Associated Press (Sept. 25, 2002).