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Hart Exhibit 1  
Docket No. E-2, Sub 1219

Lynn J. Good  
President, CEO and Vice Chair

Duke Energy Corporation  
550 South Tryon Street  
Charlotte, NC 28202

OFFICIAL COPY

Apr 13 2020

March 12, 2014

Mr. Pat McCrory  
Governor of the State of North Carolina  
NC State Capitol  
1 East Edenton Street  
Raleigh, NC 27601

Mr. John Skvarla  
Secretary, Department of Environment and Natural Resources  
NC State Capitol  
1 East Edenton Street  
Raleigh, NC 27601

Dear Governor McCrory and Secretary Skvarla:

This letter provides an update to my February 28 letter and delivers recommendations for near-term and longer-term actions at our ash basins in North Carolina. Taken together, these near-term and longer-term actions comprise our comprehensive ash basin plan. Our recommendations have been developed around guiding principles designed to prevent future events and to identify opportunities to improve ash pond management activities.

We are committed to working with the State of North Carolina, the North Carolina General Assembly, the North Carolina Utilities Commission (NCUC) and all of our regulators as we develop an updated, comprehensive plan that protects the environment and provides safe, reliable and cost-effective electricity to North Carolinians. As we progress through implementation, we will continue to refine and expand these recommendations, including the design, engineering and cost estimates. We will also be working on these matters with our regulators in other states we serve.

We have accepted responsibility for the Dan River ash discharge and have taken a number of immediate actions following the event:

- We installed a permanent plug on the 48-inch stormwater pipe on February 8, and permanently plugged the 36-inch pipe on February 21.
- Crews have removed coal ash in an area of the riverbed below the broken stormwater pipe's discharge point. We will continue to work with state and federal agencies as we determine next steps needed for the river.

- Company representatives presented information about the Dan River ash release to the North Carolina General Assembly's Environmental Review Commission on February 17 and to the NCUC on February 24.
- We have worked with the North Carolina Division of Water Resources to redirect stormwater around the basins in a manner compliant with our National Pollution Discharge Elimination System (NPDES) permit, until a permanent solution is devised.
- We, along with various agencies, have continually tested the water in the Dan River. The drinking water has remained safe.

We will continue to work with you, your staffs and all appropriate regulatory agencies to finalize our work at Dan River.

For more than a century, our company has provided reliable and affordable electricity to our customers. Coal-fired power plants produced a good portion of that electricity. Throughout the past few decades, we have dedicated significant resources to the management and monitoring of our ash basins. We continue to place the safe operations of these ash basins as one of our highest priorities.

We have formed a team dedicated to strengthening our comprehensive strategy for managing all of our ash basins. John Elnitsky, most recently the company's vice president of project management and construction, is leading this effort. This team will focus on implementing our recommendations listed below as well as identifying and addressing ongoing improvement opportunities. This work will provide an opportunity for us to assess our ongoing storage techniques and will influence the ash basin closure strategies for our retired facilities, recognizing that any storage technique embodies cost and risk-reduction tradeoffs. We want to make certain that we, our regulators and other stakeholders can have a high degree of confidence in the integrity of our ash basins.

As stated above, our comprehensive plan is comprised of both near-term and longer-term actions. Our near-term actions set forth below address three specific retired plants, specific actions related to three active operating units (Cliffside 5 and both Asheville units), and an approach to reduce risk on remaining ponds at all retired plants. These actions are first steps in a more comprehensive plan that will address all retired sites (21 ponds/7 sites) and pond management at active sites (12 ponds/7 sites). Of course, implementing our near-term recommendations and longer-term plans depends on state and federal agreement that these are prudent, cost-effective and environmentally sound options. They are as follows, with associated time frames:

- Permanently close the Dan River ash ponds and move ash away from the river to a lined structural fill solution or a lined landfill. This work will be started immediately upon securing the appropriate fill solution or landfill location and any necessary permits, with an expected completion thereafter of 24-30 months.
- Accelerate planning and closure of the Sutton ash ponds to include evaluation of possible lined structural fill solutions and other options. A conceptual closure plan will be submitted to the North Carolina Department of Environment and

Natural Resources (NCDENR) within six months, and removing the water from the ash basins will be completed in the next 18-24 months.

- Move all ash from Riverbend away from the river to a lined structural fill solution or a lined landfill. Work will begin immediately upon securing the appropriate fill solution or landfill location and any necessary permits, with an expected completion thereafter within 48-54 months.
- Continue moving ash from the Asheville plant to a lined structural fill solution. We continue to look for ash reuse opportunities where such uses remain permissible under the upcoming coal ash regulations.
- Convert the three remaining North Carolina units to dry fly ash (Cliffside 5 and both Asheville units) or retire the units. Conversion work, if selected, will be completed within 30-36 months of receiving permits.
- Minimize the potential risk of a discharge similar to Dan River by accelerating the removal of water from the ash ponds at all retired coal plants. Upon receipt of permits, dewatering will be completed within 24-36 months.

In addition, we have taken immediate action to initiate a near-term comprehensive engineering review of all of our ash basins to identify and address potential risks. This review consists of a risk-informed approach to confirm the structural integrity of the ash basins and associated structures, as well as the characterization and evaluation of all stormwater discharges near ash basins. We expect this engineering review to continue over the next six-to-eight months.

We are also developing a comprehensive longer-term ash basin strategy for all ash ponds in North Carolina and throughout our service territory. This strategy will include a review of active ponds, inactive ponds and closure strategies for the remaining retired plants, will be informed by outside experts, and will include a risk-informed, tiered approach. The work will include a review of the effectiveness of ash storage management programs and practices to confirm that longer-term solutions are sustainable and lessons learned are captured for company-wide application. This comprehensive strategy will evaluate options up to and including complete conversion to all dry handling. This work will be completed by year-end.

We want to get the near-term and longer-term strategies right and implemented in a timely way. That will require close coordination with NCDENR and/or the United States Environmental Protection Agency (EPA) on permitting, as well as consideration of many factors including environmental and transportation issues for each community where coal ash is stored. We look forward to working with and incorporating the input of those agencies, as well as your offices and the General Assembly, to accomplish these objectives.

As our plans progress, it will be important to align our steps with upcoming federal regulations. The EPA issued a proposed rule on June 21, 2010, regarding federal regulation of coal ash. A final rule is expected by December 19, 2014. In addition, the EPA issued a proposed rule June 7, 2013, for Steam Electric Effluent Guidelines that

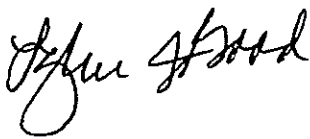
regulates wastewater streams from power plants. The final rule is expected no sooner than May 2014. Our longer-term solutions must satisfy these rules.

As we continue to refine our recommendations, we would like to meet to discuss the near-term items and our comprehensive strategy. Such a meeting should include technical expertise from the company and your agencies to listen to and challenge assumptions. Cost estimates to implement these recommendations are very dependent upon the actual disposal methods that are approved (e.g., cap in place versus structural fill or lined landfills), and we will work with the state to make estimates available as we narrow the range of options at each particular site.

Low-cost power generation has fueled the development of our state over the last century. As scientific knowledge and technology have advanced, we have worked constructively with the policymakers and regulators of our state to develop cost-effective ways to continue providing reliable, low-cost energy to our citizens while protecting public health and the environment.

We look forward to continuing this work as we develop and implement these recommendations for both immediate and longer-term solutions to coal ash storage and disposal.

Sincerely,

A handwritten signature in black ink, appearing to read "Lynn J. Good". The signature is fluid and cursive, with the first name "Lynn" and last name "Good" clearly distinguishable.

Lynn J. Good  
President and Chief Executive Officer



IN THE UNITED STATES DISTRICT COURT  
EASTERN DISTRICT OF NORTH CAROLINA  
WESTERN DIVISION

UNITED STATES OF AMERICA,

DUKE ENERGY BUSINESS SERVICES, LLC;  
DUKE ENERGY CAROLINAS, LLC;  
DUKE ENERGY PROGRESS, INC.,  
Defendants.

)  
)  
)  
) Case No.  
) 5:15-CR-62-H  
) 5:15-CR-67-H  
) 5:15-CR-68-H  
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PLEA TO CRIMINAL INFORMATION AND SENTENCING HEARING  
BEFORE SENIOR JUDGE MALCOLM J. HOWARD  
MAY 14, 2015; 10:00 A.M.  
GREENVILLE, NORTH CAROLINA

FOR THE GOVERNMENT:

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*Erin C. Blondel*  
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**FOR THE GOVERNMENT (CONTINUED)**

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**DAVID J. COLLIER, RMR, CRR**  
FEDERAL OFFICIAL COURT REPORTER  
413 MIDDLE STREET  
NEW BERN, NC 28560

## P R O C E E D I N G S

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THE COURT: Good morning, ladies and gentlemen, and welcome to the United States District Court for the Eastern District of North Carolina sitting here in Greenville.

Madam Clerk, call the calender for the matters for disposition this morning.

THE CLERK: Calling for a plea pursuant to a criminal information and sentencing: United States of America versus Duke Energy Business Services, United States of America versus Duke Energy Progress, United States of America versus Duke Energy Carolinas; Case Numbers 5:15-CR-62-1H, 5:15-CR-67-1H, 5:15-CR-68-1H.

THE COURT: On or about February 20, 2015, the United States filed criminal informations in each of the three Federal Districts in North Carolina, charging three corporations that are before the Court today, all of whom are subsidiaries of Duke Energy, with violations of the Clean Water Act.

At the same time the defendant corporations consented to transfer of jurisdiction of the cases from Middle District and from Western District over to the Eastern District pursuant to what is called Rule 20 of the Federal Rules of Criminal Procedure. Therefore all three of these cases, one from the Middle District, one from the Western District and the original one in the Eastern District, are now before this Court for

1 disposition.

2 After these matters were transferred, they were  
3 assigned to me in the normal and regular method of case  
4 assignment within our district. We're going to now proceed  
5 with the arraignment in these matters during the course of  
6 today.

7 I'll begin this morning by inviting counsel to  
8 present themselves and whomever they desire to present,  
9 beginning with the United States Government, Ms. Rangarajan.

10 MS. RANGARAJAN: Thank you, Your Honor. Banu  
11 Rangarajan on behalf of the United States from the Eastern  
12 District of North Carolina. Seated with me at counsel table,  
13 sir, is Lana Pettus with the Department of Justice  
14 Environmental Crimes Section. From the Western District of  
15 North Carolina, Your Honor, Steve Kaufman.

16 MR. KAUFMAN: Good morning, Your Honor.

17 MS. RANGARAJAN: Also with the Eastern District of  
18 North Carolina we have Jodi Mazer, who is a Special Assistant;  
19 Seth Wood, who is an Assistant United States Attorney; and  
20 Erin Blondel, Assistant United States Attorney.

21 From the Middle District of North Carolina,  
22 Your Honor, we have JoAnna McFadden, A.U.S.A.

23 MS. McFADDEN: Good morning, Your Honor.

24 MS. RANGARAJAN: And Deputy Chief Stephen Inman, sir.

25 And seated behind counsel are all of the Special

1 Agents that have been working on the case with us. We have  
2 Scott Faircloth, Diane Taggart, Bennett Strickland, Cecil  
3 Cherry, Mike Woods, Jerry Polk, Judy Billings, Maureen O'Mara,  
4 and at counsel table, Kevin LaPointe.

5 Your Honor, we also have with us today U.S. Attorneys  
6 Jill Rose and Thomas Walker from the Western and Eastern  
7 Districts of North Carolina.

8 THE COURT: You are outstanding with your  
9 recollection of names.

10 MS. RANGARAJAN: Thank you, Your Honor.

11 THE COURT: Mr. Cooney, on behalf of the defendants?

12 MR. COONEY: I'm going to have to check my driver's  
13 license for mine after that performance, Your Honor.

14 THE COURT: Yes, sir.

15 MR. COONEY: I'm Jim Cooney with Womble Carlyle and  
16 I'm assisted at counsel table by Karen Popp with Sidley and  
17 Austin in Washington, D.C., by Claire Rauscher of Womble  
18 Carlyle, and by Dave Buente of Sidley and Austin again of  
19 Washington, D.C.

20 THE COURT: Very good. Thank you, Mr. Cooney.

21 All right. We will begin the arraignment process of  
22 these three different corporations, and I'm going to inquire of  
23 Mr. Cooney: Who will be representing the companies today?

24 MR. COONEY: Ms. Julia Janson, Your Honor.

25 THE COURT: All right. Ms. Janson, will you please

1 stand, ma'am, for a moment.

2 Madam Clerk, will you administer an oath to  
3 Ms. Janson.

4 THE CLERK: Place your left hand on the bible and  
5 raise your right hand. Please state your name.

6 MS. JANSON: Julia Janson.

7 THE COURT: Do you swear that the answers you will  
8 make to the Court will be the truth to the best of your  
9 knowledge and understanding, so help you God?

10 MS. JANSON: I do.

11 THE CLERK: Thank you.

12 THE COURT: All right. There's going to be a whole  
13 series of questions for you, Ms. Janson, as the representative  
14 of your companies. I would like you to remain standing for a  
15 few minutes and we'll get some of this out of the way, but then  
16 it will be too long for you to have to stand and so I'll permit  
17 you to be seated later on.

18 MS. JANSON: I appreciate that.

19 THE COURT: Let me begin by asking you, now that you  
20 have been sworn, for the record, please state your full name.

21 MS. JANSON: My full name is Julia Smoot Janson.

22 THE COURT: And what is your position with the  
23 defendant Duke Energy Progress?

24 MS. JANSON: My position with Duke Energy Progress is  
25 I am a Director of the company as well as Executive



1 Vice President, Chief Legal Officer and Corporate Secretary.

2 THE COURT: And what is your position with the  
3 defendant Duke Energy Business Services?

4 MS. JANSON: My positions with Duke Energy Business  
5 Services are as President and Chief Legal Officer.

6 THE COURT: And what are your positions with the  
7 entity Duke Energy Carolinas?

8 MS. JANSON: Executive Vice President, Chief Legal  
9 Officer and Corporate Secretary.

10 THE COURT: Ms. Janson, are you 18 years of age or  
11 older?

12 MS. JANSON: I am.

13 THE COURT: Thank you. How far did you go in school?

14 MS. JANSON: I have a J.D.

15 THE COURT: Are you currently or have you recently  
16 been treated for any issues of a medical nature, other than  
17 routine matters?

18 MS. JANSON: No, sir.

19 THE COURT: The real top question we have to ask  
20 routine defendants, have you been treated for any mental  
21 illness in recent months, and I forego that with you.

22 In the past 24 hours have you taken any medicine of  
23 any kind or any other matters that might impair your ability to  
24 understand these proceedings?

25 MS. JANSON: No, Your Honor.

1 THE COURT: Do you understand what is going on today?

2 MS. JANSON: I do.

3 THE COURT: Mr. Cooney, do you have any reason to  
4 doubt Ms. Janson's competency or her ability to understand what  
5 is happening in court today?

6 MR. COONEY: I have none, Your Honor.

7 THE COURT: Ms. Rangarajan, does the Government have  
8 any reason to doubt Ms. Janson's competency or her ability to  
9 understand these proceedings?

10 MS. RANGARAJAN: No, Your Honor.

11 THE COURT: The Court finds as a fact that Ms. Julia  
12 Janson is competent to appear, understand the nature of these  
13 proceedings and to assist the Court in these matters.

14 Now you may be seated for a moment, Ms. Janson and  
15 Mr. Cooney.

16 If at any time, Ms. Janson, you do not understand a  
17 question, or even you, Mr. Cooney, that I ask, do not try to  
18 answer it, just tell me you don't understand and I'll try to  
19 rephrase, and if at any time you want to talk to each other,  
20 you may do so.

21 Now, Counsel, Mr. Cooney, do we have a corporate  
22 resolution authorizing Ms. Janson to enter pleas on behalf of  
23 Duke Energy Progress?

24 MR. COONEY: We do, Your Honor. We have a resolution  
25 in connection with the Memorandum of Plea Agreement and another

1 resolution specifically authorizing Ms. Janson to enter pleas  
2 today before the Court.

3 THE COURT: First as to Duke Energy Progress, has  
4 every member of the Board of Directors of Duke Energy Progress  
5 affixed his or her signature to this resolution before the  
6 Court authorizing Ms. Janson to enter a plea on behalf of the  
7 corporation?

8 MR. COONEY: They have, Your Honor.

9 THE COURT: Are you satisfied that the corporate  
10 charter and bylaws of Duke Energy Progress empower the Board of  
11 Directors to authorize this person to enter a plea of guilty to  
12 a criminal charge against the corporation?

13 MR. COONEY: I am, Your Honor.

14 THE COURT: And are you satisfied that Ms. Janson has  
15 the authority on behalf of Duke Energy Progress to enter pleas  
16 today?

17 MR. COONEY: Yes, I am, and she does.

18 THE COURT: The same questions as to Duke Energy  
19 Carolinas, and I know that's repetitive, but, see, we have to  
20 make a record of all these matters. Has every member or  
21 manager of Duke Energy Carolinas affixed his or her signature  
22 to the resolution authorizing Ms. Janson to enter pleas on  
23 behalf of that entity?

24 MR. COONEY: They have, Your Honor.

25 THE COURT: And are you satisfied that the

1 organizational and governing documents of Duke Energy Carolinas  
2 empower the members or managers to authorize a person to enter  
3 a guilty plea to criminal charges against that business entity?

4 MR. COONEY: I am, Your Honor.

5 THE COURT: And finally, are you satisfied Ms. Janson  
6 has the authority to act on behalf of Duke Energy Carolinas in  
7 entering pleas today?

8 MR. COONEY: I am, Your Honor, and she does.

9 THE COURT: And finally on this issue as to Duke  
10 Energy Business Services, has every member or manager of Duke  
11 Energy Services affixed his or her signature onto this  
12 resolution before the Court authorizing Ms. Janson to enter  
13 pleas on behalf of that entity?

14 MR. COONEY: It has, Your Honor, and if I can explain  
15 that, Duke Energy Business Services is a sole member LLC, the  
16 sole member of that LLC is in turn a corporation, that  
17 corporation has authorized Duke Energy Business Services, LLC  
18 to enter and in addition that corporation has authorized  
19 Ms. Janson to enter a plea on behalf of Duke Energy Business  
20 Services, LLC.

21 THE COURT: And you're satisfied that the  
22 organization and governing documents of Business Services  
23 empower those spokespersons to authorize Ms. Janson to enter a  
24 guilty plea to the charges against that business entity?

25 MR. COONEY: I am, Your Honor.

1           THE COURT: And finally, are you satisfied Ms. Janson  
2 does in fact have the authority to act on behalf of Duke Energy  
3 Business Services in entering pleas today?

4           MR. COONEY: I am, Your Honor, and she does.

5           THE COURT: Counsel for the Government, do you have  
6 any reason to doubt that Ms. Janson is competent and has the  
7 proper authority to act on behalf of each of the three  
8 defendant corporations that are before the Court today?

9           MS. RANGARAJAN: Your Honor, the Government has no  
10 reason to doubt her ability and competency to enter the pleas  
11 in the plea agreements.

12           THE COURT: All right. The Court finds as a fact  
13 that Julia Janson has the authority of the defendant  
14 corporations, Duke Energy Progress, Duke Energy Carolinas and  
15 Duke Energy Business, to act on their behalf and enter pleas  
16 today.

17           Mr. Cooney, you may present the clerk, Madam Clerk,  
18 your documents.

19           MR. COONEY: Thank you, Your Honor.

20           THE COURT: Right now in the routine business of the  
21 Court I must summarize the charges in these matters, and I  
22 begin with Duke Energy Progress and I'll be asking questions of  
23 you, Ms. Janson, under the authority previously explained.

24           You may continue to be seated and you might need the  
25 microphone in front of you.

1 Have you been furnished with a copy of all the  
2 charges, all of which are misdemeanors in the Federal Court  
3 System, contained in these criminal informations against the  
4 defendant Duke Energy Progress?

5 MS. JANSON: I have.

6 THE COURT: Now, I have to summarize the charge  
7 that's before the Court from the Eastern District of  
8 North Carolina as to Duke Energy Progress, and that is just a  
9 one count charge that there was negligent discharge of  
10 pollutants from a point source or aiding and abetting between  
11 the time frame of October 1, 2010 and December 30, 2014 in  
12 violation of the Clean Water Act.

13 Second, as to the charges in the Middle District of  
14 North Carolina that are before the Court, that's docket  
15 5:15-CR-67, Counts 5 and 6 are against Duke Energy Progress,  
16 and Count 5 charges failure to maintain treatment system  
17 equipment and related appurtenances and aiding and abetting  
18 between the time period January 1, 2012 and January 24, 2014,  
19 in violation of the Clean Water Act statutes.

20 And finally in the Middle District case as to  
21 Duke Energy Progress, Count number 6, failure to maintain  
22 treatment system equipment and related appurtenances and/or  
23 aiding and abetting between the same dates in violation of the  
24 Clean Water Act.

25 And finally as to the Western District of



1 North Carolina, criminal information, count number 2 as to Duke  
2 Energy Progress, negligent discharge of pollutants from a point  
3 source or aiding and abetting between May 31, 2011 and  
4 December 30, 2014.

5 Now, each of these offenses carries the following  
6 penalty: Not more than five years probation; the greater  
7 of: Not less than \$2500 nor more than \$25,000 per day of  
8 violation; \$200,000; or twice the gross gain or loss; a  
9 \$125 special assessment as to each count; and restitution, if  
10 applicable.

11 Ms. Janson, do you understand the charges against the  
12 defendant corporation, this is Duke Energy Progress, and do you  
13 understand the maximum punishments that could apply to this  
14 particular corporation?

15 MS. JANSON: I do.

16 THE COURT: If imposed by the Court, is the defendant  
17 corporation, Duke Energy Progress, financially able to pay a  
18 substantial fine and make full restitution to any victim of the  
19 offenses in these cases?

20 MS. JANSON: It is, Your Honor.

21 THE COURT: All right. Now, as to Duke Energy  
22 Carolinas, Limited Liability Corporation, have you been  
23 furnished a copy of all of the charges, all of which again are  
24 misdemeanors, contained in the criminal information against  
25 Duke Energy Carolinas?

1 MS. JANSON: I have.

2 THE COURT: I summarize by saying in the Middle  
3 District of North Carolina there are four counts as to Duke  
4 Energy Carolinas: Negligent discharge of pollutants from a  
5 point source or aiding and abetting, February 2, 2014 to  
6 February 8, 2014; failure to maintain treatment systems and  
7 equipment and related appurtenances or aiding and abetting  
8 through the dates January 1, 2012, February 2, 2014; third  
9 count, negligent discharge of pollutants again, for a different  
10 date and time, that is January 1, 2012 to February 21, 2014;  
11 and finally Count 4 in the Middle District as to Carolinas  
12 Corporation, failure to maintain treatment systems and related  
13 appurtenances on the dates January 1, 2012 to February 6, 2014.  
14 Correction, that's Middle District of North Carolina. That's  
15 the summary of the charges.

16 And finally as to the Western District of  
17 North Carolina, one count as to this particular defendant,  
18 Duke Energy Carolinas, negligent discharge of pollutants from a  
19 point source and aiding and abetting between November 8, 2012  
20 and December 30, 2014.

21 Now, each of these offenses, as I've said before,  
22 carry not more than five years probation; the greater of not  
23 less than \$2500 or more than \$25,000 per day of violation;  
24 \$200,000; or twice the gross gain or loss; and a \$125 special  
25 assessment.

1           Do you understand the charges against the defendant  
2 business entity Duke Energy Carolinas and the maximum  
3 punishments that I've just stated?

4           MS. JANSON: I do, Your Honor.

5           THE COURT: If imposed by the Court, is the defendant  
6 corporation Duke Energy Carolinas financially able to pay a  
7 substantial fine and make full restitution to any victim of the  
8 offenses in that case?

9           MS. JANSON: It is.

10          THE COURT: Now finally, in the third case,  
11 Duke Energy Business Services, have you been furnished a copy  
12 of the charges, all of which are misdemeanors, as relates to  
13 Duke Energy Business Services?

14          MS. JANSON: I have, Your Honor.

15          THE COURT: And as to the case in the Eastern  
16 District of North Carolina there is one count, negligent  
17 discharge of pollutants from a point source or aiding and  
18 abetting, between the times of October 1, 2010 and December 30,  
19 2014, in violation of the Clean Water Act.

20          As to the Middle District of North Carolina there are  
21 six charges as it relates to Duke Energy Business Services, and  
22 I have -- I'll try to summarize them as quickly as possible.  
23 Count 1 is negligent discharge during the period February 2,  
24 2014 to February 8, 2014; failure to maintain treatment system  
25 equipment and related appurtenances, January 1, 2012 to

1 February 2, 2014; negligent discharge from a point source in  
2 Count 3, January 1, 2012 to February 21, 2014; count number 4  
3 in the Middle District, failure to maintain treatment system  
4 equipment and related appurtenances between January 1, 2012 and  
5 February 6, 2014; in Count 5 failure to maintain treatment and  
6 related appurtenances between January 1, 2012 and January 24,  
7 2014; and finally Count 6 in the Middle District, failure to  
8 maintain treatment system equipment and related appurtenances  
9 between January 1, 2012 and January 24, 2014.

10 Mr. Court Reporter, can you keep up with me?

11 COURT REPORTER: Yes.

12 THE COURT: Thank you.

13 And finally as to the charges in the Western District  
14 as relates to Business Services, two counts, the negligent  
15 discharge of pollutants from a point source or aiding and  
16 abetting between November 8, 2012 and December 30, 2014; and  
17 count number 2 in the Western District, negligent discharge of  
18 pollutants from a point source, aiding and abetting, between  
19 May 31, 2011 and December 30 in 2014.

20 Each offense carries the same penalties that I  
21 previously stated for the other two corporations, probation of  
22 not more than five years; the greater fine of 2500 but not more  
23 than 25,000 per day; 200,000; or twice the gross gain or loss;  
24 and a \$125 special assessment.

25 Ms. Janson, do you understand the charges against the

1 entity Duke Energy Business Services?

2 MS. JANSON: I do, Your Honor.

3 THE COURT: And if imposed by the Court is Duke  
4 Energy Business Services financially able to pay a substantial  
5 fine and make full restitution to any victims of the offense?

6 MS. JANSON: It is.

7 THE COURT: Thank you, ma'am.

8 I'd point out that the Eastern District of North  
9 Carolina is comprised of the 44 counties basically from  
10 Wake County going straight up to the Virginia line and from  
11 Wake County going down through Harnett County, Cumberland  
12 County, Robeson County, everything back to the coast. That has  
13 comprised the Eastern District of North Carolina for more than  
14 75 years. The Middle District of North Carolina is comprised  
15 of the counties from Durham to Winston Salem basically. And  
16 the Western District of North Carolina is comprised of the  
17 counties again basically from Charlotte up through the  
18 mountains all the way to the Tennessee line. So there are  
19 three Federal Court districts in the State of North Carolina.

20 There are 94 Federal Court districts in the  
21 United States Court System, that includes 89 Federal Districts  
22 among the 50 states and then there are five Federal Court  
23 districts including the District of Puerto Rico, the District  
24 of Guam, the District of the Virgin Islands, the District of  
25 the Mariana Islands and the District of Columbia, and that's

1 how our Federal Court system -- for those of you who are not  
2 attorneys and don't know about this. So our issues today just  
3 involve these three districts.

4 Now, I'm going to take up the Rule 44 colloquy.

5 Ms. Janson, as you know, each of the three defendant  
6 corporations or business entities in this matter are  
7 represented by the same attorneys. Now, I'm required by law to  
8 advise you as the representative of these corporations that the  
9 United States Constitution gives every defendant, even a  
10 corporation, the right to effective assistance of a counsel.  
11 When one lawyer represents two or more defendants in a case,  
12 the lawyer may have trouble representing all the defendants  
13 with the same fairness. This is a conflict of interest that  
14 denies the defendant the right to effective assistance of  
15 counsel. Such conflicts are always a potential problem because  
16 different defendants may have different degrees of involvement,  
17 and each defendant, according to our Constitution and the  
18 interpretations thereof, has the right to a lawyer who  
19 represents only it.

20 Ms. Janson, did you receive a document as to each  
21 defendant's -- each defendant which lists some of the various  
22 ways in which dual representation might work to a defendant's  
23 disadvantage?

24 MS. JANSON: I did, Your Honor.

25 THE COURT: And have you had a chance to review those



1 documents?

2 MS. JANSON: I have.

3 THE COURT: Have you had a chance to discuss the  
4 potential disadvantages with the attorneys who represent the  
5 defendants in these cases?

6 MS. JANSON: I have, Your Honor.

7 THE COURT: And do you want me to read out loud these  
8 disadvantages or have you read and understand them?

9 MS. JANSON: I have read and understand them.

10 THE COURT: Do you have any questions of me regarding  
11 these potential issues?

12 MS. JANSON: I do not, Your Honor.

13 THE COURT: Do you wish to speak with any other  
14 independent lawyer about the wisdom of waiving the right to  
15 separate counsel?

16 MS. JANSON: I do not, Your Honor.

17 THE COURT: Mr. Cooney, please advise the Court  
18 regarding your ability and your colleagues' to effectively  
19 represent all three defendants before the Court today, and do  
20 you have any reason to believe that a conflict in these matters  
21 will prevent you from providing effective assistance of counsel  
22 or causes prejudice to any of the defendants?

23 MR. COONEY: Your Honor, we've discussed this  
24 thoroughly with each other and also with our clients. We  
25 believe very strongly it's to the clients' advantage to be

1 represented by single counsel, and I have no question about our  
2 ability to render Constitutionally effective assistance for  
3 each of these defendants in these cases.

4 THE COURT: Ms. Karen Popp, do you agree with the  
5 statements made by Mr. Cooney?

6 MS. POPP: Yes, Your Honor.

7 THE COURT: Ms. Claire Rauscher?

8 MS. RAUSCHER: I do, Your Honor.

9 THE COURT: And finally David Buente, do you agree  
10 with Cooney?

11 MR. BUENTE: Of course I agree with Mr. Cooney,  
12 Your Honor.

13 THE COURT: Ms. Janson, having been advised of each  
14 defendant's right to effective representation and having  
15 assured the Court that you, one, understand the potential  
16 conflict of interest; second, understand the potential perils  
17 of dual representations; and third, having discussed this  
18 matter with the attorneys for the defendants, do not wish to  
19 discuss this matter with separate independent counsel; on  
20 behalf of Duke Energy Progress, do you hereby voluntarily waive  
21 the Sixth Amendment right of protection of separate counsel?

22 MS. JANSON: I do, Your Honor.

23 THE COURT: And have you also signed the waiver  
24 indicating the same?

25 MS. JANSON: I have.

1           THE COURT: And on behalf of Duke Energy Carolinas,  
2 do you hereby voluntarily waive the Sixth Amendment protection  
3 of separate counsel and have you signed the waiver form?

4           MS. JANSON: I do and I have.

5           THE COURT: And finally as to Duke Energy Business,  
6 do you hereby voluntarily waive the Sixth Amendment protection  
7 of counsel and have you signed that waiver?

8           MS. JANSON: I do and I have, Your Honor.

9           THE COURT: All right. Mr. Cooney, do we have those  
10 waivers or have you already handed them up?

11          MR. COONEY: Your Honor, I have them here and I'll be  
12 happy to hand them up to the Clerk.

13          THE COURT: Let's go ahead and do that. Folks need  
14 a little break from me.

15          All right. The charges. I'm going to now advise the  
16 defendants of certain rights afforded them, and this recitation  
17 will be intended for the benefit of the representative of these  
18 defendants, to wit Ms. Janson.

19          When I ask you, Ms. Janson, whether you understand  
20 these rights, an affirmative answer shall indicate to me that  
21 you on behalf of each Duke Energy -- strike that. Duke Energy  
22 Progress, number two, Duke Energy Carolinas, and Duke Energy  
23 Business Services, understand these rights, so I won't have to  
24 repeat it three times.

25          So I begin by saying: Do you understand and agree to

1 proceed in this way? When you answer yes or no to one, it's as  
2 to all three. Correct?

3 MS. JANSON: I agree, Your Honor.

4 THE COURT: All right. Do you and all of your  
5 respective corporate officers and directors or members and  
6 managers understand that the defendants have a right to plead  
7 not guilty to the charges presented?

8 MS. JANSON: We do.

9 THE COURT: And do you and all of your respective  
10 corporation officers and directors and members and managers  
11 understand that the corporation or business entity has a right  
12 to a trial by jury and the assistance of counsel at such trial?

