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3 HEARING ON ``DRINKING WATER AND PUBLIC HEALTH IMPACTS OF COAL

4 COMBUSTION WASTE DISPOSAL''

5 THURSDAY, DECEMBER 10, 2009

6 House of Representatives,

7 Subcommittee on Energy and Environment

8 Committee on Energy and Commerce

9 Washington, D.C.

10 The Subcommittee met, pursuant to call, at 9:35 a.m., in  
11 Room 2322 of the Rayburn House Office Building, Hon. Edward  
12 Markey [Chairman of the Subcommittee] presiding.

13 Members present: Representatives Markey, Doyle,  
14 McNerney, Matheson, Barrow, Upton, Stearns, Whitfield,  
15 Shimkus, Pitts and Scalise.

16 Also present: Representatives Sarbanes and Forbes.

17 Staff present: Greg Dotson, Chief Counsel, Energy and  
18 Environment; Tracy Sheppard, Senior Counsel; Melissa Bez,  
19 Professional Staff Member; Caitlin Haberman, Special

20 Assistant; Peter Ketcham-Colwill, Special Assistant; Jackie  
21 Cohen, Counsel; Karen Lightfoot, Communications Director,  
22 Senior Policy Advisor; Lindsay Vidal, Special Assistant;  
23 Mitchell Smiley, Special Assistant; Jerry Couri, Republican  
24 Professional Staff; Andrea Spring, Republican Professional  
25 Staff; and Garrett Golding, Republican Legislative Analyst.

|  
26           Mr. {Markey.} Good morning, and we welcome you all to  
27 the Subcommittee on Energy and Environment, and this hearing  
28 is called to order.

29           Almost 1 year ago, on December 22, 2008, hundreds of  
30 acres of land in Tennessee were buried in toxic sludge after  
31 an accidental breach at a disposal pond at a TVA plant. The  
32 breach resulted in the release of 1.1 billion gallons of the  
33 byproducts of burning coal. It covered more than 300 acres  
34 of land in a gray, poisonous muck, damaging homes and  
35 property and tainting nearby rivers. This toxic stew  
36 contained high levels of arsenic, selenium, mercury and other  
37 dangerous substances. It was quite literally a poisonous  
38 lump of coal dumped on a nearby community just 3 days before  
39 Christmas last year.

40           Exposure to these pollutants can wreak havoc on human  
41 health including increased risk of cancer, birth defects,  
42 reproductive problems, gastrointestinal illnesses, damage to  
43 the nervous system and kidneys, and learning disabilities to  
44 children. They have also been associated with acute symptoms  
45 of hair loss, severe muscle cramps, nausea, joint pain,  
46 confusion and blistering skin. The cleanup for the  
47 catastrophic event that occurred in eastern Tennessee is  
48 estimated to cost more than \$1 billion. It completely

49 destroyed three homes, displaced all nearby residents,  
50 crumpled docks and wiped out roads.

51       The Kingston catastrophe caused the media, the public  
52 and the Congress to focus attention on EPA's longstanding  
53 failure to promulgate meaningful regulations for the disposal  
54 of this material. Despite the litany of damage from coal  
55 combustion waste, current regulations have been left largely  
56 to the States resulting in widespread inconsistencies in  
57 waste management.

58       In the wake of the TVA disaster, I wrote two letters to  
59 the EPA addressing the lack of national policy to regulate  
60 and monitor coal combustion waste and its impact on health  
61 and the environment. A decade after announcing that national  
62 regulations were needed, the EPA finally said in March of  
63 this year that it would propose regulations for coal waste  
64 disposal by the end of 2009. Every State in the Nation  
65 currently gets at least some of its electricity from coal-  
66 fired plants. Each year these power plants along with  
67 industrial facilities produce approximately 130 million tons  
68 of coal combustion waste. Every day in almost every State,  
69 coal ash is dumped into ponds, dry landfills and abandoned  
70 mines. Accidental breaches are not the only threats  
71 associated with the management of coal combustion waste. The  
72 slow leakage of the toxins the waste contains even when

73 dumped into dry but unlined storage sites has poisoned water  
74 supplies, damaged ecosystems and jeopardized public health.  
75 And what oozes into the soil and water are dangerous  
76 substances such as arsenic, cadmium, selenium and mercury.  
77 In fact, the National Academy of Sciences has identified 24  
78 potentially hazardous metals in coal ash. As EPA moves  
79 forward with its regulations, it must ensure that public  
80 health is protected for all disposal practices, not just the  
81 type of wet impoundment ponds that led to the Tennessee  
82 disaster.

83       The good news is, that these materials can be recycled.  
84 In fact, industry estimates that 45 percent of coal ash is  
85 currently being beneficially reused. However, not all  
86 methods of reuse are equally beneficial when it comes to  
87 protecting public health. For example, using coal fly ash to  
88 make concrete doesn't allow the dangerous chemicals to leach  
89 out and also likely to reduce greenhouse gas emissions  
90 compared to other means of producing concrete. But other so-  
91 called beneficial uses are less protective of public health.  
92 Using the material as filler for some road embankments or, as  
93 we will hear today, to build golf courses can lead to leakage  
94 of the very same poisons into the drinking water. EPA should  
95 encourage the beneficial uses that truly do protect public  
96 health and derive economic benefit to the industry while

97 restricting those that have the potential to cause economic  
98 or physical harm to nearby communities. That is what the  
99 subject of today's hearing will be. We look forward to  
100 hearing from our witnesses.

101 [The prepared statement of Mr. Markey follows:]

102 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
103 Mr. {Markey.} Let me now turn and recognize the  
104 gentleman from Kentucky, Mr. Whitfield.

105 Mr. {Whitfield.} Mr. Chairman, thank you very much for  
106 this important hearing on drinking water and public health  
107 impacts on coal combustion waste disposal.

108 As you have already stated, 50 percent of our  
109 electricity, in fact, a little bit more than that, is  
110 produced by coal in the United States and 92 percent of  
111 electricity in my home State of Kentucky is produced by coal.  
112 I definitely believe it is important that we continue to be  
113 able to use coal in the United States for two main reasons.  
114 First of all, it provides cheap electricity which creates  
115 jobs and makes us more competitive in the global marketplace,  
116 and second of all, it is our most abundant resource here in  
117 the United States since we have about a 250-year reserve of  
118 coal.

119 Now, unfortunately, since the 111th Congress began,  
120 many, we believe, have been targeting coal specifically for  
121 the purpose of making it more difficult to burn coal in the  
122 United States in the long term. I think one of the  
123 objectives of cap and trade is certainly to make it more  
124 difficult to use coal, the Obama Administration recently in  
125 its endangerment finding to give them an opportunity to

126 regulate CO2 emissions which they had never done before. We  
127 have seen that it is much more difficult to get permitting to  
128 burn coal. And then we know that in Copenhagen that coal is  
129 a principal target as they discuss climate change issues.

130 Now, I don't think any of us are opposed to examining  
131 newer methods that will allow coal to be used in a cleaner  
132 way and we are totally supportive of that, and I know that  
133 today we have witnesses in the first panel who have  
134 experienced some health problems. They will tell us about  
135 what it is from. And obviously we want to do everything that  
136 we can do to protect health. But as the chairman has already  
137 indicated, there are many beneficial uses in building  
138 materials and as structural fill for building sites using  
139 this material. And I would also point out that EPA has  
140 looked at this issue repeatedly about whether or not coal ash  
141 should be listed as a hazardous material. States already  
142 regulate this material, and we are willing to work with the  
143 federal government to regulate this material, but if you are  
144 going to try to classify it as a hazardous material, then  
145 there is going to be a major issue on that because when you  
146 burn a material at over 3,000 degrees temperature, it is very  
147 difficult to see how the residue can be very hazardous, and I  
148 might say that EPA looked at this in 1993 and determined not  
149 to regulate. They looked at it in 1999 and decided not to

150 regulate. They looked at it in 2000 and decided not to  
151 regulate. And then back in 1980 when Congress first passed  
152 the Bevel amendment, they determined that this was not a  
153 hazardous product.

154         So I think that it is very important that we have this  
155 hearing but I think it is also important that we proceed in a  
156 balanced way because if America is going to continue to  
157 create jobs and if America is going to continue to be  
158 competitive in the global marketplace, then there is not any  
159 way that we can eliminate the use of fossil fuel the way  
160 Albert Gore and others are suggesting that we do.

161         So this type of hearing is vitally important because it  
162 gives us an opportunity to look at it in a balanced approach.  
163 We look forward to the testimony of those witnesses on our  
164 first panel as well as all witnesses today. And with that, I  
165 would yield back the balance of my time.

166         [The prepared statement of Mr. Whitfield follows:]

167 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
168           Mr. {Markey.} The gentleman's time has expired. The  
169 chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

170           Mr. {Doyle.} Thank you, Mr. Chairman, for calling this  
171 important hearing. I am going to waive my opening statement  
172 and look forward to hearing from the witnesses.

173           [The prepared statement of Mr. Doyle follows:]

174 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|

175 Mr. {Markey.} The gentleman's time will be preserved.

176 The Chair recognizes the gentleman from Georgia, Mr. Barrow.

177 Mr. {Barrow.} Thank you, Mr. Chairman. I will waive

178 opening.

179 [The prepared statement of Mr. Barrow follows:]

180 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
181           Mr. {Markey.} The Chair recognizes the gentleman from  
182 California, Mr. McNerney.

183           Mr. {McNerney.} Thank you, Mr. Chairman, for hosting  
184 this important hearing on the disposal of coal waste, and we  
185 are going to need coal for a long time to come so we better  
186 figure out how to use it properly and how to dispose of the  
187 waste.

188           Unfortunately, some of the waste products have caused  
189 major health problems, and I thank the witnesses for coming  
190 forward today to discuss this. I know it is difficult to  
191 come out here and sit in front of a panel, so you deserve  
192 credit for that. I know there are some good ways to do it.  
193 As the chairman mentioned, encasing it in concrete is an  
194 excellent opportunity for us to use that in a beneficial way  
195 but we do need to be careful about using it in other ways. I  
196 look forward to the testimony today to make some decisions  
197 and to help the EPA in their regulatory process.

198           Thank you, Mr. Chairman.

199           [The prepared statement of Mr. McNerney follows:]

200           \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
201           Mr. {Markey.} The gentleman's time has expired. The  
202 chair recognizes the gentleman from Illinois, Mr. Shimkus.

203           Mr. {Shimkus.} Thank you, Mr. Chairman, and I do  
204 appreciate the hearing today and appreciate the witnesses on  
205 both panels for coming in, and we will hear issues that  
206 affected the lives of individuals. I always also like to  
207 highlight how what we do here in Washington affects other  
208 people's lives, and I always have historically put up this  
209 poster of 1,200 miners who lost their jobs last time we  
210 enacted clean air regulations. This isn't just one mine in  
211 my district. In Ohio, Ohio lost 35,000 coal-mining jobs. So  
212 we better tread carefully on how we balance the environmental  
213 risk with what we do see, and I agree with my colleague from  
214 Kentucky, an all-out attack on coal mining, coal use in this  
215 country and so I will also be focusing on the impacts to  
216 these guys who come from real families, real communities and  
217 where small communities in rural parts of my State were  
218 destroyed because of the attack on coal.

219           I also would like, Mr. Chairman, to ask unanimous  
220 consent for three letters to be submitted in the record. I  
221 know you will want to look at those.

222           [The information follows:]

223 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|

224 Mr. {Markey.} Without objection, so ordered.

225 Mr. {Shimkus.} The first letter is from 74 Members of

226 Congress to Lisa Jackson at the EPA regarding our position

227 against listing coal combustion byproducts as hazardous. In

228 fact, there are at least 15 members of this committee on this

229 letter on both sides of the aisle. This letter is an

230 original letter by our good friend from Pennsylvania, Mr. Tim

231 Holden. The second is from the Illinois EPA. In it, they

232 state, ``Based on our past experience, it is our position

233 that classifying coal combustion waste as a hazardous waste

234 is not warranted and would place unnecessary barriers on its

235 beneficial use and reuse in the future. We feel our

236 approaching of regulating coal combustion waste under the

237 non-hazardous solid-waste regulations is protective of both

238 human health and the environment and is an effective and

239 logical way to safely manage coal combustion waste,'' and

240 that is from the Illinois EPA. The last letter is from the

241 Office of Public Utilities in city of Springfield, Illinois,

242 which is partially in my district. In it, they say,

243 ``Listing coal combustion byproducts as hazardous waste would

244 have dramatic adverse consequences for the city of

245 Springfield.'' That is our State capital. And that the

246 CWLP, which is the city water, light and power, due--``City

247 of Springfield CWLP due to the increase in cost associated  
248 with the managing and disposing of coal combustion byproducts  
249 as well as a lack of availability of coal combustion  
250 byproducts for construction purposes.' ' They go on to  
251 associate the cost of CCBs were listed as hazardous. They  
252 identify four locations as facilities that are permitted to  
253 receive RCRA hazardous waste. These amounts reflect  
254 treatment and transportation costs, and we have in the  
255 millions of dollars. What does this mean? We better tread  
256 very, very carefully. When this country is in one of the  
257 worst economic periods that I can remember, to have another  
258 attack on good jobs in this country is unwarranted. So I  
259 would caution us to go carefully, Mr. Chairman. I yield back  
260 my time.

261 [The prepared statement of Mr. Shimkus follows:]

262 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
263 Mr. {Markey.} The gentleman's time has expired. The  
264 chair recognizes the gentleman from Maryland, Mr. Sarbanes.

265 Mr. {Sarbanes.} Thank you, Mr. Chairman. I appreciate  
266 your giving me the opportunity to participate briefly here.

267 Mr. {Markey.} I am sorry. I just want to remind you  
268 that the gentleman is not on the subcommittee, so let me  
269 recognize the remaining members of the subcommittee. The  
270 gentleman from Florida, Mr. Stearns, is recognized.

271 Mr. {Stearns.} Thank you, Mr. Chairman.

272 You know, when I lived in Massachusetts, I had a coal-  
273 burning furnace to try and keep my house warm because it was  
274 so expensive, and then I had a wood stove. You know, when I  
275 finished, I used to take the coal ash and put it on my  
276 garden, and every year that garden worked just so remarkably  
277 well. It worked to the benefit of the garden and me because  
278 we had fresh vegetables. And I used to take the ash from the  
279 wood too and I would put it in the garden, so I would just  
280 say to the chairman and to the others that I think there is  
281 some redeeming value to some of this coal ash.

282 I note, Mr. Chairman, that the EPA Administrator Jackson  
283 is not here to testify, and it would be very helpful to have  
284 her here to answer some of the questions about this issue.  
285 As I understand it, for three decades EPA has resisted

286 subjecting this coal ash to federal hazardous waste  
287 management regulation, and more specifically in 1993 and  
288 2000, the EPA conducted two regulatory determinations on the  
289 management and use of coal combustion products which  
290 determined that, ``in conducting these two regulatory  
291 determinations, EPA did not identify any,'' let me repeat,  
292 ``any environmental harm associated with the beneficial use  
293 of coal combustion products'' and concluded in both  
294 determinations that these materials do not, do not warrant  
295 regulation as a hazardous waste material. So it is pretty  
296 clear that the EPA has a strong message on this and the EPA  
297 is not here. So I think, Mr. Chairman, it would be helpful  
298 for the committee if you explain why the EPA Administrator is  
299 not here to help us further explain her remarks on this coal  
300 ash.