13 MS. JANSON: We do, Your Honor.

14 THE COURT: And do you and these same persons  
15 understand that you have a right to confront and cross-examine  
16 witnesses at such a trial?

17 MS. JANSON: We do.

18 THE COURT: And do you understand, and on behalf of  
19 these other folks, that the defendant corporations would not  
20 have to prove that they are innocent and that the corporation  
21 or business entity would be presumed to be innocent at such a  
22 trial?

23 MS. JANSON: We do, Your Honor.

24 THE COURT: And do you understand, and the corporate  
25 officers and directors and members and managers, that at such a

1 trial the Government would have to prove that the corporation  
2 or business entity is guilty beyond a reasonable doubt?

3 MS. JANSON: We understand, Your Honor.

4 THE COURT: And do you understand that these same  
5 folks have the right -- you would have the right to testify  
6 through its directors, officers, members, managers, agents,  
7 employees or otherwise at such a trial?

8 MS. JANSON: We do.

9 THE COURT: And finally -- not quite finally, but  
10 we're getting there -- do you on behalf of the corporation  
11 officers and directors and members understand that if I accept  
12 a plea or pleas of guilty today, the corporation or business  
13 entity will have forfeited its right to a trial and the other  
14 rights I've just described?

15 MS. JANSON: We understand, Your Honor.

16 THE COURT: Do you and all these folks understand  
17 that today I will proceed ultimately to enter judgment of  
18 guilty and sentence the corporations or business entity on the  
19 basis of these guilty pleas?

20 MS. JANSON: We do.

21 THE COURT: And finally, do you and your respective  
22 corporation officers, directors, members and managers  
23 understand that the Court may order the corporation or business  
24 entity to make restitution to victims of the offenses?

25 MS. JANSON: We do, Your Honor.

1 THE COURT: Okay. Plea agreements.

2 Before me are three plea agreements that have been  
3 filed in this court. I've obviously seen them before, but  
4 these are the original and official ones, and I'm going to  
5 begin with the plea agreement between the Government and the  
6 defendant Duke Energy Progress.

7 Now, the Duke Energy Progress plea agreement has  
8 51 pages and appears to be signed by you, Ms. Janson, on behalf  
9 of the Duke Energy Corporation as well as your counsel and many  
10 of the Government counsel. Did you in fact sign this  
11 plea agreement on behalf of Duke Energy Progress, Ms. Janson?

12 MS. JANSON: I did, Your Honor.

13 THE COURT: Did you have an opportunity to read and  
14 to discuss this plea agreement with your corporate attorneys  
15 and did you in fact do so before you signed it on behalf of  
16 Duke Energy Progress?

17 MS. JANSON: I did.

18 THE COURT: And does the plea agreement represent in  
19 its entirety any and all agreements Duke Energy Progress has  
20 with the United States and the United States Attorney?

21 MS. JANSON: Yes, Your Honor.

22 THE COURT: Do you understand the terms, the  
23 language, the words, the sentences, even any legal phrases that  
24 are used in the plea agreement?

25 MS. JANSON: I do.



1           THE COURT: And it's my understanding that you  
2 in fact are a lawyer.

3           MS. JANSON: I am.

4           THE COURT: Did you discuss with counsel the appeal  
5 waiver contained in paragraph 3(e) on page 10 and do you  
6 understand that by entering into this plea agreement and  
7 entering a plea of guilty on behalf of Duke Energy Progress you  
8 may be giving up the corporation's right to appeal or  
9 collaterally attack all or any part of any conviction or  
10 sentence imposed in this case?

11          MS. JANSON: I did discuss and I do understand.

12          THE COURT: Do you have any questions about the  
13 plea agreement in Duke Energy Progress?

14          MS. JANSON: I do not, Your Honor.

15          THE COURT: Other than what's in this plea agreement,  
16 has anyone made any other or different promises to you or to  
17 the corporation in order to get Duke Energy Progress to plead  
18 guilty?

19          MS. JANSON: No, sir.

20          THE COURT: Has anyone threatened the corporation in  
21 any way in order to persuade Duke Energy Progress to either  
22 accept the plea agreement or to plead guilty?

23          MS. JANSON: They have not, Your Honor.

24          THE COURT: Is Duke Energy pleading guilty of its own  
25 free will because it is in fact guilty?

1 MS. JANSON: It is.

2 THE COURT: And do you understand that if I accept  
3 the corporation's plea of guilty today Duke Energy Progress  
4 can't come back later and ask for a trial?

5 MS. JANSON: I do.

6 THE COURT: Have you answered all of my questions  
7 truthfully?

8 MS. JANSON: I have.

9 THE COURT: Do you need any more time to think about  
10 the plea or discuss the plea with counsel before entering a  
11 plea on behalf of Duke Energy Progress?

12 MS. JANSON: I do not, Your Honor.

13 THE COURT: Now Duke Energy Carolinas.

14 This plea agreement has 54 pages and appears to be  
15 signed by you on behalf of Duke Energy Carolinas, by your  
16 attorneys and by some eight other lawyers on behalf of the  
17 prosecution by the Government. Did you in fact sign this on  
18 behalf of Duke Energy Carolinas?

19 MS. JANSON: I did, Your Honor.

20 THE COURT: Did you have an opportunity to read and  
21 discuss this plea agreement with your attorney before you  
22 signed it?

23 MS. JANSON: I did.

24 THE COURT: Does the plea agreement represent in its  
25 entirety all agreements between Duke Energy and the

1 United States and the U.S. Attorneys?

2 MS. JANSON: It does.

3 THE COURT: Did you understand the terms, the words,  
4 the sentences, before you signed it?

5 MS. JANSON: I did, Your Honor.

6 THE COURT: Did you discuss with counsel the appeal  
7 waiver contained in paragraph 3(e) on page 11 of this  
8 plea agreement?

9 MS. JANSON: I did.

10 THE COURT: And did you have any questions about the  
11 plea agreement?

12 MS. JANSON: No, sir.

13 THE COURT: And do you understand that that plea  
14 agreement may prevent you or the corporation from raising any  
15 appeal or any collateral attack?

16 MS. JANSON: I understand, Your Honor.

17 THE COURT: Other than what's in the plea agreement,  
18 has anyone made any other or different promises to get Duke  
19 Energy Carolinas to plead guilty?

20 MS. JANSON: They have not.

21 THE COURT: Has anyone threatened the business entity  
22 in any way to persuade Duke Energy Carolinas to either accept  
23 the plea agreement or to plead guilty?

24 MS. JANSON: No, sir.

25 THE COURT: Is in fact Duke Energy Carolinas pleading

1 guilty of its own free will because it is in fact guilty?

2 MS. JANSON: It is.

3 THE COURT: Do you understand that if I accept this  
4 entity's plea today, Duke Energy can't come back later --  
5 Duke Energy Carolinas can't come back later and ask for a  
6 trial?

7 MS. JANSON: I understand.

8 THE COURT: Have you answered all these questions  
9 truthfully?

10 MS. JANSON: I have.

11 THE COURT: Do you need any more time to think about  
12 the plea or discuss it further with counsel?

13 MS. JANSON: I do not, Your Honor.

14 THE COURT: Finally Duke Energy Business Services.  
15 This plea agreement is 45 pages long and appears to  
16 be signed by you on behalf of Duke Energy Business Services and  
17 by your attorney and by eight lawyers or more on behalf of the  
18 prosecuting office of the U.S. Government. Did you in fact  
19 sign the Duke Energy Business Services plea agreement?

20 MS. JANSON: I did, Your Honor.

21 THE COURT: Did you have an opportunity to read and  
22 discuss it with your lawyer?

23 MS. JANSON: I did.

24 THE COURT: Does it represent in its entirety all  
25 agreements between Duke Energy Business and the United States?

1 MS. JANSON: It does.

2 THE COURT: Did you understand the terms, the  
3 language, the words, the sentences, legal phrases in the  
4 plea agreement?

5 MS. JANSON: I do understand, Your Honor.

6 THE COURT: Did you discuss with counsel the appeal  
7 waiver contained on page 5, paragraph 3D, and do you understand  
8 that this may prevent the corporation from any appeal or  
9 collateral attack on any part of the conviction?

10 MS. JANSON: I did discuss and I do understand.

11 THE COURT: Do you have any questions about the  
12 Duke Business Service plea agreement?

13 MS. JANSON: I do not.

14 THE COURT: Has anyone threatened you or the business  
15 entity in any way to persuade Duke Energy Business to either  
16 accept the plea or plead guilty?

17 MS. JANSON: They have not.

18 THE COURT: Is Duke Energy pleading guilty of its own  
19 free will because it is in fact guilty?

20 MS. JANSON: It is.

21 THE COURT: Do you understand that if I accept the  
22 plea of Duke Energy Business today you can't come back later  
23 for a trial?

24 MS. JANSON: I understand.

25 THE COURT: Have you answered all of my questions in

1 this case truthfully?

2 MS. JANSON: I have.

3 THE COURT: Do you need any more time to think about  
4 the plea or discuss the plea with your counsel?

5 MS. JANSON: I do not.

6 THE COURT: All right. The Court is satisfied --  
7 does the United States have any objection to the Court  
8 approving these plea agreements?

9 MS. RANGARAJAN: No objection from the Government,  
10 Your Honor.

11 THE COURT: Let the record reflect the Court has  
12 executed the approval of the plea agreements in the three cases  
13 before the Court, Duke Energy Business, Duke Energy Progress  
14 and Duke Energy Carolinas.

15 All right. I'm now going to ask for the entry of  
16 plea and I'm going to begin -- this would be for each of the  
17 three different criminal informations in the three districts,  
18 and I'll begin with Case Number 5:15-CR-62, which is the  
19 Eastern District of North Carolina's charge.

20 All right. Ms. Janson, I'm going to ask you to stand  
21 now.

22 How does Duke Energy Progress plead to Count 1 of the  
23 criminal information in the Eastern District of North Carolina,  
24 that's Case Number 62?

25 MS. JANSON: Guilty.

1           THE COURT: And how does Duke Energy Business  
2 Services, LLC plead to Count 1 of the criminal information in  
3 the Eastern District?

4           MS. JANSON: Guilty, Your Honor.

5           THE COURT: Did Duke Energy Progress and Duke Energy  
6 Business Services, as charged in Count 1, by and through their  
7 employees acting within the scope of their employment,  
8 negligently discharge pollutants from a point source into a  
9 water of the United States in violation of certain aspects of  
10 the Clean Water Act? Did they do that?

11          MS. JANSON: Yes, sir.

12          THE COURT: And did they by and through their  
13 employees fail to exercise the degree of care that someone of  
14 ordinary prudence would have exercised in the same circumstance  
15 with respect to the discharge of coal ash and coal ash  
16 wastewater from an unpermitted drainage ditch at the Lee Steam  
17 Electric Plant in Goldsboro, North Carolina into the Neuse  
18 River? Did they do that?

19          MS. JANSON: Yes, Your Honor.

20          THE COURT: All right. Now, in the Middle District  
21 of North Carolina there are six counts, so this is going to  
22 take a little bit longer.

23                 How does Duke Energy Business Corporation -- strike  
24 that.

25                 How does Duke Energy Business Service Corporation

1 plead to Count 1 of the Middle District's Case Number, 67?

2 MS. JANSON: Guilty.

3 THE COURT: And how does Duke Energy Carolinas plead  
4 to Count 1 of the Middle District case?

5 MS. JANSON: Guilty, Your Honor.

6 THE COURT: All right. Did in fact in Count 1 Duke  
7 Energy Business and Duke Energy Carolinas, by and through their  
8 employees acting within the scope of their employment,  
9 negligently discharge pollutants from a point source into a  
10 water of the United States without a permit?

11 MS. JANSON: Yes.

12 THE COURT: And did Duke Energy Business Services and  
13 Duke Energy Carolinas by and through its employees fail to  
14 exercise the degree of care that someone of ordinary prudence  
15 would have exercised in the same circumstance with respect to  
16 the discharge of coal ash and coal ash wastewater through a  
17 48-inch storm pipe running beneath the primary ash basin at the  
18 Dan River Steam Station in Eden, North Carolina into the  
19 Dan River? Did they do that?

20 MS. JANSON: Yes, sir.

21 THE COURT: All right. That's Count 1. Now Count 2.

22 Count 2 also has Duke Energy Business Service and  
23 Duke Energy Carolinas. How does Duke Energy Business Service  
24 plead to Count 2 in the Middle District?

25 MS. JANSON: Guilty.



1 THE COURT: And how does Duke Energy Carolinas plead  
2 to Count 2 in the Middle District?

3 MS. JANSON: Guilty, Your Honor.

4 THE COURT: And did both of these entities, by and  
5 through their employees acting within the scope of their  
6 employment, negligently violate a condition of its permit in  
7 that they failed to exercise the due care that someone of  
8 ordinary prudence would have exercised with respect to the  
9 maintenance and inspection of the 48-inch storm pipe running  
10 beneath the primary ash basin in Dan River in violation of  
11 Part II, Standard Conditions for NDPES permits? Did they do  
12 that?

13 MS. JANSON: Yes, Your Honor.

14 THE COURT: All right. That's Count 2. Now Count 3.  
15 Count 3 charges Business Services and Energy  
16 Carolinas. How does Duke Energy Business Services plead to  
17 Count 3, negligent discharge of pollutants from a point source,  
18 in the Middle District?

19 MS. JANSON: Guilty, Your Honor.

20 THE COURT: And how does Duke Business Services plead  
21 to Count 3?

22 MS. JANSON: Guilty.

23 THE COURT: Strike that. I'm still on Count 3, or am  
24 I on Count 4? Business Services twice. I'm still on Count 3,  
25 it charges Business Services and Duke Energy Carolinas, and as

1 to both -- as to Business Services, you've already -- you  
2 said -- how do you plead?

3 MR. COONEY: Guilty, Your Honor.

4 THE COURT: As to Energy Carolinas how do you plead?

5 MS. JANSON: Guilty.

6 THE COURT: And did they negligently discharge  
7 pollutants from a point source or aiding and abetting in  
8 Count 3?

9 MS. JANSON: Yes, sir.

10 THE COURT: All right. Now we're going to Count 4,  
11 failure to maintain treatment systems, and that charges Duke  
12 Energy and Business and Corporate -- and Carolinas, Count 4.

13 How does Business Services plead to Count 4?

14 MS. JANSON: Guilty, Your Honor.

15 THE COURT: And how does Energy Carolinas plead to  
16 Count 4?

17 MS. JANSON: Guilty.

18 THE COURT: And did they, as charged in Count 4, fail  
19 to maintain treatment systems and related appurtenances, as set  
20 out in the bill between January 1st, 2012 and February 21,  
21 2014?

22 MS. JANSON: Yes.

23 THE COURT: Count 5, failure to maintain treatment  
24 systems and related appurtenances, it charges Business Services  
25 and Energy Progress this time.

1           Now, how do you plead on Count 5 as to Duke Energy  
2 Business Services?

3           MS. JANSON: Guilty, Your Honor.

4           THE COURT: And how do you plead on Count 5 as to  
5 Duke Energy Progress?

6           MS. JANSON: Guilty.

7           THE COURT: And did Duke Energy Progress and Duke  
8 Energy Business Services, as charged in Count 5, between  
9 January 1, 2012 and January 24, 2014, in the Middle District of  
10 North Carolina, by and through its employees, fail to exercise  
11 the degree of care that someone with ordinary prudence would  
12 have exercised in the same circumstance with respect to the  
13 inspection of the risers within the 1978 coal ash basin at  
14 Cape Fear Electric Station in Moncure, North Carolina?

15          MS. JANSON: Guilty.

16          THE COURT: And finally Count 6. We're getting  
17 there. Just bear with us.

18          How does Duke Energy Business Services plead to  
19 Count 6, failure to maintain treatment system equipment?

20          MS. JANSON: Guilty.

21          THE COURT: All right. How does Duke Energy Progress  
22 plead to Count Number 6 in Case Number 67 in the Middle  
23 District?

24          MS. JANSON: Guilty, Your Honor.

25          THE COURT: And did these corporations, acting within

1 the -- through their employees, acting within the scope of  
2 their employment, negligently violate a condition of its permit  
3 with respect to the maintenance and inspection of the riser  
4 within the 1985 coal ash basin at Cape Fear Electric Steam  
5 Station in Moncure, North Carolina? Did it do that?

6 MS. JANSON: Yes, sir.

7 THE COURT: All right. That takes care of the Middle  
8 District. Now we're down to the last bill of information,  
9 which is the Western District of North Carolina, and it carries  
10 just two counts, Count 1, criminally negligent discharge of  
11 pollutants, charges Duke Energy Business and Duke Energy  
12 Carolinas. How do they plead to Count 1 of the charges from  
13 the Western District of North Carolina, Business Services,  
14 Ms. Janson?

15 MS. JANSON: Guilty, Your Honor.

16 THE COURT: And how does Duke Energy Carolinas plead  
17 to Count 1 of the Western District charge?

18 MS. JANSON: Guilty.

19 THE COURT: And did they as charged in Count 1  
20 between November 8, 2012 and December 30, 2014, in Gaston  
21 County, within the Western District of North Carolina, fail to  
22 exercise the degree of care that someone of ordinary prudence  
23 would have exercised as relates to coal ash and coal ash  
24 wastewater from an unpermitted and engineered drain from a coal  
25 ash basin at the Riverbend Steam Station in Catawba County?

1 Did they do that?

2 MS. JANSON: Yes, sir.

3 THE COURT: That's Count 1. And then Count 2 in the  
4 Western District charges Duke Energy Business Services and  
5 Duke Energy Progress, and that has to do with the Buncombe  
6 County issue of criminally negligent discharge of pollutants.  
7 How does Business Services plead to Count 2 of the 68 criminal  
8 information?

9 MS. JANSON: Guilty, Your Honor.

10 THE COURT: And how does Duke Energy Progress plead  
11 to Count 2 of the Western District's criminal information, the  
12 Buncombe County issue?

13 MS. JANSON: Guilty.

14 THE COURT: Now, did in fact Business Services and  
15 Duke Energy Progress, by and through their employees acting  
16 within the scope of their employment, fail to exercise the  
17 degree of care that someone of ordinary prudence would have  
18 exercised as relates to the unpermitted and engineered outfall  
19 from a coal ash basin at the Asheville Steam Electric  
20 Generating Plant through an unpermitted and engineered toe  
21 drain into the French Broad River, in violation of the National  
22 Pollutant Discharge Elimination System? Did in fact those  
23 employees do that?

24 MS. JANSON: Yes.

25 THE COURT: All right. You may be seated.

1 MS. JANSON: Thank you.

2 THE COURT: That concludes the receipt of the pleas  
3 in these cases. At this time the Court will receive the  
4 presentation of a factual basis from the Government, but before  
5 they do that -- I've got to receive the factual basis and then  
6 I'll see if Mr. Cooney has any objection, and after that I will  
7 be asking are there any victims, but I want to take a ten  
8 minute recess for the convenience of everybody.

9 Marshal, we're going to be in recess for let's say  
10 15 minutes and then we'll come back.

11 - - - - -

12 (Recess at 10:54 a.m. until 11:09 a.m.)

13 - - - - -

14 THE COURT: Now, at this time the Court will receive  
15 the presentation by the United States of a factual basis so I  
16 might have an independent factual basis for accepting the pleas  
17 of the corporations.

18 Let the record reflect the parties have filed a joint  
19 factual statement which is attached as an exhibit to each of  
20 the defendants' plea agreements in each of the three files.  
21 The Court hereby accepts that factual statement and  
22 incorporates it into the record as support for the factual  
23 basis for the defendants' pleas.

24 The Government may now provide a synopsis of all the  
25 salient facts it desires to present regarding what the

1 Government believes it could prove at a trial beyond a  
2 reasonable doubt as it relates to these charges that have been  
3 pled to.

4 Ms. Rangarajan, will you be presenting on behalf of  
5 the Government?

6 MS. RANGARAJAN: Thank you, Your Honor. Actually it  
7 will be myself and Ms. Pettus that will be presenting on behalf  
8 of the Government. We are splitting the charges, Your Honor.

9 THE COURT: I'll hear you in whatever order you  
10 desire.

11 MS. RANGARAJAN: Thank you, sir.

12 Your Honor, by way of summary, with respect to  
13 Counts 1 through 4 of Case Number 5:15-CR-67, which are the  
14 four charges arising under the Clean Water Act against  
15 Defendants Duke Energy Carolinas and Duke Energy Business  
16 Services in the Middle District for the negligent discharge of  
17 pollutants from two stormwater pipes running underneath the  
18 primary coal ash basin at the Dan River Steam Station and the  
19 negligent failure to maintain those stormwater pipes, the  
20 evidence at trial would show as follows: That on February 2nd,  
21 2014, a portion of the 48-inch stormwater pipe running  
22 underneath the primary ash basin at the Dan River Steam Station  
23 near Eden, North Carolina, in the Middle District of  
24 North Carolina, failed, resulting in the unpermitted discharge  
25 of approximately 27 million gallons of coal ash wastewater and

1 between 30,000 and 39,000 tons of coal ash into that Dan River.

2 The coal ash, sir, traveled more than 62 miles  
3 downriver from the Middle District of North Carolina through  
4 the Western District of Virginia and into the Kerr Reservoir,  
5 both in the Eastern Districts of North Carolina and Virginia.

6 Shortly after the spill, video camera inspections  
7 were conducted of the second pipe, the 36-inch stormwater pipe.  
8 That video camera inspection revealed that the second pipe had  
9 also deteriorated and was allowing coal ash wastewater to leak  
10 and be discharged into the Dan River.

11 So how did this happen? This happened through the  
12 failure of Duke Energy Carolinas and Duke Energy Business  
13 Services to exercise reasonable care in preventing the  
14 negligent discharge and maintaining that equipment.

15 By way of background, sir, Duke Energy Carolinas is a  
16 energy utility company that owns and operates several  
17 facilities in North Carolina, including the Dan River facility.  
18 Duke Energy Business Services is a subsidiary of Duke Energy  
19 Corporation and it is in essence a human resources company, it  
20 provides shared services to all of the utilities of Duke Energy  
21 Corporation nationwide. Some of those services include  
22 engineering services and environmental services.

23 The Dan River facility itself began operations in  
24 1949 and ceased operations in terms of coal combustion in 2012.  
25 As with all of Duke Energy coal combustion plants in



1 North Carolina, the Dan River facility has large earthen basins  
2 to store and treat the byproducts of coal combustion, such as  
3 fly ash and bottom ash. The Dan River itself has two such coal  
4 ash basins known as the primary ash basin and the Secondary Ash  
5 Basin. In 2013 the basins contained a combined total of  
6 roughly 232 million tons -- or million gallons of coal ash.

7           Underneath that primary ash basin were two stormwater  
8 pipes, the 48-inch stormwater pipe and the 36-inch stormwater  
9 pipe. The 48-inch stormwater pipe when originally installed  
10 was made of corrugated metal. In 1967, 1968, the primary ash  
11 basin was expanded and with it the stormwater pipe was  
12 expanded. During the time of that expansion the second portion  
13 of the 48-inch pipe was reinforced concrete. With respect to  
14 the 36-inch pipe, it was reinforced concrete pipe.

15           As set forth in more detail in the joint factual  
16 statement, as of 1979, engineers working for Duke Energy  
17 Carolinas, what was formally Duke Power Company, discovered and  
18 repaired major leaks in the 36-inch pipe and leaks in the  
19 48-inch, and over time Duke Energy Carolinas and its -- and  
20 Duke Power Company, which it's formerly known as, continued to  
21 receive warnings of potential failures or problems that could  
22 arise with these pipes, and those come in the form of  
23 independent consultant reports and other annual inspections  
24 performed internally by Duke Energy itself.

25           Pursuant to North Carolina law, Duke Energy Carolinas

1 hired consultants to perform five year inspections of its  
2 basin. The first inspection in 1981 cautioned that, quote, the  
3 culverts which pass beneath the primary basin may become  
4 potential problems, particularly as they age, and that report  
5 recommended that the flow of water through the pipes be  
6 quantitatively monitored to determine if there were leaks.

7 In the second inspection in 1986 the consultant noted  
8 that part of the 48-inch stormwater pipe was, quote,  
9 constructed of corrugated metal pipe, which would be expected  
10 to have less longevity of satisfactory service than the  
11 reinforced concrete pipes, and again recommended quantitative  
12 flow monitoring.

13 In 1991 -- in the 1991 inspection report,  
14 quantitative flow monitoring was again recommended for the  
15 stormwater pipes; however, at that time the independent  
16 consultant erroneously identified the entire length of that  
17 48-inch pipe as being reinforced concrete pipe, as opposed to  
18 it being part metal, part concrete.

19 During the review process, however, engineers with  
20 Duke Energy Carolinas/Duke Power Company did not correct the  
21 error. The error was repeated again in the 1998 independent  
22 consultant report, the 2001 independent consultant report and  
23 the 2007 consultant report, and it was not corrected in each of  
24 those reports by Duke Energy Carolinas or Duke Power Company  
25 employees. Some of those same engineers also failed to perform

1 the required annual inspections from the period of 2001 to 2007  
2 at those basins.

3 Now, despite the erroneous identification of the  
4 48-inch stormwater pipe as being reinforced concrete in these  
5 independent consultant reports, each of the Duke Energy  
6 Carolinas employees responsible for monitoring the flow from  
7 the stormwater pipes from 1999 to December, 2012, was aware  
8 that the 48-inch stormwater pipe was composed of corrugated  
9 metal. Some of those same employees though failed to perform  
10 monthly inspections for months or years at a time for various  
11 reasons as described in the joint factual statement.

12 As of February, 2014, sir, the record keeping and  
13 information sharing practices at Duke Energy Carolinas and  
14 Duke Energy Business Services did not ensure that critical  
15 information such as the fact that the 48-inch stormwater pipe  
16 was part metal and part concrete was communicated from  
17 employees with knowledge to engineers and employees making  
18 budget decisions. In addition, the engineers responsible for  
19 the Dan River facility had not sufficiently reviewed the  
20 records available to them, including original schematics and  
21 historical inspection reports, and therefore continued to  
22 operate under the erroneous belief that the 48-inch pipe was  
23 all reinforced concrete.

24 In May, 2011 a senior engineer and a program  
25 engineer, so two individuals at Duke Energy Business Services

1 assigned to work specifically on coal ash issues at the  
2 Dan River facility, recommended that in the upcoming budget,  
3 for the facility to include camera inspections of the four  
4 pipes in or near the coal ash basins. There are actually four  
5 pipes that run throughout the two basins, two underneath the  
6 primary basin, one that connects the primary to the secondary  
7 basin and then a pipe that goes from the secondary basin to the  
8 Dan River, the discharge pipe, and that is a permanent outfall,  
9 sir.

10 The estimated cost of the camera inspection for all  
11 four pipes was \$20,000, roughly \$5,000 per pipe. Duke Energy  
12 Carolinas did not provide the funding. When Duke Energy  
13 Carolinas did not provide the funding, the Dan River station  
14 manager called the Vice President in charge of approving the  
15 Dan River budget and told the Vice President three things:  
16 One, the Dan River facility needed the camera inspections;  
17 two, the facility did not know the conditions of the pipes; and  
18 three, if one of the pipes failed, there would be environmental  
19 harm. The Vice President did not change his mind. The camera  
20 inspections were not funded.

21 In May, 2012 the same two engineers again recommended  
22 camera inspections of the pipes because of -- and the reason  
23 they advanced was aging of the pipe systems. Duke Energy  
24 Carolinas again did not provide funding for the camera  
25 inspections. Had they done so, the actual composition of the

1 48-inch pipe would have been made known and the leaks would  
2 have been seen in the 36-inch pipe.

3           Ultimately, on February 2nd, 2014, a date well beyond  
4 the reasonable service life of corrugated metal pipe under  
5 similar conditions, a five foot long corrugated metal elbow  
6 joint within the 60-year-old corrugated metal section of the  
7 stormwater pipe, that 48-inch pipe, failed, resulting in the  
8 release of coal ash and coal ash wastewater into the Dan River.  
9 The combination of corrosion in the elbow joint and the weight  
10 of the coal ash basin over the elbow joint caused it to buckle,  
11 fail and be pushed through the end of the 48-inch stormwater  
12 pipe into the Dan River. The elbow joint was recovered from  
13 the Dan River itself later. The discharge continued until the  
14 outfall was plugged on February 8th, 2014.

15           The discharge from the 36-inch pipe caused by  
16 infiltration of wastewater, some spraying into the pipe in  
17 pressurized jets through the joints between sections of pipe  
18 and lengthwise cracks in some pipe sections, was stopped on  
19 February 21st, 2014. The evidence indicates that the  
20 discharge -- the evidence would indicate at trial that the  
21 discharge from the 36-inch pipe began at least as early as  
22 January 1st, 2012. The Dan River facility, sir, did not have a  
23 permit or authorization to discharge wastewater or coal ash  
24 from the primary ash basin through either the 48-inch or the  
25 36-inch stormwater pipe, and that would be some of the evidence

1 that the Government would be prepared to present at trial with  
2 respect to Counts 1 through 4 in Docket Number 5:15-CR-67, sir.

3 THE COURT: All right. Thank you, Ms. Rangarajan.

4 Ms. Pettus, I look forward to hearing from you,  
5 ma'am.

6 MS. PETTUS: Yes, Your Honor. Thank you.

7 With respect to Counts 5 and 6 --

8 THE COURT: Remind us of where you -- I know that  
9 Ms. Rangarajan is an Assistant U.S. Attorney in the Eastern  
10 District, and for the record state where you are employed.

11 MS. PETTUS: Of course, Your Honor. I'm a senior  
12 trial attorney with the Environmental Crimes Section of the  
13 Environment and Natural Resources of the U.S. Department of  
14 Justice, and I am located generally in Washington, D.C.

15 THE COURT: Thank you, ma'am. You may proceed.

16 MS. PETTUS: Thank you.

17 I will pick up starting with Counts 5 and 6 in the  
18 Middle District criminal information, Case Number 5:15-CR-67.  
19 Those counts charge violations of the Clean Water Act by  
20 Defendants Duke Energy Business Services and Duke Energy  
21 Progress for negligent failure to maintain equipment at coal  
22 ash basins at the Cape Fear Steam Electric Plant.

23 The evidence with respect to those counts would show  
24 as follows: The Cape Fear Steam Electric Plant is located near  
25 Moncure, North Carolina in the Middle District of

1 North Carolina. It is owned by Duke Energy Progress, which was  
2 formerly known as Progress Energy Carolinas. It is also a  
3 public utility company.

4 The Cape Fear plant has a total of five coal ash  
5 basins. The charges in this case are based on two of those  
6 coal ash basins, one which was constructed in or about 1978 and  
7 the other that was constructed in or about 1985. The 1978 coal  
8 ash basin had a storage capacity of nearly 287 million gallons  
9 and the 1985 coal ash basin had a storage capacity of nearly  
10 575 million gallons.

11 Duke Energy Progress stopped electric power  
12 generation at the Cape Fear plant in December, 2011.  
13 Essentially the plant was retired. At that point coal ash and  
14 wastewater simply remained in the 1985 and the 1978 coal ash  
15 basins. Each basin contained a structure known as a riser,  
16 that's essentially a vertical pipe that sits in the coal ash  
17 basin and allows the discharge of water from the basin under  
18 normal operation. So essentially as material settles out of  
19 the wastewater that has accumulated in the basin and the water  
20 level itself rises, it eventually overtops the top of the riser  
21 and trickles down and it's discharged in accordance with the  
22 permit for the facility.

23 From no later than January 1st, 2012 to January 24th,  
24 2014, Duke Energy Progress and Duke Energy Business Services  
25 failed to properly maintain those risers in the 1985 and 1978

1 coal ash basins.

2 As required by State law, Duke Energy Progress  
3 conducted and hired other companies to conduct annual  
4 inspections of the coal ash basins and also hired consultants  
5 to perform five year independent consultant inspections of the  
6 coal ash basins at the Cape Fear plant.

7 In 2008 the annual report recommended inspecting the  
8 risers in both coal ash basins using a boat, because at that  
9 time the condition of the risers was marginal and the risers  
10 were considered likely to develop problems within the next two  
11 to five years. The recommendation was repeated in inspection  
12 reports through the year 2013, but Duke Energy Progress never  
13 performed an inspection of the risers by boat.

14 The 2012 independent consultant inspection also  
15 documented that the skimmer on top of the riser, essentially a  
16 circular piece of metal preventing trash from floating into the  
17 riser, was also in disrepair on the 1978 basin.

18 In addition to the inspection reports, in 2011  
19 employees of Duke Energy Progress visited the Cape Fear plant  
20 and determined that the risers in both the 1978 and 1985 coal  
21 ash basins were in fact leaking based on the flow of wastewater  
22 to the discharge pipes. They informed their management that  
23 repairs were needed and were further supported by the 2013  
24 annual inspection that also documented leakage from the riser.  
25 Nevertheless, no additional inspection or monitoring of the



1 risers was undertaken by Duke Energy Progress until March of  
2 2014.

3           On or about January 24th, 2014, Duke Energy Progress  
4 through Duke Energy Business Services entered into a contract  
5 with an underwater pipe repair contractor for, among other  
6 things, repair work on those risers in the two coal ash basins.  
7 The repair work was to occur at some time between January 27,  
8 2014 and December 21st, 2014, but no start date was  
9 specifically identified. That repair work was ultimately not  
10 conducted until on or about March 19th and 20th of 2014.

11           With respect to Count Number 1 in Case Number  
12 5:15-CR-62 in the Eastern District of North Carolina, that  
13 charges a violation of the Clean Water Act by Defendants Duke  
14 Energy Business Services and Duke Energy Progress for negligent  
15 unpermitted discharge of coal ash or coal ash wastewater from a  
16 coal ash basin at the H.F. Lee Steam Electric Plant.

17           The evidence for that count would show as follows:  
18 That the H.F. Lee Steam Electric Plant is located in Goldsboro,  
19 North Carolina in the Eastern District of North Carolina and is  
20 owned by Duke Energy Progress. The plant contains a number of  
21 previously used coal ash basins, only one of which is active  
22 and continues to contain water and coal ash.

23           Duke Energy Progress had a NPDES permit, which is a  
24 type of permit under the Clean Water Act, that was issued in  
25 2009 for that particular coal ash facility. The NPDES permit

1 authorized three discharge points or outfalls for the plant,  
2 one was for the active coal ash basin, one was for a cooling  
3 water pond and one was for a separate electricity generation  
4 facility that was natural gas powered that's also on the site  
5 but not related to the coal ash facility.

6           The Lee plant had a number of seeps. Seeps occur in  
7 earthen dams and impoundments when water that often carries  
8 dissolved chemical constituents moves through poor soil and  
9 emerges at the surface of the ground. Duke Energy Progress and  
10 Duke Energy Carolinas have documented nearly 200 of these seeps  
11 at their coal ash basins in North Carolina. Seeps are  
12 discharges for the purposes of the Clean Water Act when they  
13 reach a water of the United States. Now, there may be some  
14 dispute over the legal niceties of exactly what circumstances  
15 account for that purpose, but in general parlance.

16           One of the seeps at the Lee plant identified in  
17 October, 2010 flowed into a drainage ditch outside the coal ash  
18 basin which led to the Neuse River. That seep was repaired in  
19 May, 2011. At least four additional seeps have been identified  
20 that flow into the same drainage ditch. That drainage ditch  
21 was not an outfall permitted under the plant's NPDES permit.  
22 Wastewater from the ditch was sampled and analyzed in February,  
23 2013 and again in March of 2014. Testing showed that that  
24 wastewater did contain pollutants such as chloride, arsenic,  
25 boron, barium, iron and manganese. Unpermitted discharges

1 occurred from the drainage ditch from at least October 1, 2010  
2 to December 30th, 2014.

3 Moving on to the criminal information from the  
4 Western District of North Carolina, with respect to Count 1 in  
5 Case Number 5:15-CR-68, which charges a violation of the Clean  
6 Water Act for the Defendants Duke Energy Business Services and  
7 Duke Energy Carolinas for negligent unpermitted discharge of  
8 coal ash and coal ash wastewater from a coal ash basin at the  
9 Riverbend Steam Station, that evidence would show that the  
10 Riverbend Steam Station is located in Gaston County,  
11 North Carolina in the Western District of North Carolina and is  
12 owned by Duke Energy Carolinas. The Riverbend Station has two  
13 coal ash basins adjacent to Mountain Island Lake which store  
14 approximately 2,730,000 tons of coal ash.

15 Duke Energy Carolinas held a NPDES permit for the  
16 Riverbend Station. The NPDES permit authorized three outfalls  
17 to the facility. On some date unknown but prior to December,  
18 2012, one or more individuals at Riverbend employed by Duke  
19 Energy Carolinas allowed a seep to flow into an unpermitted  
20 channel that allowed contaminated water from the coal ash basin  
21 to be discharged into an engineered channel that led to the  
22 Catawba River. The unpermitted seep contained elevated levels  
23 of arsenic, chromium, cobalt, boron, barium, nickel, strontium,  
24 sulphate, iron, manganese and zinc. Unpermitted  
25 discharges occurred from at least November --

1           THE COURT: Slow down now. He's got to get all these  
2 things. Tell what those bad things were again.

3           MS. PETTUS: The pollutants included elevated levels  
4 of arsenic, chromium, cobalt, boron, barium, nickel, strontium,  
5 sulphate, iron, manganese and zinc. Those are all considered  
6 pollutants under the Clean Water Act.

7           The unpermitted discharges from the ditch at  
8 Riverbend occurred from at least November 8th, 2012 to  
9 December 30th, 2014.

10          With respect to Count 2 in Case Number 5:15-CR-68,  
11 which charges a violation of the Clean Water Act for defendants  
12 Duke Energy Business Services and Duke Energy Progress for  
13 negligent unpermitted discharge of coal ash and coal ash  
14 wastewater from a coal ash basin at the Asheville Steam  
15 Electric Generating Plant, the evidence would show that the  
16 Asheville Steam Electric Generating Plant is located in  
17 Buncombe County, North Carolina in the Western District of  
18 North Carolina and is owned by Duke Energy Progress.

19          The Asheville plant also has two coal ash basins, one  
20 constructed in 1964, the other constructed in 1982, and they  
21 hold approximately 3 million tons of coal ash.

22          Duke Energy Progress held a NPDES permit for the  
23 Asheville plant identifying permitted outfalls for that plant.  
24 At least two seeps flowed into engineered toe drains at the  
25 base of the 1964 coal ash basin and ultimately discharged into

1 the French Broad River. This discharge was unpermitted and  
2 occurred from at least May 31st, 2011 to December 30th, 2014.

3 THE COURT: Thank you, Ms. Pettus.

4 Does that conclude the statement of what you believe  
5 could be proved at a trial, Ms. Pettus?

6 MS. PETTUS: That does, Your Honor.

7 THE COURT: Ms. Rangarajan?

8 MS. RANGARAJAN: Yes, sir.

9 THE COURT: Anything further?

10 MS. RANGARAJAN: Nothing further, Your Honor.

11 THE COURT: All right. Mr. Cooney, on behalf of the  
12 defendants, do you have any objection to the contentions by the  
13 United States?

14 MR. COONEY: Your Honor, we have stipulated to the  
15 existence of a factual basis for these pleas. There are two  
16 corrections I would like to make based on the joint factual  
17 statement.

18 First, Ms. Rangarajan indicated that the 48-inch pipe  
19 underneath the Dan River was well beyond its useful life. That  
20 is not what is in the joint factual statement. The joint  
21 factual statement states specifically it was at the end of its  
22 useful life. This was installed roughly in 1954, it's got  
23 roughly a 60 year useful life, so it was right there in 2014.  
24 That's what the parties agreed to as part of the joint factual  
25 stipulation, and that's what the Government stipulated to.

1           Second, Ms. Pettus indicated that though the repair  
2 contract was signed in January of 2014 -- and by the way, the  
3 earlier stipulation is paragraph 182 of the joint factual  
4 statement.

5           Ms. Pettus indicated that while the repair contract  
6 from Cape Fear was signed in January of 2014, the repairs were  
7 not undertaken until March of 2014. Paragraph 120 of the joint  
8 factual statement indicates the reason for that is that the  
9 water level needed to be lowered in the ponds in order to  
10 permit divers to safely work on the risers, and that's because  
11 of a phenomenon known as differential pressure. If something  
12 happens while the divers are underwater to those risers, it  
13 could kill the divers, and so the delay was caused by the fact  
14 that the water level needed to be lowered as set forth in  
15 paragraph 120 of the joint factual statement.

16           Other than that I have no objections.

17           THE COURT: All right. I'm satisfied. All I  
18 inquired or asked was for them to give what they believed they  
19 could prove, it would have been up to a jury, and I find that  
20 just the choice of words "well beyond" versus "at the end of"  
21 is close enough, but your objection and concern is noted and  
22 will be a part of the record, and as to the issue of the  
23 repair, I understand the contentions and we'll go from there.

24           All right. The Court hereby approves and accepts the  
25 memoranda of plea agreements in these cases as previously

1 stated. The Court is satisfied with the responses given during  
2 this immediate session of this hearing and makes the following  
3 finding on the record.

4 Madam U.S. Attorney, under the Rules I'm required to  
5 inquire pursuant to 18 U.S. Code 3717(a)(4), are there any  
6 victims present at the arraignment who desire to be heard, so  
7 far as you know?

8 MS. RANGARAJAN: Your Honor, there are no victims  
9 that have made themselves known to the Government to be heard  
10 today. The Government did, as the Court knows, make effort to  
11 identify victims, including poling the gallery as folks entered  
12 this morning. Nobody has presented themselves and requested a  
13 right to allocute, so there are no victims as defined under the  
14 Crime Victims Rights Act for the Court to hear from this  
15 morning.

16 THE COURT: All right. The Court inquires of the  
17 audience, is there anyone here who perceives themselves as a  
18 victim who wishes to be heard?

19 There being no such response, we will continue.

20 All right. It's time for the entry of the general  
21 judgment in this matter and I do so. It is the finding of the  
22 Court in each of the cases presented, those are the file  
23 numbers of 5:15-CR-62 from the Eastern District of North  
24 Carolina, File Number 5:15-CR-67 from the Middle District of  
25 North Carolina, and File Number 5:15-CR-68 from the Western

1 District of North Carolina, the Court finds that Ms. Janson is  
2 fully competent and capable of entering informed pleas on  
3 behalf of each defendant, Duke Energy Carolinas, Duke Energy  
4 Business Services and Duke Energy Progress, and that the pleas  
5 of guilty are knowingly and voluntarily made, supported by an  
6 independent factual basis containing each of the elements of  
7 the offense. The pleas are therefore accepted. The defendant  
8 Duke Energy Business Services, LLC is hereby adjudged guilty of  
9 Count 1 of the criminal information in the Eastern District of  
10 North Carolina; it is adjudged guilty of Counts 1, 2, 3, 4, 5  
11 and 6 of the criminal information in File 15-CR-67 in the  
12 Middle District of North Carolina; and finally Duke Energy  
13 Business Service is adjudged guilty of Counts 1 and 2 of the  
14 criminal information in File Number 5:15-CR-68 from the Western  
15 District of North Carolina.

16 Defendant Duke Energy Progress, Incorporated is  
17 hereby adjudged guilty of Count 1 of the criminal information  
18 in File 5:15-CR-62 from the Eastern District of North Carolina;  
19 Duke Energy Progress, Inc. is found guilty of Counts 5 and 6 of  
20 the criminal information in File Number 5:15-CR-67 from the  
21 Middle District of North Carolina; and Duke Energy Progress,  
22 Inc. is found guilty of Count 2 of the criminal information in  
23 File Number 5:15-CR-68 from the Western District of  
24 North Carolina.

25 Now, as to the Defendant Duke Energy Carolinas, LLC,



1 it is hereby adjudged and found that Energy Carolinas is found  
2 guilty of Counts 1, 2, 3 and 4 of the criminal information in  
3 File 5:15-CR-67 from the Middle District of North Carolina and  
4 guilty of Count 1 of the criminal information in file  
5 5:15-CR-68. The Court hereby approves and accepts each  
6 memoranda of plea agreement. Because the plea agreements in  
7 these cases were executed pursuant to Rule 11(c)(1)(C), each  
8 defendant is hereby informed that the agreed dispositions will  
9 be included in their respective judgments.

10 The Court intends to proceed to sentencing without  
11 the preparation of a presentence report, as the parties have  
12 waived a presentence report by the United States Probation  
13 Office. The Court has had as its assistance during the  
14 preparation for accepting these pleas and passing judgment in  
15 this case -- had the assistance of two Senior United States  
16 Probation Officers, Mr. John Wasco, please stand, and  
17 Mr. Dwayne Benfield, please stand, who are the assigned  
18 probation officers to this case as we came to it today and as  
19 it goes forward from here.

20 The next step in this matter is the sentencing of the  
21 three defendants. I'm going to have to have another fairly,  
22 well, short recess of about an hour, and when I come back I  
23 will hear from the defendants through counsel as to what they  
24 want as far as an allocution or what they would like for me to  
25 hear, and then if there's anything further from the

1 United States, I'll hear that, and then I will proceed to  
2 sentence the three entities today.

3 The hour is now 11:40 something, I'm going to recess  
4 Court until 1:00 p.m. and we'll come back, and I would  
5 anticipate that we could get all the sentencings accomplished  
6 within approximately an hour to an hour and a half.

7 Anything further from the United States before we  
8 recess for midday, Ms. Rangarajan?

9 MS. RANGARAJAN: No, sir.

10 THE COURT: Mr. Cooney?

11 MR. COONEY: None, Your Honor.

12 THE COURT: All right. Marshal, court will be in  
13 recess until 1:00 p.m.

14 - - - - -

15 (Recess at 11:41 a.m. until 12:58 p.m.)

16 - - - - -

17 THE COURT: Good afternoon, ladies and gentlemen.

18 As we are aware, we've completed all the  
19 preliminaries in these arraignment proceedings and we're now  
20 prepared to go forward. This is the appropriate time to hear  
21 before judgment is finally passed certain matters or any  
22 matters that the defense desires to bring to my attention.

23 First off, Madam U.S. Attorney, is the Government  
24 ready to proceed this afternoon?

25 MS. RANGARAJAN: We are, Your Honor. Thank you.

1           THE COURT: Mr. Cooney, are the defendants ready to  
2 proceed?

3           MR. COONEY: Yes, we are, Your Honor.

4           THE COURT: All right. I'm ready to hear from you,  
5 sir, or your team, however you want to do it.

6           MR. COONEY: Thank you, Your Honor. You'll be  
7 hearing from myself, from Ms. Popp, Ms. Rausher, and then  
8 finally from Ms. Janson. We'll not trifle with the Court's  
9 patience. We'll recall the admonition that you gave me  
10 yesterday that no one remembers who spoke before Lincoln at the  
11 Gettysburg Address.

12           THE COURT: You'll also remember that the  
13 Ten Commandments contain 297 words and the Bill of Rights 463.  
14 Recently a Federal directive that came out of the city where  
15 some of these people come from, a directive to regulate the  
16 price of cabbage contained 28,911 words. I look forward to  
17 hearing whatever you want to tell me this afternoon.

18           MR. COONEY: I will be longer than the Bill of Rights  
19 but shorter than cabbage, I can promise that.

20           Your Honor, before I begin, as an officer of the  
21 court, I want to bring to the Court's attention the  
22 professionalism and integrity of the United States Attorney's  
23 Offices and the Department of Justice. We have appreciated the  
24 high ethical standards they've held and the professionalism  
25 with which they've approached this matter, and I can assure the

1 Court and the public that the United States has been zealously  
2 represented in this. This was a long, hard investigation,  
3 we've reached a complex agreement that we're going to urge the  
4 Court to enter, but I wanted to thank the prosecutors in this  
5 case for their professionalism throughout this.

6 THE COURT: Thank you. I know they appreciate it.

7 MR. COONEY: Your Honor, as you know, I represent  
8 three companies, two of which have been in existence in this  
9 state in one form or another for 110 years. Duke Energy  
10 Progress is the old Carolina Power and Light, Duke Energy  
11 Carolinas is the old Duke Power, and these companies together  
12 were the first companies to bring electricity to  
13 North Carolina.

14 When the first farmers went in and turned on their  
15 lights or people listened to the radio, it was likely on power  
16 that was brought to them by these companies, and these  
17 companies helped transform this state from a rural agricultural  
18 state into a manufacturing state and now into a high tech  
19 research economy, and throughout that time they provided a lot  
20 of jobs to a lot of people.

21 Right now we have 13,000 employees and 8,000 retirees  
22 who depend on these companies, and these are good jobs, these  
23 are the kind of jobs that you can build dreams on, and for  
24 110 years no one ever accused these companies of committing a  
25 crime, and certainly these companies were never convicted of

1 committing a crime, and all of that changed at 11:40 a.m. when  
2 Your Honor adjudged them guilty of crimes.

3           The reason the companies are here and the reason they  
4 entered into these plea agreements goes back to something  
5 Lynn Good, the Chief Executive Officer, did in the days  
6 immediately following Dan River. She told that community and  
7 she told this State and she told this company we were going to  
8 make it right and we were going to take responsibility, and  
9 that's what we've done today and that's what these companies  
10 have done today.

11           I want to talk for a second about the kinds of crimes  
12 that the company has acknowledged and pleaded guilty to. These  
13 are crimes of negligence. These are negligence-based crimes.  
14 There is no charge and the company has not pleaded guilty to  
15 anything that says the company willfully committed a crime or  
16 intentionally committed a crime or knowingly committed a crime.  
17 There's no allegation that the company had a business plan to  
18 avoid the environmental laws or a business plan or any kind of  
19 a plan that told them that they were not to try to do the best  
20 they could for the environment. These are negligence-based  
21 crimes that quite frankly the company, when it took a look at  
22 its own conduct in the days and weeks following Dan River,  
23 concluded that it was obligated to do better, that it should  
24 have done better, and that is the essence of negligence, which  
25 is why the companies were willing to plead guilty to these

1 negligence-based crimes.

2           What I'd like to do, Your Honor, is talk very briefly  
3 about kind of the three baskets of things we're dealing with,  
4 which are Dan River, Cape Fear and then what we call the seeps  
5 in general, and I'll be very brief, but I want to begin with  
6 Dan River.

7           In the days following the Dan River spill -- let me  
8 get this on. There we go.

9           In the days following the Dan River spill, in  
10 addition to committing tremendous resources that you'll hear  
11 about to try to correct the spill, to stop what was going on,  
12 the company also began an in-depth inquiry into what happened  
13 at Dan River, what caused this, and within a few weeks and  
14 months and as a result of this what the company learned was  
15 that its employees had made a series of independent errors and  
16 other errors had occurred over a long period of time, nearly  
17 60 years, that had coalesced leading to the Dan River spill.

18           As Ms. Rangarajan pointed out in the joint factual  
19 statement, the employees had not consistently inspected the ash  
20 basins, had not inspected them in a consistent manner, that  
21 there was confusion about what the stormwater pipe was made out  
22 of, and I'll get into that a little later, that the engineers  
23 had recommended a video camera inspection and that  
24 recommendation had been turned down because the thought was the  
25 pipe was going to be removed soon and hadn't exhibited any

1 problems. So there were a number of errors that were made,  
2 certainly that decision was one of them, and in hindsight the  
3 company certainly believes that that video camera inspection  
4 should have occurred and would have given it valuable  
5 information.

6 So Ms. Rangarajan was right in her factual summary  
7 about all of these, and in fact when the company discovered all  
8 of this we had a meeting on June 22nd, 2014 with the  
9 U.S. Attorney's office and we did a presentation for them and  
10 brought them the e-mails and the documents that showed that and  
11 acknowledged that right from the beginning. As I told  
12 Ms. Rangarajan, as far as Dan River goes, we ought to be able  
13 to agree on the facts, and we were able to do so, I think, to a  
14 dramatic extent.

15 Now, let me explain a little bit about what's going  
16 on at Dan River, because these ash basins are all kind of  
17 different. That's an overhead view of the two basins at  
18 Dan River. Now, in the media the basins are portrayed  
19 sometimes as you dig a hole and you throw stuff in it and you  
20 leave it there, and that's just not correct. These are  
21 permitted wastewater treatment systems, they're permitted by  
22 the Government, they're regulated by EPA and by DENR and by  
23 various divisions of DENR, and the way these work is on basic  
24 engineering principles, they work on the same engineering  
25 principles that municipal wastewater systems work on and

1 industrial wastewater systems work on. These are principles of  
2 settling. These are settling ponds.

3           So at Dan River, as Ms. Rangarajan mentioned, we have  
4 a primary ash pond, and what would happen is coal byproducts,  
5 what was left over from the burning of coal, would come into  
6 the primary ash basin, they would mix it with water so that it  
7 could be handled and wouldn't fly all over the place, it would  
8 then settle. The solids would settle out and the cleaner water  
9 on the top would eventually be pumped into the secondary ash  
10 basin, where more settling would occur, and in fact there's  
11 kind of a wetlands associated with that secondary ash basin,  
12 and then once enough settling occurred, the water at the top  
13 that had been fully treated at that point would be discharged  
14 through the permitted outfall into the Dan River, and that's  
15 the permit that the company had.

16           Now, the stormwater pipe -- and there's roughly where  
17 the permitted ash outfall is. Now, the stormwater pipe that  
18 we're talking about ran under the primary ash basin and it ran  
19 from a wetlands area on the left to the Dan River. That  
20 stormwater pipe had nothing to do with the operation of the  
21 coal ash basin, it was just simply a pipe that was built so  
22 that stormwater from one part of the property could get to  
23 another part of the property underneath the ash basin. It was  
24 first installed in 1954 and then was expanded later in the  
25 1960s.



1           So at the time of the Dan River spill, that  
2 stormwater pipe ran roughly 1,000 feet, so it was a lengthy  
3 pipe, and as Ms. Rangarajan pointed out, when the ash basin was  
4 expanded and that pipe was expanded, it had reinforced concrete  
5 on either end with a middle section of corrugated metal. That  
6 X marks roughly the spot where the pipe failed.

7           After the pipe failed, a video camera inspection was  
8 done of the entire pipe and the entire pipe was intact and  
9 showed no major problems except for a five foot section of  
10 pipe, it's a bend section, and that's a picture of the pipe  
11 that we pulled out of the Dan River in April of 2014 that the  
12 company was able to locate and bring out and the  
13 representatives of the Government were with us.

14           What we discovered when we pulled it out is there had  
15 been extensive corrosion, we think due in part to a  
16 manufacturing defect that had occurred 60 years earlier in  
17 terms of where asphalt paving was placed, and we think that in  
18 part may have been responsible for the way in which the pipe  
19 failed, but the problem was the pipe failed all at once, and it  
20 failed on the bottom, and because it failed on the bottom there  
21 was no leaking on the top to give us any warning there was a  
22 problem with the pipe, it just simply corroded and then the  
23 weight caused it to collapse.

24           Now, Ms. Rangarajan talked a little bit about the  
25 composition of the pipe. This was an unusual pipe because you

1 had corrugated metal and then you had extensions on either end,  
2 and part of the problem was the company had not clearly labeled  
3 the fact that you really had a pipe with two different kinds of  
4 materials in it, and pursuant to a North Carolina Utilities  
5 Commission order, every five years the company had an  
6 independent inspector come out and do an independent inspection  
7 of the basins to examine what was wrong and make some  
8 recommendations. In 1991 -- they would do drawings with each  
9 of these reports, and in the 1991 report the drawing showed the  
10 pipe as being RCP, you see that 48-inch RCP, that stands for  
11 reinforced concrete, and Ms. Rangarajan is right, the company  
12 didn't catch that in 1991 and that error was repeated every  
13 five years literally up through 2014, and what happened of  
14 course is as a new engineer would come in who had  
15 responsibility for the coal ash basins, they would logically go  
16 to the last inspection report, because you want to know what  
17 were the basins like at the last inspection, are there any  
18 issues I need to deal with, and they might go to the report  
19 before that, and so by 2014 there was literally 23 years of  
20 documents that tended to label this thing as reinforced  
21 concrete, and so the independent engineers kept missing it and  
22 frankly the Duke engineers missed it because of that, an error,  
23 an independent error, it was certainly not intentional on  
24 anyone, but that complicated the ability to deal with this  
25 pipe.

1           In addition, Ms. Rangarajan talked about a series of  
2 recommendations for quantitative inflow and outflow monitoring,  
3 how much water is going in the stormwater pipe, how much water  
4 is going out. Those recommendations were actually abandoned in  
5 the early '90s because we developed a new technology with  
6 fiberoptics, you could put video cameras in these, and so the  
7 new recommendations were always you need to examine the water  
8 coming out of the pipe and see if it's cloudy, and if it's  
9 cloudy then you need to do a video camera inspection, and the  
10 theory on that was a basic engineering principle, that the pipe  
11 will leak before it fails. Pipes tend not to fail all at once,  
12 they tend to show signs of it, but the problem here, as  
13 Ms. Rangarajan pointed out, is usually you expect a pipe to  
14 corrode at the top where all the weight is, but this one  
15 corroded at the bottom, and because it corroded at the bottom  
16 there wasn't a lot of leakage going on and so that lulled  
17 everyone into a false sense of security that in fact this pipe  
18 is in pretty good shape, and that was, frankly, what was going  
19 on when the recommendation was made to do a video camera  
20 inspection.

21           Now, let me set the context for that, because  
22 Ms. Rangarajan is right, engineers within the company said it  
23 might be a good idea to do a video camera inspection of these  
24 pipes, they're old, we're not sure what kind of condition  
25 they're in, and you're closing down the coal ash steam station.

1           The coal ash part of Dan River was closed down in  
2 2012, it doesn't burn any more coal, this basin is not  
3 receiving any more coal ash, so they said why don't we look at  
4 the stormwater pipe with a video camera. The response, quite  
5 frankly, was, well, here is the problem, we're going to remove  
6 that pipe, and what I've got up on the screen is actually a  
7 schematic drawing of a plan that was presented to DENR in  
8 October of 2013 in which the coal ash basin would be dewatered,  
9 ash dried out and then moved away from the river, and then as  
10 you can see, both the 48-inch and the 36-inch pipes were going  
11 to be removed.

12           So the person who makes the final decision was under  
13 the belief that these pipes are going to be removed soon.  
14 We've never had a problem with them. Does it make sense to  
15 spend money to do a video camera inspection? Obviously in  
16 retrospect the answer is yes, the company needed to do that,  
17 and frankly the company should have done it at that time, but  
18 the belief was the pipes would no longer be there very much  
19 longer and you don't need to do that.

20           The problem is the company didn't appreciate there  
21 was corrosion at the bottom, they weren't going to get any  
22 signs of it, and quite frankly they ran out of time, the pipe  
23 failed before they could remove it.

24           I'd like to talk, if I can for a second, about the  
25 response to Dan River. This spill occurred on February 2nd and

1 at Dan River the area in which the spill occurred didn't have  
2 any power going out to the basins, there were no lights,  
3 there's no electricity out there, you need a lot of heavy  
4 equipment to move in all of a sudden, and just to kind of give  
5 you a sense of it, remember where the break is, it's kind of  
6 deep into the ash basin itself, so what the company did is it  
7 sent literally hundreds of people out there within a few days  
8 and formed two teams to try to deal with this.

9           One team tried to plug it from the river, which  
10 required the construction of a barge to see if you could  
11 approach it from the river. Remember, we're talking about a  
12 place without power to begin with.

13           Another team tried to approach it from the ash basin  
14 itself. Of course the ash basin is not a stable environment,  
15 so the company went to a rock quarry 20 miles away and brought  
16 in 10,000 tons of new rock to build a stable platform so they  
17 could try to get to that leak where it occurred.

18           So you had these two massive teams, one trying to  
19 work from the river, another trying to build a platform in the  
20 ash basin so they could get to that pipe, and that week in  
21 particular, Your Honor, there was wind, there was snow, all the  
22 temperatures were freezing, and this was all being done  
23 essentially from an abandoned building near these coal ash  
24 basins, and the company did it, they did it in a timely fashion  
25 and they did it without injuring anyone and in a safe manner.

1 They were able to plug this pipe within six days and that took  
2 a herculean engineering effort.

3 But the company's response didn't just stop there.  
4 The company was also worried and was ordered to do testing, so  
5 this is a chart of what the arsenic levels were at the Danville  
6 Water Plant during this period of time, because Danville is the  
7 first community that's downstream from the Dan River Steam  
8 Station. Arsenic is one of the elements that can be in coal  
9 ash and it's an element that people worry about.

10 So on this chart with the red line, you see it at 10,  
11 is the level for -- safe level for human consumption. You get  
12 above 10, you've got a real problem. You want to keep  
13 everything below 10. The blue line are the actual arsenic  
14 measurements at the Danville Water Treatment Plant.

15 Fortunately there was never a problem in terms of  
16 these kinds of chemicals in the Danville water system. The  
17 Danville water treatment system was able to handle it and there  
18 were no threats from that, and in fact the Environmental  
19 Protection Agency itself has said that. This is a screen shot  
20 from the Environmental Protection Agency's own website in which  
21 they say there have been no human health screening levels  
22 exceeded in either the surface water or in sediments for  
23 contaminants associated with coal ash and that EPA's drinking  
24 water samples have shown no impacts to the local water, and  
25 in fact by July of 2014, we think in part due to Duke's

1 response, the EPA said that Dan River was back to its  
2 pre-coal ash spill quality.

3 Now, this was a significant event to the environment,  
4 no one is trying to diminish that, but it appears to have been  
5 a limited event as well and human health was not threatened at  
6 any time during this.

7 In addition, to achieve this the company spent  
8 \$7.3 million to repair that pipe, to try to get it blocked.  
9 They spent more than \$5 million to remediate the river, to  
10 remove the coal ash deposits in the river that they've been  
11 directed to remove. They spent -- they just paid the Virginia  
12 Department of Environmental Quality two and a half million  
13 dollars to remediate the issues in the Eastern and Western  
14 Districts of Virginia. They spent an additional \$348,000 in  
15 lab analysis alone and tested everywhere from the Dan River up  
16 into the Kerr Lake Reservoir to make sure there were no risks  
17 to humans. They spent 3.15 million for sediment removal,  
18 700,000 in just resource assessments, how are the fisheries  
19 doing, how are the mollusks doing, what does the riparian  
20 environment look like. They spent an additional -- close to  
21 \$1 million for additional labor over six days, and the total  
22 forecast costs associated with this are around \$20 million, but  
23 that's just the response to this pipe. The company did more  
24 than that.

25 This has been a transformative event. Companies are

1 a little bit like human beings, things can happen to them in  
2 their lives that change them forever, and whatever Duke Energy  
3 was prior to February 2nd, 2014, it is different now after  
4 February 2nd, 2014, and you can see that in some of the  
5 responses, because they went immediately beyond just saying we  
6 need to fix Dan River and they went immediately beyond in  
7 telling everyone our customers are not going to pay for that,  
8 we're going to pay for it.

9 We started saying do we have any other Dan Rivers in  
10 the system, what do we need to do to make sure our other coal  
11 ash basins don't have pipes that we don't -- that we don't  
12 realize are either corroding or may not be built the way we  
13 think they're built. So it spread out over 32 coal ash basins  
14 across the State of North Carolina and immediately began  
15 conducting video inspections of every riser and horizontal pipe  
16 associated with a coal ash basin. That came out to nearly  
17 three miles of linear feet of pipe that were inspected. A mile  
18 and a half of corrugated metal piping was inspected. Nearly a  
19 mile of reinforced concrete piping was inspected. They  
20 inspected almost a mile of other linear feet of piping, and  
21 they reinspected every dam to make sure there were no problems  
22 anywhere else.

23 As a result of those inspections they also took some  
24 additional safety measures, and I'm putting some of those in  
25 there, but essentially sealing up corrugated metal pipes and



1 installing slip lining and plugging risers and permanently  
2 retiring risers and a number of other things that they believe  
3 are going to make these coal ash basins more safe while they're  
4 retired and can avoid another Dan River.

5           So we have a response, the immediate response to  
6 Dan River, then we have a company-wide response to their  
7 operations, but I told you it's a changed company and let me  
8 tell you and show you how else it's changed, and it's done that  
9 through permanent organizational changes.

10           One of the problems with Dan River that the company  
11 uncovered that we presented to the Government and that  
12 Ms. Rangarajan had talked about was the fact that we had people  
13 at the ash basin who knew things that the engineers didn't.  
14 Duke operates under a system where a major piece of  
15 infrastructure like a turbine or a coal ash basin has an  
16 equipment owner and that person is responsible for maintaining  
17 that piece of equipment. For the coal ash basins, the  
18 equipment owner often was not an engineer, but the people who  
19 actually had to do the engineering obviously were engineers but  
20 they were in a different place, and so what the company  
21 realized is we were dividing knowledge, which is exactly what  
22 Ms. Rangarajan talked about, and so rather than having a  
23 division of knowledge, what they have done is they have tried  
24 to streamline the organization and put a higher level of  
25 expertise managing these coal ash basins.