301       Imposing a hazardous waste designation on this coal ash  
302 will do little to prevent the situation that occurred at the  
303 TVA's Kingston, Tennessee, plant and will only force greater  
304 landfilling of it while eliminating the environmental  
305 benefits of using coal ash. So I think, Mr. Chairman, in  
306 light of my opening statement, we still have some questions  
307 to ask.

308       [The prepared statement of Mr. Stearns follows:]

309 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
310 Mr. {Markey.} The gentleman's time has expired. The  
311 gentleman from Louisiana, Mr. Scalise.

312 Mr. {Scalise.} Thank you, Mr. Chairman. I appreciate  
313 the opportunity to discuss the impacts of coal combustion  
314 waste disposal.

315 While I strongly support measures that protect the  
316 safety of our Nation's drinking water, I am concerned about  
317 the negative implications that could result from the  
318 regulation of coal combustion waste by EPA as a hazardous  
319 waste instead of under RCRA's subtitle D non-hazardous waste  
320 authority. This issue involves a very critical component to  
321 our country's overall energy policy, and an EPA decision to  
322 regulate coal combustion waste as hazardous waste could be  
323 devastating to our Nation's economy.

324 Mr. Chairman, as we discuss this issue of energy policy  
325 in general, I also want to take this opportunity to express  
326 my serious concerns about recent decisions from the current  
327 Administration and the direction that this Congress is taking  
328 regarding our energy policy. While we await EPA's final  
329 ruling on how they plan to regulate coal combustion waste. I  
330 also have serious concerns about the EPA's recent  
331 announcement regarding their proposed regulation of  
332 greenhouse gases. The EPA's regulation of greenhouse gas

333 emissions would result in the largest power grab of any  
334 United States agency over our national economy. The threat  
335 of heavy-handed EPA regulation or a cap-and-trade energy tax  
336 will result in millions of American jobs being shipped  
337 overseas to countries like China and India, who don't have  
338 the current environmental regulations that we have today. In  
339 my home State of Louisiana, thousands of jobs will be lost  
340 under a cap-and-trade energy tax, and as a matter of fact,  
341 there is a company in south Louisiana that is currently  
342 basing their decision to locate in either Brazil or Louisiana  
343 in part on what Washington does on emissions regulations not  
344 to mention the Climate Gate scandal, which has not only  
345 proven that there have been efforts to silence those  
346 scientists who present evidence to the contrary of global  
347 warming alarmists would have our world believe about climate  
348 change, but as we have seen, the science on climate change  
349 was actually corrupted in an effort to help make their case.  
350 It seems, Mr. Chairman, that this Administration and those  
351 running Congress will stop at nothing to pursue this liberal  
352 agenda that is killing our economy, resulting in thousands of  
353 dollars in higher electric bills for American families and  
354 small businesses and shipping millions more American jobs  
355 overseas. Thank you, and I yield back.

356 [The prepared statement of Mr. Scalise follows:]

357 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
358 Mr. {Markey.} Great. The gentleman's time has expired.  
359 All time for opening statements of members has expired. So  
360 what we will do is, we will ask our witnesses to come up to  
361 the panel, if they would, and I would ask Representative  
362 Forbes if he would to come over to introduce our first  
363 witness.

364 Mr. {Forbes.} Mr. Chairman, first of all, I would like  
365 to thank the members of the subcommittee for giving me the  
366 courtesy to join you briefly to introduce one of the  
367 witnesses on your panel, and I would also like to thank you  
368 for holding this very important hearing.

369 This is an important hearing for at least two reasons.  
370 First, Members of Congress need to hear from Americans whose  
371 daily lives have been interrupted because of uncertainty  
372 surrounding a basic need like safe drinking water. At some  
373 point today rain or shine, a family from my district will  
374 drive to their local church, gather around a spigot and  
375 bottle up as much water as they need to survive the weekend.  
376 Over the past 19 months, hundreds of constituents from my  
377 district have not been able to drink a single glass of water  
378 from their wells without fear of consuming poisonous toxins.  
379 They have not been able to bathe their children without  
380 pausing to wonder whether they will pass on a deadly disease,

381 and they have not been able to finance the education of their  
382 loved ones because their equity lines of credit on their  
383 homes have been devastated.

384         The second reason I believe this hearing is important is  
385 because the members of this committee must be made aware that  
386 irrespective of any new coal ash regulations, the  
387 Environmental Protection Agency is already doing a disservice  
388 to our constituents by providing contradictory test results  
389 to some of the residents and by withholding hazard scores  
390 that could highlight dangers threatening the health and  
391 welfare of the citizens we are supposed to protect.

392 Yesterday, I sent a follow-up request to the EPA requesting  
393 immediate access to a hazard ranking system evaluation and  
394 score for the Battlefield Golf Club in Chesapeake. This  
395 information would provide families and constituents from my  
396 district an understanding of the nature and severity of any  
397 toxic contamination on or near their personal property. To  
398 date, it has been withheld by the EPA as a part of the  
399 deliberative process.

400         Mr. Chairman, if the federal government continues to  
401 deliberate for another 18 months, constituents from my  
402 district will continue to live with uncertainty about their  
403 drinking water, their health and their homes. If the  
404 Congress and this Administration are truly committed to

405 transparency and accountability, certainly we can do better.  
406 But rather than requiring you to continue to listen to more  
407 words from me at this time, I would like to introduce you to  
408 someone who can tell you what it means to live with  
409 uncertainty about the safety of her family's drinking water.  
410 Mrs. Robyn Whitaker-Pierce is a long-time resident of my  
411 hometown of Chesapeake and her family owns a home near the  
412 Battlefield Golf Course, which was built atop a foundation  
413 that includes coal fly ash. Her family has had to live with  
414 the uncertainty as to whether her drinking water is safe for  
415 many months, and she has a compelling story to share. Mrs.  
416 Pierce, I want to thank for you for taking time to be here  
417 today and I know the committee looks forward to your  
418 testimony.

419       Mr. Chairman, thank you for allowing me to introduce  
420 Mrs. Pierce.

421       Mr. {Markey.} Thank you, Congressman Forbes, and Mrs.  
422 Whitaker-Pierce, whenever you feel comfortable, please begin.

|  
423 ^STATEMENTS OF ROBYN WHITAKER-PIERCE, RESIDENT OF CHESAPEAKE,  
424 VIRGINIA; GAYLE QUEEN, RESIDENT OF GAMBRILLS, MARYLAND;  
425 RAYMOND HUNT, JR., RESIDENT OF WATERFLOW, NEW MEXICO; AND  
426 CARLA HUNT, RESIDENT OF WATERFLOW, NEW MEXICO

|  
427 ^STATEMENT OF ROBYN WHITAKER-PIERCE

428 } Ms. {Whitaker-Pierce.} Good morning. Thank you for  
429 your time.

430 In 2001, our local utility company, Dominion Virginia  
431 Power, orchestrated an aggressive campaign convincing area  
432 residents and local city council that a golf course  
433 constructed with coal ash was not only safe but a great  
434 benefit for our neighborhood. Residents and local government  
435 were assured on numerous occasions and in various forums that  
436 the use of such material posed no threat to our community,  
437 and that any and all safeguards would be adhered to, and  
438 quote fly ash in this specific use was ``safe as dirt.''

439 We now know differently thanks to the diligent work of a  
440 local newspaper reporter, Robert McCabe. Mr. McCabe reported  
441 tests of monitoring wells on a golf course sculpted with 1.5  
442 million tons of fly ash yielded alarmingly high levels of  
443 toxins in groundwater. All of the homes in the immediate

444 area rely on private wells as our water source. Immediately  
445 the local city government ordered area wells tested and  
446 requested the EPA's help in discerning the potential risks to  
447 our community.

448         Nineteen months later, my home has been tested multiple  
449 times by three different agencies including the EPA and  
450 results are inconsistent and confusing. Lead levels have  
451 been detected in excess of three times the EPA's action  
452 standard, and on one such occasion water tests were done on  
453 the same day by three firms. Two of the three detected  
454 elevated lead levels yet a call from the EPA's representative  
455 said ``Good news. There is no lead in your water.''

456         You can imagine my alarm as a mother when the EPA  
457 representative asked about young children in my home and  
458 their ages, and later that day, I received a call from a  
459 doctor at the Centers for Disease Control urging me to get  
460 the children's lead level tested. The EPA continues to test  
461 my water every few months and I get those results but to the  
462 layperson they are confusing and I feel as in the dark now as  
463 I was when all this started. For example, just Tuesday, 2  
464 days ago, an EPA representative came to my home to continue  
465 another water test. It turns out that all of the tests that  
466 have been conducted inside my home have been done at the only  
467 sink with the only dedicated filter, auxiliary filter--let me

468 put it that way--and is used least in our home.

469 Consequently, all of the data that they have collected to  
470 this point is not a true representation of our exposure as  
471 the water we brush our teeth with and bathe with has yet to  
472 be evaluated.

473         How did this happen? For 5 years, hundreds of  
474 truckloads of coal ash were dumped daily in our community.  
475 We have since learned that those same truck drivers and were  
476 required to have haz-mat licenses, were wearing masks and  
477 protective clothing yet our children unknowingly played  
478 outside amongst this dangerous dust. Neighbors recall coming  
479 home and finding layers of gray chalky residue on vehicles  
480 and pool surfaces. None of my neighbors had any inkling of  
481 the dangers we were being exposed to. Dominion did but we  
482 didn't.

483         We now know that experts warn of the dangers of heavy  
484 metal toxins leaching from coal ash when exposed to water.  
485 Yet coal ash was spread over a 220-acre site in our backyards  
486 in a region with a notoriously high water table, I think we  
487 have some pictures. Ladies and gentlemen, this is someone's  
488 yard, and please understand that this is just a small area  
489 but boy, if you could flip over to the next picture, that is  
490 my street. We have recreational boating every time a storm  
491 comes through to our neighborhood. Please explain to me how

492 it is that coal ash, no liners, was thrown into my backyard  
493 in an area like this, and this is not a one-time occurrence.  
494 Our streets and yards are underwater when storms come, but  
495 even after Dominion Virginia Power commissioned feasibility  
496 studies that discouraged using fly ash as a construction  
497 material, they pushed on. Permits for a septic system on the  
498 golf course location were denied by the health department due  
499 to the high water table, yet that 1.5 million tons of fly ash  
500 was dumped on the same site, and Dominion pushed on.

501         Just 50 miles from Chesapeake, between 1957 and 1974,  
502 fly ash from Dominion's Yorktown power generating station was  
503 disposed of in four abandoned burrow and gravel pits. This  
504 area later was designated by our own EPA as the Chisman Creek  
505 Superfund site. Even in light of this previous debacle,  
506 Dominion pushed on in Chesapeake.

507         The reverberation from this lack of regulation has been  
508 enormous. Numerous families have recently been diagnosed  
509 with cancer, asthma and autoimmune diseases, not to mention  
510 our fear for our children's future health. Are these  
511 illnesses related to dust and water exposure? It may take  
512 years for the effects of our exposure to this toxic waste  
513 dump to manifest themselves.

514         Since May of 2008, my family and other families in our  
515 neighborhood have not used their tap water to cook or drink.

516 We have been reduced to traveling to a municipal cistern  
517 where two to three times per week we fill empty gallon jugs  
518 with water to bring back home for our use. Most of us still  
519 bathe and brush our teeth with the tap water. What other  
520 alternative do we have, and who is there to provide for our  
521 safety?

522         The financial ramifications are devastating. As a  
523 professional realtor, I can assure you that as long as the  
524 specter of fly ash looms over our community, our houses will  
525 not sell. We are literally held hostage in our homes not at  
526 the barrel of a gun but by the cesspool of poisons in our  
527 back yards.

528         We have retired military veterans who have proudly  
529 served our country for 20-plus years. They want to move home  
530 but they can't because no one will buy their house. Elderly  
531 couples who have lost a spouse and cannot keep up with their  
532 homes want and need to downsize but they cannot. My husband  
533 has been a self-employed electrical contractor for over 25  
534 years. The equity in our home is our retirement. We have  
535 been wiped out. There is no equity in a home no one will  
536 buy. How will we put our boys through college, and what am I  
537 going to do with my children if my husband passes away? One  
538 family in our neighborhood cannot qualify for financial aid  
539 for their child's college education because they own their

540 home, but it is worthless.

541           My children are afraid. Their friends' parents are  
542 concerned about their children's exposure when visiting my  
543 home. An 11-year-old was at our house for a sleepover and  
544 asked me, ``Miss Robyn, I just washed my hands. Do I need to  
545 do something about the poison water?'' I was just excited  
546 that he washed his hands after going to the bathroom,  
547 frankly.

548           But the Virginia health department has been no help.  
549 Virginia's Department of Environmental Quality let this  
550 happen again and has been a colossal disappointment. The  
551 EPA, they are out to lunch. I have absolutely no faith in an  
552 environmental protection agency that continues to come to my  
553 house but until 19 months after coming to my house just  
554 realizes that they are testing the wrong tap, the tap that my  
555 children brush their teeth and bathe with.

556           We certainly cannot expect the local power company to  
557 operate in a conscientious manner, if our government doesn't  
558 help. We the public are stunned to find there is no  
559 regulation in place to protect us. The current definition of  
560 beneficial use quite frankly is an oxymoron. As long as coal  
561 ash remains unregulated, we the people have no protection  
562 from the companies who use beneficial use as a cover for  
563 corporate malfeasance.

564           In our opinion, the only hope we have is for the far-  
565 reaching hand of our federal government to mandate the EPA to  
566 designate coal ash as a hazardous waste, to regulate its use  
567 with the strictest of protocols, and order that this tumor in  
568 my community gone. And ladies and gentlemen, until that is  
569 done, the inmates are running the asylum.

570           [The prepared statement of Ms. Whitaker-Pierce follows:]

571 \*\*\*\*\* INSERT 1 \*\*\*\*\*

|  
572 Mr. {Markey.} We thank you very much for being here.

573 Let me now turn to Representative Sarbanes from Maryland  
574 to introduce our next witness.

575 Mr. {Sarbanes.} Thank you, Mr. Chairman. I appreciate  
576 your giving me the opportunity to participate this morning in  
577 the hearing, and I thank you for the issues that you are  
578 going to be looking at. I have the unhappy distinction that  
579 this is now the second hearing that has occurred in this  
580 Congress, the first was in Natural Resources and Mineral  
581 Resources Subcommittee, in which a constituent of mine will  
582 be testifying on the effects of coal combustion waste, fly  
583 ash, in terms of exposure to that harmful substance. And I  
584 congratulate Ms. Queen, who I am going to introduce now, for  
585 her willingness to come forward and testify on what the  
586 effects have been on her and her family because they have  
587 been devastated, just as we have heard from Mrs. Whitaker-  
588 Pierce.

589 Let me introduce Gayle Queen. Before her illness forced  
590 her to stop working, she was a supervisor in the family  
591 support division of the Department of Social Services in Glen  
592 Burnie, Maryland, which is in my district, where she helped  
593 young women obtain jobs, earn GEDs and go back to school.  
594 She moved to her present home in Gambrills, which is part of

595 my district and which is where the witness in the Natural  
596 Resources Committee, Norm Harvey, also resides. Ms. Queen  
597 moved to Gambrills in 1997. She has two adult sons and her  
598 younger son and her three daughters living with her were  
599 exposed to the coal ash contamination until they moved in  
600 2008. The leaching of this fly ash into the drinking water  
601 supply is a really critical, critical issue for us to  
602 examine.

603         Again, I appreciate your taking the time and resources  
604 of this committee to focus on it. I thank Ms. Queen for  
605 being here and we look forward to her testimony.

606         Mr. {Markey.} Great. We thank the gentleman, and Ms.  
607 Queen, whenever you are ready, please begin.

|  
608 ^STATEMENT OF GAYLE QUEEN

609 } Ms. {Queen.} Good morning, and thank you. My name is  
610 Gayle Queen and I live at 2401 Queen Mitchell Road in  
611 Gambrills, Maryland. My family has lived in this area for  
612 over 100 years. I am a 56-year-old and a widow. I am no  
613 longer employed. I lived in Gambrills community while for  
614 over 10 years during that time 4.1 million tons of coal ash  
615 was dumped next to my home by a power company.

616 I am here to tell you about what happened in Gambrills,  
617 Maryland, and how the contamination of the air and drinking  
618 water has affected my health, the health of my family and  
619 community. I am here today to ask you to make sure that  
620 Congress passes legislation so that another community doesn't  
621 have to suffer like my community.

622 The coal ash was dumped into an unlined 80-foot-deep pit  
623 on 84 acres. The coal ash went into an aquifer that supplies  
624 my community drinking water and we all breathe the dust in.  
625 Once the community was informed of the problem in 2007, we  
626 were given no help by the State or federal government.  
627 Later, one of the solutions was to hook up some of my  
628 neighbors to a fire hydrant for water. The hoses froze in  
629 the winter. For other people, bottled water was supplied and

630 it is still supplied today. Every 2 weeks I get bottled  
631 water to wash, bathe, to do everything with every 2 weeks,  
632 but this did nothing for our past exposure both in our  
633 drinking water and in the air.

634         The problem in Gambrills with coal ash started in the  
635 1990s at another coal ash dump site when the power company  
636 dumped coal ash in another community. The residents of that  
637 community complained and they moved it down to the dumping  
638 area that I showed you over there. When it was required to  
639 have a continued a 36-inch-thick layer of clay at the bottom  
640 of the ash pit, the power company decided to dump the coal  
641 ash near by home in Gambrills. There was supposed to be no  
642 contact between the coal ash and the surface of the  
643 groundwater with a four-foot separation between the coal ash  
644 and the groundwater. No expense, no liner or 30-inch layer  
645 of clay was required at the Gambrills site. Sadly, the coal  
646 ash went directly into standing water and sand and gravel pit  
647 which had excavation as deep as 80 feet. There was no liner  
648 or four-foot barrier either. The truck drivers who dumped  
649 the coal ash dumped it without any remorse. My community was  
650 never warned of the danger of toxic coal ash or that it would  
651 go into our water or our lungs and cause injury.

652         Starting in 1999 and through 2007, tests showed that  
653 arsenic, iron, manganese and sulfate were being leached at

654 dangerous levels and finally these dangerous chemicals got  
655 into our private wells.

656 I have a well at my home. I rely on my well water to  
657 provide cooking, drinking and bathing water. In 2007, the  
658 power company began providing me bottled water. Before this,  
659 I had never heard of coal ash or its dangers and didn't know  
660 this toxin was being dumped in my community. If I had known  
661 about the dangers, I would have protected me and my family  
662 and community long ago. But we didn't know of the dangers or  
663 even that dumping was going on.

664 Thankfully, the power company did finally take  
665 responsibility for the situation by helping the community  
666 with these problems. But the contamination of the water  
667 remains. It should never have happened.

668 Because of the coal ash contamination, I have lost both  
669 my financial security and my health. My biggest monetary  
670 asset, my home, is worthless. I cannot afford to pay the  
671 mortgage after the death of my husband in 2006, and I may  
672 have to file for bankruptcy or foreclosure because it is not  
673 worth anything.

674 Because of the coal ash, I have trouble breathing, and I  
675 am not a smoker. My doctor has told me I have the lungs of  
676 an 80-year-old woman because of breathing in something, coal  
677 ash. I am terrified about my future health. My husband died

678 in 2006 from renal failure, and I worry that my organs will  
679 fail, I will get cancer or I will get another disease because  
680 of my exposure to this ash. I also worry about my  
681 grandchildren. They drank the water, they bathed in it, they  
682 brushed their teeth. Will they get a disease, too? No one  
683 can tell me for sure. But I do know they never should have  
684 been exposed to this stuff.

685 I ask that you pass legislation to protect people like  
686 me and my family. If the Environmental Protection Agency had  
687 the authority to require liners and force power companies not  
688 to dump close to drinking water systems, what happened to me  
689 and my community would not happen to anyone else. We do not  
690 have the power to protect ourselves. These companies and the  
691 State agencies are not protecting us. Coal ash contamination  
692 ruins the lives of the people in the community and our  
693 environment. It cannot be allowed to happen again. Thank you  
694 very much.

695 [The prepared statement of Ms. Queen follows:]

696 \*\*\*\*\* INSERTS 2, 3 \*\*\*\*\*

|  
697           Mr. {Markey.} Thank you, Ms. Queen, very much.

698           Our final witness is Mr. Raymond George Hunt, Jr. He  
699 and his family have lived in Waterflow, New Mexico, as sheep  
700 ranchers for generations. Mr. Hunt and his family operate a  
701 small business in supply meat to the local Native American  
702 tribes in the Four Corners area of New Mexico. Mr. Hunt's  
703 home is adjacent to the San Juan Generating Station of Public  
704 Service Company of New Mexico and the San Juan coal mine  
705 operated by BHP, and he and his family have been directly  
706 impacted by the coal combustion waste disposal practices at  
707 these facilities. So we welcome you, sir. Please begin.

|  
708 ^STATEMENT OF RAYMOND HUNT, JR.

709 } Mr. {Hunt.} Thank you, sir, for letting me attend this.

710 I own and operate a small family business on land my  
711 grandfather established in the early 1940s where I raised my  
712 four children. For generations we drank from the fresh water  
713 on our property without any adverse effects. Our animals  
714 grazed nearby and drank from the natural springs and the  
715 arroyo during the irrigation season. These water sources  
716 were healthy and very productive for our business, which  
717 provides meat to the Native American Tribes.

718 In 1974, Public Service Company built the San Juan Power  
719 Plant and began using the dry arroyo to discharge their  
720 wastewater. They began burying fly ash in the nearby dry  
721 streambeds, rather than into lined ponds, which then leached  
722 into our underground aquifers, contaminating our good water  
723 with very high levels of arsenic, selenium, potassium,  
724 chromium, lead, sulfate and many others.

725 By 1975, after the dumping of the coal ash began, my  
726 family started to get sick. I was diagnosed with heavy metal  
727 poisoning with extremely high arsenic, iron, lead and  
728 selenium levels. I lost nearly 100 pounds in less than a  
729 year. I was so weak I couldn't stand or walk, and wasn't

730 expected to live. For several years, my diet consisted of  
731 steamed chicken, squash and potatoes. Any variation caused  
732 extreme diarrhea, nausea and vomiting. My stomach ached and  
733 I suffered constant indigestion. My wife was sick most of  
734 the time with similar symptoms. We had difficulty  
735 comprehending simple conversations. Her body became  
736 misshapen causing--

737           Mr. {Markey.} Take your time.

738           Mrs. {Hunt.} My name is Carla Hunt and I am his second  
739 wife. If I would be all right with you, I will finish his  
740 statement.

741           My wife was sick most of the time with similar symptoms.  
742 We both had difficulty comprehending simple conversations.  
743 Her body became misshapen, causing many complications that  
744 remain today. Our children lost weight and complained of  
745 stomachaches. They had constant indigestion and diarrhea.  
746 Their hair was falling out and unhealthy looking. Their  
747 teeth and eyesight were compromised to the extent they still  
748 wear glasses and require frequent monitoring. The children's  
749 teachers reported that they had difficulty with simple tasks  
750 of concentration and comprehension. One son was enrolled in  
751 special education classes throughout his high school years.

752           Two days before Christmas in 1982, PNM approached us  
753 offering us \$2,500 to sign a release as a good neighbor

754 gesture on their part. We asked them, instead, to cover the  
755 cost of hooking into the public water system for our family,  
756 and they refused.

757         For two years, we bought drinking water and carried it  
758 into our home until we could afford the connection fees for  
759 the public water system. Once we stopped using the well, we  
760 began slowly to improve. My wife, kids and I had been sick  
761 for over ten years. My animals were not so fortunate. I  
762 watched 1,400 head of sheep slowly suffer and die from the  
763 lack of safe drinking water. Within 2 years I lost my entire  
764 sheep herd and took outside jobs, rather than risk selling  
765 contaminated meat to my customers.

766         Although they lined the ponds, as required by an EPA  
767 enforcement action and fine in 1984, PNM set up an agreement  
768 that the fly ash would be returned to the neighboring BHP San  
769 Juan Coal Mine and buried in the unlined pits there. The  
770 result is that the fly ash and scrubber sludge continues to  
771 contaminate the arroyo and groundwater through unlined sites.

772         My children are grown and married now. Two sons have  
773 served several tours of duty in Iraq, Afghanistan and  
774 Germany. All have some evidences of the childhood problems  
775 they experienced due to the polluted water. My daughters  
776 have had very difficult pregnancies and deliveries, which  
777 doctors have said may be the result of the childhood

778 poisoning. I have three grandchildren who have been  
779 diagnosed autistic, also linked to heavy metal poisoning in  
780 their mothers, and another who is ADHD. My brother developed  
781 multiple sclerosis and spent 20 years in a care unit. My  
782 father died of cancer. Four of my stepbrothers and sisters  
783 have died prematurely due to cancer and cancer-related  
784 illnesses. All were under the age of 40 and healthy,  
785 athletic children throughout their high school years with no  
786 apparent contributing illnesses. All of them drank from  
787 these same polluted water wells and streams. I rely heavily  
788 on others to help me with the management and operation of my  
789 business, because, although recovered, I still suffer many  
790 side effects from the poisoning.

791 In conclusion, this is only the story of my family. I  
792 have many neighbors with similar stories. Some have lost  
793 young children. Others have children and parents with major  
794 health problems. Many have lost their livelihoods, their  
795 animals, and the ability to provide for their families  
796 because of the pollution that has come down the Shumway  
797 Arroyo and through our underground water sources from  
798 improperly disposed coal ash. They, too, were offered good  
799 neighbor settlements from PNM in exchange for their silence  
800 and agreement to sign a hold harmless contract.

801 My experience is that the energy industry cannot be

802 entrusted with innocent lives or to regulate themselves, for  
803 the good of the community, in lieu of a profit for their  
804 stockholders. I urge you to take every measure available to  
805 you to prevent this from happening to anyone, anywhere in our  
806 Nation, ever again.

807 [The prepared statement of Mr. Hunt follows:]

808 \*\*\*\*\* INSERT 4 \*\*\*\*\*

|  
809 Mr. {Markey.} Thank you.

810 Mr. {Hunt.} There is one other thing I wanted to  
811 mention about this. Them poor animals would die and they  
812 wouldn't even rot. They would mummify. And for the cost of  
813 putting in city water so we did not have to haul water was  
814 only \$175, and they refused to do that. And, you know, my  
815 kids, I dropped out in the 8th grade in Kirkland and my kids  
816 when the State epidemiologist showed up says under the  
817 circumstances, only one family is not worth investigating.  
818 My kids said from age 5 to 2 we want to be better to our  
819 government than what our government was to us. And them kids  
820 got 52 years perfect attendance.

821 Mr. {Markey.} Thank you, Mr. Hunt, very much, and we  
822 thank each of our witnesses for your very compelling  
823 testimony here today.

824 The Chair will now recognize himself for a round of  
825 questions, and any of you can respond to this who would like.  
826 On our second panel right after you, we will hear from some  
827 witnesses that the characteristics of coal ash are similar to  
828 that of dirt or rocks and that the material is extremely  
829 unlikely to pose a health risk. How would you respond to  
830 that statement?

831 Mr. {Hunt.} Pardon me?

832 Mr. {Markey.} How would you respond to that statement?

833 Mr. {Hunt.} Coal ash is dangerous stuff, and, just like  
834 I say, them animals that I had with all--they created a deal  
835 by the name of polyencephalomalacia, and just like the sheeps  
836 they would lay down and they couldn't get up because they had  
837 lesions on the brains and the crows would peck their eyes  
838 out. And coal ash is a dangerous substance and it needs to  
839 be controlled rather than the stockholders making a huge  
840 profit. They need to take care of it in a proper way.

841 Mr. {Markey.} There are no federal regulations in this  
842 area. The States have regulations or they have  
843 responsibility for putting regulations on the books. How  
844 would you characterize the regulations that your State has  
845 for protection of families against the adverse effects of  
846 coal ash?

847 Mr. {Hunt.} Well, in our case, the State of New Mexico  
848 had full knowledge that our well was polluted, and also the  
849 EPA had full knowledge and the power plant also, and they did  
850 absolutely nothing to do anything about it, and I am sure  
851 that there is laws on the books that they are supposed to  
852 regulate them but they never did nothing, and like I say,  
853 they just ignored us like we was nobody.

854 Mr. {Markey.} Ms. Whitaker-Pierce?

855 Ms. {Whitaker-Pierce.} Yes, I would like to comment on

856 that. I think that the information that we presented today  
857 speaks for itself. You have got the Yorktown situation that  
858 happened and the identical same utility company came back out  
859 and did it in our backyard. I am not against beneficial use  
860 if it is used beneficially. I don't think that it has to be  
861 one or the other. But what there has to be is someone that  
862 is going to hold these utility companies responsible for  
863 disposing of it in ways that we know without a question of a  
864 doubt are not harmful to the general public.

865 Mr. {Markey.} So you are saying your State did not do  
866 enough?

867 Ms. {Whitaker-Pierce.} Oh, absolutely--well, I am here.  
868 I am here. Absolutely no.

869 Mr. {Markey.} Ms. Queen, did your State do enough?

870 Ms. {Queen.} I don't know if they did enough but they  
871 did fine them \$1 million. It was too late then but they were  
872 fined for \$1 million.

873 Mr. {Markey.} Have all of you been provided with water  
874 in order to deal with the effect of this issue? Did they  
875 provide water to you, Ms. Queen?

876 Ms. {Queen.} Yeah, I still--

877 Mr. {Markey.} You testified that that was the case?

878 Ms. {Queen.} Yeah, I still get water.

879 Mr. {Markey.} And do you receive water?

880 Ms. {Whitaker-Pierce.} Sir, we have asked the utility  
881 company to give us bottled water to see us through this and  
882 they have across the board rejected it. Our source of water  
883 is to go up to a, it looks like an outhouse. I wish I had  
884 pictures for you. The local city government did build a  
885 structure around it so that we weren't exposed to the  
886 elements when we were trying to fill up those gallon jugs two  
887 to three times a week, but the insulation is pouring down  
888 around it. I mean, you would be appalled at the conditions,  
889 and that is how our families in our neighborhood get their  
890 water is to go to this municipal source and fill up jugs.

891 Mr. {Markey.} Let me ask you one more question before  
892 my time expires. Dominion has stated in correspondence that  
893 the developer of the Battlefield Golf Club project met all  
894 relevant Virginia environmental regulations when it used coal  
895 ash. Do you believe that that is the case?

896 Ms. {Whitaker-Pierce.} No, sir, absolutely not, and my  
897 well tests say differently.

898 Mr. {Markey.} What regulations were violated in your--

899 Ms. {Whitaker-Pierce.} Well, it is my understanding  
900 that the rate of bonders was not at the rate that it should  
901 have been with that coal ash. It is also my understanding  
902 that liners should have been placed; they were not. The  
903 developer, hundreds of truckloads on a daily basis took out

904 the good dirt, sold that and then replaced it with the coal  
905 ash that Dominion paid them to take, and my common sense  
906 tells me that if the United States of America went to some  
907 Third World country and paid this country to take our toxic  
908 waste material off of their hands but we turned a blind eye  
909 because we weren't quote, unquote, personally responsible for  
910 making sure that that stuff went down the right way, the  
911 public outcry globally would be outraged.