1           Now, to do that, what they did is they first formed  
2 something called ABSAT, and that's referenced in the plea  
3 agreement, it stands for the Ash Basin Strategic Action Task  
4 Force, and that was a group put together within three days of  
5 Dan River, it's led by a retired admiral from the Nuclear Navy  
6 and he was in charge of making sure the coal ash basins are  
7 safe, that we do the inspections, and then how do we need to  
8 restructure, and more importantly how are we going to close  
9 these things, how are we going to act in an environmentally  
10 responsible manner, make sure these things are functioning  
11 until they're closed.

12           In addition the company has formed something called a  
13 CCP or a Coal Combustion Products organization. That  
14 organization is dedicated solely to coal combustion products,  
15 how to store them, what to do with them, how to recycle them,  
16 how to manage them. They then went out and formed something  
17 called a National Ash Management Advisory Board, and these are  
18 all referred to in the plea, and what the company did is it  
19 gathered experts from all over the country and put them on an  
20 advisory board to help us deal with this problem, help us  
21 design engineering techniques, design approaches to closure,  
22 design approaches to maintenance that will make sure not only  
23 that we do what we're supposed to do but that the company sets  
24 a new level for the engineering and for the maintenance of  
25 these ash basins.

1           So now what happens, Your Honor, is engineers are  
2 directly responsible for these ash basins, they are the  
3 equipment owners, they have several engineering degrees, so  
4 that we can put that knowledge together in one place.

5           In addition, ABSAT is working on formulating closure  
6 strategies and evaluations, how are we going to close these  
7 ponds, dry up this ash and either keep it in place in a safe  
8 manner or move it in a safe manner while the CCP organization  
9 is managing these ash basins on a day-to-day basis, and a  
10 person in that CCP portion is actually going to be our Chief  
11 Compliance Officer, interfacing with Probation and the Court  
12 during the term of probation.

13           Finally, the leadership of the environmental health  
14 and safety organization has been replaced, they are no longer  
15 in those positions and there is brand new leadership to create  
16 this new standard that the company wants to create. This was  
17 done to centralize control in management which had been  
18 diffused before, this was done to bring more engineering  
19 expertise and this was done to have direct accountability, and  
20 those were some of the lessons this company learned from  
21 Dan River.

22           Now I want to spend a couple minutes talking about  
23 Cape Fear. Cape Fear is a little bit different than Dan River,  
24 because in Cape Fear you don't have a primary pond and a  
25 secondary pond, you actually have two separate settling ponds.

1           So again, what happens with Cape Fear is the coal ash  
2 slurries would go into these ponds and they would settle and  
3 then the treated water on the top, as Ms. Pettus described,  
4 would go into the top of the risers and then go through a  
5 channel into a permitted outfall and eventually into the river,  
6 and that was what the permit provided for and the way these  
7 basins functioned.

8           We talked a lot about risers. I want to show you a  
9 picture of one. That structure there that's standing up in the  
10 water is a riser. This a huge structure, it's basically a  
11 series of concrete cylinders that are grouted and cemented on  
12 top of each other, and this is old infrastructure, this plant  
13 has been operating or was operating since the 1940s, it closed  
14 down about four years ago, doesn't produce electricity anymore,  
15 but over time the grouting in the risers deteriorated and that  
16 permitted the treated water to leak in through the side rather  
17 than through the top, which meant that the water was going into  
18 the discharge system in a way that was different than described  
19 in the permit, and of course the permit requires us to maintain  
20 these risers so they don't leak, and those were the bases for  
21 those pleas.

22           Now, the only other thing I really want to add about  
23 Cape Fear is these pleas have nothing to do with a dispute that  
24 arose between the company and DENR over whether the company was  
25 authorized to repair the risers or authorized to repair the

1 risers in the way in which the company believed they needed to  
2 be repaired. I think it's fair to say there is a dispute even  
3 with the Government about those issues. These pleas have  
4 nothing to do with that and don't address that. Those are  
5 separate issues that are being fought out through an NOV  
6 process with DENR in State Court.

7 Now, what I'd like to do is just spend a few minutes  
8 talking about seeps and toe drains, and you've heard some of  
9 that today from Ms. Pettus. Essentially a seep is something  
10 that occurs with an earthen impoundment, and I've got a picture  
11 up there, and you can see in the foreground -- you'll see that  
12 rock, and then in the foreground you'll see some wet areas.  
13 That's actually a picture of one of the ash basins, and the wet  
14 areas in the foreground are a seep.

15 Now, seeps are really a natural aspect of earthen  
16 impoundments, they occur naturally, you know, they can either  
17 come from groundwater themselves, because these are close to  
18 rivers, or they can come from the ash basins, and in fact the  
19 U.S. Army Corps of Engineers 30 years ago recognized that all  
20 earth and rock-filled dams are subject to seepage, and DENR ten  
21 years ago said all earth dams have seepage resulting from water  
22 percolating slowly through the dam and its foundation.

23 In 2009, after the TVA coal ash spill, EPA went out  
24 throughout the country and inspected every coal ash basin in  
25 the country, there are close to 1,000 of them, and these are

1 all earthen impoundments, they're typically maintained either  
2 by industries or by utilities that burn coal, and what EPA  
3 found is that there were seeps at all of the earthen  
4 impoundments. I mean, the fact that you have an earthen  
5 impoundment that seeps is no secret, the EPA knew about that,  
6 DENR knew about that, the dam safety people knew about that.

7 I think it's fair to say Ms. Rangarajan -- I mean  
8 Ms. Pettus talked about some of the legal nuances of seeps,  
9 because it's fair to say there is a disagreement among us about  
10 whether a seep by itself that simply percolates up and may  
11 reach a water of the United States is a violation of the law.  
12 The Government takes the position it is. That issue is not  
13 resolved in this plea. What the company did in this plea is it  
14 acknowledged it should not have had specific engineering  
15 structures that take seeps, pull them together and then put  
16 them into a water of the United States, unless it was part of  
17 the permit.

18 So the pleas here deal with specific engineered  
19 features, not with every seep, because as you'll see from the  
20 joint factual statement, we have close to 200 seeps, and  
21 obviously there were only pleas to six, so we believe that was  
22 a fair compromise with the Government. The Government's  
23 position is different than ours on seeps in general, and  
24 frankly that's still being worked out as the Government deals  
25 with other entities and we go through a permitting process.

1           The thing about seeps is that the easiest way to  
2 control a seep is to let us dry out the coal ash and move it  
3 and close those basins. We can't -- the plea agreement  
4 requires this company to comply with the Coal Ash Management  
5 Act to remove ash from four high priority sites. We can't move  
6 an ounce of coal ash until the company receives the permits it  
7 needs to receive.

8           The company wants to close these basins down. The  
9 Government wants to see them closed down. We agree that's the  
10 environmentally responsible thing to do, but we can't do  
11 anything until we can move water out of them and then get  
12 permits to do something with the ash, and so a lot of that is  
13 dependent on a permitting process that we certainly don't  
14 control and the Government doesn't control but we will be  
15 reporting on regularly to the Court.

16           Finally, I'd like to mention something that wasn't  
17 mentioned in the factual statement because there's been no  
18 accusation of wrongdoing, but it is contained in both the  
19 plea agreement and the factual statement, and that's bromide.  
20 Bromide is not toxic to human beings. There are no real levels  
21 for bromide.

22           What happened in 2002, North Carolina in a very  
23 progressive move passed the Clean Smokestacks Act, which  
24 basically required companies like Duke that were burning coal  
25 to put scrubbers on top of coal fired facilities. The

1 scrubbers have taken out hundreds of thousands of tons of  
2 emissions from the air. They've been a huge success. They've  
3 reduced this company's emissions in some areas by 80 to  
4 90 percent.

5 Now, a byproduct of the scrubbers is -- it includes  
6 gypsum, for example, and the company actually manufactures  
7 wallboard from that, but also bromide, and no one knew that  
8 bromide was really going to be a byproduct of these scrubbers  
9 until they got installed and started running full time.

10 Now, putting bromide into a river is not a violation  
11 of the permit, it didn't violate anything, Duke hasn't been  
12 accused of doing anything wrong by doing that, and bromide by  
13 itself is not going to cause a problem. The problem arose  
14 specifically with Belews Creek in Eden because Eden was using  
15 an older chlorine-based water treatment system and the flows  
16 were not as great as it had been in the past, and what happens  
17 when bromide comes into contact in sufficient amounts with a  
18 chlorine-based treatment system is it generates an element  
19 called TTHMs, which can cause human health problems, and you  
20 saw that referred to in the joint factual statement. So the  
21 company began working with Eden and also the Town of Madison to  
22 try to upgrade their water systems, and we're in the process of  
23 doing that today.

24 This is where I think the Government asked for  
25 something appropriate and then was very creative in working



1 with us, because they knew we were working with Eden and  
2 Madison, we have scrubbers at Cliffside and other places, we're  
3 not aware of any other town that may have a problem with it,  
4 but since we are going to have a Court-appointed monitor in  
5 place anyway, what the Government suggests and what we agreed  
6 to do and what we created was a claims process for those towns  
7 that see a TTHM increase, believe that they're downstream from  
8 a scrub plant, believe it's being caused by bromide, to come in  
9 and present their claim to the Court-appointed monitor, we'll  
10 present whatever evidence we may have, the Court-appointed  
11 monitor will make a decision and then we have a right of appeal  
12 or the town would have a right of appeal with the Court for a  
13 final decision, but that is a clean, simplified way to take  
14 care of an environmental problem that frankly was an unintended  
15 consequence that no one knew was going to happen when scrubbers  
16 were put on coal fired plants, and I think that's one of the  
17 creative aspects of this plea agreement that I appreciate the  
18 Government being willing to consider and, frankly, that started  
19 with the Government's suggestions.

20 Your Honor, I'm getting ready to turn this over for a  
21 second, but the Court noted that these pleas were filed on  
22 February 20th, 2015. That morning, and I don't know if you  
23 remember that day, but it was bitterly cold, we set a lot of  
24 weather records that day, and that day, just before the sun  
25 rose, the people in North Carolina asked for more power than

1 these companies had ever generated before in their history and  
2 the companies met that demand, so even as the companies were  
3 filing this criminal plea to accept responsibility and to make  
4 things right, they were still focused on their primary mission,  
5 they were keeping people warm, they were keeping the lights on,  
6 and that's what they intend to do throughout this period of  
7 probation and I urge the Court to go ahead and accept this plea  
8 agreement, and I'd like to let Ms. Popp address the Court.

9 THE COURT: Thank you. Thank you very kindly,  
10 Counsel.

11 Ms. Popp, I'll be glad to hear you, ma'am.

12 MS. POPP: Your Honor, thank you.

13 Judge, in addition to the remediation steps that Duke  
14 Energy has taken, we also wanted to bring to your attention  
15 that the company has fully cooperated in an exemplary way with  
16 the Government's investigation throughout. That cooperation  
17 has been immediate, it was thorough and it was continuous.

18 From day one, the company's response to the Dan River  
19 spill, the company has done the right thing. It was  
20 management's instructions from the very beginning that the  
21 company would cooperate with the Government to help them to be  
22 transparent. Duke has been guided by that commitment, a  
23 commitment to go where the facts take them, regardless of the  
24 impact that it would have on business, and the speed at which  
25 the company has worked in cooperation has been extraordinary,

1 especially given the magnitude of the issues that this case  
2 presents.

3           We appreciate that the Government has moved quickly,  
4 that the Government wanted to resolve the issues quickly, and  
5 we have responded by moving expeditiously in doing so.  
6 We respect the thoroughness with which the Government has  
7 investigated this case, and Duke Energy has not held back in  
8 its cooperation along the way. Indeed, we spent an enormous  
9 number of hours, a lot of work, and we've engaged in frank and  
10 open communications throughout the investigation, we have  
11 facilitated access to evidence and we've produced an enormous  
12 amount of evidence, and on this slide I just want to give you a  
13 few statistics in that regard.

14           We've produced documents to the Government 51 times  
15 totaling over 1.6 million pages. We helped make available and  
16 schedule interviews for 50 Duke employees, some of whom went  
17 into the grand jury. We made presentations to the Government,  
18 some of which you've heard about today, and we've made  
19 presentations on evidence that we discovered that were  
20 unfavorable. We wanted to bring that to the Government's  
21 attention immediately and to make sure that they understood it,  
22 that they had access to it.

23           The Government asked for expedited production of  
24 documents in addition to the ones that we were giving them on a  
25 rolling basis, on a weekly basis, and we did that, Judge,

1 22 times, and we've disclosed documents that we weren't  
2 required to disclose. We went beyond the search terms that the  
3 Government had asked us to use, and when we found documents, we  
4 turned them over to the Government, brought them to their  
5 attention and explained them to them.

6 Judge, in sum, not only has this company engaged in  
7 extraordinary, exemplary remediation, we've engaged in full  
8 disclosure. We've been in full cooperation mode, helpful mode,  
9 including resolving this matter expeditiously, and it's in the  
10 spirit that Duke has responded to the Dan River spill, with  
11 that spirit to be fully cooperative, Judge. Thank you.

12 THE COURT: Thank you, Ms. Popp.

13 Yes. Ms. Claire.

14 MS. RAUSCHER: Thank you, Your Honor.

15 Your Honor, I have the privilege of talking to you  
16 just a little bit about the company. Duke Energy, as you  
17 heard, has been in existence for over 100 years. It has a very  
18 proud history in this state of providing power, employment and  
19 service to the citizens of this state.

20 Not only does it provide power, but the service that  
21 it provides is very significant here. For example, 6 million  
22 customers are provided with power by the company. That  
23 includes individuals, that includes families and that includes  
24 businesses. So throughout the state almost everybody in the  
25 state gets their power from the company.

1           There are 13,200 employees employed by the company,  
2     there are 8700 retirees, and there are thousands of contractors  
3     who work for the company. So once again, the company is  
4     providing jobs and benefits to the citizens of this great  
5     state.

6           Not only are there jobs, but the tax base that's  
7     provided by this company is significant. You know, here on  
8     this slide, for example, just the tax base to the local  
9     governments is in excess of \$122 million last year. That's  
10    just to local governments.

11          Economic development. The company is a huge driver  
12    of economic development in this state. For example, in the  
13    last -- in 2013 and 2014 Duke Energy helped -- their activities  
14    resulted in \$1.87 billion in capital investment as well as the  
15    creation of 9400 new jobs in this state, and just as an  
16    example, Your Honor, Gildan Textiles, one of the companies that  
17    came into the state, Clearwater Paper, TransCarolina Products,  
18    and I remember several years ago Google built a data center in  
19    the western part of the state and it was a huge economic boon,  
20    and Duke Energy was one of the major drivers of them relocating  
21    or having that farm here.

22          Not only do we have the economic development, but you  
23    have to look at the charitable contributions and contributions  
24    of the employees. In 2012 through 2014, three years, in hours  
25    and in dollars, Duke Energy employees have provided

1 \$138 million in charitable contributions and volunteer hours,  
2 and that's to groups like United Way, the arts, museums, and  
3 going out in the community and doing community service.

4 So as you can see, Your Honor, the company has an  
5 amazingly positive impact on the state and it's important to  
6 the state.

7 Now, you heard my colleagues say earlier that the  
8 Dan River spill was a transformative event for this company,  
9 and it was. From day one Lynne Good, the CEO of the company,  
10 said not only are we going to make this right, but we're going  
11 to do what it takes to make that right, and they continue to  
12 fulfill that promise today.

13 It's clear that the company will continue to monitor  
14 the coal ash basins and will close the coal ash basins at some  
15 point, and that's their goal and that's what they want to do,  
16 but I think it's important for Your Honor to understand that  
17 they're going to not only continue to do that during the  
18 five years of probation, but they're going to continue to do  
19 that beyond, because they're committed to providing a safe  
20 environment, to providing safe operations and also to ensure  
21 the environment is sustained in this community.

22 Now, at this time, Your Honor, I'd like to recognize  
23 Julia Janson. As you know, she's the Executive Vice President,  
24 Chief Legal Officer of Duke Energy, but throughout her career  
25 she's had rising and various increased responsibilities in the

1 company, including Senior Vice President of Ethics and  
2 Compliance. She calls North Carolina her home with her family  
3 and she is a proud member of the senior management team at the  
4 company and she would like to address the Court on behalf of  
5 the company.

6 THE COURT: I'll be glad to hear you, Ms. Janson.

7 MS. JANSON: Thank you, Your Honor.

8 So you've heard a lot today about our company and the  
9 actions we took in the wake of the Dan River spill. I have to  
10 tell you, I started with this company about a week after I took  
11 the Bar Exam and I will disclaim that that was over a quarter  
12 of a century ago.

13 I find this to be an extraordinary company made up of  
14 28,000 caring men and women who get up every day to strive to  
15 serve our customers, and that's our mission, that's what we do.  
16 Safety is our highest priority, and that includes the safety of  
17 our customers, our contractors, the environment and the  
18 communities that we serve, and so on behalf of everyone at Duke  
19 Energy we want to again apologize for the incident at  
20 Dan River. We quickly took accountability, we moved swiftly to  
21 fix the issue, and we've reformed our operations in ways we  
22 could have never dreamed possible. We stand ready to move ash  
23 and will do so as quickly as the State process will allow us to  
24 do that.

25 We've got really high expectations of ourselves and

1 the Dan River incident didn't meet those expectations, but I  
2 hope that our actions demonstrate how much we've learned.  
3 We're a new, different and better company, our operations have  
4 been strengthened and we look forward to working with the  
5 Government throughout this process.

6 Just as importantly and maybe more importantly, we've  
7 been working hard to restore the trust and confidence of the  
8 communities that we serve and our customers and will continue  
9 to do that, and I really want to thank you for the opportunity  
10 to address the Court.

11 THE COURT: Thank you, Ms. Janson.

12 Any further?

13 MR. COONEY: Nothing further at this time,  
14 Your Honor.

15 THE COURT: All right. Thank you.

16 Madam U.S. Attorney.

17 MS. RANGARAJAN: Thank you, Your Honor.

18 Your Honor, again, Lana and I will split the argument  
19 on behalf of the Government. I will start, sir.

20 While the defendants have undertaken corporate  
21 restructuring to address the problems that they have had in  
22 systemic failures within the communication between engineers  
23 and employees, it took the third largest coal ash spill in the  
24 nation's history to bring about that change and to motivate  
25 that change. And yes, they've cooperated in the Federal



1 criminal investigation, they have taken remedial action, they  
2 are a large company, they employ a lot of people; all of those  
3 factors were taken into consideration in the plea negotiations,  
4 in resolving the case going forward, but we're here today,  
5 Your Honor, to ask you to accept those terms of the plea  
6 agreements and impose those terms for a reason. It is the  
7 offense conduct in this case, the history in this case, the  
8 negligence in this case that warrant the terms set forth in  
9 that plea.

10 Now, I don't have a PowerPoint presentation for the  
11 Court, but I do have one slide, but we'll have to switch -- and  
12 we do have the supporting documentation for the Court, but in  
13 the interest of brevity I just want to focus on the history  
14 that was set forth in the joint factual statement, because  
15 while this company has been around for 100 plus years, for  
16 30 years, Your Honor, they have had failures in this company,  
17 they have failed to listen to their own engineers, they have  
18 failed to listen to recommendations, and they have failed to do  
19 inspections that they were required to do.

20 This started with Dan River in the '70s. In '79 they  
21 knew there were problems. You move into the '80s and their  
22 engineers are paying attention. Some of those engineers that  
23 went on the inspections in '84, '85 and '86 did inspections in  
24 2008 and are still with the company today, so they had  
25 engineers with knowledge about what is at Dan River, what's in

1 the basin, throughout this timeframe, but in the '80s they were  
2 recommending -- their own engineers recommended that they  
3 install notches, basically measuring/sampling systems in the  
4 48-inch pipe, in the 36-inch pipe. They didn't do it, and then  
5 over time, as is set forth in the plea agreement, in the joint  
6 factual statement, there were other failures.

7           Their own engineers -- this wasn't the erroneous  
8 error in 1991 by an independent consultant. The consultants  
9 did fail and made that erroneous classification, but Duke  
10 itself, its employees failed to take action as well. So it's a  
11 cumulative negligence, Your Honor, and it is that negligence,  
12 it's that offense conduct in allowing the negligent discharge  
13 of coal ash and coal ash wastewater into the waters of the  
14 United States, it's the failing to maintain equipment at  
15 Dan River and Cape Fear, it is the seeps and discharges that  
16 they allowed to be channelized through ditches and engineered  
17 conveyances, all of that conduct that warrants in this case the  
18 terms of that plea agreement, which because of the systemic  
19 historical problems with the company, there needs to be  
20 five years of solid oversight and supervision by this Court.

21           Now, the defendant -- defense counsel mentioned that  
22 they didn't do the camera inspections because they thought the  
23 basins were going to close. We note in 2011 the camera  
24 inspection wasn't funded and in 2012 the camera inspection  
25 wasn't funded.

1           During that 2012 discussion between the engineers and  
2 the equipment owners about whether or not this camera  
3 inspection should be funded, they specifically discussed basin  
4 closure, and the folks on the ground responded, we don't think  
5 it's going to close in 2013, we don't know when it's going to  
6 close, in essence, and the timeline suggests that Dan River is  
7 not closing until 2016. So in 2012 they're willing to take the  
8 \$5,000 gamble and not do the video camera inspections because  
9 eventually it's going to close down. But you know what one of  
10 the equipment owners said to them? In light of the basin  
11 closing, don't you think we should know what we have? And they  
12 didn't follow up, they still denied the camera inspection, and  
13 so that is why we are here. We are here to make sure that  
14 going forward the company is on a strong environmental  
15 compliance plan but that there is also independent oversight by  
16 this Court and a Court-appointed monitor.

17           It is the defendants' failure to listen to their  
18 employees and to rely on those employees' expertise, it is the  
19 historic systemic problems within the company that brought them  
20 here, but it is also, Your Honor, the breach of the public's  
21 trust. The public trusted Duke Energy for the last 30 plus  
22 years to manage its coal ash basins reasonably and with  
23 ordinary care, and they failed. They pled guilty to  
24 negligently handling its coal ash basins, the equipment there,  
25 and for allowing seeps and discharges into the waters of the

1 United States. For those reasons, Your Honor, the terms of the  
2 plea are appropriate here and should be vigorously pursued by  
3 the Court over the next five years, and that is the  
4 Government's response with respect to Dan River.

5 THE COURT: Thank you. Ms. Pettus.

6 MS. PETTUS: Thank you, Your Honor.

7 I want to start just by touching also on the question  
8 of harm a little bit. It was referenced in the defendants'  
9 presentation in terms of the drinking water system and so  
10 forth.

11 The defendants correctly noted that the levels of  
12 arsenic and other contaminants in the water column and the  
13 sediment in the Dan River were found by EPA to have returned to  
14 normal by July of 2014. Also water treatment facilities  
15 managed to adequately treat the water for drinking purposes in  
16 the aftermath of the spill, and of course the implication of  
17 that is that the harm from the spill is limited.

18 In some respects that's true, and we're all really  
19 fortunate for that. No one wants that spill to have been any  
20 worse than it was. And while there were no harms like  
21 documented fish kills or human injuries, we do need to clarify,  
22 so that you understand the basis of the plea, that that's not  
23 the entire story on harm. In fact, there was a piece of an  
24 article that was shown in the defendants' presentation that was  
25 from July 15th of 2014, the Danville Register & Bee. If you

1 read down further in the article, it cites the EPA's  
2 representative explaining that even though the EPA has finished  
3 its monitoring and is moving on, the State Department of  
4 Environmental Quality and Inland Game and Fisheries for the  
5 State of Virginia is going to be there continuing to take tests  
6 over time.

7           The reason for that is that the full extent of the  
8 ecological harm, longterm sense, is still being determined.  
9 That's because full assessments of that kind of harm from  
10 spills like this one can take a significant amount of time to  
11 determine. In some cases biologists need to observe and  
12 monitor populations of flora and fauna over several years to  
13 fully understand the effects of certain kinds of exposures.

14           In the case of the Dan River spill there is a natural  
15 resource damage assessment and restoration process underway  
16 that is being led by Natural Resource trustees from  
17 North Carolina, Virginia and the U.S. Department of Interiors  
18 Fish and Wildlife Service. That process exists to assess the  
19 impacts of the coal ash release on natural resources. They  
20 focus on injuries to habitat, surface water, sediment, aquatic  
21 species, migratory birds and the human uses of those resources.  
22 They also determine ways to restore those. That is generally  
23 funded by the responsible party, such as the defendants, and  
24 the defendants are participating in that process, but it is not  
25 yet complete. The plea agreement specifically avoids

1 interfering in that process and makes no representations about  
2 the possible outcome of that process. Nonetheless, we believe  
3 that the significant fine in this case captures how seriously  
4 we view the ecological and possible ecological effects of this  
5 spill.

6 In addition to any ecological harm, there is of  
7 course the readily calculable harm of the cost of responding to  
8 the spill. The defendants touched on that in their  
9 presentation and it's also discussed in the joint factual  
10 statement. That is the direct basis for the fine amount for  
11 Count 1 in the Middle District charges in this case.

12 Then there are the nearly impossible to quantify  
13 costs of the alarm, stress, concern and worry of the people in  
14 the communities along the Dan River who woke up the morning  
15 after the Super Bowl in 2014 to an ash gray river. That is  
16 another reason why the significant fines imposed by the terms  
17 of this plea agreement are appropriate.

18 To touch briefly on some of the other charges, in the  
19 case of the risers at Cape Fear, similar to the situation at  
20 the Dan River facility, Duke Energy Progress had received  
21 warnings in inspections from 2008 to 2013 that they needed to  
22 more closely inspect their risers because the condition was  
23 marginal and they were expected to develop problems in the next  
24 two to five years.

25 There was no follow-through on the recommendations.

1 Fortunately, unlike the Dan River spill, there was no  
2 catastrophic results, but in 2011 Duke Energy Progress' own  
3 employees notified management that the risers had in fact begun  
4 to leak and needed repair. Again, there was no action, no  
5 follow-through and no accountability for nearly three years.  
6 The defendants have admitted to that in pleading guilty.

7           In the case of the seeps and discharges at the Lee,  
8 Riverbend and Asheville facilities, the Eastern and Western  
9 District charges, the defendants, like all of the entities they  
10 cite, were well aware that earthen dams have seeps. We totally  
11 agree that is common knowledge. The Government and the  
12 defendants may disagree on whether some subcategories of seeps  
13 are illegal or not, but there is clearly no dispute that you  
14 are not supposed to channel seeps directly into a river without  
15 a permit. That's true whether it's a small amount, whatever  
16 the constituents are and whether or not it has a measurable  
17 effect on water quality on its own, because if we are going to  
18 preserve the quality of our water, the cumulative effect of  
19 pollution from all sources matters.

20           The fact that the defendants were aware that their  
21 earthen coal ash basins would inevitably have seeps and did not  
22 take precautions to ensure that those seeps were not being  
23 channeled through ditches and other conveyances constructed by  
24 its employees to nearby rivers, which was in fact allowed to  
25 occur for a period of years at each of those facilities, is

1 again indicative of a need for change in the culture of the  
2 defendants and their management of the coal ash basins. That  
3 culture and poor management had a deleterious effect  
4 cumulatively on the watersheds and wetlands throughout  
5 North Carolina, which the community service payment and  
6 wetlands mitigation payment in the plea agreement are designed  
7 to address.

8           The terms and conditions of the plea agreement  
9 coupled with the five year term of probation with the  
10 Court-appointed monitor are designed to ensure lasting and  
11 meaningful changes, that the defendants continue on their  
12 professed new path, and to prevent this type of neglect from  
13 happening in the future, and for that we urge the Court again  
14 to accept the terms of the plea agreement and hope that that  
15 will be successfully adhered to over the next five years.

16           THE COURT: All right. Thank you very much.

17           The Court now arrives at the time to pass its  
18 judgment in the case. It's been an hour. It's going to take  
19 me at least 45 minutes, I think, to sentence the three  
20 defendants, so I'm going to take just a ten minute recess,  
21 Marshal.

22           - - - - -

23           (Recess at 1:59 p.m. until 2:09 p.m.)

24           - - - - -

25           THE COURT: The time has arrived to pass judgment in



1 this matter. I've made up my mind in the various cases.

2 I'm going to sentence the defendants in the order of  
3 Duke Energy Carolinas first, Duke Energy Progress second and  
4 Duke Energy Business Services third.

5 The Court finds, based on a thorough review of the  
6 joint factual statement of the parties, the plea agreement, the  
7 sentencing memoranda and the hearing today, that it has  
8 sufficient information in the record to meaningfully exercise  
9 its sentencing authority pursuant to United States sentencing  
10 laws and to impose sentence in this case; therefore the  
11 preparation of a presentence report is waived.

12 I have to state the fine calculations under Chapter 8  
13 and note that they do not apply in this case because these  
14 charges are brought under the Clean Water Act. Nevertheless,  
15 in the Duke Energy Carolinas case, as to Count 1 and through 4,  
16 the penalty is up to five years probation, that's in the  
17 67 case, the Middle District case, and the fine range for  
18 Count 1 is \$17,500 to \$38,455,000. In Count 2 the fine range  
19 is 1.910 -- it's \$1,910,000 to \$19,100,000. In Count 3 it's  
20 \$1,957,500 to \$19,575,000. Finally, in Count 4 of the Middle  
21 District case it's the same, \$1,957,500 to \$19,575,000.  
22 Finally, as to the 68 case, the Western District case, as to  
23 Count 1 the penalty is up to five years probation, fine range  
24 of \$1,957,500 to \$19,575,000.

25 Now, the Court has considered all of the factors set

1    forth in 18 U.S. Code Section 3553(a) and 3572. Pursuant to  
2    the Sentencing Reform Act of 1984 and in accord with the  
3    Supreme Court decision in United States v. Booker, it is the  
4    judgment of the Court that the defendant Duke Energy Carolinas  
5    is hereby placed on probation for a term of five years. This  
6    term consists of five years on Counts 1 through 4 of docket  
7    ending with 67 and five years on Count 1 of docket ending with  
8    68, all to run concurrently.

9            While on probation the defendant shall not commit  
10   another Federal, State or local crime. If the defendant learns  
11   of any violation committed by any of its agents or employees  
12   within the scope of their employment during the term of  
13   probation, the defendant shall have five business days to  
14   notify the U.S. Probation Office of the violation.

15           The defendant shall comply with all Federal, State  
16   and other regulations relating to coal ash during the period of  
17   the probation. The defendant shall not have any new notices of  
18   violation, notices of deficiencies or other criminal or civil  
19   or administrative enforcement actions with respect to coal ash  
20   while on probation. It shall be considered to be a violation  
21   of probation if the defendant receives any new notices of  
22   violation, notices of deficiencies or other criminal or civil  
23   or administrative enforcement actions with respect to coal ash  
24   based on its conduct, including the failure to act, occurring  
25   after entry of this judgment, in which a final assessment,

1 after the conclusion of any appeal is more than \$5,000. Any  
2 conduct or condition resulting in a final assessment of more  
3 than \$15,000 shall be presumed to be material and in violation  
4 of this probation. The Court will not consider there to be a  
5 violation of the conditions of probation if the defendant  
6 complies with Federal environmental laws when they are in  
7 direct conflict between State and Federal environment laws.  
8 The Court also will not deem it to be a violation of probation  
9 if the enforcement action is based upon information disclosed  
10 by the defendant in its 2004 Topographical Map and Discharge  
11 Assessment or in its 2014 National Pollution Discharge  
12 Elimination System permit renewal application.

13 Further, the defendant shall comply with the  
14 following additional conditions, and they number now number 1  
15 through 17. I ask you to pay attention.

16 The defendant shall cooperate fully with the  
17 United States Probation Office during the period of  
18 supervision, including truthfully answering any inquiries by  
19 our probation office. The defendant shall provide the  
20 probation office with the following: Full access to any of the  
21 defendant's operating locations; ten days prior notice of any  
22 intended change in principal business or mailing addresses;  
23 notice of any material change in the defendant's economic  
24 circumstance that might affect the defendant's ability to pay  
25 fines or meet other financial obligations set forth in this

1 judgment.

2 The defendant and its co-defendants, Progress and  
3 Business Services, shall pay for Court-appointed monitoring as  
4 set forth in Paragraphs 2A through 2I of Exhibit A of this  
5 judgment. Exhibit A has been provided to the parties and they  
6 have agreed generally to the conditions contained therein.