912 Mr. {Markey.} We thank you. We thank each one of you.  
913 Would you like to add something?

914 Mr. {Hunt.} Yes. On that situation we had down there,  
915 they were dumping untreated human waste down through there  
916 also, and what happened when the State had full knowledge  
917 that our well was polluted and the kids was involved, they  
918 acted like they was a subsidy of the big large power company  
919 and the large coal mine and there is no excuse for that.

920 Mr. {Markey.} Thank you, Mr. Hunt.

921 The Chair recognizes the ranking member of the  
922 subcommittee, the gentleman from Michigan, Mr. Upton.

923 Mr. {Upton.} Thank you, Mr. Chairman. I apologize for  
924 being a little bit late. We had an important Michigan  
925 delegation meeting involving the Great Lakes that required  
926 all of our attendance.

927 I appreciate your stories, obviously everyone here. I

928 have sympathy for you and the circumstances surrounding that.  
929 Ms. Queen, I had one question as it related to your  
930 testimony. You indicated that the waste was put into an  
931 unlined landfill. Is there a requirement in the State of  
932 Maryland that it be a lined facility? Do you know if they  
933 violated--is there such a standard in Maryland, do you know?  
934 If you don't know the answer--

935 Ms. {Queen.} No, I am not sure, but it is too late now.  
936 They have one now.

937 Mr. {Upton.} So there is one now?

938 Ms. {Queen.} Now, but--

939 Mr. {Upton.} Now there is a requirement that it has to  
940 be put into a lined--

941 Ms. {Queen.} Yes. I don't know if it was a requirement  
942 before but they didn't have one but now I am told there is a  
943 liner.

944 Mr. {Upton.} I know in my district in Michigan, in our  
945 State we have a number of coal facilities and it is my  
946 understanding, and we are trying to find out for sure, but it  
947 is my understanding that the waste that isn't used for  
948 particleboard and shingles and working with asphalt and  
949 highways does in fact go to a lined facility which would then  
950 prevent what happened.

951 Ms. {Queen.} Yeah, they do have one now.

952 Mr. {Upton.} Thank you. I yield back.

953 Mr. {Markey.} The gentleman's time is expired. The  
954 Chair recognizes the gentleman from Pennsylvania, Mr. Doyle.

955 Mr. {Doyle.} Thank you, Mr. Chairman, and all of us  
956 obviously feel badly about what has happened to you three  
957 individuals, and you know, the problem is with no national  
958 standards, some States do better jobs than other states in  
959 regulating this problem. Some States are doing nothing,  
960 which is a real problem. In my State of Pennsylvania, our  
961 Department of Environmental Protection has provided oversight  
962 on beneficial reuse since 1985 and implemented stringent  
963 standards in 1992, and Mr. Chairman, I do have letters from  
964 our Pennsylvania Department of Environmental Protection and  
965 Public Utility Commission which I would like to submit for  
966 the record.

967 [The information follows:]

968 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
969 Mr. {Markey.} Without objection, it will be included in  
970 the record.

971 Mr. {Doyle.} It basically hopes that as EPA makes this  
972 rulemaking that they say there is clearly a need for  
973 regulation of States with lax requirements or no requirements  
974 but they should look at States that do have stringent  
975 requirements and are doing this right and not preempt their  
976 laws, especially if our laws are more stringent than what the  
977 federal government may end up implementing, so I hope that we  
978 don't preempt those States that already have strict standards  
979 in place in this process.

980 Ms. Whitaker-Pierce, I am curious, you got conflicting  
981 results from the testing, right? Did you ever have an  
982 independent lab? Did you ever you yourself hire somebody?  
983 You know, I am thinking about what I would do in your  
984 situation if I started--you know, one person said there is  
985 lead and one person said there isn't lead, I would want my  
986 own independent testing, and I was just curious, how many  
987 different testers were in your home and did you have anybody  
988 that was testing your water samples for you?

989 Ms. {Whitaker-Pierce.} No, I did not personally  
990 commission an agency to test the waters. The city of  
991 Chesapeake tested the waters. They also hired a third party

992 expert firm, J.R. Reed and Associates, to do water tests  
993 along with the EPA.

994 Mr. {Doyle.} And you also said they all tested from  
995 just one source in your home and it was a source that had an  
996 auxiliary filter. Why was that selected and did you ever ask  
997 the--were you present when the testing was done?

998 Ms. {Whitaker-Pierce.} Yes, sir, I was. I am glad you  
999 asked because my 5 minutes didn't give me enough time to  
1000 elaborate on that. They had tested in two locations at my  
1001 home. They have tested at the well head and then they have  
1002 gone in and tested at my kitchen tap, and this has been done  
1003 every single time. When I say inconsistencies, sometimes  
1004 they will come and take a first draw and then they will purge  
1005 the system for 5 minutes and then they will purge it for 10  
1006 minutes and 20 minutes and they will do various tests along  
1007 that timeline, and then they were the ones that said okay,  
1008 well, we need to go to your kitchen tap, but that kitchen tap  
1009 has the auxiliary filter that I had put on when we moved out  
1010 there.

1011 Mr. {Doyle.} Did you tell them that there was a filter  
1012 on that?

1013 Ms. {Whitaker-Pierce.} Yes, sir, absolutely,  
1014 absolutely, and when I say that they are conflicting and  
1015 confusing, the sheet that I get, this report that I get has

1016 all of the different levels that have been detected but I  
1017 still don't know what the EPA standard on arsenic is, for  
1018 example. I mean, it was just by coincidence that I found out  
1019 that the EPA's level for lead was .15 percent, and that was  
1020 because the city of Chesapeake on their documentation  
1021 included that benchmark.

1022 Mr. {Doyle.} So you are getting data but you are not  
1023 getting any experts to sit down--

1024 Ms. {Whitaker-Pierce.} No, sir.

1025 Mr. {Doyle.} --I mean, as a layperson to explain what  
1026 that data means in real terms to you and your family?

1027 Ms. {Whitaker-Pierce.} No, and I would welcome that.  
1028 As a matter of fact, it was offered by one of our city  
1029 representatives and they said, you know, the EPA is the  
1030 expert so if it is okay with you, what we would like to do  
1031 with your permission is to turn over those results to the EPA  
1032 and then the EPA person can sit down with their results and  
1033 then explain to you what all this means. We are still  
1034 waiting.

1035 Mr. {Doyle.} Thank you.

1036 Mr. Hunt, was there ever any testing done? I mean,  
1037 there is no disputing what happened to you and your family.  
1038 You can see what happened, and then as you started to drink  
1039 bottled water or other water, you eventually started to

1040 recover. Was there ever any testing done by any enforcement  
1041 agency to determine what was in your water?

1042 Mr. {Hunt.} Well, I am glad you brought that up. What  
1043 happened, there was a lady that lived down the street there.  
1044 Her and her husband both met at BYU and they were very  
1045 outstanding citizens and they had five boys and she was  
1046 pregnant with the sixth one, and what happened, they would  
1047 come down and they would have her open up her basement to  
1048 allow them to go in and pull samples out of the well less  
1049 than 100 feet from the arroyo, and what happened, she was  
1050 pregnant with the sixth son, and what happened, she came down  
1051 with leukemia and she chose not to have any treatment because  
1052 of her baby, so after the baby was born, the baby was a year  
1053 old when she passed away and what happened, the four younger  
1054 children that she has got, they have done missions for the  
1055 Mormon Church and stuff like that, very outstanding people,  
1056 and they got hormones to keep from wetting the bed at night.  
1057 And there is another little boy, his dad owned a dairy and  
1058 his uncle come running across the street one day and he says  
1059 Joe is drowning, come quick, so I run over to see and what it  
1060 was, it was the mother's dad's birthday that day and they had  
1061 Joe on the floor and they were working with him doing CPR and  
1062 stuff like that and you could tell he was dead.

1063 Mr. {Doyle.} I saw that and I saw what has happened to

1064 your sheep. I am saying did anyone ever test this water and  
1065 issue a report--

1066 Mr. {Hunt.} Yes, they did test it but they never warned  
1067 the woman down there that died of leukemia. They come to her  
1068 house and make them open the door to pull samples and they  
1069 never warned her about what had happened.

1070 Mr. {Doyle.} You never got results?

1071 Mr. {Hunt.} None whatsoever.

1072 Mr. {Doyle.} Wow. I see my time has more than passed.  
1073 Thank you.

1074 Mr. {Markey.} The gentleman's time has expired. The  
1075 gentleman from Kentucky, Mr. Whitfield.

1076 Mr. {Whitfield.} Thank you, Mr. Chairman, and thank you  
1077 three people for being with us this morning and explaining  
1078 your personal experiences.

1079 In listening to your testimony, I think that I  
1080 understand that each of you has well water, you don't have  
1081 city water, you don't have county water but all of you had  
1082 well water. Is that correct?

1083 Ms. {Whitaker-Pierce.} Yes.

1084 Mr. {Hunt.} I have got city water now but I had to pay  
1085 to hook onto it but at the time we had spring water.

1086 Mr. {Whitfield.} Okay, but at the time it was spring  
1087 water or well water. And Mr. Hunt, I noticed that in the

1088 article out there that it said what killed over 1,000 sheep  
1089 and it says rancher, State and PNM. I am not sure what PNM  
1090 is but it must--

1091 Mr. {Hunt.} Public Service Company of New Mexico.

1092 Mr. {Whitfield.} Okay. And then it says that at odds  
1093 over the bad water. So there was no agreement between the  
1094 State, the PNM and you as to whether or not this water was  
1095 bad or what caused the bad water.

1096 Mr. {Hunt.} Well, what happened when they hit the  
1097 Albuquerque Journal, it was 13 months that they played around  
1098 and made them animals drink that bad water, and what  
1099 happened, there was an individual that come in out of the New  
1100 Mexico environmental department. They got him out of risk  
1101 management and they put him in as the deputy secretary under  
1102 the Johnson Administration, and then when things started  
1103 heating up, he become the general counsel, and what happened,  
1104 the State ordered the sheep to be hauled off and tested after  
1105 me feeding them for 13 months and watched them die, and when  
1106 they would die we would have to pile them up in piles and  
1107 burn them, and the man come back and he said poor carrot  
1108 killed the animals but you can notify the New Mexico State  
1109 animal health people, and in the document it says all animals  
1110 was in good nutritional condition and I don't know where he  
1111 got that information from. I would really love to know that.

1112 Mr. {Whitfield.} But as far as the water that the sheep  
1113 drank, that was well water--

1114 Mr. {Hunt.} No, no, that was out of the arroyo there,  
1115 and what happened, after the article come out in Albuquerque  
1116 Journal front page, they sent a surveillance man down there  
1117 and the surveillance man said 500 parts per million on  
1118 sulfate is all that is allowed for animals, and it was eight  
1119 times above that, and they never did nothing. They just sat  
1120 back and laughed at me.

1121 Mr. {Whitfield.} All of you it sounds like are not  
1122 really satisfied with the way the State dealt with this, the  
1123 way the State environmental people dealt with this, the way  
1124 the utility companies dealt with it, which is understandable,  
1125 but I would ask did any of you go to an attorney to explore a  
1126 class-action lawsuit or some sort of lawsuit against any of  
1127 the utility companies?

1128 Mr. {Hunt.} I tried to do that, and what happened is  
1129 kind of like going down trying to beat the hell out of Mike  
1130 Tyson. The only thing you are going to do is get the hell  
1131 beat out of you.

1132 Mr. {Whitfield.} So you determined that was not in your  
1133 best interest?

1134 Mr. {Hunt.} Yes. There is no justice whatsoever in  
1135 this mess.

1136           Mr. {Whitfield.} Well, you know, the chairman mentioned  
1137 this briefly but one of the confusing things for us is, we  
1138 know that EPA has looked at this coal ash repeatedly through  
1139 the years and we know that 1 percent or less of coal ash has  
1140 trace elements of arsenic, cadmium, lead, mercury and  
1141 selenium in it, and the scientists have said, and there is  
1142 going to be people testifying to this later, that fly ash or  
1143 coal ash has no more of these trace elements in it than  
1144 regular soil and regular rocks do. So, you know, it presents  
1145 a puzzle for us as to whether or not--I mean, I think there  
1146 is probably agreement that maybe this should be regulated,  
1147 that there should be some federal regulation, but to classify  
1148 this as a hazardous material from the scientific evidence  
1149 that I have looked at, I mean, I would have some question  
1150 about that. But from your personal experience, though, you  
1151 are 100 percent certain that your problems were caused by  
1152 your exposure to coal ash. Is that correct?

1153           Mr. {Hunt.} Absolutely, and when you burn it down and  
1154 condense is up, what happens, it becomes very poisonous.

1155           Mr. {Whitfield.} But you did indicate, I heard you say  
1156 that there was proof that there had been some human waste  
1157 that had been--

1158           Mr. {Hunt.} That also.

1159           Mr. {Whitfield.} So--

1160 Mr. {Hunt.} But just like today, they haven't dumped  
1161 human waste in a long time, but it is still up around eight  
1162 times above what is allowed running right into the San Juan  
1163 River right on down towards Mexico.

1164 Mr. {Whitfield.} Now, have they corrected this human  
1165 waste issue?

1166 Mr. {Hunt.} I have no idea. Nothing would surprise me  
1167 about them people.

1168 Mr. {Whitfield.} Okay.

1169 Ms. {Whitaker-Pierce.} Mr. Whitfield, I would like to  
1170 respond to that.

1171 Mr. {Whitfield.} Yes.

1172 Ms. {Whitaker-Pierce.} You will also--you can get  
1173 experts to testify to anything that you want to hear. The  
1174 utility companies obviously have a dog in the fight. You can  
1175 find experts out there that will say that absolutely coal ash  
1176 is dangerous, certainly should not be breathed, certainly  
1177 should not be exposed to water, certainly should not be  
1178 involved in one's water system, and there is no doubt in my  
1179 mind that the careless actions and the ineptitude of our EPA  
1180 and our local government and our State governments to  
1181 regulate this and make sure that people are acting  
1182 responsibly is the reason that we are all here today.

1183 Mr. {Whitfield.} Now, Ms. Pierce, did you consider

1184 legal action or did you have the same view as Mr. Hunt?

1185 Ms. {Whitaker-Pierce.} Well, we are currently  
1186 represented, yes, by counsel to try to get the right thing  
1187 done here.

1188 Mr. {Whitfield.} So you are in litigation now or at  
1189 least you have retained an attorney to explore it?

1190 Ms. {Whitaker-Pierce.} Correct.

1191 Mr. {Whitfield.} Okay. I see my time is about expired,  
1192 Mr. Chairman.

1193 Mr. {McNerney.} [Presiding] Thank you, Mr. Whitfield.

1194 The chairman stepped out for a minute and asked me to  
1195 step in his seat while he is gone.

1196 First of all, again, I want to thank the witnesses for  
1197 coming forth and testifying, very compelling words that you  
1198 have spoken this morning. You know, when coal-fired plants  
1199 are required to scrub their emissions from mercury and other  
1200 sulfates and so on, I can't imagine how people would think  
1201 that the fly ash is perfectly safe, but apparently we have  
1202 some evidence here this morning. Ms. Whitaker-Pierce, I  
1203 would like to ask if you think that Mr. McCabe's work that  
1204 brought light to the dangers there, if he hadn't done that  
1205 investigative work, do you think you would still be in the  
1206 dark about the risks and dangers?

1207 Ms. {Whitaker-Pierce.} Well, I am still in the dark,

1208 but there is no doubt that he is our knight in our shining  
1209 armor. We had this construction going on in our backyard for  
1210 7 years and really thought that it was safe. So yes, had he  
1211 not brought this to light, we would still be drinking the  
1212 water, and we owe him a huge debt, yes.

1213 Mr. {McNerney.} And so you would be facing potential  
1214 health problems, you and your family and your neighbors, so  
1215 he does deserve a certain amount of thanks for that, a lot of  
1216 thanks.

1217 Ms. {Whitaker-Pierce.} Yes, sir, he does, and we are  
1218 not out of harm's way yet. We had been drinking that stuff  
1219 for 5 years and are still using it for various purposes in  
1220 the home.

1221 Mr. {McNerney.} Thank you.

1222 Ms. Queen, you mentioned that tests showing arsenic,  
1223 iron, manganese and sulfates were leaching at dangerous  
1224 levels but that these tests were not shared with the  
1225 community. Is that right, the tests showing that these  
1226 substances were leaking into your water but you were not  
1227 notified of the test results?

1228 Ms. {Queen.} Not in the beginning but later on we did.  
1229 Someone came to the door to say that the water, you know, was  
1230 going to be tested and we should stop drinking the water, and  
1231 right away--not right away they started to bring in bottled

1232 water for everybody except for over on the other side of the  
1233 road they put hoses out but the hoses froze so they got  
1234 bottled water too, but we are still getting bottled--they  
1235 made it right. They are going to put city water in to  
1236 everybody that had well water. We are getting city water  
1237 hookup and it hasn't come yet. They started, city water  
1238 hookup and no water bill for as long as you own the home, and  
1239 I still get bottled water today every 2 weeks. So they made  
1240 right on--the power company did.

1241 Mr. {McNerney.} Thank you. Now, when did you first  
1242 started noticing the dust and started feeling that that was  
1243 being a hazard, that that was hazardous to you and your  
1244 family?

1245 Ms. {Queen.} When I first moved there, I noticed, but  
1246 we just cleaned the house, you know. We just cleaned it up.  
1247 You know how it would get on the house and on the porch and  
1248 we started cleaning it up, and then after it came out in  
1249 2007, then we realized, oh, that is not good, you know.

1250 Mr. {McNerney.} So you were breathing it in for years  
1251 basically without knowing that it was dangerous?

1252 Ms. {Queen.} No, I didn't know anything about it.

1253 Mr. {McNerney.} Mr. Hunt, thank you again for your  
1254 testimony and thank you for your children's service to our  
1255 Nation. Would you say that the behavior of PNM and the State

1256 agencies was conducted in ignorance or do you think that they  
1257 knew the dangers and still prevented action from being taken  
1258 on your behalf?

1259         Mr. {Hunt.} To tell you the truth, I feel it was  
1260 criminal, and there is one thing I will say about the man  
1261 that asked if we ever tried to take legal action. We tried  
1262 to take it to court and I have only got an 8th-grade  
1263 education, and what happened when it was all said and done,  
1264 our lawyer was sitting up there testifying against us and we  
1265 refused to accept the settlement, which was \$190,000, and we  
1266 wrote on the release we are signing this against our will  
1267 under duress and intimidation, and went down and filed it at  
1268 the county clerk's office to make it a public document  
1269 information. And, you know, bless their hearts, they went  
1270 down and said it was a nuisance litigation. It cost me  
1271 \$73,300 for a tax attorney to keep from losing everything I  
1272 owned.

1273         Mr. {McNerney.} Was the local media, the Albuquerque  
1274 Journal or--

1275         Mr. {Hunt.} The only thing they are out for is mainly  
1276 sell advertising, and the reason why we subscribe to the  
1277 paper is just to read the obituaries and the advertisements.  
1278 Like I say, I could have lost everything I own.

1279         Mr. {McNerney.} It looks like my time has expired, and

1280 the first panel has finished, so your testimony has been very  
1281 beneficial. Thank you.

1282 It is now time for the second panel to step forward.

1283 Mr. {Hunt.} I have been waiting 28 years for this date.  
1284 Thank you.

1285 Mr. {McNerney.} Would all the second panel witnesses  
1286 please take their seats at the testimony table, please? Now,  
1287 we have the second panel in front of us and I would like to  
1288 introduce the witnesses and then I will ask for their  
1289 testimony. First we have Lisa Evans, who is an attorney  
1290 specializing in hazardous-waste law. Ms. Evans has been  
1291 active in hazardous-waste litigation advocacy for over 25  
1292 years and is an expert on coal ash issues. She has been a  
1293 project attorney for Earthjustice since 2006. Prior to  
1294 Earthjustice, Ms. Evans worked on toxic coal waste for the  
1295 Boston-based nonprofit Clean Air Task Force. Ms. Evans began  
1296 her career as an assistant regional counsel at the  
1297 Environmental Protection Agency region I. Ms. Evans, you can  
1298 begin your testimony when you are ready.

|  
1299 ^STATEMENTS OF LISA EVANS, SENIOR ADMINISTRATIVE COUNSEL,  
1300 EARTHJUSTICE; MARY A. FOX, PH.D., MPH, ASSISTANT PROFESSOR,  
1301 JOHNS HOPKINS BLOOMBERG SCHOOL OF PUBLIC HEALTH; KEN LADWIG,  
1302 SENIOR PROGRAM MANAGER, ELECTRIC POWER RESEARCH INSTITUTE;  
1303 AND DONALD MCGRAW, M.D., PITTSBURGH, PENNSYLVANIA

|  
1304 ^STATEMENT OF LISA EVANS

1305 } Ms. {Evans.} Thank you. Members of the subcommittee,  
1306 thank you for holding this hearing to examine the threats  
1307 posed to our health and environment by coal ash, the  
1308 hazardous substance generated by power plants that burn coal.

1309 When mismanaged, this toxic waste damages the health and  
1310 environment of Americans nationwide by poisoning drinking  
1311 water, fouling the air and destroying aquatic ecosystems.  
1312 Federal action on this issue is imminent. Last March, EPA  
1313 Administrator Lisa Jackson made a commitment to publish a  
1314 proposed rule governing the disposal of coal ash by year's  
1315 end. My testimony today recognizes the primary goal of this  
1316 impending rule: the protection of human health.

1317 The committee has heard today from witnesses whose  
1318 health and the health of their families and neighbors have  
1319 been seriously compromised by exposure to the toxic

1320 contaminants in ash. Today's witnesses represented three  
1321 separate instances of coal ash contamination but they have  
1322 three important things in common. First, dry dumping of coal  
1323 ash, not wet disposal, caused serious harm. Much of the  
1324 focus this year has been on the deadly dangers posed by wet  
1325 ash ponds. Wet disposal has drawn national attention since  
1326 the cataclysmic failure of the TVA dam, whose release of over  
1327 1 billion gallons of toxic sludge was 100 times the size of  
1328 the Exxon Valdez spill. But today it is significant to note  
1329 that dry disposal and release of dry ash is a cause of  
1330 damage. This is not surprising. EPA has identified a  
1331 significant threat from dry disposal in unlined landfills,  
1332 estimating that such disposal can result in a risk of cancer  
1333 50 times EPA's regulatory goal.

1334         Second, at each site State law was woefully inadequate  
1335 to protect the health of the affected communities. Today,  
1336 regulation of coal ash is left totally up to the States but  
1337 in New Mexico, Virginia and Maryland, where the witnesses  
1338 reside, the States failed to put in place even the most basic  
1339 safeguards. In none of these States, not even household  
1340 garbage would be allowed to be disposed of in the manner that  
1341 ash was. In these States and in most of the States in the  
1342 United States, improper, unsafe and ultimately harmful  
1343 disposal of toxic ash is permitted and sometimes even

1344 encouraged.

1345           Third, the witnesses and their communities were harmed  
1346 economically. While the focus today is properly on health,  
1347 significant damage to communities occurs when cheap disposal  
1348 is unfettered by federal law. Today you heard how Mr. Hunt,  
1349 a sheep rancher, lost his herd, how the housing values in  
1350 Robin Pierce's community have plummeted and how Gayle Queen  
1351 may tragically lose her home to foreclosure. These economic  
1352 hardships produce stress that tears at the fabric of our  
1353 community. The dumping of ash in all three situations was  
1354 the cheapest route for industry but the true costs were borne  
1355 by these witnesses and their neighbors.

1356           As a former EPA attorney, I worked to enforce the  
1357 Resource Conservation Recovery Act. This experience gave me  
1358 a deep appreciation of the statute's fundamental goal. In  
1359 one word, the driving force of RCRA is prevention. Congress  
1360 passed RCRA in 1976 to put in place regulations to prevent in  
1361 the first instance the mismanagement of waste in order to  
1362 prevent the migration of toxic chemicals. Further, in 1980,  
1363 Congress explicitly directed EPA to require safe disposal of  
1364 coal ash. But for decades, nearly 30 years, EPA has failed  
1365 to promulgate national regulations and this omission is huge  
1366 and dangerous. EPA tells us that in 2008 U.S. electric  
1367 utilities produced 136 million tons of coal ash. This is

1368 enough ash to fill the boxcars of a train from this room to  
1369 Melbourne, Australia, and this amount is rapidly climbing as  
1370 we capture more toxics like mercury and other hazardous  
1371 metals at the power plant stacks.

1372         The bright spot today is that the prevention of harm  
1373 from the dumping of ash is a problem we know how to solve.  
1374 Isolation of toxic waste from water in engineered landfills  
1375 is 20th century technology at best. Thus, the essential next  
1376 step is for EPA to promulgate federally enforceable  
1377 regulations that guarantee that all U.S. citizens are  
1378 protected from the harms posed by mismanagement of ash. Only  
1379 under subtitle C of RCRA will all States be required to adopt  
1380 minimum disposal standards that protect the health of all  
1381 living near coal ash dump sites.

1382         In sum, I respectfully ask the subcommittee to end the  
1383 30-year impasse and encourage EPA to promulgate federally  
1384 enforceable regulations that will prevent the harm that these  
1385 witnesses have suffered from occurring again.

1386         About 2 years ago, I held Mr. Hunt's infant  
1387 granddaughter, and I would like nothing better than to  
1388 guarantee to her that what happened to her grandfather will  
1389 not happen to her family in Waterflow, New Mexico, nor to  
1390 Mrs. Queen's grandchildren in Gambrills, Maryland, nor to Ms.  
1391 Pierce's children in Chesapeake, Virginia. This subcommittee

1392 may have a hand in making the same guarantee.

1393           Thank you again for the opportunity to comment on this  
1394 critically important issue and thank you especially for  
1395 allowing the witnesses in the previous panel to have their  
1396 voices heard.

1397           [The prepared statement of Ms. Evans follows:]

1398 \*\*\*\*\* INSERT 5 \*\*\*\*\*

|  
1399 Mr. {McNerney.} Thank you, Ms. Evans.

1400 The second witness I would like to call is Mary Fox, Dr.  
1401 Mary Fox. She is an assistant professor of policy and  
1402 management at the Johns Hopkins Bloomberg School of Public  
1403 Health. She is part of the core faculty of the school's Risk  
1404 Sciences and Public Policy Institute and her research focuses  
1405 on the human health effects of exposure to chemical mixtures.  
1406 Dr. Fox received her Ph.D. in environmental and occupational  
1407 health policy from the Johns Hopkins Bloomberg School of  
1408 Public Health. Ms. Fox, please begin your testimony when you  
1409 are ready.

|  
1410 ^STATEMENT OF MARY A. FOX

1411 } Ms. {Fox.} Thank you, and good morning. I appreciate  
1412 the opportunity to address the subcommittee today.

1413 There are a few important things to know when addressing  
1414 the health impacts of coal combustion waste. First, coal  
1415 combustion waste is a complex mixture of well-documented  
1416 hazardous substances. The types of and severity of health  
1417 effects of coal combustion waste constituents range from  
1418 benign and cosmetic changes to organ function changes to  
1419 cancer. As a Nation, we produce a large volume of waste.  
1420 The uses and types of disposal may allow distribution into  
1421 the broader environment. Taken together, these  
1422 considerations present us with a public health protection  
1423 challenge.

1424 Some examples of the health effects associated with  
1425 specific combustion waste constituents include cancer  
1426 associated with arsenic, neurological effects associated with  
1427 aluminum, lead and manganese, kidney effects from barium and  
1428 mercury, effects on the gastrointestinal system related to  
1429 beryllium, and copper. It is important to note that multiple  
1430 coal combustion waste constituents contribute to certain  
1431 health effects. Exposure to combinations or mixtures of

1432 these constituents may increase the risk of developing these  
1433 health problems.

1434         As we have seen in some of the pictures this morning  
1435 from the particular sites, people can come into contact with  
1436 coal combustion waste through breathing if the dust is in the  
1437 air or through drinking water if constituents have leached  
1438 from a disposal site into groundwater that is tapped by  
1439 drinking-water wells. And as we have heard, not far from  
1440 here in Gambrills, Maryland, coal combustion waste was used  
1441 to reclaim a former sand and gravel pit. Constituents of  
1442 the coal combustion waste reached the drinking-water wells of  
1443 nearby residents and sampling by the county health department  
1444 found concentrations of aluminum, arsenic, beryllium,  
1445 cadmium, lead, manganese and thallium above drinking-water  
1446 standards in some wells.

1447         It is difficult to study and therefore accurately  
1448 quantify the population-level health impacts of coal  
1449 combustion waste exposure. Three of the common coal  
1450 combustion waste management practices, landfill, surface  
1451 impoundment or use in reclamation of mines, result in  
1452 localized disposal. Communities surrounding such disposal  
1453 sites are typically small. Proximity to the coal combustion  
1454 waste disposal site will likely spur interest in evaluating  
1455 community health. Unfortunately, systematic health effects

1456 research in any one small community will have limited  
1457 statistical power to detect changes in health outcomes. An  
1458 absence of traditional epidemiological studies, human health  
1459 risk assessment methods are available to evaluate population  
1460 exposures to multiple contaminant mixtures. Because coal  
1461 combustion waste is a complex mixture of constituents, risk  
1462 assessment methods will be essential to evaluating the health  
1463 risks of exposure to coal combustion waste.

1464         And let me conclude with a few key points. Coal  
1465 combustion waste is a complex mixture that can be mobilized  
1466 in the environment, depending on the uses and disposal  
1467 methods. People can be exposed to coal combustion waste  
1468 through breathing or inhalation, direct contact and  
1469 ingestion. Health effects of exposure will be underestimated  
1470 if we ignore the potential for simultaneous exposure to  
1471 multiple components of the mixture and prevention of exposure  
1472 through better management of the waste is ultimately the most  
1473 sound public health approach.

1474         Thank you again for the opportunity to speak with you  
1475 this morning.

1476         [The prepared statement of Ms. Fox follows:]

1477 \*\*\*\*\* INSERT 6 \*\*\*\*\*

|  
1478 Mr. {Markey.} Thank you, Dr. Fox, very much.

1479 Our next witness is Ken Ladwig. He is senior project  
1480 manager at the Electric Power Research Institute, responsible  
1481 for research on the management and use of coal combustion  
1482 waste. Since joining EPRI in 1999, he has worked on various  
1483 aspects of coal waste and groundwater research including the  
1484 potential for environmental release, disposal site management  
1485 and coal waste options. We welcome you, sir. Whenever you  
1486 are ready, please begin.

|  
1487 ^STATEMENT OF KEN LADWIG

1488 } Mr. {Ladwig.} Thank you, Mr. Chairman. I appreciate  
1489 the opportunity to provide testimony to this subcommittee.