7 The defendant shall develop, adopt and implement and  
8 fund a comprehensive nationwide environmental compliance plan  
9 and a comprehensive statewide environmental compliance plan as  
10 set forth in Paragraphs 3A and 3I of Exhibit A. Exhibit A has  
11 been provided to the parties as previously stated.

12 The defendant shall adopt, implement and enforce a  
13 comprehensive environmental training program for all domestic  
14 employees as set forth in Paragraph 4A of Exhibit A.

15 The defendant shall cooperate with the Bromide claims  
16 remediation process as detailed in the plea agreement.

17 The defendant shall identify or establish a position  
18 as a compliance officer at the Vice President level or higher  
19 who will liaison with the CAM and the United States Probation  
20 Office as set forth in paragraphs of Exhibit A.

21 The defendant shall ensure that any new, expanded or  
22 reopened coal ash or coal ash wastewater impoundments at any  
23 facilities own by the defendant are lined. At such  
24 impoundments the defendant shall ensure there are no  
25 unpermitted discharges of coal cash or coal ash wastewater from

1 any engineered, channelized or naturally occurring seeps. Coal  
2 ash and wastewater impoundments will be subject to inspection  
3 by the Court-Appointed Administrator and/or the United States  
4 Probation Officers at any time.

5           The defendant shall record appropriate reserves on a  
6 financial statement for the purpose of recognizing the  
7 projected obligation to retire its coal ash impoundments in  
8 North Carolina. At the time of the signing of the  
9 plea agreement the obligation was currently estimated at a  
10 total of \$2 billion. Each year during the term of probation,  
11 beginning on the date of this judgment, and occurring by  
12 March 31 of each year thereafter, the defendant shall cause the  
13 Chief Financial Officer of Duke Energy Corporation to certify  
14 to the Court, the United States Probation Office and the CAM  
15 and the United States that the defendant and Duke Energy have  
16 sufficient assets reserved to meet the obligations imposed by  
17 law or regulation or as may otherwise be necessary to fulfill  
18 the defendant's obligation with respect to its coal ash  
19 impoundments within the State of North Carolina. If the  
20 Court-Appointed Administrator has any concerns regarding the  
21 assets available to meet obligations imposed by the judgment,  
22 the CAM shall immediately notify the Court and/or the U.S.  
23 Probation Officer and the parties.

24           The defendant shall cause its parent holding company,  
25 Duke Energy Corporation, to record appropriate reserves on its

1 consolidated financial statements for the purpose of  
2 recognizing the projected obligation to retire all coal ash  
3 impoundments, including those in North Carolina. This  
4 obligation is currently estimated at a total of \$3.4 billion on  
5 Duke Energy's balance sheet for all coal ash impoundments.  
6 Each year during the term of probation, beginning on the date  
7 of judgment, and occurring by March 31 of each year, the  
8 defendant shall cause the Chief Financial Officer of Duke  
9 Energy Corporation, in accordance with the Guaranty Agreement  
10 between the parties, to certify to the Court, the U.S.  
11 Probation Officer, the Court-Appointed Administrator and the  
12 United States that the defendant and Duke Energy have  
13 sufficient assets reserved to meet the obligations imposed by  
14 law or regulations or as may otherwise be necessary to fulfill  
15 the obligation with respect to its coal ash impoundments within  
16 the State of North Carolina.

17           The defendant shall, throughout the entire probation,  
18 maintain unused borrowing capacity in the amount of  
19 \$250 million under the Master Credit Facility as a security to  
20 meet its obligation to close or remediate any coal ash  
21 impoundments.

22           The defendant shall make, as set forth in the plea  
23 agreement, a community service payment totaling \$13.5 million  
24 to the National Fish and Wildlife Foundation, a nonprofit  
25 organization established pursuant to Federal law, 16 U.S. Code

1 Section 3701-10. This payment is to be made within 60 days of  
2 today and proof of such payment is to be provided to the  
3 United States Probation Office.

4 The defendant shall pay, as set forth in the  
5 plea agreement, \$5 million to an unauthorized -- strike that,  
6 to an authorized wetlands mitigation bank or conservation trust  
7 for the purchase of riparian/wetland, riparian land, or  
8 restoration equivalent property located in the Broad River  
9 Basin, French Broad River Basin, Cape Fear River Basin,  
10 Catawba River Basin, Dan River Basin, Yadkin-Pee Dee River  
11 Basin, Neuse River Basin, Lumber River Basin, and Roanoke River  
12 Basin as set forth in Paragraph 12A of Exhibit A of this  
13 judgment. Exhibit A has been provided to the parties, and they  
14 have agreed to the conditions contained therein. The  
15 mitigation payment is in addition to and does not replace Duke  
16 Energy Corporation's public commitment to fund its \$10 million  
17 Water Resources Fund for environmental and other philanthropic  
18 projects along lakes and rivers in the Southeast, or the  
19 required \$5 million payment by Duke Energy Progress in a  
20 related case.

21 The defendant shall within five business days of this  
22 judgment place a full-page (132 column inches) public apology  
23 in at least two national newspapers and a major newspaper in  
24 each of the cities of Raleigh, Greensboro and Charlotte,  
25 North Carolina. The language of the public apology has been

1 agreed upon by the parties and is contained in Exhibit C of the  
2 plea agreement. Proof of such public apology shall be provided  
3 to the United States Probation Office within seven days of  
4 being placed in the respective paper.

5           The defendant shall not seek or take credit for any  
6 fine, restitution, community service payment, mitigation  
7 payment, or funding of the environmental compliance plan,  
8 including the costs associated with the hiring or payment of  
9 staff or consultants needed to assist the Court-Appointed  
10 Administrator, in any related civil or administrative  
11 proceedings, including but not limited to the Natural Resources  
12 Damages Assessment process.

13           The defendant shall not capitalize into inventory or  
14 basis or take any tax deductions in the United States or  
15 elsewhere on any portion of the monetary payments (fines,  
16 restitution, community service, mitigation or funding of the  
17 environmental compliance plans) imposed as a part of this  
18 judgment; provided, however, that nothing in the judgment shall  
19 bar or prevent the defendant from appropriately capitalizing or  
20 seeking an appropriate tax deduction for restitution in  
21 connection with the remediation of bromide claims.

22           The defendant shall not reference the burden of or  
23 the costs associated with compliance with the criminal fines,  
24 restitution related to counts of conviction, community service  
25 payments, the mitigation obligation, cost of cleanup in



1 response to the February 2, 2014 release at Dan River Steam  
2 Station and funding of the environmental compliance plan in any  
3 request or application for a rate increase on its customers.

4           The defendant shall exercise its best efforts to  
5 comply with each and all of the obligations under both the  
6 National Environmental Plan and the North Carolina  
7 Environmental Plan. Any attempted reliance on the  
8 force majeure clause to excuse performance or timely  
9 performance of any condition should be exercised by the  
10 defendant in accordance with the provisions of the  
11 plea agreement.

12           The special conditions of probation shall hereafter  
13 be subject to review by the Court upon petition or motion by  
14 the United States Probation Office, the Court-Appointed  
15 Monitor, either of the parties, or on its own motion.

16           Now, it is further ordered that Duke Energy Carolinas  
17 shall pay to the United States a special assessment of \$625,  
18 which is due and payable immediately.

19           It is further ordered that the defendant make  
20 restitution to the following victims in the following amounts.  
21 This is as to Duke Energy Carolinas now.

22           To the City of Virginia Beach for coal ash spill,  
23 \$63,309.45.

24           To the City of Chesapeake, Virginia, the amount of  
25 \$125,069.75.

1           To the Army Corps of Engineers in Wilmington,  
2 North Carolina, \$31,491.11.

3           Any payment made by this defendant shall be divided  
4 among the victims named in proportion to their compensable  
5 damage.

6           Payments of restitution shall be made to the Clerk of  
7 the Eastern District of North Carolina at its Raleigh  
8 headquarters.

9           It is further ordered that the defendant in this  
10 case, Duke Energy Carolinas, shall pay to the United States of  
11 America a total fine in the amount of \$53,600, which amount  
12 shall bear interest at the lawfully prescribed rate until paid.  
13 These fines totaling \$53,600,000 are allocated as \$38 million  
14 on Count 1 of Docket 67, \$2 million on Count 2 of Docket 67,  
15 \$9.5 million on Count 3 of Docket 67, and \$2.1 million on  
16 Count 1 of Docket 68.

17           I'm reminded a moment ago when I said the total  
18 amount of the fines to Duke Energy Carolinas was 53,000, it  
19 totals \$53,600,000.

20           Now, payment of the total fine, the numbers I've just  
21 stated, shall be made to the Clerk of Court for the Eastern  
22 District of North Carolina at 310 New Bern Avenue, Raleigh, NC  
23 by 1:00 p.m. tomorrow, Friday, May 15, 2015.

24           That concludes the statement of the sentence in the  
25 case of United States versus Duke Energy Carolinas.

1           Mr. Probation Officer, do you know of any required  
2 changes to further comply with the sentencing law?

3           MR. WASCO: No, Your Honor. Thank you.

4           THE COURT: Mr. Cooney, on behalf of the defendant  
5 Duke Energy Carolinas, are there any objections to the sentence  
6 as just stated by the Court?

7           MR. COONEY: We have no objection, Your Honor. There  
8 is one clarification. Your Honor had a reference about the  
9 ability of the company to capitalize into inventory costs that  
10 would be incurred regardless of the compliance plan and also to  
11 seek rate recovery for costs that would be incurred regardless  
12 of the compliance plan here, that's provided for specifically  
13 in the plea, and I just wanted to put that in the record.

14          THE COURT: It's going to be exactly the way it was  
15 in the plea.

16          MR. COONEY: Thank you, Your Honor.

17          THE COURT: Any objection by the United States to the  
18 judgment as stated?

19          MS. RANGARAJAN: No, Your Honor.

20          THE COURT: Then by virtue of the authority duly  
21 invested in me, I hereby impose upon Duke Energy Carolinas,  
22 Inc. the conditions and fines and other matters as just stated  
23 by the Court.

24          Now, I'm required to remind the defendant that if you  
25 believe the underlying guilty pleas were somehow involuntary or

1 if there was other fundamental defects in the proceeding, then  
2 you may have a right to appeal. If you believe the judgment as  
3 to the probation is unlawful or improper, you may have a right  
4 to appeal. If there's a basis for appeal, the appeal must be  
5 filed with the Clerk of this Court within 14 days of today.

6 Mr. Cooney, I request you advise your client of this  
7 obligation.

8 MR. COONEY: I will do, Your Honor. Thank you.

9 THE COURT: All right. I will now go to the  
10 defendant Duke Energy Progress, Inc.

11 The Court finds based on a thorough review of the  
12 joint factual statements of the parties, the plea agreement,  
13 the sentencing memoranda, it has sufficient information in the  
14 record to meaningfully exercise its sentencing authority in  
15 this case; therefore, the preparation of a presentence report  
16 is waived after reviewing the joint factual statement and other  
17 pertinent information, considering the matters presented here  
18 today, and the Court accepts the plea agreement as binding upon  
19 the Court.

20 In this case, Duke Energy Progress, the maximum  
21 penalties authorized by law for each of the counts, so that's  
22 one count in the 62 case, two counts in the 67 case and  
23 one count in the 68 case, the maximum fine in the 62 case is  
24 3 million -- strike that. The fine range, minimum to maximum,  
25 is \$3,880,000 to \$38,800,000 as to Count 1, as to Count 5 and 6

1 in the 67 case the fine range is \$1,887,500 to \$18,875,000, and  
2 the same as to Count Number 6 in Case 67. In Case 68 the fine  
3 range -- that's the Western District, the fine range is from  
4 \$3,275,000 to \$32,750,000. These fine ranges are based on days  
5 of violation and so forth.

6 Now, the Court has considered all of the factors set  
7 forth in the various sentencing laws. Now, pursuant to the  
8 Sentencing Reform Act of '84 and in accordance with the Supreme  
9 Court decision in United States v. Booker, it is the judgment  
10 of the Court that the defendant, Duke Energy Progress, Inc., is  
11 hereby placed on probation for a term of five years. This term  
12 consists of five years on each of the counts in each of the  
13 three criminal informations, all such terms to run  
14 concurrently. While on probation, the defendant shall not  
15 commit another Federal, State or local crime. If the defendant  
16 learns of any such violations committed by its agents or  
17 employees within the scope of their employment during the term  
18 of probation, the defendant shall within five business days  
19 notify the United States Probation Office of the violations.

20 The defendant, Duke Energy Progress, Inc., shall  
21 comply with all Federal, State and other regulations regarding  
22 coal ash during the period of probation. The defendant shall  
23 not have any new notices of violation, notices of deficiency or  
24 other criminal or civil or administrative actions with respect  
25 to coal ash while on probation. It shall be considered to be a

1 violation of probation if the defendant receives any new  
2 notices of violation, notices of deficiency or other criminal  
3 or civil or administrative enforcement actions with respect to  
4 coal ash based on conduct, including the failure to act,  
5 occurring after the entry of this judgment in which a final  
6 assessment, after the conclusions of appeals, is more than  
7 \$5,000. Any conduct resulting in a final assessment of more  
8 than 15 would be presumed to be a material violation.

9           The Court will not consider it to be a violation of  
10 the conditions of probation if the defendant complies with  
11 Federal environmental laws when there is a direct conflict  
12 between State and Federal environmental laws. The Court will  
13 also not deem it a violation of probation if the enforcement  
14 action is based upon information disclosed by the defendant in  
15 the 2014 Topographical Map and Discharge Assessment and/or its  
16 2014 National Pollutant Discharge Elimination System permit  
17 renewal application.

18           The defendant shall comply with the following  
19 additional conditions, and they're very similar to what I  
20 previously stated in the Carolinas case, but I'll have to go  
21 through them again for the record.

22           The defendant shall fully cooperate with the  
23 United States Probation Office during the period of  
24 supervision, including truthfully answering any inquiries by  
25 the probation office. The defendant shall provide the

1 probation office with full access to any of the defendant's  
2 operating locations; 10 days notice, prior notice, of any  
3 intended change in principal business or mailing address; a  
4 notice of material change in the defendant's economic  
5 circumstance that may affect the defendant's ability to pay  
6 fines or meet financial obligations as set forth in the  
7 judgment.

8           The defendant and its two co-defendants, Duke Energy  
9 Carolinas and Duke Energy Business, shall pay for a  
10 Court-Appointed Monitor as set forth in Exhibit A of this  
11 judgment.

12           The defendant shall develop, adopt, implement and  
13 fund a comprehensive nationwide environmental compliance plan  
14 and a comprehensive statewide environmental compliance plan as  
15 set out in Exhibit A of the judgment.

16           The defendant shall adopt, implement and enforce a  
17 comprehensive environmental training program for all domestic  
18 employees as set forth in Exhibit A of this judgment.

19           The defendant shall cooperate with the Bromide claims  
20 remediation process as detailed in the plea agreement.

21           The defendant shall identify or establish a position  
22 as a compliance officer at the Vice President level or higher  
23 within Duke Energy Progress who will liaison with the CAM and  
24 the United States Probation Officer as set forth in Exhibit A  
25 of the judgment.

1           The defendant shall ensure that any new, expanded or  
2 reopened coal ash or coal ash wastewater impoundment at any  
3 facility observed by the defendant are lined.

4           The defendant shall record appropriate reserves on  
5 financial statements for the purpose of recognizing the  
6 projected obligation to retire its coal ash impoundments in  
7 North Carolina. At the time of the signing of the  
8 plea agreement, the obligation as to this defendant was  
9 currently estimated at a total of \$1.4 billion. Each year  
10 during the term of probation, beginning on the date of  
11 judgment, and occurring by March 31 of each year thereafter,  
12 the defendant shall cause the Chief Financial Officer of  
13 Duke Energy Corporation to certify to the Court, the  
14 United States Probation Officer or the CAM, and the  
15 United States, that the defendant and Duke Energy have  
16 sufficient assets reserved to meet the obligation imposed by  
17 law or regulation or as may otherwise be necessary to fulfill  
18 the defendant's obligation with respect to its coal ash  
19 impoundments within the State of North Carolina.

20           The defendant shall cause its parent holding company,  
21 Duke Energy, to record appropriate reserves on its consolidated  
22 financial statements for the purpose of recognizing the  
23 projected obligation to retire all coal ash impoundments,  
24 including those in North Carolina. This obligation is  
25 currently estimated at \$3.4 billion on Duke Energy's balance



1 sheet.

2 The defendant shall, throughout the term of  
3 probation, maintain unused borrowing capacity in the amount of  
4 \$250 million under the Master Credit Facility as security to  
5 meet its obligation to close or remediate any coal ash  
6 impoundments. The defendant shall certify this capacity to the  
7 CAM on an annual basis or more often if required.

8 The defendant shall make, as set forth in the  
9 plea agreement, a community service payment totaling  
10 \$10.5 million to the National Fish and Wildlife Foundation, a  
11 nonprofit organization organized under Federal law. This  
12 payment is to be made within 60 days of this judgment.

13 This is a different one. This is Progress. There  
14 was another one under Carolinas a moment ago.

15 Now, this defendant, Progress, shall also set  
16 forth -- as set forth in the plea agreement, pay 5 million to  
17 an authorized wetlands mitigation bank or conservation trust  
18 for the purchase of riparian/wetland, riparian land, or  
19 restoration equivalent located in the Broad River Basin, the  
20 French Broad River Basin, Cape Fear River Basin, Catawba River  
21 Basin, Dan River Basin, Yadkin-Pee Dee River Basin, Neuse River  
22 Basin, Lumber River Basin, Roanoke River Basin, as set forth in  
23 Exhibit A of the judgment. This mitigation payment is in  
24 addition to and does not replace Duke Energy's commitment to  
25 fund its \$10 million Water Resources Fund for environmental and

1 philanthropic projects along lakes and rivers in the Southeast,  
2 or the required \$5 million payment by Duke Energy Carolinas in  
3 the related case.

4           This defendant also will have five business days  
5 after entry of this judgment to place a full-page (132 column  
6 inches) public apology in at least two national newspapers and  
7 a major newspaper in each of the Raleigh, Greensboro and  
8 Charlotte, North Carolina papers. The language of the public  
9 apology has been agreed upon by the parties and is contained in  
10 Exhibit C of the plea agreement. Proof of such apology shall  
11 be provided to the United States Probation Officer within seven  
12 days of being placed.

13           The defendant shall not seek or take credit for any  
14 fine, restitution, community service payment, mitigation  
15 payment, or funding of environmental compliance plans,  
16 including the costs associated with the hiring or payment of  
17 staff or consultants to the CAM, in any related civil or  
18 administrative proceedings, including but not limited to the  
19 National Resource Damage Assessment process.

20           The defendant shall not capitalize into inventory or  
21 basis or take as a tax deduction in the United States or  
22 elsewhere any portion of the monetary payments, including fine,  
23 restitution, community service, mitigation, or funding of the  
24 environmental compliance plans, imposed as a part of this  
25 judgment; provided, however, that nothing in this judgment

1 shall bar or prevent the defendant from appropriately  
2 capitalizing or seeking an appropriate tax deduction for  
3 restitution in connection with the remediation of bromide and  
4 for costs which would have been incurred by the defendant  
5 regardless of the environmental compliance and the like.

6           The defendant shall not reference the burden of, or  
7 the cost associated with, compliance with the criminal fines,  
8 restitution, community service payments, mitigation, costs of  
9 cleanup, and funding of the environmental compliance plans, in  
10 any request or application for a rate increase on its  
11 customers; provided, however, that nothing in the judgment  
12 shall bar or prevent the defendant from seeking appropriate  
13 recovery for restitution in connection with the remediation of  
14 bromide claims as set forth.

15           The defendant shall exercise its best efforts to  
16 comply with each and all of the obligations under the  
17 North Carolina and the national environmental plan. Any  
18 attempted reliance on the force majeure clause to excuse  
19 performance or timely performance of any condition shall be --  
20 should be exercised by the defendant in accordance with the  
21 provisions of the plea agreement.

22           The special conditions of probation shall hereafter  
23 be subject to review by the Court upon petition or motion by  
24 any of the parties.

25           It is ordered that the defendant shall pay the

1 special assessment in this case, Energy Progress, of \$500.  
2 That will be in four counts of \$125 each.

3 Although provisions of the Victim and Witness  
4 Protection Plan are applicable, as there are no identifiable  
5 victims as relates to these particular issues outstanding, it  
6 is ordered that the defendant shall pay to -- now, it is  
7 further ordered that the defendant, Duke Energy Progress, shall  
8 pay to the United States a total fine of \$14,400,000, which  
9 amount shall bear interest at the lawful prescribed rate.  
10 These fines are imposed in Docket 62, Count 1 at \$3,900,000 and  
11 Docket 67 at Count 5 and Count 6 each at \$3.5 million, and in  
12 Docket 68 on Count 2 at \$3.5 million, for a total of, as just  
13 stated, \$14,400,000 to Duke Energy Progress.

14 The Court notes for the record the fine imposed on  
15 each count as sought by the Government and agreed to by the  
16 defendant is within the fine range established by the statute  
17 in each count.

18 Payment of this fine shall be made to the Clerk of  
19 the Eastern District of North Carolina at its Raleigh  
20 headquarters by 1:00 p.m. on Friday, May 15, that is tomorrow.

21 That concludes the statement of the sentence as to  
22 Duke Energy Progress.

23 Mr. Probation Officer, do you know of any required  
24 changes to further comply with the sentencing laws?

25 MR. WASCO: No, Your Honor. Thank you.

1 THE COURT: Mr. Cooney, any objections?

2 MR. COONEY: No, just the same issue I noted for  
3 Duke Energy Carolinas, and it's going to be in compliance with  
4 the plea agreement, on the rate increases.

5 THE COURT: Correct.

6 Madam U.S. Attorney, any objections?

7 MS. RANGARAJAN: No objections, Your Honor.

8 THE COURT: All right. We've got one more.

9 I look over to you folks, that's always where my jury  
10 sits and that's who I try to talk to. I don't care about the  
11 rest of you people. So if I look over there, then look at  
12 y'all, I say, well, that isn't my jury. Our jury here comes  
13 from the Outer Banks and Halifax County and fishermen down from  
14 Carteret County, and you guys don't look like fishermen from  
15 Carteret County.

16 Appellate rights, Duke Energy Progress. The judgment  
17 I've just passed, I am required to state for the record that if  
18 the defendant Duke Energy Progress believes that the underlying  
19 guilty plea was somehow involuntary or if there was some other  
20 fundamental defect in the proceeding, they may have a right to  
21 appeal. If they believe the fine range and the probation terms  
22 as stated by the Court and issued by the Court are incorrect,  
23 they may have the right to appeal. In any extent, you have  
24 14 days from today to file your notice of appeal with the Clerk  
25 of this Court. Mr. Cooney, do you understand?

1 MR. COONEY: I do, Your Honor, and will discuss that  
2 with my client.

3 THE COURT: Okay. Now, finally, Duke Energy Business  
4 Services.

5 The Court finds based on a thorough review of the  
6 joint factual statement, the plea agreements, the sentencing  
7 memoranda, that it has sufficient information in the record to  
8 exercise its sentencing authority and to impose sentence in  
9 this case without a presentence report.

10 The Court has considered all of the factors set forth  
11 in 18 U.S. Code Section 3553 and 3572, and pursuant to the  
12 Sentencing Act of 1984 and in accordance with the Supreme Court  
13 decision in United States v. Booker, it is the judgment of the  
14 Court that the defendant Duke Energy Business Services, LLC is  
15 hereby placed on probation for a term of five years. This term  
16 consists of five years on Count 1 of Docket 62, five years on  
17 Count 1 through 6 of Docket 67 and five years on Counts 1 and 2  
18 of Docket 68, all to run concurrently for a total probation  
19 term of five years. While on probation the defendant shall not  
20 commit another Federal, State or local crime. If the defendant  
21 learns of any such violations committed by its agents or  
22 employees within the scope of employment, it shall notify the  
23 probation office within five business days.

24 The defendant shall comply with all Federal, State  
25 and local regulations relating to coal ash during the period of

1 probation. The defendant shall not have any new notices of  
2 violation. It shall be considered a violation of probation if  
3 the defendant receives any new notice or notices of deficiency  
4 or other criminal or civil or administrative enforcement  
5 actions with respect to coal ash based on conduct, including  
6 the failure to act, occurring after entry of this judgment in  
7 which the final assessment after the conclusion of appeals of  
8 more than \$5,000. Any conduct resulting in a final assessment  
9 of more than 15 shall be presumed to be a material violation.

10 The Court will not consider there to be a violation  
11 of probation if the defendant complies with Federal  
12 environmental laws. The Court will not deem it a violation of  
13 probation if the enforcement action is based upon information  
14 already disclosed in some of the filings.

15 The defendant shall cooperate fully with U.S.  
16 probation during the period of supervision, including  
17 truthfully answering any inquiries. The defendant shall  
18 provide the probation officer with the following: Full access  
19 to any of the defendant's operating locations; 10 days notice  
20 of changes of address; any notice of material change in the  
21 defendant's economic circumstance that might affect the  
22 defendant's ability to pay fines or meet financial obligations.

23 The defendant and its co-defendants, Carolinas and  
24 Progress, shall pay for a Court-Appointed Monitor as set forth  
25 in Exhibit A of this judgment. Exhibit A has been provided to

1 the parties and they have agreed to the conditions contained  
2 therein.

3 The defendant shall develop, adopt and fund a  
4 comprehensive nationwide environmental compliance plan and a  
5 comprehensive statewide environmental compliance plan as set  
6 forth in Exhibit A.

7 The defendant shall adopt, implement and enforce a  
8 comprehensive environmental training program for all domestic  
9 employees as set forth in Exhibit A.

10 The defendant shall cooperate with the Bromide claim  
11 remediation process as detailed in the plea agreement.

12 The defendant shall identify or establish a position  
13 as a compliance officer at the Vice President level of this  
14 corporation, Business Services, who will liaison with the CAM  
15 and the United States Probation Office as required in  
16 Exhibit A.

17 The defendant shall ensure that any new, expanded, or  
18 reopened coal ash or coal ash wastewater impoundments at any  
19 facilities owned by the defendants are lined. At such  
20 impoundments the defendant shall ensure there are no  
21 unpermitted discharges of coal ash or coal ash wastewater from  
22 any engineered, channelized or naturally occurring seeps.  
23 Coal ash and wastewater impoundments will be subject to  
24 inspection by the CAM and/or United States Probation Officers  
25 at any time.



1           The defendant shall along with the other defendants  
2 place a newspaper ad in Raleigh, Greensboro and Charlotte and  
3 notify the Probation Office within seven days of the ad.

4           The defendant shall not seek or take credit for any  
5 fine, restitution, community service and so forth in any  
6 related civil or administrative proceeding, including but not  
7 limited to the National Resources Damage Assessment Process.

8           The defendant shall not capitalize into inventory or  
9 basis or take as a tax deduction in the United States or  
10 elsewhere any portion of the monetary payments (fines,  
11 restitution, community service, mitigation, or funding of the  
12 environmental compliance plans) imposed as a part of this  
13 judgment; provided, however, that nothing in the judgment shall  
14 bar or prevent the defendant from appropriately capitalizing or  
15 seeking an appropriate tax deduction for restitution in  
16 connection with the remediation of bromide or for costs which  
17 would have been incurred by the defendant regardless of  
18 environment compliance.

19           The defendant shall not reference the burden or the  
20 costs associated with compliance with the criminal fines,  
21 restitution related to counts of conviction, community service  
22 payments, the mitigation, cost of cleanup in response to the  
23 Dan River issue, and funding of the environmental compliance  
24 plan in requests or applications for a rate increase to its  
25 customers; provided, however, nothing in this judgment shall

1 bar or prevent the defendant from seeking appropriate recovery  
2 for restitution in connection with the remediation of bromide.

3 The defendant shall exercise its best efforts to  
4 comply with all its obligations under both the North Carolina  
5 and the national environmental plans. Any attempted reliance  
6 on force majeure, acts of God, clause to excuse performance or  
7 timely performance of any condition of the national or  
8 North Carolina environment plan should be exercised by the  
9 defendant in accordance with the provisions in the  
10 plea agreement.

11 The special conditions of probation shall hereafter  
12 be subject to review by the Court upon petition or motion by  
13 the United States, the CAM or either of the parties on its own  
14 motion.

15 The special assessment, that's the \$125 per count, is  
16 assessed against Duke Energy Business Services in the amount of  
17 \$1,125.

18 The Court finds that in light of the total criminal  
19 penalties of \$68 million being paid by its co-defendants,  
20 Duke Energy Progress, Inc. and Duke Energy Carolinas, and the  
21 overall corporate structure as it relates to this defendant, no  
22 further fine is necessary as to Duke Energy Business Services,  
23 Inc., therefore there is no fine set forth against Duke Energy  
24 Business Services, Inc.

25 That concludes the statement of the sentences.

1           Mr. Probation Officer, do you know of any required  
2 change to further comply with the United States sentencing  
3 standards?

4           MR. WASCO: Your Honor, just for the record, if the  
5 Court would consider making the appropriate statements as to  
6 the fine ranges per count.

7           THE COURT: For the record, the range, the fine range  
8 for Business Energy Services, Business Services, on the 62  
9 case, the Eastern District case, all three, they're changed in  
10 all three of them, Eastern, Middle and West, the probation term  
11 in every count is up to five years, and then the fine range in  
12 the Eastern District, that's 62, it will be \$3,880,000 to  
13 \$38,800,000. The fine range in 67 would have been, Count 1,  
14 \$17,500 to \$38,455,850. Count 2, \$1,910,000 to \$19,100,000.  
15 Count 3, \$1,957,500 to \$19,575,000. The same for Count 4.  
16 And then Count 5 and 6 are each \$1,887,500 to \$18,875,500.  
17 And then in the Western District, Count 1 was \$1,957,500 to  
18 \$19,575,000, and Count 2 was \$3,275,000 to \$32,750,000.

19           Does that satisfy you, Mr. Probation Officer?

20           MR. WASCO: Yes, sir. Thank you.

21           THE COURT: All right. Now, there is no fine to  
22 Duke Energy after the fines -- to Business, the fines are to  
23 the two others, the major.

24           That concludes the -- okay. I now have to ask.

25           MR. COONEY: No objections, Your Honor.

1           THE COURT: Do you have any objection to the sentence  
2 as stated for Duke Business Services?

3           MR. COONEY: No, Your Honor.

4           THE COURT: Madam U.S. Attorney?

5           MS. RANGARAJAN: No, Your Honor.

6           THE COURT: Then by virtue of the authority duly  
7 invested in me, I impose upon Duke Energy Business Services the  
8 judgment that I have just stated, and that same statement would  
9 be applicable to all two of the others, and that concludes the  
10 sentencing part.

11          MR. COONEY: Your Honor, for the record, I will  
12 advise my client of their appellate rights as well.

13          THE COURT: I got a lot of help here this afternoon.  
14 I guess I need it.

15          Anyway, we will get the judgments, the official  
16 judgments done, because I know Duke wants the judgment before  
17 you pay the fine tomorrow, don't you?

18          You will get them done this afternoon, and probably  
19 within the next hour; is that right, Lisa?

20          THE CLERK: Maybe within the next couple. It will be  
21 done today.

22          THE COURT: It will be done today.

23          Now, I do want to echo what both counsel said.  
24 Mr. Cooney made a very beautiful statement about how  
25 cooperative and helpful the United States and how honorable

1 they had been, the attorneys have been with him, and  
2 Ms. Rangarajan said the same thing back to him, and I want to  
3 say that I've been as the Court dealing with this matter now  
4 for, I don't know, 60 days or so, it's taken about half my  
5 time, I don't know what it's going to be like for the next  
6 five years, but I do want to acknowledge that no one could have  
7 been more cooperative than -- well, starting with the  
8 Government team, Ms. Rangarajan, Ms. Pettus, Ms. Blondel right  
9 here; and then Mr. Cooney and Claire Rauscher and David Buente  
10 and Karen Popp, you've all been very cooperative and helpful  
11 and very professional.

12 It would have been exceedingly different -- I've been  
13 sitting here 28 years and I've had some very, very fine  
14 lawyers, but I don't know that I've had any more fine than the  
15 seven or eight of you, and I've had a whole lot of sorry ones,  
16 but I'm not going to -- you all are certainly well past that,  
17 but I want to thank you for your cooperation.

18 I also -- we discussed yesterday afternoon amongst  
19 counsel and the Court that there were no remaining documents to  
20 remain sealed after today. Is that still the position of the  
21 United States?

22 MS. RANGARAJAN: Your Honor, the Government had moved  
23 to unseal. It's my understanding that the defendants no longer  
24 object.

25 THE COURT: No longer object.

1 MS. RANGARAJAN: That is correct.

2 THE COURT: Okay. You're just trying to make the  
3 record clear, you've been wanting to do this for a while,  
4 haven't you?

5 MS. RANGARAJAN: Yes, sir.

6 THE COURT: And the old Judge just wouldn't cooperate  
7 with you.

8 Here is the order, Madam Clerk. Everything is  
9 unsealed in this case.

10 Now if we can go back to my speech, this is a complex  
11 case and it will take some effort. I'm impressed with the  
12 statements made by the lawyers, but I'm particularly impressed  
13 with Ms. Janson's statement. I believe that Duke does want to  
14 help and cooperate, and I know you're -- I think you want to,  
15 and I believe you, but you're going to have to because they're  
16 going to force you to, and that's their responsibility, and  
17 then I've got to supervise it all, but we will try to work  
18 together and go from there.

19 I checked the other day. So far as I can ascertain,  
20 in the history of our Court, certainly in the Eastern District,  
21 I think for the entire state, this is the largest criminal fine  
22 that has ever been imposed, and we've had a Federal District  
23 Court in the State of North Carolina since sometime -- I think  
24 it was March of 1790. That's 225 years.

25 Finally, I am not a judge that routinely lectures the

1 defendants and I don't plan to begin that today. I tried to do  
2 my job in this case. That completes this matter.

3 Is there anything else in this matter for today that  
4 the United States desires to be addressed? Ms. Rangarajan?

5 MS. RANGARAJAN: No, Your Honor. Thank you, sir.

6 THE COURT: Anything the defendants, any of the  
7 defendants, want to addresses today, Mr. Cooney?

8 MR. COONEY: No, Your Honor.

9 THE COURT: Thank you all.

10 Marshal, that concludes this hearing and the Court  
11 will be adjourned.

12 - - - - -

13 (Proceedings concluded at 3:01 p.m.)

14 - - - - -

## C E R T I F I C A T E

This is to certify that the foregoing transcript of proceedings taken in a plea to criminal information and sentencing hearing in the United States District Court is a true and accurate transcript of the proceedings taken by me in machine shorthand and transcribed by computer under my supervision, this the 4th day of June, 2015.

/S/ DAVID J. COLLIER

DAVID J. COLLIER

OFFICIAL COURT REPORTER



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EISENSTEIN MALANCHUK LLP

October 25, 2011

Steven Antunes, Esq.  
Senior Litigation Counsel  
AEGIS Insurance Services, Inc.  
10 Exchange Place  
Jersey City, New Jersey 07302

Re: Carolina Power & Light/AEGIS – ash pond settlement negotiations

Dear Steven:

I am writing in response to your September 29<sup>th</sup> letter, in which you assert you are ending settlement negotiations over CP&L's ash pond claims. We want to make it clear that we feel that this decision is in error, and that North Carolina law clearly supports the conclusion that the looming remediation costs associated with the contamination from the ash ponds will be recoverable under the AEGIS policies.

First, with respect to whether there has been an occurrence as defined by the AEGIS policies, the costs being incurred by CP&L go beyond any requirements posed in the permits for these ash ponds and, as such, cannot be construed as simply a normal part of CP&L doing business in this area. To the contrary, the North Carolina regulators, and potentially the Environmental Protection Agency (EPA) as well, as imposing substantial new remediation obligations based on contamination due to ash disposal facilities. We see this as no different than the obligations imposed under the Superfund laws, which at one point were themselves considered "new" with regard to environmental issues faced by utilities, including at manufactured gas plant sites.

Courts in North Carolina have not hesitated to impose coverage obligations for remediation of routine business operations that result in contamination. Thus the North Carolina courts have construed substantially similar policy language and found that the contamination of soil and groundwater from waste disposal areas constitutes an occurrence. In Waste Management of Carolinas, Inc. v. Peerless Ins. Co., the owner of a landfill sought indemnification from his insurer to cover the cost of responding to groundwater contamination from a landfill that the owner routinely used to store industrial waste materials during the policy period. 340 S.E.2d 374, 376 (N.C. 1986). The North Carolina Supreme Court rejected the insurer's argument that the

Steven Antunes, Esq.  
October 25, 2011  
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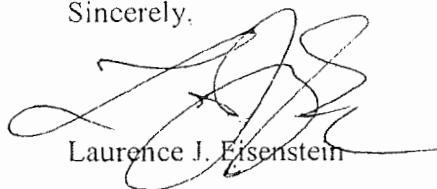
contamination was not an "occurrence" (i.e., an unexpected and unintended event) because it resulted from the landfill owner routinely dumping waste into the landfill. Id. at 380. The North Carolina Supreme Court held that, while dumping the waste may have been a routine part of the owner's business, the damage caused by that act was unexpected and unintended and, therefore, constituted an occurrence. Id. at 380, 383; see also Peerless Ins. Co. v. Strother, 765 F. Supp. 866, 870-71 (E.D.N.C. 1990) (contamination from oil that leached from transformers was an occurrence). Furthermore, whether the damage was expected or intended is based in North Carolina upon the insured's subjective expectations and intentions at the time of the occurrence, and not what the insured arguably should have expected. McCoy v. Coker, 620 S.E.2d 691, 698 (N.C. Ct. App. 2005). We are confident that CP&L neither expected nor intended the contamination from the ash ponds at any time prior to or during the AEGIS policy periods. As such, we feel the law is solidly in our favor that any contamination from the ash ponds is an occurrence under the policies.

To the extent you are further suggesting that coverage would not exist in the absence of a lawsuit being filed against CP&L, the North Carolina Supreme Court has rejected this view, and held that the costs incurred in complying with a state agency's remediation orders are "damages" to which coverage extends. C.D. Spangler Constr. Co. v. Indus. Crankshaft & Eng'g Co., Inc., 388 S.E.2d 557, 565 (N.C. 1990); see also Bond/Tec. Inc. v. Scottsdale Ins. Co., 622 S.E.2d 165, 168 (N.C. Ct. App. 2005) (holding that the insured's voluntary payments to the injured third party did not preclude coverage under a general liability policy).

Exceedances of State guidelines are now being found in the boundary monitoring wells at ash pond facilities; further State orders on remediation, stemming directly from such contamination and not simply due to the business of operating a coal-fired power plant, thus seem inevitable. CP&L will face state-mandated remediation orders regarding its ash ponds and will incur the related costs. That conclusion is all the more likely given EPA's recent attention to coal combustion residue and the pressure from non-governmental organizations regarding ash ponds.

CP&L asks that you reconsider your position in light of the above. Please feel free to contact us for further discussion of how this can be accomplished.

Sincerely,



Laurence J. Eisenstein

cc: ✓ Kenneth E. Ryan, Esq.

## ENVIRONMENTAL PROTECTION AGENCY

### 40 CFR Part 261

[FRL-6588-1]

RIN 2050-AD91

### Notice of Regulatory Determination on Wastes From the Combustion of Fossil Fuels

**AGENCY:** Environmental Protection Agency.

**ACTION:** Regulatory determination.

**SUMMARY:** This document explains EPA's determination of whether regulation of fossil fuel combustion wastes is warranted under subtitle C of the Resource Conservation and Recovery Act (RCRA). Today's action applies to all remaining fossil fuel combustion wastes other than high volume coal combustion wastes generated at electric utilities and independent power producing facilities and managed separately, which were addressed by a 1993 regulatory determination. These include: Large-volume coal combustion wastes generated at electric utility and independent power producing facilities that are co-managed together with certain other coal combustion wastes; coal combustion wastes generated by non-utilities; coal combustion wastes generated at facilities with fluidized bed combustion technology; petroleum coke combustion wastes; wastes from the combustion of mixtures of coal and other fuels (*i.e.*, co-burning); wastes from the combustion of oil; and wastes from the combustion of natural gas.

The Agency has concluded these wastes do not warrant regulation under subtitle C of RCRA and is retaining the hazardous waste exemption under RCRA section 3001(b)(3)(C). However, EPA has also determined national regulations under subtitle D of RCRA are warranted for coal combustion wastes when they are disposed in landfills or surface impoundments, and that regulations under subtitle D of RCRA (and/or possibly modifications to existing regulations established under authority of the Surface Mining Control and Reclamation Act (SMCRA)) are warranted when these wastes are used to fill surface or underground mines.

So that coal combustion wastes are consistently regulated across all waste management scenarios, the Agency also intends to make these national regulations for disposal in surface impoundments and landfills and minefilling applicable to coal combustion wastes generated at electric

utility and independent power producing facilities that are not co-managed with low volume wastes.

The Agency has concluded that no additional regulations are warranted for coal combustion wastes that are used beneficially (other than for minefilling) and for oil and gas combustion wastes. We do not wish to place any unnecessary barriers on the beneficial use of fossil fuel combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs. Currently, about one-quarter of all coal combustion wastes are diverted to beneficial uses. We support increases in these beneficial uses, such as for additions to cement and concrete products, waste stabilization and use in construction products such as wallboard.

**DATES:** Comments in response to data and information requests in this document are due to EPA on September 19, 2000.

**ADDRESSES:** Public comments and supporting materials are available for viewing in the RCRA Information Center (RIC). In addition to the data and information that was included in the docket to support the RTC on FFC waste and the Technical Background Documents, the docket also includes the following document: Responses to Public Comments on the Report To Congress, Wastes from the Combustion of Fossil Fuels. The RIC is located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA. The Docket Identification Number is F-2000-FF2F-FFFFF. The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding federal holidays. To review docket materials, we recommend that the public make an appointment by calling 703 603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost \$0.15/page. The index and some supporting materials are available electronically. See the **SUPPLEMENTARY INFORMATION** section for information on accessing them.

Commenters must send an original and two copies of their comments referencing docket number F-2000-FF2F-FFFFF to: (1) If using regular US Postal Service mail: RCRA Docket Information Center, Office of Solid Waste (5305G), U.S. Environmental Protection Agency Headquarters (EPA, HQ), Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460-0002; or (2) if using special delivery, such as overnight express service: RCRA Docket Information Center (RIC), Crystal Gateway One, 1235 Jefferson Davis

Highway, First Floor, Arlington, VA 22202. Comments may also be submitted electronically through the Internet to: [rcra-docket@epa.gov](mailto:rcra-docket@epa.gov). Comments in electronic format should also be identified by the docket number F-2000-FF2F-FFFFF and must be submitted as an ASCII file avoiding the use of special characters and any form of encryption.

Commenters should not submit electronically any confidential business information (CBI). An original and two copies of CBI must be submitted under separate cover to: RCRA CBI Document Control Officer, Office of Solid Waste (5305W), U.S. EPA, Ariel Rios Building, 1200 Pennsylvania Avenue, NW., Washington, DC 20460-0002.

**FOR FURTHER INFORMATION CONTACT:** For general information, contact the RCRA Hotline at 800 424-9346 or TDD 800 553-7672 (hearing impaired). In the Washington, DC, metropolitan area, call 703 412-9810 or TDD 703 412-3323.

For more detailed information on specific aspects of this regulatory determination, contact Dennis Ruddy, Office of Solid Waste (5306W), U.S. Environmental Protection Agency, Ariel Rios Building, 1200 Pennsylvania Avenue, NW, Washington, DC 20460-0002, telephone (703) 308-8430, e-mail address [ruddy.dennis@epa.gov](mailto:ruddy.dennis@epa.gov).

**SUPPLEMENTARY INFORMATION:** The index and several of the primary supporting materials are available on the Internet. You can find these materials at <http://www.epa.gov/epaoswer/other/fossil/index.htm>.

The official record for this action will be kept in paper form. Accordingly, EPA will transfer all comments received electronically into paper form and place them in the official record, which will also include all comments submitted directly in writing. The official record is the paper record maintained at the address in **ADDRESSES** at the beginning of this notice.

EPA will not immediately reply to commenters electronically other than to seek clarification of electronic comments that may be garbled in transmission or during conversion to paper form, as discussed above.

The contents of today's notice are listed in the following outline:

#### 1. General Information

- A. What action is EPA taking today?
- B. What is the statutory authority for this action?
- C. What was the process EPA used in making today's decision?
- D. What is the significance of "uniquely associated wastes" and what wastes does EPA consider to be uniquely associated wastes?

E. Who is affected by today's action and how are they affected?

F. What additional actions will EPA take after this regulatory determination regarding coal, oil and natural gas combustion wastes?

## 2. What Is the Basis for EPA's Regulatory Determination for Coal Combustion Wastes?

A. What is the Agency's decision regarding the regulatory status of coal combustion wastes and why did EPA make that decision?

B. What were EPA's tentative decisions as presented in the Report to Congress?

C. How did commenters react to EPA's tentative decisions and what was EPA's analysis of their comments?

D. What is the basis for today's decisions?

E. What approach will EPA take in developing national regulations?

## 3. What Is the Basis for EPA's Regulatory Determination for Oil Combustion Wastes?

A. What is the Agency's decision regarding the regulatory status of oil combustion wastes and why did EPA make that decision?

B. What were EPA's tentative decisions as presented in the Report to Congress?

C. How did commenters react to EPA's tentative decisions and what was EPA's analysis of their comments?

D. What is the basis for today's decisions?

## 4. What Is the Basis for EPA's Regulatory Determination for Natural Gas Combustion Wastes?

A. What is the Agency's decision regarding the regulatory status of natural gas combustion wastes and why did EPA make that decision?

B. What was EPA's tentative decision as presented in the Report to Congress?

C. How did commenters react to EPA's tentative decisions?

D. What is the basis for today's decisions?

## 5. What Is the History of EPA's Regulatory Determinations for Fossil Fuel Combustion Wastes?

A. On what basis is EPA required to make regulatory decisions regarding the regulatory status of fossil fuel combustion wastes?

B. What was EPA's general approach in making these regulatory determinations?

C. What happened when EPA failed to issue its determination of the regulatory status of the large volume utility combustion wastes in a timely manner?

D. When was the Part 1 regulatory decision made and what were EPA's findings?

## 6. Executive Orders and Laws Addressed in Today's Action

A. Executive Order 12866—Determination of Significance.

B. Regulatory Flexibility Act, as amended.

C. Paperwork Reduction Act (Information Collection Requests).

D. Unfunded Mandates Reform Act.

E. Executive Order 13132: Federalism.

F. Executive Order 13084: Consultation and Coordination with Indian Tribal Governments.

G. Executive Order 13045: Protection of Children from Environmental Health Risks and Safety Risks.

H. National Technology Transfer and Advancement Act of 1995.

I. Executive Order 12898: Environmental Justice.

J. Congressional Review Act.

## 7. How To Obtain more Information

### 1. General Information

#### A. What Action Is EPA Taking Today?

In today's action, we are determining that regulation of fossil fuel combustion (FFC) wastes under subtitle C of the Resource Conservation and Recovery Act (RCRA) is not warranted. This determination covers the following wastes:

- Large-volume coal combustion wastes generated at electric utility and independent power producing facilities that are co-managed together with certain other coal combustion wastes;
- Coal combustion wastes generated at non-utilities;
- Coal combustion wastes generated at facilities with fluidized bed combustion technology;
- Petroleum coke combustion wastes;
- Wastes from the combustion of mixtures of coal and other fuels (i.e., co-burning of coal with other fuels where coal is at least 50% of the total fuel);
- Wastes from the combustion of oil; and
- Wastes from the combustion of natural gas.

While these wastes remain exempt from subtitle C, we have further decided to establish national regulations under subtitle D of RCRA (RCRA sections 1008(a) and 4004(a)) for coal combustion wastes that are disposed in landfills or surface impoundments or used to fill surface or underground mines. For coal combustion wastes used as minefill, we will consult with the Office of Surface Mining in the Department of the Interior and thoroughly assess whether equivalent protectiveness could be achieved by using regulatory authorities available under the Surface Mining Control and Reclamation Act (SMCRA), as well as those afforded under the Resource Conservation and Recovery Act. We will consider whether RCRA subtitle D or SMCRA authorities or some combination of both are most

appropriate to regulate the disposal of coal combustion wastes when used for minefill in surface and underground mines to ensure protection of human health and the environment. These standards will be developed through notice and comment rulemaking and in consultation with states and other stakeholders. These regulations will, in EPA's view, ensure that the trend towards improved management of coal combustion wastes over recent years will accelerate and will ensure a consistent level of protection of human health and the environment is put in place across the United States.

If, as a result of comments in response to this notice; the forthcoming analyses identified in this notice; or additional information garnered in the course of developing these national regulations; we find that there is a need for regulation under the authority of RCRA subtitle C, the Agency will revise this determination accordingly.

We recognize our decision to develop regulations under RCRA subtitle D (or, for minefilling, possibly under SMCRA) for the above-listed coal combustion wastes was not specifically identified as an option in our March 31, 1999 Report to Congress. Our final determination reflects our consideration of public comments received on the Report to Congress and other analyses that we conducted.

Today's decision was, in the Agency's view, a difficult one, given the many competing considerations discussed throughout today's notice. After considering all of the factors specified in RCRA section 8002(n), we have decided as discussed further below, that the decisive factors are the trends in present disposal and utilization practices (section 8002 (n)(2)), the current and potential utilization of the wastes (Section 8002 (n)(8), and the admonition against duplication of efforts by other federal and state agencies.

As described in the Report to Congress, the utility industry has made significant improvements in its waste management practices over recent years, and most state regulatory programs are similarly improving. For example, in the utility industry the use of liners and groundwater monitoring at landfills and surface impoundments has increased substantially over the past 15 years as indicated in the following table.

## PERCENT OF UTILITY COAL COMBUSTION WASTE MANAGEMENT UNITS WITH CONTROLS IN 1995

Waste management unit	Liners		Groundwater monitoring	
	Percent of all units	Percent of new units *	Percent of all units	Percent of new units *
Landfills .....	57	75	85	88
Surface Impoundments .....	26	60	38	65

\* New units constructed between 1985–1995.  
Source: USWAG, EPRI 1995.

Public comments and other analyses, however, have convinced us that these wastes could pose risks to human health and the environment if not properly managed, and there is sufficient evidence that adequate controls may not be in place—for example, while most states can now require newer units to include liners and groundwater monitoring, 62% of existing utility surface impoundments do not have groundwater monitoring. This, in our view, justifies the development of national regulations. We note, however, that some waste management units may not warrant liners and/or groundwater monitoring, depending on site-specific characteristics.

New information we received in public comments includes additional documented damage cases, as well as cases indicating at least a potential for damage to human health and the environment. We did not independently investigate these damage cases; rather, we relied on information contained in state files. While the absolute number of documented damage cases is not large, we have considered the evidence of proven and potential damage in light of the proportion of facilities that lack basic environmental controls (*e.g.*, groundwater monitoring). We acknowledge, moreover, that our inquiry into the existence of damage cases was focused primarily on a subset of states—albeit states that account for almost 20 percent of coal fired utility electricity generation capacity. Given the volume of coal combustion wastes generated nationwide (115 million tons) and the numbers of facilities that currently lack some basic environmental controls, especially groundwater monitoring, other cases of proven and potential damage are likely to exist. Because EPA did not use a statistical sampling methodology to evaluate the potential for damage, the Agency is unable to determine whether the identified cases are representative of the conditions at all facilities and, therefore, cannot quantify the extent and magnitude of damages at the national level.

Since the Report to Congress, we have conducted additional analyses of the potential for the constituents of coal combustion wastes to leach in dangerous levels into ground water. Based on a comparison of drinking water and other appropriate standards to leach test data from coal combustion waste samples, we identified a potential for risks from arsenic that we cannot dismiss at this time. This conclusion is based on possible exceedences of a range of values that EPA is currently considering for a revised arsenic MCL. Once a new arsenic MCL is established, additional groundwater modeling may be required to evaluate the likelihood of exceeding that MCL.

As discussed further below, in light of certain comments received on the Report to Congress, we are not relying on a quantitative groundwater risk assessment to assess potential risks to human health or the environment. In the absence of a more complete groundwater risk assessment, we are unable at this time to draw quantitative conclusions regarding the risks due to arsenic or other contaminants posed by improper waste management. Once we have completed a review of our groundwater model and made any necessary changes, we will reevaluate groundwater risks and take appropriate regulatory actions. We will specifically assess new modeling results as they relate to any promulgated changes in the arsenic MCL.

We acknowledge that, even without federal regulatory action, many facilities in the utility industry have either voluntarily instituted adequate environmental controls or have done so at the direction of states that regulate these facilities. In addition, we found that for the proven damage cases, the states (and in two cases, EPA under the Superfund program) have taken action to mitigate risk and require corrective action. However, in light of the evidence of actual and potential environmental releases of metals from these wastes; the large volume of wastes generated from coal combustion; the proportion of existing and even newer units that do not currently have basic controls in

place; and the presence of hazardous constituents in these wastes; we believe, on balance, that the best means of ensuring that adequate controls are imposed where needed is to develop national subtitle D regulations. As we develop and issue the national regulations, we will try to minimize disruptions to operation of existing waste management units.

In taking today's action, we carefully considered whether to develop national regulations under RCRA subtitle D or subtitle C authorities. One approach we considered was to promulgate regulations pursuant to subtitle C authority, similar to recently proposed regulations applicable to cement kiln dust. Under this approach, EPA would have established national management standards for coal combustion wastes managed in landfills and surface impoundments and used for minefilling, as well as a set of tailored subtitle C requirements, promulgated pursuant to RCRA section 3004(x). If wastes were properly managed in accordance with subtitle D-like standards, they would not be classified as a hazardous waste. If wastes were not properly managed, they would become listed hazardous wastes subject to tailored subtitle C standards. This approach would give EPA enforcement authority in states following their adoption of the contingent management listing.

We believe, however, for the reasons described below, the better approach at this time to ensuring adequate management of FFC wastes is to develop national regulations under subtitle D rather than subtitle C. EPA has reached this conclusion in large part based on consideration of "present disposal and utilization practices." RCRA § 8002(n). As noted above, present disposal practices in landfills and surface impoundments are significantly better than they have been in the past in terms of imposing basic environmental controls such as liners and groundwater monitoring. This trend is the result of increasing regulatory oversight by states of the management of these wastes as well as voluntary industry improvements. In the 1980's, only 11

states had authority to require facilities to install liners, and 28 states had the authority to require facilities to conduct groundwater monitoring at landfills. As of 1995, these rates were significantly higher, with 43 states having the authority to require liners and 46 states having the authority to require groundwater monitoring at landfills. When authority under state groundwater and drinking water regulations are considered, some commenters have suggested that nearly all states can address the management of these wastes. Thus, with the exception of relatively few states, the regulatory infrastructure is generally in place at the state level to ensure adequate management of these wastes.

While the trend both in terms of state regulatory authorities and the imposition of controls at these facilities has been positive, between 40 and 70 percent of sites lacked controls such as liners and/or groundwater monitoring as of 1995. This gap is of environmental concern given the potential for risks posed by mismanagement of coal combustion wastes in certain circumstances. Nonetheless, given most of the states' current regulatory capabilities and the evidence that basic controls are increasingly being put in place by the states and facilities (see RCRA section 8002(n), which directs EPA to consider actions of state and other federal agencies with a view to avoiding duplication of effort), EPA believes that subtitle D controls will provide sufficient clarity and incentive for states to close the remaining gaps in coverage, and for facilities to ensure that their wastes are managed properly.

For minefilling, although we have considerable concern about certain current practices (e.g., placement directly into groundwater) we have not yet identified a case where placement of coal wastes can be determined to have actually caused increased damage to ground water. In addition, there is a federal regulatory program—SMCRA—expressly designed to address environmental risks associated with coal mines. Finally, given that states have been diligent in expanding and upgrading programs, as they have done for surface impoundments and landfills, we believe they will be similarly responsive in addressing environmental concerns arising from this emerging practice. In short, we arrive at the same conclusions, for substantially the same reasons, for this practice as we did for landfills and surface impoundments: that subtitle D controls, or upgraded SMCRA controls or a combination of the two, should provide sufficient clarity and incentive to ensure proper handling

of this waste. Having determined that subtitle C regulation is not warranted for all other management practices, EPA does not see a basis in the record for carving this one practice out for separate regulatory treatment.

Once these regulations are effective, facilities would be subject to citizen suits for any violation of the standards. If EPA were addressing wastes that had not been addressed by the states (or the federal government) in the past, or an industry with wide evidence of irresponsible solid waste management practices, EPA may well conclude that the additional incentives for improvement and compliance provided by the subtitle C scheme—the threat of federal enforcement and the stigma associated with improper management of RCRA subtitle C waste—were necessary. But the record before us indicates that the structure and the sanctions associated with a subtitle D approach (or a SMCRA approach if EPA determines it is equivalent) should be sufficient.

We also see a potential downside to pursuing a subtitle C approach. Section 8002(n)(8) directs us to consider, among other factors, "the current and potential utilization of such materials." Industry commenters have indicated that they believe subjecting any coal combustion wastes to a subtitle C regime would place a significant stigma on these wastes, the most important effect being that it would adversely impact beneficial reuse. As we understand it, the concern is that, even though beneficially reused waste would not be hazardous under the contemplated subtitle C approach, the link to subtitle C would nonetheless tend to discourage purchase and re-use of the waste. We do not wish to place any unnecessary barriers on the beneficial uses of these wastes, because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal. States and industry have also expressed concern that regulation under subtitle C could cause a halt in the use of coal combustion wastes to reclaim abandoned and active mine sites. We recognize that when done properly, minefilling can lead to substantial environmental benefits. EPA believes the contingent management scheme we discussed should diminish any stigma that might be associated with the subtitle C link. Nonetheless, we acknowledge the possibility that the approach could have unintended consequences. We would be particularly concerned about any adverse effect on the beneficial re-use market for these wastes because more than 23 percent

(approximately 28 million tons) of the total coal combustion waste generated each year is beneficially reused and an additional eight percent (nine million tons) is used for minefilling. EPA believes that such reuse when performed properly, is by far the environmentally preferable destination for these wastes, including when minefilled. Normally, concerns about stigma are not a deciding factor in EPA's decisions under RCRA, given the central concern under the statute for protection of human health and the environment. However, given our conclusion that the subtitle D approach here should be fully effective in protecting human health and the environment, and given the large and salutary role that beneficial reuse plays for this waste, concern over stigma is a factor supporting our decision today that subtitle C regulation is unwarranted in light of our decision to pursue a subtitle D approach.

Additionally, in a 1993 regulatory determination, EPA previously addressed large volume coal combustion wastes generated at electric utility and independent power producing facilities that manage the wastes separately from certain other low volume and uniquely associated coal combustion wastes (see 58 FR 42466; August 9, 1993). Our 1993 regulatory determination maintained the exemption of these large volume coal combustion wastes from being regulated as hazardous wastes when managed separately from other wastes (e.g., in monofills). We intend that the national subtitle D regulations we develop for the coal combustion wastes subject to today's regulatory determination will also be applicable to the wastes covered in the 1993 regulatory determination for the reasons listed below, so that all coal combustion wastes are consistently regulated for placement in landfills, surface impoundments, and minefills.

- The co-managed coal combustion wastes that we studied extensively in making today's regulatory determination derive their characteristics largely from these large-volume wastes and not from the other wastes that are co-managed with them.

- We believe that the risks posed by the co-managed coal combustion wastes result principally from the large-volume wastes.

- These large-volume coal combustion wastes, account for over 20% of coal combustion wastes.

As we proceed with regulation development, we will also take enforcement action under RCRA section 7003 when we identify cases of imminent and substantial endangerment. We will also use Superfund remedial and emergency



response authorities under the Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA), as appropriate, to address damages that result in risk to human health and the environment.

However, as stated above, this decision was a difficult one and EPA believes that, absent our conclusions regarding the current trends in management of this waste, the waste might present sufficient potential threat to human health and the environment to justify subtitle C regulation. There are several factors that might cause us to rethink our current determination. First, and perhaps most importantly, if current trends toward protective management do not continue, EPA may well determine that subtitle C regulation is warranted for this waste. As we have stated, we do not believe the current gaps in the basic controls are acceptable, and our determination that subtitle C regulation is not warranted is premised to a large extent on our conclusion that subtitle D regulation will be sufficient to close these gaps. If this conclusion turns out not to be warranted, we would be inclined to re-examine our current decision.

Second, EPA will continue to examine available information and, as a result of the ongoing review, may conclude over the next several months that this decision should be revised. Our ongoing review will include consideration of: (1) The extent to which fossil fuel combustion wastes have caused actual or potential damage to human health or the environment; (2) the environmental effects of filling underground and surface coal mines with fossil fuel combustion wastes; and (3) the adequacy of existing state and/or federal regulation of these wastes. Finally, the agency will consider the results of a report of the National Academy of Sciences regarding the adverse human health effects of mercury, one of the constituents in fossil fuel combustion wastes. EPA believes that this report will enhance our understanding of the risks due to exposure to mercury. All of these efforts may result in a subsequent revision of today's regulatory determination.

Finally, relating to oil combustion wastes, we will work with relevant stakeholders so that any necessary measures are taken to ensure that oil combustion wastes currently managed in the two known remaining unlined surface impoundments are managed in a manner that protects human health and the environment.

#### *B. What Is the Statutory Authority for This Action?*

We are issuing today's notice under the authority of RCRA section 3001 (b) (3) (C), as amended. This section exempts certain wastes, including fossil fuel combustion wastes, from hazardous waste regulation until the Agency completes a Report to Congress mandated by RCRA section 8002 (n) and maintains the exemption, unless the EPA Administrator makes a determination that subtitle C (hazardous waste) regulation is warranted. RCRA section 3004 (x) provides the Agency with flexibility in developing subtitle C standards. If appropriate, these formerly exempted wastes may not be subjected to full subtitle C requirements in areas such as treatment standards, liner design requirements and corrective action.

#### *C. What Was the Process EPA Used in Making Today's Decision?*

##### *1. What Approach Did EPA Take to Studying Fossil Fuel Combustion Wastes?*

We conducted our study of wastes generated by the combustion of fossil fuels in two phases. The first phase, called the Part 1 determination, covered high volume coal combustion wastes (e.g., bottom ash and fly ash) generated at electric utility and independent power producing facilities (non-utility electric power producers that are not engaged in any other industrial activity) and managed separately from other fossil fuel combustion wastes. In 1993, EPA issued a regulatory determination that exempted Part 1 wastes from regulation as hazardous wastes (see 58 FR 42466; August 9, 1993). Today's regulatory determination is the second phase of our effort, or the Part 2 determination. It covers all other fossil fuel combustion wastes not covered in Part 1. This includes high volume, utility-generated coal combustion wastes when co-managed with certain low volume wastes that are also generated by utility coal burners; coal combustion wastes generated by industrial, non-utility, facilities; and wastes from the combustion of oil and gas. Under court order, we are required to complete the Part 2 regulatory determination by April 25, 2000.<sup>1</sup>

<sup>1</sup> The consent decree entered into by EPA (*Frank Gearhart, et al. v. Browner, et al.*, No. 91-2435 (D.D.C.) for completing the studies and regulatory determination for fossil fuel combustion wastes used the term "remaining wastes" to differentiate the wastes to be covered in today's decision from the large-volume utility coal combustion wastes that were covered in the August 1993 regulatory determination (see 58 FR 42466).

##### *2. What Statutory Requirements Does EPA Have To Meet in Making Today's Regulatory Determinations?*

RCRA section 8002(n) specifies eight study factors that we must take into account in our decision-making. These are:

1. The source and volumes of such materials generated per year.
2. Present disposal practices.
3. Potential danger, if any, to human health and the environment from the disposal of such materials.
4. Documented cases in which danger to human health or the environment has been proved.
5. Alternatives to current disposal methods.
6. The costs of such alternatives.
7. The impact of those alternatives on the use of natural resources.
8. The current and potential utilization of such materials.

Additionally, in developing the Report to Congress, we are directed to consider studies and other actions of other federal and State agencies with a view toward avoiding duplication of effort (RCRA section 8002(n)). In addition to considering the information contained in the Report, EPA is required to base its regulatory determination on information received in public hearings and comments submitted on the Report to Congress (RCRA section 3001(b)(3)(C)).

##### *3. What Were the Agency's Sources of Information and Data That Serve as the Basis for This Decision?*

We gathered publicly available information from a broad range of sources, including federal and state agencies, industry trade groups, environmental organizations, and open literature searches. We requested information from all stakeholder groups on each of the study factors Congress requires us to evaluate. For many of the study factors, very limited information existed prior to this study. We worked closely with the Edison Electric Institute (EEI), Utility Solid Waste Activities Group (USWAG), the Electric Power Research Institute (EPRI), and the Council of Industrial Boiler Owners (CIBO) as those organizations developed new information. Because other ongoing EPA projects currently focus on portions of the FFC waste generator universe, we also leveraged data collection efforts conducted for air, industrial waste, and hazardous waste programs. In addition, we obtained information from environmental organizations regarding beneficial uses of some FFC wastes and methods for characterizing the risks associated with FFC wastes.