1490 At EPRI, we have been engaged in coal combustion product  
1491 research both disposal and use for over 30 years. Our goal  
1492 in meeting with legislative staff recently and attending this  
1493 hearing is to ensure that all pertinent technical information  
1494 is available to those that may be involved in this important  
1495 decision-making process.

1496 In my brief time today, I will focus primarily on coal  
1497 ash, and I believe it was Congressman Whitfield that said  
1498 that it is confusing to hear coal ash referred to both as a  
1499 toxic sludge or something of high toxicity, and on the other  
1500 hand hear it referred to as being the same as soil. I hope  
1501 to provide some illumination on that topic, and as usual, I  
1502 think the answer is probably somewhere in the middle.

1503 Coal ash is derived from the inorganic minerals in coal,  
1504 and as such its element composition is similar to the  
1505 composition of rocks and soil, so that is inevitable. Trace  
1506 metals make up less than 1 percent of the total composition.  
1507 However, while the trace elements are qualitatively the same  
1508 as those in rocks and soil, they are enriched slightly

1509 relative to rocks and soil and therefore the material does  
1510 need to be managed. The toxicity characteristic leaching  
1511 procedure, TCLP, is the leaching test that has been used to  
1512 draw the line between hazardous and non-hazardous waste under  
1513 RCRA since 1990. In samples from more than 30 power plants  
1514 in testing we have done at EPRI, no coal ash samples exceeded  
1515 any TCLP limits for any trace metals. These data are  
1516 consistent with data from U.S. EPA. We have also compared  
1517 leachate from fly ash to leachate from other non-hazardous  
1518 waste such as metal slags and found them to be similar.  
1519 There are literally hundreds of other laboratory leaching  
1520 protocols that have been used by EPRI and other researchers  
1521 to evaluate coal ash and there is quite a bit of disagreement  
1522 among the technical community as to which is the best  
1523 procedure. We are coordinating with EPA on interpretation  
1524 and use of a new set of leaching protocols that offer a  
1525 number of benefits in understanding CCP leaching mechanisms.  
1526 However, the tests produce a lot of data that requires  
1527 careful evaluation and application on a site-specific basis.  
1528 Indiscriminate use of selected results from these complicated  
1529 tests is both misleading and inaccurate.

1530         Power plants have been generating and managing coal ash  
1531 for more than 60 years. EPA released a report in 2007  
1532 describing 67 CCP management sites with either groundwater or

1533 surface water impacts characterized as proven or potential  
1534 damage cases. Most of these damage cases represent older  
1535 facilities without liners, onsite releases and low-toxicity  
1536 constituents. Remediation is actively occurring or has been  
1537 completed at nearly all of the EPA damage case sites.  
1538 Conversely, a DOE EPA report recently found that nearly all  
1539 new CCP disposal cells built between 1994 and 2004 were lined  
1540 and included groundwater monitoring networks. Several States  
1541 such as Wisconsin have had successful non-hazardous disposal  
1542 requirements in place for CCPs for many years.

1543         The physical and chemical properties of CCPs make them  
1544 valuable raw materials for many construction and geotechnical  
1545 applications, and I think from the comments I have heard  
1546 today, we all agree that using the CCPs in safe applications  
1547 is the best outcome. In 2007, over 50 million tons of CCPs  
1548 were used rather than disposed. The primary uses for fly ash  
1549 are as an ingredient in concrete and cement and use in  
1550 geotechnical fills. FGD gypsum is largely used as a direct  
1551 replacement for rock gypsum in panel products, and U.S. EPA,  
1552 USDA and Federal Highway Administration are all actively  
1553 involved in CCP use.

1554         We recently worked with the Recycling Materials Resource  
1555 Center to use lifecycle analysis programs to quantify the  
1556 environmental benefits of using CCPs in sustainable

1557 construction. Based on 2007 data, using CCPs in place of  
1558 mined materials saved over \$160 trillion BTUs in energy  
1559 consumption, which is roughly the equivalent of the amount of  
1560 energy used in 1.7 million homes, or a decent-sized city, 32  
1561 billion gallons in water consumption and 11 million tons in  
1562 greenhouse gas emissions, and that equates to about taking  
1563 two million autos off the road in a year. In addition, use  
1564 rather than disposal saved a land area the size of Central  
1565 Park in New York in 2007.

1566 In conclusion, the Kingston release made coal ash a  
1567 front-page news item and we are a lot more aware of some of  
1568 the issues surrounding coal ash. What we need to do now is  
1569 define a clear path forward that ensures safe disposal and  
1570 allows for continued growth in CCP use. This will require  
1571 continuing to fix problem sites such as Kingston and the  
1572 damage cases, and I believe there was a hearing on Kingston  
1573 yesterday that presented the progress that has been made on  
1574 that site in just a year. And along with that, we need to  
1575 identify and implement components of successful disposal site  
1576 designs and practices. This is not an intractable for  
1577 difficult task, and I agree with Lisa that there are  
1578 technologies out there for dealing with the disposal of these  
1579 materials. There are many examples of successful CCP  
1580 disposal sites in all parts of the country right now.

1581           Finally, we need to continue to grow the use of these  
1582 materials in applications that are demonstrated to be both  
1583 safe and of value. Every ton that is used rather than  
1584 disposed provides savings in energy, water, greenhouse gas  
1585 emissions, land area and natural resources. Thank you.

1586           [The prepared statement of Mr. Ladwig follows:]

1587           \*\*\*\*\* INSERTS 7, 7A \*\*\*\*\*

|  
1588           Mr. {Markey.} Thank you, Mr. Ladwig, very much.

1589           Our final witness, Dr. Donald McGraw, is a practicing

1590 physician in Pittsburgh, Pennsylvania. Dr. McGraw has 30

1591 years of experience in occupational and environmental

1592 medicine and has received a master's degree in public health

1593 from Johns Hopkins University. We welcome you, sir.

1594 Whenever you are ready, please begin.

|  
1595 ^STATEMENT OF DONALD MCGRAW

1596 } Dr. {McGraw.} Thank you, Mr. Chairman.

1597 I would like to first say that I grew up in a small town  
1598 in southeastern Ohio to a family of farming, coal mining and  
1599 steel working people. When I grew up, we had a coal-fired  
1600 furnace which I stoked every morning. I shoved the coal in  
1601 as a lad through a window into the basement and I helped my  
1602 grandfather dump the coal ash on our garden, which grew  
1603 wonderfully, as the Congressman from Florida mentioned  
1604 earlier. When I left the area to attend school, I ended up  
1605 back in Pittsburgh. I have been there for some 30 years now.  
1606 I serve on the faculties of the University of Pittsburgh  
1607 Schools of Medicine and Public Health and have taught medical  
1608 students and residents for several decades. I previously was  
1609 at least briefly on the faculty at Johns Hopkins prior to  
1610 coming home. I am on the attending medical staff at a number  
1611 of prominent area hospitals. I see patients in those  
1612 hospitals, in clinics, in their worksites and in their homes.  
1613 I have been in coal mines, steel mills, coal tar plants. I  
1614 have been on coke ovens. I have been just about everywhere  
1615 that coal has been used.

1616 Only hearts of stone could fail to be moved to

1617 compassion by the stories and personal plights of the three  
1618 families who spoke before but tragedies occur all too  
1619 frequently in the form of tsunamis or typhoons in Thailand,  
1620 the Philippines and mainland China, hurricanes like Katrina  
1621 in New Orleans and Biloxi where I have participated in the  
1622 aftermath and helped in at least a small way with my church  
1623 in the cleanup. Hurricane Ike in Galveston, earthquakes in  
1624 Peru and Russia and elsewhere around the world have brought  
1625 death and devastation. Volcanic eruptions in Mexico and  
1626 elsewhere leave in their wakes tragedy that is all too real.  
1627 But in my experience, the main tragedy in coal combustion is  
1628 the devastating job loss and economic devastation in the wake  
1629 of steel mill shutterings and coal mine closures in  
1630 southwestern Pennsylvania, southeastern Ohio, the mountains  
1631 of West Virginia, Kentucky, Illinois and elsewhere. It would  
1632 be truly a misadventure, a tragic misadventure to plunge  
1633 these people even deeper into economic darkness.

1634         In the course of my work in 2005, I was asked to see a  
1635 number of individuals including adults and children, a half  
1636 dozen, maybe even more than that, when an accidental spill of  
1637 fly ash occurred in Forward Township not far from Pittsburgh.  
1638 This was a large pile of ash that had been there for probably  
1639 50 years and slid down the hill into this tiny community and  
1640 coated the ground where these people lived a foot or two in

1641 depth, and this was a soft, flaky ash, much like you would  
1642 see coming out of any coal-powered facility. These people  
1643 unfortunately waded around in it for days, cleaned it,  
1644 shoveled it, swept it, breathed it in their own personal  
1645 cleanups before some attention was paid. The DEP in  
1646 Pennsylvania is very good and they came to the rescue and  
1647 ultimately that cleanup has been underway. I saw those  
1648 individuals as individual patients. I listened to their  
1649 stories. I evaluated them physically and I could find no  
1650 objective abnormalities in any of those people.

1651 Simultaneously, or concomitantly, the Allegheny County Health  
1652 Department, part of Bruce Dixon, who is just a marvelous  
1653 physician, examined these people tested their urine, their  
1654 blood, their hair, their nails and could find no evidence of  
1655 any increased exposure to any heavy metals or any medical  
1656 problems. Subsequently, these people were re-examined by the  
1657 county health department in 2009, last spring, and once again  
1658 were given a clean bill of health after extensive evaluation.

1659       Last year I had the opportunity to go to Tennessee, and  
1660 I am not sure why I was asked other than the fact that I had  
1661 been involved with individuals from Pittsburgh and vicinity.  
1662 I went down to Kingston and saw the massive upheaval down  
1663 there that was caused by the release of large stock of coal  
1664 fly ash in a retention pond, which gave way after a very long

1665 period of heavy rain, much like the weather caused the  
1666 problems in Forward Township. This ash slid largely into the  
1667 waterways nearby but it did slide into the yards and homes of  
1668 I think probably about five or six families whose houses were  
1669 certainly adversely affected. I also had the opportunity  
1670 aside from touring the area not to examine any of these  
1671 individuals but to participate in an open meeting at a local  
1672 school in which any community residents or interested parties  
1673 could attend and probably some 150 people or some came, some  
1674 of whom were residents and some others were just interested,  
1675 and asked questions about the potential adverse health  
1676 effects of their exposure in this setting, and I tried to  
1677 reassure them that their exposure now and in the future was  
1678 extremely unlikely to be detrimental to their personal  
1679 health, the health of their children, their animals, et  
1680 cetera.

1681 In the course of my practice, I have had the opportunity  
1682 to address the potential toxicity of heavy metals such as  
1683 arsenic and a wide variety of settings. I have examined  
1684 hundreds, if not thousands, of individuals whose work has  
1685 required that they be in the presence of compounds like  
1686 arsenic and coal and coal tar and coke oven emissions and  
1687 other potentially toxic materials, and as it was pointed out  
1688 earlier, all of these are natural occurring minerals. They

1689 occur in the substrata of the earth. They are released by  
1690 volcanic eruptions, by forest fires in far greater amounts  
1691 than are released as a result of industrial production.

1692 Arsenic--

1693 Mr. {Markey.} If you could summarize, please, Dr.  
1694 McGraw?

1695 Dr. {McGraw.} Yes. I am sorry.

1696 Arsenic is present in water, in high concentrations in  
1697 mineral springs all over North America, and we eat it every  
1698 day in our foodstuffs and we drink it in our water. That is  
1699 not to say that it is not potentially toxic but so are a wide  
1700 variety of other materials. Cars are dangerous too but if we  
1701 ban them or extremely limit their use, it would be  
1702 devastating to the economy of this country.

1703 [The prepared statement of Dr. McGraw follows:]

1704 \*\*\*\*\* INSERT 8 \*\*\*\*\*

|  
1705 Mr. {Markey.} Thank you, Dr. McGraw, very much.

1706 Now we will turn to our questions from the subcommittee.

1707 Let me ask you, Dr. Fox, I just heard Dr. McGraw talking  
1708 about arsenic, you know, as not a particularly dangerous  
1709 substance to be ingested by human beings. Could you talk a  
1710 little bit about the ingestion of arsenic or other heavy  
1711 metals over a period of many years in terms of what that risk  
1712 might be to human beings?

1713 Ms. {Fox.} Yes. That is a distinction that is useful  
1714 to make in several of the examples I think that Dr. McGraw  
1715 discussed. In Forward Township, for example, and in  
1716 Kingston, Tennessee, those were situations where the  
1717 exposures were relatively short term and sort of the  
1718 immediate nature of the spill prompted a quite rigorous  
1719 cleanup. In situations as in Gambrills, Maryland, that we  
1720 heard about earlier, the waste has been disposed in this  
1721 former sand and gravel pit since the mid-1990s approximately,  
1722 and the contamination of the groundwater there may have been  
1723 going on for years and may continue for some time. So  
1724 chronic exposure to arsenic and some of the other  
1725 constituents is associated with a number of health problems  
1726 that I already discussed.

1727 Mr. {Markey.} Do you agree with that, Dr. McGraw?

1728 Dr. {McGraw.} Which part?

1729 Mr. {Markey.} The part where she is saying that  
1730 continuous exposure to these constituent elements over a  
1731 period of time are related to serious medical consequences.

1732 Dr. {McGraw.} That all depends on the concentration,  
1733 the dose, the area of exposure, how it is taken in. Our body  
1734 has numerous capabilities for eliminating potential toxins  
1735 from it. We are very well constructed to manage our health  
1736 despite exposure to many natural elements, and while there  
1737 are huge concentrations of materials like arsenic sadly in  
1738 the well water in places like Taiwan and Bangladesh, they are  
1739 many degrees of magnitude higher than any that might ever be  
1740 potentially even occurring in the United States in any  
1741 conceivable way.

1742 Mr. {Markey.} So you are saying that the hundreds of  
1743 thousands of people who died in Bangladesh related to  
1744 ingestion of arsenic is something that we shouldn't be  
1745 concerned about here as a warning to us?

1746 Dr. {McGraw.} I am not sure of those numbers, Mr.  
1747 Markey.

1748 Mr. {Markey.} But you cited Bangladesh, so hundreds of  
1749 thousands of people--

1750 Dr. {McGraw.} Perhaps I would have to check and see  
1751 what those numbers were, but--

1752 Mr. {Markey.} The World Health Organization says that  
1753 hundreds of thousands of people have died in Bangladesh. You  
1754 cited Bangladesh, relating it to your World Health  
1755 Organization analysis.

1756 Dr. {McGraw.} Correct.

1757 Mr. {Markey.} Do you dispute the World Health  
1758 Organization?

1759 Dr. {McGraw.} No, no, I don't, but--

1760 Mr. {Markey.} So take the arsenic findings there and  
1761 extrapolate them for the purposes of what lesson you want us  
1762 to draw from Bangladesh in terms of exposure to arsenic,  
1763 please.

1764 Dr. {McGraw.} Those levels in those countries are  
1765 hundreds and hundreds and thousands of micrograms per liter  
1766 relative to our required water levels of one-hundredth of a  
1767 microgram per liter.

1768 Mr. {Markey.} But the EPA and the World Health  
1769 Organization have identified arsenic as a carcinogen. Do you  
1770 disagree with that finding?