Specifically, we gathered and analyzed the following information from industry, states and environmental groups:

- Published and unpublished materials obtained from state and federal agencies, utilities and trade industry groups, and other knowledgeable parties on the volumes and characteristics of coal, oil, and natural gas combustion wastes and the corresponding low-volume and uniquely associated wastes (see the following section for a description of “uniquely associated wastes”).

- Published and unpublished materials on waste management practices (including co-disposal and re-use) associated with FFC wastes and the corresponding low-volume and uniquely associated wastes.

- Published and unpublished materials on the potential environmental impacts associated with FFC wastes.

- Published and unpublished materials on trends in utility plant operations that may affect waste volumes and characteristics. We gathered specific information on innovations in scrubber use and the potential impacts of the 1990 Clean Air Act Amendments on waste volumes and characteristics.

- Energy Information Agency (EIA), Department of Energy, data on utility operations and waste generation obtained from EIA's Form 767 database. These data are submitted to EIA annually by electric utilities.

- Site visit reports and accompanying facility submittals for utility and non-utility plants we visited during the study.

- Materials obtained from public files maintained by State regulatory agencies. These materials focus on waste characterization, waste management, and environmental monitoring data, along with supporting background information.

We visited five states to gather specific information about state regulatory programs, FFC waste generators, waste management practices and candidate damage cases related to fossil fuel combustion. The five states we examined in great detail were: Indiana, Pennsylvania, North Carolina, Wisconsin, and Virginia. These five states account for almost 20 percent of coal-fired utility electrical generation capacity.

We also performed a variety of analyses, including human health and ecological risk assessments, analyses of existing federal and state regulatory programs, and economic impact analyses. We discussed and shared

these results with all of our stakeholders. We also conducted an external peer review of our risk analysis.

#### 4. What Process Did EPA Follow To Obtain Comments on the Report to Congress?

RCRA requires that we publish a Report to Congress (RTC) evaluating the above criteria. Further, within six months of submitting the report, we must, after public hearings and opportunity for comment, decide whether to retain the exemption from hazardous waste requirements or whether regulation as hazardous waste is warranted. On March 31, 1999, we issued the required RTC on those fossil fuel combustion wastes (coal, oil and gas) not covered in the Part 1 regulatory determination, which are also known as the “remaining wastes” (see footnote 1).

We asked the public to comment on the Report and the appropriateness of regulating fossil fuel wastes under subtitle C of RCRA. To ensure that all interested parties had an opportunity to present their views, we held a public meeting with stakeholders on May 21, 1999. The April 28, 1999 **Federal Register** notice provided a 45-day public comment period, until June 14, 1999. We received over 150 requests to extend the public comment period by up to six months. However, we were obligated by a court-ordered deadline to issue our official Regulatory Determination by October 1, 1999. (See 64 FR 31170; June 10, 1999.) In response to requests for an extension, we entered into discussions with the parties to consider an extension of the comment period to ensure that all interested members of the public had sufficient time to complete their review and submit comments. Subsequently, the plaintiffs in *Gearhart v. Reilly* moved to modify the consent decree to reopen the comment period and to allow EPA until March 10, 2000 to complete the Regulatory Determination. We supported the motion, and on September 2, 1999, the Court granted the motion. In compliance with the court order, on September 20, 1999, we announced that public comments would be accepted through September 24, 1999 (64 FR 50788; Sept. 20, 1999). We have since received two extensions to the date for the final determination. Currently, EPA is directed to issue the Part 2 regulatory determination by April 25, 2000.

We received about 220 comments on the RTC from the public hearing and our **Federal Register** requests for comments. The docket for this action (Docket No. F-99-FF2P-FFFFF) contains all individual comments presented in the

public meetings and hearing, and a transcript from the public hearing, and all written comments. The docket is available for public inspection. Today's decision is based on the RTC, its underlying data and analyses, public comments, and EPA analyses of these comments.

The comments covered a wide variety of topics discussed in the Report to Congress, such as fossil fuel combustion waste generation and characteristics; current and alternative practices for managing FFC waste; documented damage cases and potential danger to human health and the environment; existing regulatory controls on FFC waste management; cost and economic impacts of alternatives to current management practices; FFC beneficial use practices; and our review of applicable state and federal regulations.

#### *D. What Is the Significance of “Uniquely Associated Wastes” and What Wastes Does EPA Consider To Be “Uniquely Associated Wastes?”*

Facilities that burn fossil fuels generate combustion wastes and also generate other wastes from processes that are related to the main fuel combustion processes. Often, as a general practice, facilities co-dispose these wastes with the large volume wastes that are subject to the RCRA section 3001 (b) (3) (C) exemption. Examples of these related wastes are:

- Precipitation runoff from the coal storage piles at the facility.
- Waste coal or coal mill rejects that are not of sufficient quality to burn as fuel.
- Wastes from cleaning the boilers used to generate steam.

There are numerous wastes like these, collectively known as “low-volume” wastes. Further, when one of these low-volume wastes, during the course of generation or normal handling at the facility, comes into contact with either fossil fuel (e.g., coal, oil) or fossil fuel combustion waste (e.g., coal ash or oil ash) and it takes on at least some of the characteristics of the fuel or combustion waste, we call it a “uniquely associated” waste. When uniquely associated wastes are co-managed with fossil fuel combustion wastes, they fall within the coverage of today's regulatory determination. When managed separately, uniquely associated wastes are subject to regulation as hazardous waste if they are listed wastes or exhibit the characteristic of a hazardous waste (see 40 CFR 261.20 and 261.30, which specify when a solid waste is considered to be a hazardous waste).

The Agency recognizes that determining whether a particular waste



is uniquely associated with fossil fuel combustion involves an evaluation of the specific facts of each case. In the Agency's view, the following qualitative criteria should be used to make such determinations on a case-by-case basis:

(1) Wastes from ancillary operations are not "uniquely associated" because they are not properly viewed as being "from" fossil fuel combustion.

(2) In evaluating a waste from non-ancillary operations, one must consider the extent to which the waste originates or derives from the fossil fuels, the combustion process, or combustion residuals, and the extent to which these operations impart chemical characteristics to the waste.

The low-volume wastes that are not uniquely associated with fossil fuel combustion would not be subject to today's regulatory determination. That is, they would not be accorded an exemption from RCRA subtitle C, whether or not they were co-managed with any of the exempted fossil fuel combustion wastes. Instead, they would be subject to the RCRA characteristic standards and hazardous waste listings. The exemption applies to mixtures of an exempt waste with a non-hazardous waste, but when an exempt waste is mixed with a hazardous waste, the mixture is not exempt.

Based on our identification and review of low volume wastes associated with the combustion of fossil fuels, we are considering offering the following guidance concerning which low volume wastes are uniquely associated with and which are not uniquely associated with fossil fuel combustion. Unless there are some unusual site-specific circumstances, we would generally consider that the following lists of low volume wastes are uniquely and non-uniquely associated wastes:

#### Uniquely Associated

- Coal Pile Runoff
- Coal Mill Rejects and Waste Coal
- Air Heater and Precipitator Washes
- Floor and Yard Drains and Sumps
- Wastewater Treatment Sludges
- Boiler Fireside Chemical Cleaning Wastes

#### Not Uniquely Associated

- Boiler Blowdown
- Cooling Tower Blowdown and Sludges
- Intake or Makeup Water Treatment and Regeneration Wastes
- Boiler Waterside Cleaning Wastes
- Laboratory Wastes
- General Construction and Demolition Debris
- General Maintenance Wastes

Moreover, we do not generally consider spillage or leakage of materials

used in the processes that generate these non-uniquely associated wastes, such as boiler water treatment chemicals, to be uniquely associated wastes, even if they occur in close proximity to the fossil fuel wastes covered by this regulatory determination.

An understanding of whether a waste is uniquely associated can be important in one circumstance. If a waste is not uniquely associated and is a hazardous waste, co-management with a Bevill waste will result in loss of the Bevill exemption. As a general matter, the wastes identified above as potentially not uniquely associated do not tend to be hazardous. This issue may therefore not be critical. The Agency, however, must still define appropriate boundaries for the Bevill exemption, because there is no authority to grant Bevill status to wastes that are not uniquely associated—the exemption was not intended as an umbrella for wastes that other industries must treat as hazardous.

EPA solicits comment on this discussion of uniquely associated wastes in the context of fossil fuel combustion and will issue final guidance after reviewing and evaluating information we receive as a result of this request.

#### *E. Who Is Affected by Today's Action and How Are They Affected?*

As explained above, fossil fuel combustion wastes generated from the combustion of coal, oil and natural gas will continue to remain exempt from being regulated as hazardous wastes under RCRA. No party is affected by today's determination to develop regulations applicable to coal combustion wastes when they are land disposed or used to fill surface or underground mines because today's action does not impose requirements. However, if such regulations are promulgated, they would affect coal combustion wastes subject to today's regulatory determination as well as wastes covered by the Part 1 regulatory determination when they are disposed in landfills and surface impoundments, or when used to fill surface or underground mines.

While we do not intend that national subtitle D regulations would be applicable to oil combustion wastes, we intend to work with relevant stakeholders so that any necessary measures are taken to ensure that oil combustion wastes currently managed in the two known remaining unlined surface impoundments are managed in a manner that protects human health and the environment.

#### *F. What Additional Actions Will EPA Take After this Regulatory Determination Regarding Coal, Oil and Natural Gas Combustion Wastes?*

To ensure that entities who generate and/or manage fossil fuel combustion wastes provide long-term protection of human health and the environment, we plan several actions:

- We will review comments submitted in response to today's notice on uniquely associated wastes and on the adequacy of the guidance developed by the utility industry on co-management of mill rejects (pyrites) with large volume coal combustion wastes.

- We will work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface impoundments to ensure that any necessary measures are taken so these wastes are managed in a manner that protects human health and the environment (described in section 3.D. of this document).

- We are evaluating the groundwater model and modeling methods that were used in the RTC to estimate risks for these wastes. This review may result in a re-evaluation of the potential groundwater risks posed by the management of fossil fuel combustion wastes and action to revise our Part 1 and Part 2 determinations if appropriate (see section 2.C. of this document).

- There are a number of ongoing and evolving efforts underway at EPA to improve our understanding of the human health impacts of wastes used in agricultural settings. We expect to receive substantial comments and new scientific information based on a risk assessment of the use of cement kiln dust as a substitute for agricultural lime (see 64 FR 45632; August 20, 1999) and other Agency efforts. As a result, we may refine our methodology for assessing risks related to the use of wastes in agricultural settings. If these efforts lead us to a different understanding of the risks posed by fossil fuel combustion wastes when used as a substitute for agricultural lime, we will take appropriate action to reevaluate today's regulatory determination (see section 2.C. of this document).

- We will review the findings and recommendations of the National Academy of Sciences upcoming report on mercury and assess its implications on risks due to exposure to mercury. We will ensure that the regulations we develop as a result of today's regulatory determination address any additional

risks posed by these wastes if hazardous constituent levels exceed acceptable levels

- We will reevaluate risk posed by managing coal combustion solid wastes if levels of mercury or other hazardous constituents change due to any future Clean Air Act air pollution control requirements for coal burning utilities (see section 2.C. of this document).

- We will continue EPA's partnership with the states to finalize voluntary industrial solid waste management guidance that identifies baseline protective practices for industrial waste management units, including fossil fuel combustion waste management units. We will use relevant information and knowledge that we obtain as a result of this effort to assist us in developing national regulations applicable to coal combustion wastes.

## **2. What Is the Basis for EPA's Regulatory Determination for Coal Combustion Wastes?**

### *A. What Is the Agency's Decision Regarding the Regulatory Status of Coal Combustion Wastes and Why Did EPA Make That Decision?*

We have determined at this time that regulation of coal combustion wastes under subtitle C is not warranted. However, we have also decided that it is appropriate to establish national regulations under non-hazardous waste authorities for coal combustion wastes that are disposed in landfills and surface impoundments. We believe that subtitle D regulations are the most appropriate mechanism for ensuring that these wastes disposed in landfills and surface impoundments are managed safely.

EPA's conclusion that some form of national regulation is warranted to address these wastes is based on the following considerations: (a) The composition of these wastes could present danger to human health and the environment under certain conditions, and "potential" damage cases identified by EPA and commenters, while not definitively demonstrating damage from coal combustion wastes, may indicate that these wastes have the potential to pose such danger; (b) we have identified eleven documented cases of proven damages to human health and the environment by improper management of these wastes in landfills and surface impoundments; (c) present disposal practices are such that, in 1995, these wastes were being managed in 40 percent to 70 percent of landfills and surface impoundments without reasonable controls in place, particularly in the area of groundwater

monitoring; and (d) while there have been substantive improvements in state regulatory programs, we have also identified gaps in state oversight.

When we considered a tailored subtitle C approach, we estimated the potential costs of regulation of coal combustion wastes (including the utility coal combustion wastes addressed in the 1993 Part 1 determination) to be \$1 billion per year. While large in absolute terms, we estimate that these costs are less than 0.4 percent of industry sales. To improve our estimates we solicit public comment on the potential compliance costs to coal combustion waste generators as well as the indirect costs to users of these combustion by-products.

We have also decided that it is appropriate to establish national regulations under RCRA non-hazardous waste authorities (and/or possibly modifications to existing regulations established under authority of SMCRA) applicable to the placement of coal combustion wastes in surface or underground mines. We have reached this decision because (a) we find that these wastes when minefilled could present a danger to human health and the environment under certain circumstances, and (b) there are few states that currently operate comprehensive programs that specifically address the unique circumstances of minefilling, making it more likely that damage to human health or the environment could go unnoticed.

With the exception of minefilling as described above, we have decided that national regulation under subtitle C or subtitle D is not warranted for any of the other beneficial uses of coal combustion wastes. We have reached this decision because: (a) We have not identified any other beneficial uses that are likely to present significant risks to human health or the environment; and (b) no documented cases of damage to human health or the environment have been identified. Additionally, we do not want to place any unnecessary barriers on the beneficial uses of coal combustion wastes so they can be used in applications that conserve natural resources and reduce disposal costs.

### *B. What Were EPA's Tentative Decisions as Presented in the Report to Congress?*

On March 31, 1999, EPA indicated a preliminary decision that disposal of coal combustion wastes should remain exempt from regulation under RCRA subtitle C. We also presented our tentative view that most beneficial uses of these wastes should remain exempt from regulation under RCRA subtitle C.

However, in the RTC we identified three situations where we had particular concerns with the disposition or uses of these wastes.

First, we indicated some concern with the co-management of mill rejects ("pyrites") with coal combustion wastes which, under certain circumstances, could cause or contribute to ground water contamination or other localized environmental damage. We indicated that the utility industry responded to our concern by implementing a voluntary education and technical guidance program for the proper management of these wastes. We expressed satisfaction with the industry program and tentatively concluded that additional regulation in this area was not necessary. We explained that we were committed to overseeing industry's progress on properly managing pyritic wastes, and would revisit our regulatory determination relative to co-management of pyrites with large volume coal combustion wastes at a later date, if industry progress was insufficient in this area.

Second, in the RTC we identified potential human health risks from arsenic when these wastes are used for agricultural purposes (e.g., as a lime substitute). To address this risk, we indicated our preliminary view that Subtitle C regulations may be appropriate for this management practice. We explained that an example of such controls could include regulation of the content of these materials such that, when used for agricultural purposes, the arsenic level could be no higher than that found in agricultural lime. As an alternative to subtitle C regulation, we indicated that EPA could engage the industry to implement a voluntary program to address the risk, for example, by limiting the level of arsenic in coal combustion wastes when using them for agricultural purposes. Moreover, we indicated that a decision to establish hazardous waste regulations applicable to agricultural uses of co-managed coal combustion wastes would likely affect the regulatory status of the Part 1 wastes (i.e., electric utility high volume coal combustion wastes managed separately from other coal combustion wastes) when used for agricultural purposes. This is because the source of the identified risk was the arsenic content of the high volume coal combustion wastes and not other materials that may be co-managed with them.

Third, we expressed concern with potential impacts from the expanding practice of minefilling coal combustion wastes (i.e., backfilling the wastes into mined areas) and described the

difficulties we had with assessing the impacts and potential risks of this practice. We explained that these difficulties include:

- Determining if elevated contaminants in ground water are due to minefill practices or pre-existing conditions resulting from mining operations,
- Trying to model situations that may be more complex than our groundwater models can accommodate,
- The lack of long-term experience with the recent practice of minefilling, which limits the amount of environmental data for analysis, and
- The site-specific nature of these operations.

Accordingly, we did not present a tentative decision in the RTC for this practice. We indicated that subtitle C regulation would remain an option for minefilling, but that we needed additional information prior to making a final decision. Rather, we solicited additional information from commenters on these and other aspects of minefilling practices and indicated we would carefully consider that information in the formulation of today's decision.

#### *C. How Did Commenters' React to EPA's Tentative Decisions and What Was EPA's Analysis of Their Comments?*

Commenter's provided substantial input and information on several aspects of our overall tentative decision to retain the exemption for these wastes from RCRA subtitle C regulation. These aspects are: modeling and risk assessment for the groundwater pathway, documented damage cases, the potential for coal combustion waste characteristics to change as a result of possible future Clean Air Act regulations, proper management of mill rejects (pyrites), agricultural use of coal combustion wastes, the practice of minefilling coal combustion wastes, and our assessment of existing State programs and industry waste management practices.

#### **1. How Did Commenters React to the Groundwater Modeling and Risk Assessment Analyses Conducted by EPA To Support its Findings in the Report to Congress?**

*Comments.* Industry and public interest group commenters submitted detailed critiques of the groundwater model, EPACMTP, that we used for our risk analysis. Industry commenters believe that the model will overestimate the levels of contaminants that may migrate down-gradient from disposed wastes. Environmental groups expressed the opposite belief; that is, that the

model underestimates down-gradient chemical concentrations and, therefore, underestimates the potential risk posed by coal combustion wastes.

The breadth and potential implications of the numerous technical comments on the EPACMTP model are significant. Examples of the comments include issues relating to:

- The thermodynamic data that are the basis for certain model calculations,
- The model's ability to account for the effects of oxidation-reduction potential,
- The model's ability to account for competition between multiple contaminants for adsorption sites,
- The model's algorithm for selecting adsorption isotherms,
- The impact of leachate chemistry on adsorption and aquifer chemistry, and
- The model's inherent assumptions about the chemistry of the underlying aquifer.

*EPA's Analysis of the Comments.* We have been carefully reviewing all of the comments on the model. We determined that the process of thoroughly investigating all of the comments will take substantially more time to complete than is available within the court deadline for issuing this regulatory determination. At this time, we are uncertain of the overall outcome of our analysis of the issues raised in the comments. Accordingly, we have decided not to use the results of our groundwater pathway risk analysis in support of today's regulatory determination on fossil fuel combustion wastes. As explained below, in making today's regulatory determination, we have relied in part on other information related to the potential danger that may result from the management of fossil fuel combustion wastes.

Meanwhile, we will continue with our analysis of comments on the groundwater model and risk analysis. This may involve changing or restructuring various aspects of the model, if appropriate. It may also include additional analyses to determine whether any changes to the model or modeling methodology would materially affect the groundwater risk analysis results that were reported in the RTC. If our investigations reveal that a re-analysis of groundwater risks is appropriate, we will conduct the analysis and re-evaluate today's decisions as warranted by the re-analysis.

In addition to our ongoing review of comments on the groundwater model, one element of the model—the metals partitioning component called "MINTEQ"—has been proposed for

additional peer review. When additional peer review is completed, we will take the findings and recommendations into account in any overall decision to re-evaluate today's regulatory determination.

While not relying on the EPACMTP groundwater modeling as presented in the RTC, we have since conducted a general comparison of the metals levels in leachate from coal combustion wastes to their corresponding hazardous waste toxicity characteristic levels. Fossil fuel wastes infrequently exceed the hazardous waste characteristic. For co-managed wastes, 2% (1 of 51 samples) exceeded the characteristic level. For individual wastes streams, 0% of the coal bottom ash, 2% of the coal fly ash, 3% of the coal flue gas desulfurization, and 7% of the coal boiler slag samples that were tested exceeded the characteristic level. Nevertheless, once we have completed a review of our groundwater model and made any necessary changes, we will reevaluate groundwater risks and take appropriate regulatory actions. We will specifically assess new modeling results as they relate to any promulgated changes in the arsenic MCL.

We also compared leach concentrations from fossil fuel wastes to the drinking water MCLs. In the case of arsenic, we examined a range of values because EPA expects to promulgate a new arsenic drinking water regulation by January 1, 2001. This range includes the existing arsenic MCL (50 ug/l), a lower health based number presented in the FFC Report to Congress (RTC) (0.29 ug/l), and two assumed values in between (10 and 5 ug/l). We examined this range of values because of our desire to bracket the likely range of values that EPA will be considering in its effort to revise the current MCL for arsenic. The National Research Council's 1999 report on Arsenic in Drinking Water indicated that the current MCL is not sufficiently protective and should be revised downward as soon as possible. For this reason, we selected the current MCL of 50 ug/L for the high end of the range because EPA is now considering lowering the current MCL and does not anticipate that the current MCL would be revised to any higher value. We selected the health-based number presented in the Report to Congress for the low end of the range because we believe this represents the lowest concentration that would be considered in revising the current MCL. Because at this time we cannot project a particular value as the eventual MCL, we also examined values in between these low-end and high-end values, a value of 5

ug/L and a value of 10 ug/L, for our analyses supporting today's regulatory determination. The choice of these mid-range values for analyses does not predetermine the final MCL for arsenic.

Those circumstances where the leach concentrations from the wastes exceed the drinking water criteria have the greatest potential to cause significant risks. This "potential" risk, however, may not occur at actual facilities. Pollutants in the leachate of the wastes undergo dilution and attenuation as they migrate through the ground. The primary purpose of models such as EPACMTP is to account for the degree of dilution and attenuation that is likely to occur, and to obtain a realistic estimate of the concentration of contaminants at a groundwater receptor. To provide a view of potential groundwater risk, we tabulated the number of occurrences where the waste leachate hazardous metals concentrations were: (a) Less than the criteria, (b) between 1 and 10 times the criteria, (c) between 10 and 100 times the criteria, and (d) greater than 100 times the criteria. Groundwater models that we currently use, when applied to large volume monofill sources of metals, frequently predict that dilution and attenuation will reduce leachate levels on the order of a factor of 10 under reasonable high end conditions. This multiple is commonly called a dilution and attenuation factor (DAF). For this reason and because lower dilution and attenuation factors (e.g., 10) are often associated with larger disposal units such as those typical at facilities where coal is burned, we assessed the frequency of occurrence of leach concentrations for various hazardous metals which were greater than 10 times the drinking water criteria. Based on current MCLs, there was only one exceedence (for cadmium). However, when we considered the arsenic health based criterion from the RTC, we found that a significant percentage (86%) of available waste samples had leach concentrations for arsenic that were greater than ten times the health-based criterion. Even considering intermediate values closer to the current MCL, a significant percentage of available waste samples had leach concentrations for arsenic that were greater than ten times the criteria (30% when the criterion was assumed to be 5 ug/l, and 14% when the criterion was assumed to be 10 ug/l). Similar concerns also occurred when comparing actual groundwater samples associated with FFC waste units and this range of criteria for arsenic. We believe this is an indication of potential risks from arsenic.

For the above analysis, we used a value equal to half the detection level to deal with those situations where analyses resulted in "less than detection" values that exceeded the MCL criteria. The actual concentration may be as low as zero or up to the detection level. To illustrate the impact of this assumption, an analysis was performed setting the "less than detection" values to zero, and an arsenic criteria at 50 ug/l. While 30% of the values exceeded 10 times the criteria when using half the detection level, exceedences dropped to 13% when "less than detection" values were set to zero.

The comparison of the leachate levels to 10 times MCL criteria is a screening level analysis that supports our concerns, which are primarily based on damage cases and the lack of installed controls (liners and groundwater monitoring). We recognize, however, that prior to issuing a regulation the Agency expects to address the issues raised on the groundwater model and complete a comprehensive groundwater modeling effort. Furthermore, we anticipate that uncertainty regarding whether the arsenic MCL will be amended and to what level, will be more settled prior to regulation of these wastes. These factors could heighten or reduce concerns with regard to the need for Federal regulation of fossil fuel combustion wastes.

## 2. How Did Commenters React to EPA's Assessment of Documented Damage Cases Presented in the Report to Congress?

Prior to issuing the RTC, we sought and reviewed potential damage cases related to these particular wastes. The activities included:

- A re-analysis of the potential damage cases identified during the Part 1 determination,
- A search of the CERCLA Information System for instances of these wastes being cited as causes or contributors to damages,
- Contacts and visits to regulatory agencies in five states with high rates of coal consumption to review file materials and discuss with state officials the existence of damage cases,
- A review of information provided by the Utility Solid Waste Act Group and the Electric Power Research Institute on 14 co-management sites, and
- A review of information provided by the Council of Industrial Boiler Owners on eight fluidized bed combustion (FBC) facilities.

These activities yielded three damage case sites in addition to the four cases

initially identified in the Part 1 determination.<sup>2</sup> Five of the damage cases involved surface impoundments and the two other cases involved landfills. The waste management units in these cases were all older, unlined units. The releases in these cases were confined to the vicinity of the facilities and did not affect human receptors. None of the damages impacted human health. We did not identify any damage cases that were associated with beneficial use practices.

*Comments.* Public interest group commenters criticized our approach to identifying damage cases associated with the management of fossil fuel combustion (FFC) wastes, stating that EPA did not use the same procedure used to identify damage cases for the cement kiln dust (CKD) Report to Congress. These commenters believed that we were too conservative in our interpretation and determination of FFC damage cases and dismissed cases that commenters believe are relevant instances of damage. For example, these commenters indicated that EPA, in the RTC, did not consider cases where the only exceedences of ground water standards were for secondary MCLs (Maximum Contaminant Levels as established by EPA for drinking water standards). They further indicated that the states often require ground water monitoring only for secondary MCL constituents and that elevated levels of the secondary MCL constituents are an indication of future potential for more serious, health-based standards to be exceeded for other constituents in the wastes, such as toxic metals. Additionally, these commenters stated that the Agency's analysis for damage cases was incomplete and they provided information on 59 possible damage cases involving these wastes, mostly at utilities. Additionally, commenters submitted seven cases of ecological damage that allege damage to mammals, amphibians, fish, benthic layer organisms and plants from co-management of coal combustion wastes in surface impoundments.

Industry commenters cited EPA's finding of so few damage cases as important support for our tentative conclusion to exempt these wastes from hazardous waste regulation. Further, some of the industry commenters indicated that the few damage cases that EPA identified do not represent current

<sup>2</sup> The Part 1 determination identified six cases of documented damages. Upon further review, we determined that two of these cases involve utility coal ash monofills which are covered by the Part 1 determination. However, the other four cases involved remaining wastes that are covered by today's determination.

utility industry management practices, but rather reflect less environmentally protective management practices at older facilities that pre-date the numerous state and federal requirements that are now in effect for managing these wastes.

*EPA's Analysis of the Comments.* Regarding ecological damage, while we did not identify any ecological damage cases in the RTC associated with management of coal combustion wastes, we reviewed the information on ecological damage submitted by commenters and agree that four of the seven submitted are documented damage cases that involve FFC wastes. All of these involve some form of discharge from waste management units to nearby lakes or creeks. These confirm our risk modeling conclusions as presented in the RTC that there could be adverse impacts on amphibians, birds, or mammals if they were subject to the elevated concentrations of selected chemicals that had been measured in some impoundments. However, no information was submitted in comments that would lead us to alter our conclusion that these threats are not substantial enough to cause large scale, system level ecological disruptions. These damage cases, attributable to runoff or overflow that is already subject to Clean Water Act discharge or stormwater regulations, are more appropriately addressed under the existing Clean Water Act requirements.

Regarding our assessment of damage to ground water, we believe our approach to FFC damage cases in the RTC was consistent with the approach we used for identifying CKD damage cases. For CKD, we established two categories of damage cases—"proven" damage cases and "potential" damage cases. Proven damage cases were those with documented MCL exceedences that were measured in ground water at a sufficient distance from the waste management unit to indicate that hazardous constituents had migrated to the extent that they could cause human health concerns. Potential damage cases were those with documented MCL exceedences that were measured in ground water beneath or close to the waste source. In these cases, the documented exceedences had not been demonstrated at a sufficient distance from the waste management unit to indicate that waste constituents had migrated to the extent that they could cause human health concerns. We do not believe that it would be appropriate to consider an exceedence directly beneath a waste management unit or very close to the waste boundary to be a documented, proven damage case.

State regulations typically use a compliance procedure that relies on measurement at a receptor site or in ground water at a point beyond the waste boundary (e.g., 150 meters). While our CKD analysis did not distinguish between primary and secondary MCL exceedences, most CKD damage cases involved a primary MCL constituent. Our principal basis for determining that CKD when managed in land-based units would no longer remain exempt from being regulated as a hazardous waste was our concern about generally poor management practices characteristic of that industry. Our conclusion was further supported by the extremely high percentage of proven damage cases occurring at active CKD sites for which groundwater monitoring data were available.

For FFC, we used the same test of proof to identify possible damage cases. Our FFC analysis drew a distinction between primary and secondary MCL exceedences because we believe this factor is appropriate in weighing the seriousness of FFC damage in terms of indicating risk to human health and the environment. For FFC, in the RTC, we reported only the "proven" damage (i.e., exceedence of a health-based standard such as a primary MCL and measurement in ground water or surface water). As was done in the CKD analysis, we also identified a number of potential FFC damage cases (eleven) which were included in the background documents that support the RTC.

Unlike the primary MCLs, secondary MCLs are not based on human health considerations. (Examples are dissolved solids, sulfate, iron, and chloride for which groundwater standards have been established because of their effect on taste, odor, and color.) While some commenters believe that elevated levels of some secondary MCL parameters such as soluble salts are likely precursors or indicators of future hazardous constituent exceedences that could occur at coal combustion facilities, we are not yet able and will not be able to test their hypothesis until we complete our analysis of all comments received on our groundwater model and risk analysis, which will not be concluded until next year.

Of the 59 damage cases reported by commenters, 11 cases appear to involve exceedences of primary MCLs or other health-based standards as measured either in off-site ground water or in nearby surface waters, the criteria we used in the RTC to identify proven damage cases. Of these eleven cases, two are coal ash monofills which were included in the set of damage cases described by EPA in its record

supporting the Part 1 regulatory determination. The remaining nine cases involve the co-management of large volume coal combustion wastes with other low volume and uniquely associated coal combustion wastes. We had already identified five of these nine cases in the RTC. Thus, only four of these eleven damage cases are newly identified to us. Briefly, the four new cases involve:

- Exceedence of a state standard for lead in downgradient ground water at a coal fly ash landfill in New York. There were also secondary MCL exceedences for sulfate, dissolved solids, and iron.
- Primary MCL exceedences for arsenic and selenium in downgradient monitoring wells for a coal ash impoundment at a power plant in North Dakota. There were also secondary MCL exceedences for sulfate and chloride.
- Primary MCL exceedences for fluoride and exceedence of a state standard for boron in downgradient monitoring wells at a utility coal combustion waste impoundment in Wisconsin. There was also a secondary MCL exceedence for sulfate.
- Exceedence of a state standard for boron and the secondary MCL for sulfate and manganese in downgradient monitoring wells at a utility coal combustion landfill in Wisconsin.

We found that in nine of the 11 proven damage cases (including one Superfund site), states took appropriate action to require or conduct remedial activities to reduce or eliminate the cause of contamination. EPA took action in the remaining two cases under the Superfund program.

Nineteen of the candidate damage cases submitted by commenters involve either on-site or off-site exceedences of secondary MCLs, but not primary MCLs or other health-based standards. Consistent with our CKD analysis, we consider these cases to be indicative of a potential for damage to occur at these sites because they demonstrate that there has been a release to ground water from the waste management unit.

Regarding the remaining 29 cases submitted by commenters:

- Six involve primary MCL exceedences, but measurements were in ground water either directly beneath the waste or very close to the waste boundary, i.e., no off-site ground water or receptor measurements indicated that ground water standards had been exceeded. Consistent with our analysis of damage cases for cement kiln dust, we consider these six cases to be indicative of a potential for damage to occur at these sites because they demonstrate that there has been a

release to ground water from the waste management unit..