1771 Dr. {McGraw.} No, I don't, Mr. Chairman. Let me give  
1772 you--

1773 Mr. {Markey.} We are trying to find--

1774 Dr. {McGraw.} If I may provide you with an analogy,  
1775 thousands of women and possibly men are injected on a daily

1776 basis with botulinum toxin, the deadliest material known to  
1777 humankind. They are injected in their faces for cosmetic  
1778 purposes. One-eighteenth of a millionth of an ounce is a  
1779 lethal dose for a human being and yet it goes into syringes  
1780 and into people's bodies on a daily basis. There are many,  
1781 many toxins that we either voluntarily or involuntarily  
1782 expose ourselves to on a daily basis. Once, again, it  
1783 depends on the dose, the level, and in this country, those  
1784 levels will never be replicated--

1785 Mr. {Markey.} Exactly.

1786 Dr. {McGraw.} --ever.

1787 Mr. {Markey.} No, no, I don't think that is so. I  
1788 think what we are learning here and we are seeing this in the  
1789 testimony of the witnesses beforehand that if enough of it is  
1790 placed in areas that are adjacent to populated areas that it  
1791 can leach into the water system and over a sustained period  
1792 of time there could be a dramatic impact on human beings as  
1793 they ingest this material. You were referring to earlier  
1794 about a one-time or two-time exposure. Here we are talking  
1795 about something that is--

1796 Dr. {McGraw.} With all due respect, Mr. Chairman, three  
1797 cases, as tragic as they might be, do not represent  
1798 epidemiology. I have looked at countless workers who have  
1799 been working for decades with exposure to these and other

1800 materials and seen no evidence of any harm, and they  
1801 certainly were exposed at far higher levels than the general  
1802 public would ever--

1803       Mr. {Markey.} You know, 3,000 young people are going to  
1804 begin smoking today in America. One thousand of them will  
1805 die from smoking-related illnesses and two will not.

1806       Dr. {McGraw.} I am not sure I see the point.

1807       Mr. {Markey.} But the one that is is really is our  
1808 concern, so you may--and again, you are not an  
1809 epidemiologist, I don't think.

1810       Dr. {McGraw.} I have studied it extensively and I do  
1811 appreciate it. I read the literature regularly.

1812       Mr. {Markey.} I appreciate that, but you are taking  
1813 personal examples and extrapolating, which is different from  
1814 actually presenting an epidemiological study.

1815       Dr. {McGraw.} I have read the epidemiologic literature.

1816       Mr. {Markey.} Ms. Evans, can you tell us if there is  
1817 just a small number of examples here or are there more people  
1818 like the witnesses that we saw on the first panel that  
1819 represent the population that we are concerned with?

1820       Ms. {Evans.} Absolutely. Thank you. I would say we  
1821 have a country full of examples similar to the people who  
1822 spoke today. There are so many unlined dump sites, whether  
1823 they be unlined ponds or unlined landfills or simply holes in

1824 the ground by gravel pits and mines where we place this  
1825 waste. For 30 years having unregulated disposal, it is  
1826 resulted in a lot of waste sites that present dangers to the  
1827 general public. The EPA has identified 71 sites so far as  
1828 Ken referenced where there has been contamination of ground  
1829 and surface water in 23 States. That is a drop in the  
1830 bucket, and EPA does admit that, and one reason that we can  
1831 say with some certainty that it is a drop in the bucket is  
1832 that so many of these dump sites are not monitored, and if  
1833 you don't monitor the dump sites, you don't know what is  
1834 leaving them. So I would say that in my experience in  
1835 numerous communities over the last 10 years, there are  
1836 certainly many, many communities that--

1837 Mr. {Markey.} Thank you, Ms. Evans, very much. I  
1838 think--

1839 Dr. {McGraw.} If I could respond, Mr. Chairman, just  
1840 briefly to Ms. Evans' comment, she identified sites but I  
1841 challenge her to identify numbers of individuals or  
1842 communities where it has been demonstrated objectively,  
1843 medically that they have developed either life-threatening  
1844 illnesses or have died as a result of exposure to coal tar  
1845 ash. I challenge her because it doesn't exist. I have seen  
1846 people die a thousand different ways, Mr. Chairman, but I  
1847 have never seen one either die or become ill from exposure to

1848 coal ash.

1849 Mr. {Markey.} Ms. Evans?

1850 Ms. {Evans.} I would be happy to provide the  
1851 subcommittee with medical reports from people who--and this  
1852 mostly occurs in litigation where they have to draw the  
1853 connection between the coal ash and the disease, but we do  
1854 have reports to that effect and can submit those to the  
1855 committee.

1856 Dr. {McGraw.} Anecdotal legal cases do not represent  
1857 epidemiology. That is not science. That is law.

1858 Mr. {Markey.} Well, I appreciate that, but we also have  
1859 certain other kind of, we call them in the law *res ipsa*  
1860 *loquitur*, which is the thing speaks for itself. I think that  
1861 is what we heard from Robin Whitaker-Pierce earlier. The  
1862 property cannot be sold. The entire community is frozen. We  
1863 have widespread health impacts. And to a certain extent,  
1864 there has been a see no evil, hear no evil aspect to this  
1865 issue over the years. So we are just kind of catching up  
1866 with this issue in the same way that we caught up with the  
1867 tobacco issue as well, and I think that the witnesses here  
1868 today provide very compelling evidence that there is a  
1869 problem here, that long-term exposure to these elements is  
1870 dangerous and again, the EPA is in the process of completing  
1871 their recommendations, and when they do, we will have them

1872 here for the hearing and we will be able to ask them those  
1873 questions.

1874 Let me turn now and recognize the gentleman from  
1875 Michigan, Mr. Upton.

1876 Mr. {Upton.} Thank you, Mr. Chairman.

1877 Ms. Evans, Mr. Ladwig, we have checked with my Michigan  
1878 utilities as they expose of this ash. I am told that they  
1879 use landfills that are clay lined unlike I guess what now  
1880 Maryland is now pursued in terms of my question for Ms. Queen  
1881 on the last panel. They have monitoring. It requires  
1882 monitoring of any leakage as well. It is regulated as an  
1883 industrial waste in the State of Michigan. And my question  
1884 is, how many States have a similar type of procedure for the  
1885 disposal of waste? Do you know?

1886 Ms. {Evans.} The majority of States do not require what  
1887 you just--

1888 Mr. {Upton.} So Michigan is more advanced than most  
1889 States. Is that what you are saying?

1890 Ms. {Evans.} I would say if you are talking about  
1891 States that require clay liners for all waste disposal units  
1892 would be in the minority but I would also say that the--

1893 Mr. {Upton.} And monitoring as well.

1894 Ms. {Evans.} And monitoring. What you have--

1895 Mr. {Upton.} I want to make sure I don't run out of

1896 time.

1897 Mr. Ladwig, would you concur with that?

1898 Mr. {Ladwig.} Not exactly. I don't know the number of  
1899 States that currently have liner requirements. I do know  
1900 that as I said in my testimony, essentially all new  
1901 facilities built between 1994 and 2004 when DOE and EPA did  
1902 their study all employed liners. So either their States are  
1903 requiring them or they are voluntarily installing liners.

1904 With respect to groundwater monitoring, almost all  
1905 landfills have groundwater monitoring, as far back as the  
1906 1990s. Ponds have had a little bit more checkered history  
1907 with respect to monitoring and it was more like half at that  
1908 time had monitoring in the 1990s when we did a study on this.  
1909 I am not sure what the number is now.

1910 Mr. {Upton.} Now, in Michigan, a good share of the  
1911 waste is actually used for highway cement, particleboard,  
1912 that type of thing. In fact, I am aware of a letter that the  
1913 Michigan Department of Transportation sent to the Federal  
1914 Highway Administration saying that this is a good use of the  
1915 substance actually. It performs better with that. A  
1916 question I think in a lot of people's view if we could  
1917 recycle this somehow in terms of a meaningful way. I am told  
1918 that again in Europe, perhaps as much as 80 to 90 percent of  
1919 the ash is used for this type of purpose. In the United

1920 States, we are closer to about 40 percent or about half. The  
1921 question is, if we classify it as a hazardous waste, as some  
1922 perhaps have suggested, what would that do to the efforts to  
1923 then recycle this versus putting it all into a landfill or  
1924 that type of thing?

1925 Ms. {Evans.} Before I respond to the recycling  
1926 question, let me just quickly go back to Michigan's landfill  
1927 regulations because I think it is also in Ken's statement  
1928 regarding the 56 facilities that were built between 1994 and  
1929 2004 because the important point has to be made that all  
1930 liners are not equal, and the requirement that landfills and  
1931 surface impoundments have clay liners was shown by EPA to be  
1932 insufficient. So the standard that landfills and surface  
1933 impoundments need to have composite liners is something that  
1934 EPA stated in its risk assessment and that landfills and  
1935 surface impoundments that are not so lined present an  
1936 unacceptable risk of migration.

1937 Mr. {Upton.} You are saying they need to have a  
1938 composite?

1939 Ms. {Evans.} A composite liner, and the--

1940 Mr. {Upton.} And how many States have that today?

1941 Ms. {Evans.} Very few have a requirement that all  
1942 landfills and all--

1943 Mr. {Upton.} So almost none?

1944 Ms. {Evans.} I mean, 50 percent of the States in the  
1945 United States don't require ponds to have any liners.

1946 Mr. {Upton.} Moving to my next question, if it was  
1947 classified as a hazardous waste, would in fact we be able to  
1948 recycle much of the material there like we do today? Yes or  
1949 no.

1950 Ms. {Evans.} Yes. EPA has the flexibility to deal with  
1951 recycled waste as solid waste. It can parse out, and under  
1952 the state it can regulate waste that is disposed as  
1953 hazardous, perhaps put--

1954 Mr. {Upton.} Would that not add tremendously to the  
1955 cost and therefore diminish the amount that is recycled  
1956 today?

1957 Ms. {Evans.} It shouldn't. If it is going to cost more  
1958 to recycle the waste--I mean if it is going to cost more to  
1959 dispose of the waste, there is going to be an incentive to  
1960 recycle.

1961 Mr. {Upton.} Mr. Ladwig, do you have a guess as to what  
1962 the cost would be to the industry, not only to go to a  
1963 composite-type liner versus the clay liners that are used  
1964 today, with the monitoring that they have which I think might  
1965 have resolved Ms. Queen's problem because in her testimony,  
1966 she indicated that it went to an unlined site, but how would  
1967 that impact recycling as well?

1968           Mr. {Ladwig.} Well, I think you have a couple questions  
1969 embedded there. The costs of moving to hazardous waste  
1970 requirements of these facilities would increase the cost of  
1971 disposal by a factor of 10, would be up into the billions of  
1972 dollars for the utility industry. Thirteen billion dollars I  
1973 think was one estimate that was provided. That is a  
1974 significant cost, and we have done an analysis that the  
1975 impact of that cost as well as the cost of phasing out wet  
1976 management, what those costs would actually do to utilities,  
1977 how many units it would--

1978           Mr. {Upton.} It would cost billions of dollars more.  
1979 That would have to be passed along to the ratepayers, right?

1980           Mr. {Ladwig.} I would assume so. You know, I am not  
1981 familiar with utility finances.

1982           Mr. {Upton.} My time is expired, so just tell me how  
1983 would impact recycling.

1984           Mr. {Ladwig.} From everything we have heard and I  
1985 believe USWAG, the Utility Solid Waste Activities Group, has  
1986 collected a number of letters. There are somewhere on the  
1987 order of 150 to 200 letters from utilities, marketing  
1988 companies and users all stating very clearly that a hazardous  
1989 waste designation would have a chilling effect on any use  
1990 just simply because using a material when it is deemed  
1991 hazardous if it goes in one direction and usable when it goes

1992 in another direction is not a workable situation.

1993 Mr. {Upton.} Thank you.

1994 Mr. {Doyle.} [Presiding] The Chair will recognize  
1995 himself.

1996 Dr. McGraw, my grandfather got off the boat from Ireland  
1997 in 1900 and landed in Pittsburgh. He worked 41 years at  
1998 Kerry Furnace in Rankin. My father followed him in the steel  
1999 industry and worked 31 years at Eggert Thompson in Braddock.  
2000 I worked there two summers and realized that I didn't want to  
2001 be a steelworker. I appreciate the steel industry and coal.  
2002 All my constituents get their electricity from coal in  
2003 Pittsburgh, and I lived my entire 56 years there. We  
2004 Pittsburghers didn't much appreciate Mr. Carnegie dumping all  
2005 his waste in the Monongahela River and the Allegheny River  
2006 and at one point those rivers got very dark and nobody fished  
2007 in those rivers, and regulations finally were put in place  
2008 that made sure that people just didn't indiscriminately dump  
2009 things into the rivers or up into the air. John Surma is a  
2010 dear friend of mine, the current CEO of U.S. Steel, and he  
2011 will tell you that he thinks that a clean environment and a  
2012 steel industry can coexist. This committee is not talking  
2013 about putting the coal industry or the steel industry out of  
2014 business but what we are saying, that in this country there  
2015 are many States that have no regulations on this or very lax

2016 regulations. Pennsylvania has been overseeing beneficial  
2017 reuse of coal ash since 1985. We have standards in place  
2018 since 1992. States like Wisconsin have good standards. We  
2019 believe that these industries can coexist with good  
2020 regulation and partnership. So when you said in your  
2021 testimony that you were much more concerned about the job  
2022 loss in the coal industry than you were about the potential  
2023 health hazards, I would tell you that we need to do both. We  
2024 can protect jobs and protect people's lives. That is what we  
2025 are trying to research here on the committee.

2026 I am familiar with Forward Township. I used to  
2027 represent it for 8 years before redistricting. I am curious,  
2028 how did you come to get involved in the Forward Township  
2029 case? You mentioned you were involved in examining people  
2030 there.

2031 Dr. {McGraw.} I believe that they were referred to me  
2032 through the graduate school of public health at the  
2033 University of Pittsburgh where I have been a faculty member  
2034 for a long time because they knew me as someone who would see  
2035 anyone for virtually any kind of problem, and I believe the  
2036 chairman of the department referred them all to me when they  
2037 called in to his office. You know, I don't disagree with  
2038 anything you just said, Mr. Doyle. I respect the need to  
2039 have a clean environment and certainly want nothing less

2040 myself, and I think the commonwealth should be particularly  
2041 proud in having already done a good job. But to classify a  
2042 relatively benign material as a hazardous waste would I think  
2043 lead to a cascade of events that would cost jobs and enormous  
2044 resources to the power industry, the coal industry, the steel  
2045 industry and all the way down the line.

2046 Mr. {Doyle.} So it is your testimony then that you  
2047 believe coal ash to be completely benign and not a health  
2048 risk to anyone?

2049 Dr. {McGraw.} That is correct.

2050 Mr. {Doyle.} We could just eat this stuff, and--

2051 Dr. {McGraw.} If you put some on my cereal, it might  
2052 not be very tasty but you would have to put it on a long,  
2053 long time before we would get to the point where those poor  
2054 people in other countries are consuming it and would be at  
2055 risk. So in this country, the likelihood of that happening  
2056 is like being struck by lightning.

2057 Mr. {Doyle.} I want to be certain about your testimony.  
2058 You talked about the arsenic levels in Bangladesh. You are  
2059 certainly not subscribing to the fact that we should adopt  
2060 Bangladesh water standards here in the United States. I  
2061 mean, you are saying it is okay to drink that much? If that  
2062 amount of arsenic was in the U.S. water, that wouldn't  
2063 concern you?

2064 Dr. {McGraw.} Of course not. All I am doing is  
2065 contrasting and trying to show that with any material,  
2066 however apparently benign, whether it is salt, sugar,  
2067 arsenic, mercury or anything else, there is a dose and there  
2068 is a length of time of exposure that is required to cause a  
2069 potential problem. Presumably in these hallowed halls, we  
2070 probably already met government requirements of introducing  
2071 the appropriate kind of new green fluorescent bulbs, all of  
2072 which contain a particularly lethal form of metallic mercury  
2073 and for which there is no hazardous waste reclamation plant  
2074 in place to my knowledge.

2075 Mr. {Doyle.} Right. I understand. My time is starting  
2076 to run out and I have a couple more.

2077 Dr. Fox, you just heard what Dr. McGraw said. He  
2078 basically says we could eat this stuff and it might taste so  
2079 good but it is not going to hurt us. What is your reaction  
2080 to that?

2081 Ms. {Fox.} Well, I would like to bring the  
2082 subcommittee's attention to some recent findings from some of  
2083 my colleagues at Hopkins and others that address the issue of  
2084 sort of typical U.S. exposures. There have been research  
2085 findings in the last 2 or 3 years of relating arsenic  
2086 exposure to cancer and also diabetes. So there is a growing  
2087 body of literature that reflects the exposure conditions in

2088 the United States and associates arsenic exposure with some  
2089 health effects of concern.

2090 Mr. {Doyle.} Thank you. I see my time is expired. Who  
2091 is next up on the list here? Ed.

2092 Mr. {Whitfield.} Thank you, Mr. Chairman, and thank you  
2093 all for being with us this morning.

2094 Mr. Ladwig, you state that since 1990 that EPRI has used  
2095 the toxicity characteristic leaching procedure protocol which  
2096 is used by EPA to test for the hazardous characteristics of  
2097 eight trace metals that EPA would consider critical to a  
2098 hazardous-waste designation: arsenic, selenium, barium,  
2099 cadmium, silver, chromium, lead and mercury, and that EPRI  
2100 data from all the analysis and tests that they have conducted  
2101 shows no coal ash samples exceeded any of the TCLP limits. Is  
2102 that correct?

2103 Mr. {Ladwig.} That is correct.

2104 Mr. {Whitfield.} And we know that EPA has looked at  
2105 this issue repeatedly from three or four dates, I don't have  
2106 the dates with me right now of the most recent one but it was  
2107 2000 and even they decided not to classify this as a  
2108 hazardous material. In your tests, were there any types of  
2109 coal or coal mined from certain regions of the country or  
2110 world that is burned here in the United States that you did  
2111 not test?

2112 Mr. {Ladwig.} I couldn't vouch that we have tested  
2113 every type of ash from every coal that is burned, you know,  
2114 from anywhere in the world but we have tested a broad range.  
2115 We have a very representative database.

2116 Mr. {Whitfield.} Well, you know, I think the key here  
2117 today, as our chairman stated, that we need a balanced  
2118 approach here because we have to use coal to meet our  
2119 electrical demands and remain competitive in the world and to  
2120 continue to create jobs and not lose jobs. And the thing  
2121 that bothers me about Ms. Evans and the group that she  
2122 represents, in her testimony she says we need a federal  
2123 standard to police this disposal of ash, which I agree with,  
2124 we do need a federal standard. And then she goes on and says  
2125 even if we get one, it is not enough. So we need a federal  
2126 standard but even if we get one, that is not enough. So I  
2127 think that is the problem that we have, and I know we are  
2128 getting ready to vote, Mr. Chairman, so I will yield back the  
2129 balance of my time.

2130 Mr. {Doyle.} Thank you very much, Mr. Whitfield.

2131 Ms. {Evans.} May I just take--

2132 Mr. {Doyle.} We have votes coming up and we are going  
2133 to try to get these witnesses in so hopefully you will get a  
2134 chance to elaborate, and when we come back we will try to  
2135 give you some more time.

2136 Mr. Matheson.

2137 Mr. {Matheson.} Thanks, Mr. Chairman.

2138 I have a question for Ms. Evans. In your testimony, you  
2139 highlight that more stringent regulation of coal ash has  
2140 raised State recycling rates significantly. I think you were  
2141 referring probably to Wisconsin.

2142 Ms. {Evans.} Yes, I am.

2143 Mr. {Matheson.} Does more stringent regulation include  
2144 a hazardous waste subtitle C designation?

2145 Ms. {Evans.} Well, there is no subtitle C designation  
2146 currently. It means more stringent--Wisconsin has more  
2147 stringent regulations than its neighbors and its recycling  
2148 rate is about double of the neighboring States.

2149 Mr. {Matheson.} In your testimony, you recommend that  
2150 EPA must designate coal combustion waste as hazardous waste  
2151 under subtitle C of RCRA. Is that correct?

2152 Ms. {Evans.} That's correct.

2153 Mr. {Matheson.} What would be the impact of the  
2154 recycling and reuse efforts in Wisconsin if we end up--if  
2155 there is federal action to regulate coal ash as hazardous  
2156 waste under subtitle C of RCRA?

2157 Ms. {Evans.} I don't think it would change. I think  
2158 that there might even be tightening that would have to be  
2159 done on the Wisconsin regulations so there might even be more

2160 incentive. If costs go up to dispose of waste in mind  
2161 landfills there would be more incentive to find safe reuse.

2162 Mr. {Matheson.} The State of Wisconsin actually has a  
2163 different opinion. They have sent a letter from the  
2164 Department of Natural Resources that says, and I will quote,  
2165 ``If coal ash were to be regulated under RCRA subtitle C, the  
2166 options for beneficial using or reusing the ash would be  
2167 significantly impacted and severely limited. So we have to  
2168 keep looking at this, and the balanced option I think that  
2169 Mr. Whitfield was talking about before about what we are  
2170 trying to do, people like the recycling idea but if you go to  
2171 a hazardous-waste designation, you know, there are other  
2172 consequences to this, and I just want to make sure that was  
2173 on the record.

2174 Ms. {Evans.} But I think you are looking at this very  
2175 black and white. There are a lot of hazardous wastes that  
2176 are successfully recycled into products.

2177 Mr. {Matheson.} I am looking at it for coal ash waste,  
2178 not for all products.

2179 Ms. {Evans.} Right, but you have to realize that EPA  
2180 has flexibility going into this regulatory process and really  
2181 does want to--

2182 Mr. {Matheson.} I just want to get on the record that  
2183 there is a potential conflict there, and you suggested that

2184 we ought to--you know, you log Wisconsin and they are saying  
2185 don't do what you are suggesting we do. I just want that on  
2186 the record.

2187 Mr. Ladwig, have you analyzed coal ash in relationship  
2188 to EPA's test to determine if a waste is hazardous under  
2189 RCRA?

2190 Mr. {Ladwig.} Yeah, well, we have done the TCLP test.  
2191 We just talked about that.

2192 Mr. {Matheson.} And what did you find?

2193 Mr. {Ladwig.} We find it always passes the TCLP test.  
2194 The EPA finds that it almost always passes.

2195 Mr. {Matheson.} How does coal ash compare to another  
2196 large volume solid waste stream like municipal solid waste?

2197 Mr. {Ladwig.} It is roughly on par with that. The  
2198 risks posed by any of these materials that are non-hazardous  
2199 are roughly in the same ballpark.

2200 Mr. {Matheson.} Mr. Ladwig, can you describe just  
2201 quickly benefits to the environment from recycling the coal  
2202 ash?

2203 Mr. {Ladwig.} Yes, I listed some of those in my  
2204 presentation but there are benefits in energy savings, water  
2205 savings, greenhouse gas emissions and land use. Those are  
2206 probably what I would call the four primary benefits from an  
2207 environmental perspective and there is obviously cost

2208 benefits.

2209 Mr. {Matheson.} Dr. McGraw, in your testimony you  
2210 highlight the need to properly and safely contain fly ash  
2211 wherever it is stored or used in some practical application.  
2212 Do you believe that a hazardous waste designation is  
2213 necessary to properly and safely contain coal ash?

2214 Dr. {McGraw.} I do not.

2215 Mr. {Matheson.} I know that my colleague from Illinois  
2216 is anxious to ask, so I am going to do one more.

2217 I think that this question about classifying coal ash as  
2218 hazardous waste and the potential to eliminate or at least  
2219 greatly reduce reuse opportunities is an issue that we need  
2220 to talk about as a committee. I think that that conflict or  
2221 at least that potential conflict is something that we need to  
2222 flush out more. I think that is why it is important we are  
2223 having this hearing. Mr. Chairman, I will yield back.

2224 Mr. {Doyle.} Mr. Shimkus.

2225 Mr. {Shimkus.} Thank you, Mr. Chairman. First, I have  
2226 a unanimous consent for opening statements that all members  
2227 may be included into the record.

2228 Mr. {Doyle.} Without objection, so ordered.

2229 Mr. {Shimkus.} And also, these are pre-cleared.  
2230 Unanimous consent for letters have been pre-cleared with your  
2231 staff from the Ecos resolution on hazardous waste, the April

2232 1, 2009, letter to the EPA from Otswanal, September 19, 2009,  
2233 letter to the EPA from the Unions for Jobs and the  
2234 Environment, a November 17, 2009, letter to EPA from the U.S.  
2235 Chamber of Commerce.

2236 [The prepared statement of Mr. Shimkus follows:]

2237 \*\*\*\*\* COMMITTEE INSERT \*\*\*\*\*

|  
2238 Mr. {Doyle.} Without objection, so ordered.

2239 Mr. {Shimkus.} Thank you, Mr. Chairman.

2240 For our panel, do you reject the assertion that the  
2241 Illinois EPA is the closest to the citizens of Illinois and  
2242 has a vested interest in protecting the health of the  
2243 citizens of Illinois? Dr. McGraw, yes or no?

2244 Dr. {McGraw.} The State?

2245 Mr. {Shimkus.} The State EPA.

2246 Dr. {McGraw.} The State EPA I think would have the most  
2247 direct relationship or familiarity with the issue.

2248 Mr. {Shimkus.} Dr. Fox, do you reject the fact that the  
2249 Illinois EPA's mission is to protect the health and safety of  
2250 the citizens of the State of Illinois?

2251 Ms. {Fox.} No.

2252 Mr. {Shimkus.} Ms. Evans, state of Illinois EPA. I am  
2253 just talking about the State of Illinois.

2254 Ms. {Evans.} Yes, and as a former federal EPA employee,  
2255 I would say that there is often a conflict between the State  
2256 EPA and--

2257 Mr. {Shimkus.} My question is, do you reject the  
2258 premise that the State of Illinois EPA does not have the  
2259 interests of the citizens of the State in health and safety  
2260 issues?

2261 Ms. {Evans.} They might have the interests but not  
2262 always the political power to regulate the--

2263 Mr. {Shimkus.} So you are saying that they don't have  
2264 the interests of the citizens of the State of Illinois?

2265 Ms. {Evans.} They have the interest. They might have  
2266 the political will to properly--

2267 Mr. {Shimkus.} So you reject this letter from the  
2268 Illinois EPA that says that they can best regulate this?

2269 Ms. {Evans.} Yes.

2270 Mr. {Shimkus.} Okay. Thank you.

2271 Mr. Ladwig?

2272 Mr. {Ladwig.} No, I don't reject that.

2273 Mr. {Shimkus.} Thank you very much.

2274 Dr. McGraw, part of our job is to make the complex  
2275 simple as possible so that we can help educate our  
2276 constituents and educate ourselves. Epidemiologic, define.

2277 Dr. {McGraw.} That is the study of populations and in  
2278 contrasting groups of individuals within a population, a  
2279 designated population who have a specific injury or illness  
2280 and comparing them with those individuals who don't, and  
2281 trying to determine as a result what might have led to that  
2282 specific problem whether there was a--

2283 Mr. {Shimkus.} So you are familiar with the scientific  
2284 method in essence?

2285 Dr. {McGraw.} Yes, I studied epidemiology as part of my  
2286 training.

2287 Mr. {Shimkus.} And the scientific method creates--and  
2288 we have been dealing with this with the whole Climate Gate  
2289 debate--is that there are facts. There are basic facts that  
2290 can be gathered and reviewed to make an analysis on what is  
2291 going on, and that is what you were testifying to and that  
2292 that is what your testimony says.

2293 Dr. {McGraw.} Facts versus presumption, which is what I  
2294 am saying.

2295 Mr. {Shimkus.} And that is why I am trying to make the  
2296 complex simple because we always talk about arsenic. We have  
2297 talked about arsenic in this committee since I have been a  
2298 member. An Olympic-sized swimming pool filled with arsenic  
2299 would be hazardous to human health. Wouldn't you agree, Dr.  
2300 McGraw?

2301 Dr. {McGraw.} Filled, yes, it would--

2302 Mr. {Shimkus.} Filled completely.

2303 Dr. {McGraw.} It would sink to the bottom and you  
2304 probably wouldn't get much if you were swimming in it  
2305 because--

2306 Mr. {Shimkus.} Now, let me ask this--

2307 Dr. {McGraw.} --it is not soluble in water.

2308 Mr. {Shimkus.} Let me ask, A, Olympic-size swimming

2309 pool filled with water with one eye drop of arsenic, would  
2310 that be hazardous to human health?

2311 Dr. {McGraw.} Of course not.

2312 Mr. {Shimkus.} So this whole debate is this. Using  
2313 real science to determine the health effects, and at what  
2314 cost. It would probably be cheaper to drain and Olympic-size  
2315 swimming pool filled with arsenic than it would be to take  
2316 out the one eye dropper of arsenic, and the issue is, at what  
2317 cost based upon what science. We are having this same debate  
2318 on the Climate Gate issue. When the scientists can't give us  
2319 the facts, then you go on emotion, and when emotions run  
2320 rampant it costs the jobs that you are referring to that I  
2321 refer to in this whole issue. So I applaud my colleague, Mr.  
2322 Matheson, for trying to get to the point of we better be  
2323 careful not solely to run on emotion because there is a cost-  
2324 benefit analysis of all this stuff, and we all understand  
2325 that, so let us get to the facts. And I think why your  
2326 testimony is so compelling is because you are doing it based  
2327 on your great credentials, epidemiological background and on  
2328 the facts of study of the health of individuals, and I want  
2329 to thank you for your time and I yield back my time, Mr.  
2330 Chairman.

2331 Mr. {Markey.} The gentleman's time has expired. We  
2332 apologize to you for the Floor schedule. We have 45 minutes

2333 of roll calls till our votes begin out on the House Floor,  
2334 and that is unfortunate.

2335         So this is a very important hearing. It is in  
2336 anticipation of the Environmental Protection Agency  
2337 promulgating new rules that will deal with public health-  
2338 related issues here but of course the question of jobs is  
2339 also part of this discussion. We have heard here today that  
2340 there are materials that are hazardous. They have poisoned  
2341 people. They have destroyed homes and have contaminated the  
2342 environment. No one, as Mr. Doyle said, is talking about  
2343 shutting down the coal industry. What we are talking about  
2344 is prohibiting unsafe disposal practices from being allowed  
2345 to continue so that we can ensure that there continues to be  
2346 safe commercial use of all of the materials that are in  
2347 question. The EPA can use its statutory authority to craft a  
2348 rule that both protects public health and allows for safe  
2349 practices to continue without causing jobs to be lost. We  
2350 can do both. Mr. Doyle has made that point. We did both  
2351 when we decided that we were going to regulate clean water,  
2352 safe food. We don't want to prohibit but at the same time we  
2353 want to ensure we put in those protections for public health.

2354         So we thank each of the witnesses. We want to continue  
2355 to work with you. We apologize to you, Ms. Evans, and to  
2356 others. I know you have other points which we would like to

2357 include in the record in its written form if you would like  
2358 to provide it to the committee. This hearing is adjourned.

2359 Thank you.

2360 [Whereupon, at 12:00 p.m., the Subcommittee was  
2361 adjourned.]