- Eighteen case summary submissions contained insufficient documentation and data for us to verify and draw a conclusion about whether we should consider these to be potential or proven damage cases. Of these 18 cases, commenters claimed that 11 cases involve primary MCL exceedences, and another two involve secondary MCLs, but not primary MCLs. The other five cases lacked sufficient information and documentation to determine whether primary or secondary MCLs are involved. Examples of information critical to assessing and verifying candidate damage cases that was not available for these particular cases include: Identification of the pollutants causing the contamination; identification of where or how the damage case information was obtained (e.g., facility monitoring data, state monitoring or investigation, third party study or analysis); monitoring data used to identify levels of contaminants; and/or sufficient information to determine whether the damages were actually attributable to fossil fuel combustion wastes; and/or location of the identified contamination (i.e., directly beneath the unit or very close to the waste boundary or at a point some distant (e.g., 150 meters) from the unit boundary).

- Three case submissions are cases we identified in the Part 1 determination and involve monofilled utility coal ash wastes. However, as explained in the Report to Congress for the Part 1 determination, EPA determined that there was insufficient evidence to consider them to be documented damage cases.

- One case did not involve fossil fuel combustion wastes.

- One case involved coal combustion wastes and other unrelated wastes in an illegal, unpermitted dump site. This site was handled by the state as a hazardous waste cleanup site.

Our detailed analysis of the damage cases submitted by commenters is available in the public docket for this regulatory determination.

In summary, based on damage case information presented in the RTC and our review of comments, we conclude that there are 11 proven damage cases associated with wastes covered by today's regulatory determination. We identified seven of these damage cases in the RTC, so there are four new proven damage cases that were identified by commenters. All of the sites were at older, unlined units, with disposal occurring prior to 1993. For all 11 of the proven damage cases, either the state or EPA provided adequate follow-up to

require or else undertake corrective action. Although these damage cases indicate that coal combustion wastes can present risks to human health and the environment, they also show the effectiveness of states' responses when damages were identified. None of these cases involved actual human exposure.

Additionally, we determined that another 25 of the commenter submitted cases are potential damage cases for the reasons described above. Thus, including the 11 potential damage cases that we identified in the background documents that support the RTC, we are aware of 36 potential damage cases. While we do not believe the latter 36 cases satisfy the statutory criteria of documented, proven damage cases because damage to human health or the environment has not been proven, we believe that these cases may indicate that these wastes pose a "potential" danger to human health and the environment in some circumstances.

In conclusion, while the absolute number of documented, proven damage cases is not large, we believe that the evidence of proven and potential damage should be considered in light of the proportion of new and existing facilities, particularly surface impoundments, that today lack basic environmental controls such as liners and groundwater monitoring. Approximately one-third of coal combustion wastes are managed in surface impoundments. We note that controls such as liners may not be warranted at some facilities, due to site-specific conditions. We acknowledge, however, that our inquiry into the existence of damage cases was focused primarily on a subset of states. Given the volume of coal combustion wastes generated nationwide and the number of facilities that lacked groundwater monitoring as of 1995, there is at least a substantial likelihood other cases of actual and potential damage likely exist. Because we did not use a statistical sampling methodology to evaluate the potential for damage, we are unable to determine whether the identified cases are representative of the conditions at all facilities and, therefore, cannot quantify the extent and magnitude of damages at the national level.

### 3. What Concerns Did Commenters Express About the Impact of Potential Future Regulation of Hazardous Air Pollutants Under the Clean Air Act on Today's Regulatory Determination?

*Comments.* In both public hearing testimony and written comments, public interest groups expressed concern about potential changes in the characteristics of these wastes when new air pollution

controls are established under the Clean Air Act. The commenters referred to the possible future requirement for hazardous air pollutant controls at coal burning electric utility power plants, which could result in an increased level of metals and possibly other hazardous constituents in coal combustion wastes. The commenters indicated that these increased levels, in turn, could have serious implications for cross-media environmental impacts such as leaching to groundwater and volatilization to the air. The commenters argued that the Agency should include these factors in its current decision making on the regulatory status of coal combustion under the Resource Conservation and Recovery Act.

*EPA's Analysis of the Comments.* We have carefully considered the issue of cross-media impacts and the commenters' specific concerns that future air regulations could have an adverse impact on the characteristics of coal combustion wastes. We have concluded that it is premature to consider the possible future impact of such new air pollution controls on the wastes that are subject to today's regulatory determination. The Agency plans to issue a regulatory determination in the latter part of 2000 regarding hazardous air pollutant (HAP) controls at coal-burning, power generating facilities. If EPA decides to initiate a rulemaking process, final rulemaking under the Clean Air Act is projected to occur in 2004. Thus, no final decision has been made on what, if any, constituents will be regulated by future air pollution control requirements. Additionally, the regulatory levels of the those specific pollutants that might be controlled and the control technologies needed to attain any regulatory requirements have not yet been identified. Therefore, we believe there is insufficient information at this time for evaluating the characteristics and potential environmental impacts of solid wastes that would be generated as a result of new Clean Air Act requirements.

When any rulemaking under the Clean Air Act proceeds to a point where we can complete an assessment of the likely changes to the character of coal combustion wastes, we will evaluate the implications of these changes relative to today's regulatory determination and take appropriate action.

### 4. How Did Commenters React to the Findings Presented in the Report to Congress Related to Proper Management of Mill Rejects (Pyrites)?

The RTC explained that we identified situations where pyrite-bearing



materials such as mill rejects (a low volume and uniquely associated waste) that are co-managed with coal combustion wastes may cause or contribute to risks or environmental damage if not managed properly. These materials when managed improperly with exposure to air and water can generate acid. The acid, in turn, can mobilize metals contained in the co-managed combustion wastes. The RTC also explained that the Agency engaged the utility industry in a voluntary program to ensure appropriate management of these wastes. The industry responded by developing technical guidance and a voluntary industry education program on proper management of these wastes.

*Comments.* Utility industry commenters supported our tentative decision to continue the exemption for coal combustion wastes co-managed with mill rejects from regulation as a hazardous waste. Their position is based primarily on the industry's voluntary implementation of an education program and technical guidance on the proper management of these wastes, as described in the RTC.

Public interest groups and other commenters disagreed with our tentative decision, explaining their belief that such voluntary controls or programs are inadequate. They indicated that coal combustion wastes should be subject to hazardous waste regulations.

*EPA's Analysis of the Comments.* We remain encouraged by the utility industry program to educate and inform its members by implementing guidance on the proper management of coal mill rejects. However, as pointed out by commenters, there is no assurance that facilities where coal combustion wastes co-managed with pyritic wastes will follow the guidance developed by industry. In light of the number of demonstrated and potential damage cases identified to date, we are concerned that simply relying on voluntary institution of necessary controls would not adequately ensure the protection of human health and the environment. At this time, to ensure that we are aware of all stakeholders views on the adequacy of the control approaches described in the guidance to protect human health and the environment, we are soliciting public comment on the final version of the industry coal mill rejects guidance. This guidance is available in the docket supporting today's decisions.

#### 5. How Did Commenters React to the Findings Presented in the Report to Congress Related to Agricultural Use of Coal Combustion Wastes?

In the RTC, we presented findings on the human health risks associated with agricultural use of coal wastes as an agricultural lime substitute. The pathway examined embodies risks from ingestion of soil and inhalation, and from ingestion of contaminated dairy, beef, fruit and vegetable products. The resultant "high end" cancer risk reported in the RTC was  $1 \times 10^{-5}$  (one in one hundred thousand exposed population), for the child of a farmer. The variables held at high end for this calculation were contaminant concentration and children's soil ingestion. With all variables set to central tendency values, the risk was calculated to be  $1 \times 10^{-7}$  (one in ten million exposed population). We did not identify the presence of any non-cancer hazard of concern. Based on the high end risk, the Agency raised the possibility in the RTC of developing Subtitle C controls or seeking commitments from industry to a voluntary program.

*Comments.* A number of industry, academic, and federal agency commenters disagreed with our tentative conclusion that some level of regulation may be appropriate for coal combustion wastes when used as an agricultural soil supplement. They indicated that EPA used unrealistically conservative levels for four key inputs used in our risk analysis and that use of a realistic level for any one of these inputs would result in a risk level less than  $1 \times 10^{-6}$ . The four inputs identified by the commenters are: application rate of the wastes to the land, the rate of soil ingestion by children, the bioavailability of arsenic and the phytoavailability of arsenic.

These commenters further recommended that EPA not regulate, but rather encourage voluntary restrictions because:

- Agricultural use of coal combustion wastes creates no adverse environmental impacts and EPA identified no damage cases associated with this practice;
- Agricultural use of these wastes has significant technical and economic benefits;
- Federal controls would be unnecessarily costly and would create a barrier for research and development on the practice;
- Existing regulatory programs are sufficient to control any risks from this practice; and
- The limits suggested in the RTC for arsenic levels in coal combustion wastes

are inconsistent with limits applied to other materials used in agriculture.

Public interest groups stated their belief that a voluntary approach would not be sufficiently protective of human health and the environment. They believe the Agency should apply restrictions on the use of these wastes in agriculture because the Agency's analyses of the risks and benefits of this practice were inadequate. They further recommended that EPA should prohibit the land application of coal combustion wastes generated by conventional boilers, and make the arsenic limitation of EPA's sewage sludge land application regulations applicable to the land application of coal combustion wastes generated by fluidized bed combustors, which add lime as part of the combustion process.

*EPA's Analysis of Comments.* After reviewing these comments and supporting information provided by the commenters, we concluded that a revised input into the model for children's soil ingestion rate is appropriate. Based on further review of the Agency's Exposure Factors Handbook (EFH), we decided to model a children's soil ingestion rate of 0.4 grams per day instead of the 1.4 grams per day that underlay the results given in the RTC.

Many studies have been conducted to estimate soil ingestion by children. Early studies focused on dirt present on children's hands. More recently, studies have focused on measuring trace elements in soil and then in feces as a function of internal absorption. These measurements are used to estimate amounts of soil ingested over a specified time period. The EFH findings for children's soil ingestion are based on seven key studies and nine other relevant studies that the Agency reviewed on this subject. These studies showed that mean values for soil ingestion ranged from 39 mg/day to 271 mg/day with an average of 146 mg/day. These results are characterized for studies that were for short periods with little information reported for pica behavior. To account for longer periods of time, the EFH reviewed the upper percentile ranges of the data studied and found ingestion rates that ranged from 106 mg/day to 1,432 mg/day with an average of 383 mg/day for soil ingestion. Rounding to one significant figure, the EFH recommended an upper percentile children's soil ingestion rate of 400 mg/day. The Agency believes that this recommendation is the best available information to address children's exposure through the soil ingestion route. Reducing the ingestion rate to the EFH handbook recommended level of

400 mg/day reduced the calculated risk to  $3.4 \times 10^{-6}$  for this one child risk situation and suggests that agricultural use of FFC wastes does not cause a risk of concern.

EPA believes its inputs for phytoavailability are accurate, although there are studies that suggest phytoavailability will decrease over time. Arsenic bioavailability is a function of all sources of arsenic and EPA believes it has characterized this accurately. However, as noted elsewhere, arsenic toxicity is now being studied by the Agency in conjunction with a proposed new arsenic MCL and may necessitate re-visiting today's judgement on agricultural use.

Our technical analysis that resulted in revised risk is explained in a document titled Reevaluation of Non-groundwater Pathway Risks from Agricultural Use of Coal Combustion Wastes, which is available in the docket for this action.

The comment on inappropriateness of application frequency was caused by a misunderstanding of the language in the RTC. The rate used was actually every two or three years, not two or three times per year.

Two ongoing studies of wastes of potential use as agricultural soil supplements relate to the use of FFC wastes for this purpose. Although these did not play a direct role in EPA's decision regarding FFC wastes, they are summarized below and may play a role in any future review of today's decision.

(1) On August 20, 1999, the agency proposed risk-based standards for cement kiln dust when used as a liming agent (see 64 FR 45632; August 20, 1999). This analysis was completed in 1998 just prior to our completion of the analysis of FFC wastes when used as agricultural supplements. The CKD analysis underwent a special peer review by a standing committee that is used by the Department of Agriculture. We were not able to respond to the peer review comments in either the CKD proposal or in our assessment for fossil fuel combustion wastes prior to publication of today's regulatory determination. The comment period for the CKD proposal closed on February 17, 2000, and we will soon begin our review and analyses of the public and peer review comments.

(2) In December 1999, EPA proposed new risk based standards for the use of municipal sewage sludge under section 503 of the Clean Water Act (the "503 standards"). It is important to note that municipal sludge has unique properties, application rates, and uses. This makes it inappropriate to transfer the 503 standards directly. Even though the standards cannot be used directly, there

may be interest in the risk assessment methodologies used to support the development of these standards. We disagree that it is appropriate to establish an arsenic limitation for coal combustion ash when used for agricultural purposes equivalent to that contained in the EPA sewage sludge land application regulations. The organic nature of sewage sludge makes it behave very differently from inorganic wastes such as coal combustion wastes.

We conclude at this time that arsenic levels in coal combustion wastes do not pose a significant risk to human health when used for agricultural purposes. We expect to continue to review and refine the related risk assessments noted above, and will consider comments on the Agency's CKD and municipal sludge proposals, as well as new scientific developments related to this issue such as additional peer review of the EPA MINTEQ model that was used as a component of our risk analysis. If these efforts lead us to a different understanding of the risks posed by coal combustion wastes when used as a substitute for agricultural lime, we will take appropriate action to reevaluate today's regulatory determination.

#### 6. How Did Commenters React to the Findings Presented in the Report to Congress Related to Minefilling of Coal Combustion Wastes?

In the RTC, we explained that we had insufficient information to adequately assess the risks associated with the use of coal combustion wastes to fill surface and underground mines, whether the mines are active or abandoned. Accordingly, we did not present a tentative conclusion in the RTC with respect to the use of coal combustion wastes for disposal in active mines or for reclamation of mines. However, we did indicate that regulation of minefilling under hazardous waste rulemaking authority would remain an option for minefilling, but that we needed additional information prior to making a final decision. Thus, we solicited additional information on specific minefilling techniques, problems that may be inherent in this management practice, risks posed by this practice, existing state regulatory requirements, and environmental monitoring data. We indicated that we would consider any comments and new information on minefilling received in comments and would address this management practice in today's regulatory determination.

*Comments.* A number of commenters responded to our request by providing reports on individual case studies, including minefilling in underground as

well as in surface mines, descriptions of current state regulatory requirements that address this practice, monitoring data, and information about risk analysis techniques.

Industry commenters and one federal agency supported our decision to study the issue further and not attempt to estimate the risks posed by this practice using existing methods. Further, numerous industry, academic, state agency, and federal agency commenters encouraged EPA not to adopt national regulations or voluntary restrictions on minefilling because: (a) Nationwide standards would not be conducive to the site-specific evaluations needed to appropriately control these operations; (b) minefilling creates no adverse environmental impacts and EPA identified no damage cases associated with this practice; (c) existing state and federal regulatory programs and industry practices are sufficient to control any risks from this practice, and (d) federal standards would be an unreasonable interference with states' authorities.

Additionally, several industry representatives, legislators, and state mining and environmental agencies mentioned that this practice, when used to remediate abandoned mine lands, will produce considerably greater environmental benefits than risks. Further, they maintained that minefilling is a relatively inexpensive means to stop or even reverse the environmental damage caused by old mining practices. They indicated that through remediation by minefilling, these lands frequently can be returned to productive use. These commenters recommended no additional regulation of this practice.

Public interest groups and others believe we should regulate minefilling under RCRA subtitle C or prohibit it for several reasons including weaknesses in existing state and federal regulatory programs, the poor practices and performance at existing minefilling operations, and potential impacts on potable water sources. Commenters stated that state programs effectively allow open dumps without any design or construction standards. For minefilling, one commenter urged EPA to defer to state regulations only if the Agency specifically found existing state regulations to be adequate.

*EPA's Analysis of Comments.* We agree with commenters that it is inappropriate to estimate the risks posed by minefilling using the existing methods that we employed to conduct risk analyses for disposal of coal combustion wastes in landfills and impoundments. We found that the



groundwater models available to us are unsuitable for estimating risks from minefills because, for example, they are not able to account for conditions such as fractured flow that are typical of the hydrogeology associated with mining operations. In addition, as explained above, EPA's primary groundwater model, EPACMTP, is now undergoing careful review on the basis of comments received on the Report to Congress.

We are aware that the use of coal combustion wastes to conduct remediation of mine lands can improve conditions caused by mining activities. We also recognize that this often is the lowest cost option for conducting these remediation activities. We generally encourage the practice of remediating mine lands with coal combustion wastes when minefilling is conducted properly and when there is adequate oversight of the remediation activities. We are also aware that relatively few states currently operate regulatory or other programs that specifically address minefilling, and that many states where this practice is occurring do not have programs in place. Based on our review of information on existing state minefill programs, we find serious gaps such as a lack of adequate controls and restrictions on unsound practices, *e.g.*, no requirement for groundwater monitoring and no control or prohibitions on waste placement in the aquifer.

At this time, we cannot reach definitive conclusions about the adequacy of minefilling practices employed currently in the United States and the ability of government oversight agencies to ensure that human health and the environment are being adequately protected. For example, it is often impossible to determine if existing groundwater quality has been impacted by previous mining operations or as a result of releases of hazardous constituents from the coal combustion wastes used in the minefilling applications. Additionally, data and information submitted during the public comment period indicate that if the chemistry of the mine relative to the chemistry of the coal combustion wastes is not properly taken into account, the addition of coal combustion wastes to certain environmental settings can lead to an increase in hazardous metals released into the environment. This phenomena has been substantiated by data available to the Agency that show when pyrites, which can cause acid generation, have been improperly co-managed with coal combustion wastes, high levels of metals, especially arsenic, have leached from the wastes.

Finally, we concluded in our recent study of disposal of cement kiln dust that placement of cement kiln dust directly in contact with ground water led to a substantially greater release of hazardous metal constituents than we predicted would occur when such placement in ground water did not occur. We are aware of situations where coal combustion wastes are being placed in direct contact with ground water in both underground and surface mines. This could lead to increased releases of hazardous metal constituents as a result of minefilling. Thus, if the complexities related to site-specific geology, hydrology, and waste chemistry are not properly taken into account when minefilling coal combustion wastes, we believe that certain minefilling practices have the potential to degrade, rather than improve, existing groundwater quality and can pose a potential danger to human health and the environment. Subsequent impacts on human health would depend in part on the proximity of drinking water wells, if any, to elevated levels of metals in the water. To date we are unaware of any proven damage cases resulting from minefilling operations.

#### 7. How Did Commenters React to EPA's Tentative Reliance on State Programs and Voluntary Industry Implementation of Improved Management Practices To Mitigate Potential Risks From Coal Combustion Waste Management?

In the RTC, EPA considered retaining the exemption for coal combustion wastes disposed in surface impoundments and landfills and for mill rejects (pyrites) that are managed with those wastes. The Agency cited a reliance on state programs that have improved substantially over the past 10 to 15 years and continue to improve, combined with voluntary industry implementation of guidance for improved management practices to mitigate risk. In addition, we stated that we would continue to work with industries and states to promote and monitor improvements.

To assess the adequacy of state programs and the potential for voluntary implementation of improved practices, we looked at the current number of facilities with liners and groundwater monitoring (which may reflect voluntary industry upgrading as well as state requirements), and the number of state programs that currently have authority to require a broad range of environmental controls. For units operating as of 1995, we found that among utilities, slightly more than half of the disposal units were surface impoundments. Of these

impoundments, 38 percent had groundwater monitoring and 26 percent had liners. Eighty-five percent of the utility landfills had groundwater monitoring and 57 percent had liners. For non-utility landfills, 94 percent had groundwater monitoring, and between 16 percent and 52 percent had liners. Between 1985 and 1995, 75 percent of new landfills and 60 percent of new surface impoundments within the utility sector had been lined. We have no information regarding the percentage of units built since 1995 (the date when the study we have relied on ended) that have liners or groundwater monitoring programs.

In looking at state programs, we found that for landfills, more than 40 states have the authority to require permits, siting restrictions, liners, leachate collection, groundwater monitoring, closure controls, and cover/dust controls. Forty-three states can require liners and 46 can require groundwater monitoring compared to 11 and 28 states, respectively, in the 1980's. For surface impoundments, more than 40 states have authority to require permits, siting restrictions, liners, groundwater monitoring, and closure control; 33 can require leachate collection (there is no earlier comparison data for surface impoundments). Forty-five states can require liners and 44 can require groundwater monitoring for impoundments.

*Comments.* Industry and state agency commenters generally stated that the Agency presented an accurate and comprehensive analysis of state programs and that existing state regulations are adequate. Public interest commenters raised many concerns about the adequacy of state programs: Either they do not have provisions to cover all elements of a protective program; they do not consistently impose the requirements for which they have authority; and/or enforcement is lax. Evidence commenters cited for the inadequacy of state programs included grandfathering for older management units and an apparent lack of controls for surface impoundments. For these reasons, some found EPA's review of state programs inaccurate or incomplete.

Public interest commenters were also skeptical of programs or efforts that rely on voluntary industry implementation because adherence to guidance is not guaranteed. Several commenters, primarily from industry, urged the Agency not to regulate pyrite co-management because of the voluntary, industry-developed guidance.

*EPA's Analysis of Comments.* We believe that state programs have, in fact, substantially improved over the last 15

years or so. A high percentage of states have authority to impose protective management standards on surface impoundments and landfills, especially for groundwater monitoring, liners, and leachate collection, which mitigate potential risks posed by these units. Over 40 states today have these authorities (33 states have authority to require leachate collection in surface impoundments). When authority under state groundwater and drinking water regulations are considered, some commenters have suggested that nearly all states can address the management of these wastes. In addition, we believe that the trend to line and install groundwater monitoring for new surface impoundments and landfills is positive. However, as some commenters noted, we acknowledge that our state program review looked at the authorities available to states and their overall regulatory requirements, not the specific requirements applied to given facilities, which could be more or less stringent. In addition, we recognize that individual state programs may have some gaps in coverage, as indicated below, so that some controls may not now be required at coal combustion waste impoundments and landfills. We would expect to see some differences in the application of requirements, depending on site-specific conditions.

One consistent trend that raises concern for the Agency is that controls are much less common at surface impoundment than at landfills. Even for newer units at utilities (constructed between 1985 and 1995), liners are used at 75 percent of landfills and only 60 percent of surface impoundments. Also at newer units, groundwater monitoring is implemented at 88 percent of landfills and at only 65 percent of surface impoundments. Approximately one-third of coal combustion wastes were managed in surface impoundments in 1995. Hydraulic pressure in a surface impoundment increases the likelihood of releases. We believe that groundwater monitoring, at a minimum, in existing as well as new impoundments, is a reasonable approach to monitor performance of the unit and a critical first step to addressing groundwater damage that may be caused by the unit. As of 1995, 38 percent of currently operating utility surface impoundments had groundwater monitoring and only 26 percent had liners.

While liners and groundwater monitoring are applied more frequently at landfills, there are still many utility and non-utility landfills that do not have liners. In addition, 15 percent of utility landfills do not have groundwater monitoring, and some six

percent of non-utility landfills do not have groundwater monitoring, based on a limited survey.

The utility industry through its trade associations has demonstrated a willingness to work with EPA to develop protective management practices, and individual companies have committed to upgrading their own practices. However, the Agency recognizes that participation in voluntary programs is not assured. Also, individual facilities and companies may not implement protective management practices and controls, for a variety of reasons, in spite of their endorsement by industry-wide groups.

We see a trend toward significantly improving state programs and voluntary industry investment in liners and groundwater monitoring that we believe can mitigate potential risks over time. However, we identified significant gaps in controls already in place and, in particular, requirements that may be lacking in some states, either in authority to impose the requirements or potentially in exercising that authority. In response to comments, we further analyzed risks posed by coal combustion wastes taking into account waste characteristics and potential and actual damage cases. Based on these analyses, we concluded that coal combustion wastes, in certain circumstances, could unnecessarily increase risks to human health and the environment, and that a number of proven damages have been documented, and that more are likely if we had been able to conduct a more thorough search of available state records and if groundwater monitoring data were available for all units. We recognize there will probably continue to be some gaps in practices and controls and are concerned at the possibility that these will go unaddressed. We also believe the time frame for improvement of current practices is likely to be longer in the absence of federal regulations.

#### *D. What Is the Basis for Today's Decisions?*

Based on our collection and analysis of information reflecting the criteria in section 8002(n) of RCRA that EPA must consider in making today's regulatory determination, materials developed in preparing the RTC and supportive background materials, existing state and federal regulations and programs that affect the management of coal combustion wastes, and comments received from the public on the findings we presented in the RTC, we have concluded the following:

#### 1. Beneficial Uses

To the extent coal combustion wastes are used for beneficial purposes, we believe they should continue to remain exempt from being regulated as hazardous wastes under RCRA. Beneficial purposes include waste stabilization, beneficial construction applications (e.g., cement, concrete, brick and concrete products, road bed, structural fill, blasting grit, wall board, insulation, roofing materials), agricultural applications (e.g., as a substitute for lime) and other applications (absorbents, filter media, paints, plastics and metals manufacture, snow and ice control, waste stabilization). For the reasons presented in section 3 below, we are separately addressing the use of coal combustion wastes to fill surface or underground mines.

For beneficial uses other than minefilling, we have reached this decision because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) no documented cases of damage to human health or the environment have been identified. Additionally, we do not want to place any unnecessary barriers on the beneficial use of coal combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs.

Disposal can be burdensome and fails to take advantage of beneficial characteristics of fossil fuel combustion wastes. About one-quarter of the coal combustion wastes now generated are diverted to beneficial uses. Currently, the major beneficial uses of coal combustion wastes include: Construction (including building products, road base and sub-base, blasting grit and roofing materials) accounting for approximately 21%; sludge and waste stabilization and acid neutralization accounting for approximately 3%; and agricultural use accounting for 0.1%. Based on our conclusion that these beneficial uses of coal combustion wastes are not likely to pose significant risks to human health and the environment, we support increases in these beneficial uses of coal combustion wastes.

Off-site uses in construction, including wallboard, present low risk due to the coal combustion wastes being bound or encapsulated in the construction materials or because there is low potential for exposure. Use in waste and sludge stabilization and in acid neutralization are either regulated (under RCRA for hazardous waste stabilization or when placed in

municipal solid waste landfills, or under the Clean Water Act in the case of municipal sewage sludge or wastewater neutralization), or appear to present low risk due to low exposure potential. While in the RTC, we expressed concern over risks presented by agricultural use, we now believe our previous analysis assumed unrealistically high-end conditions, and that the risk, which we now believe to be on the order of  $10^{-6}$ , does not warrant national regulation of coal combustion wastes that are used in agricultural applications.

In the RTC, we were not able to identify damage cases associated with these types of beneficial uses, nor do we now believe that these uses of coal combustion wastes present a significant risk to human health or the environment. While some commenters disagreed with our findings, no data or other support for the commenters' position was provided, nor was any information provided to show risk or damage associated with agricultural use. Therefore, we conclude that none of the beneficial uses of coal combustion wastes listed above pose risks of concern.

## 2. Disposal in Landfills and Surface Impoundments

In this section, we discuss available information regarding the potential risks to human health and the environment from the disposal of coal combustion wastes into landfills and impoundments. In sum, our conclusion is these wastes can pose significant risks when mismanaged and, while significant improvements are being made in waste management practices due to increasing state oversight, gaps in the current regulatory regime remain.

We have determined that the establishment of national regulations is warranted for coal combustion wastes when they are disposed in landfills and surface impoundments, because: (a) The composition of these wastes has the potential to present danger to human health and the environment under some circumstances and "potential" damage cases identified by EPA and commenters, while not definitively demonstrating damage from coal combustion wastes, lend support to our conclusion that these wastes have the potential to pose such danger; (b) we have identified eleven cases of proven damage to human health and the environment by improper management of these wastes when land disposed; (c) while industry management practices have improved measurably in recent years, there is sufficient evidence these wastes are currently being managed in

a significant number of landfills and surface impoundments without proper controls in place, particularly in the area of groundwater monitoring; and (d) while there have been substantive improvements in state regulatory programs, we have also identified significant gaps either in states' regulatory authorities or in their exercise of existing authorities. Moreover, we believe that the costs of complying with regulations that specifically address these problems, while large in absolute terms, are only a small percentage of industry revenues.

When we considered a tailored subtitle C regulatory approach, we estimated the potential costs of regulation of coal combustion wastes (including the utility coal combustion wastes addressed in the 1993 Part 1 determination) to be \$1 billion per year. While large in absolute terms, we estimate that these costs are less than 0.4 percent of industry sales. Our preliminary estimate of impact on profitability is a function of facility size, among other factors. For the larger facilities, we estimate that reported pre-tax profit margins of about 13 percent may be reduced to about 11 percent. For smaller facilities, margins may be reduced from about nine percent to about seven percent.

We identified that the constituents of concern in these wastes are metals, particularly hazardous metals. We further identified that leachate from various large volume wastes generated at coal combustion facilities frequently exceed the hazardous waste toxicity characteristic, for one or more of the following metals: arsenic, cadmium, chromium, lead, and mercury. Additionally, when we compared waste leachate concentrations for hazardous metals to their corresponding MCLs (or potential MCLs in the case of arsenic), we found that there was a potential for risk as a result of arsenic leaching from these wastes. The criteria we examined included the existing arsenic MCL, a lower health based number presented in the RTC, and two assumed values in between. We examined this range of values because, as explained earlier in this notice, EPA is in the process of revising the current MCL for arsenic to a lower value as a result of a detailed study of arsenic in drinking water and we wanted to assess the likely range of values that would be under consideration by EPA. Once we have completed a review of our groundwater model and made necessary changes, we will reevaluate the potential risks from metals in coal combustion wastes and compare any

projected groundwater contamination to the MCLs that exist at that time.

We also identified situations where the improper management of mill rejects, a low volume and uniquely associated waste, with high volume coal combustion wastes has the potential to cause releases of higher quantities of hazardous metals. When these wastes are improperly managed, the mill rejects can create an acidic environment which enhances leachability and can lead to the release of hazardous metals in high concentrations from the co-managed wastes to ground water or surface waters. Thus, our analysis of the characteristics of coal combustion wastes leads us to conclude that these wastes have the potential to pose risk to human health and the environment. We also plan to address such waste management practices in our subsequent rulemaking.

Additionally, we identified 11 proven damage cases that documented disposal of coal combustion wastes in unlined landfills or surface impoundments that involved exceedences of primary MCLs or other health-based standards in ground water or drinking water wells. Three of the proven damage cases were on the EPA Superfund National Priorities List. Although these damage cases indicate that coal combustion wastes can present risks to human health and the environment, they also show the effectiveness of states' responses when damages were identified. All of the sites were at older, unlined units, with disposal occurring prior to 1993. None of these cases involved actual human exposure. Given the large number of facilities that do not now conduct groundwater monitoring, we have a concern that additional cases of damage may be undetected.

As detailed in the RTC and explained earlier in this notice, we identified that the states and affected industry have made considerable progress in recent years toward more effective management of coal combustion wastes. We also identified that the ability for most states to impose specific regulatory controls for coal combustion wastes has increased almost three-fold over the past 15 years. Forty-three states can now impose a liner requirements at landfills whereas 15 years ago, 11 had the same authority. In addition to regulatory permits, the majority of states now have authority to require siting controls, liners, leachate collection, groundwater monitoring, closure controls, and other controls and requirements for surface impoundments and landfills.

Nonetheless, we have concluded that there are still gaps in the actual application of these controls and

requirements, particularly for surface impoundments. While most states now have the appropriate authorities and regulations to require liners and groundwater monitoring that would reduce or minimize the risks that we have identified, we have also identified numerous situations where these controls are not being applied. For example, only 26 percent of utility surface impoundments and 57 percent of utility landfills have liner systems in place. We have insufficient information to determine whether the use of these controls is significantly different for non-utility disposal units, due to a small sample size.

While many of these unlined units may be subject to grandfathering provisions that allow them to continue to operate without being lined, or may not need to be lined due to site-specific conditions, we are especially concerned that a substantial number of units do not employ groundwater monitoring to ensure that if significant releases occur from these unlined units, they will be detected and controlled. In 1995, groundwater was monitored at only 38 percent of utility surface impoundments. While monitoring is more frequent at landfills, there are still many units at which releases of hazardous metals could go undetected. For example, of the approximately 300 utility landfills, 45 newer landfills (15%) do not monitor ground water. We are concerned that undetected releases could cause exceedences of drinking water or other health-based standards that may threaten public health or groundwater and surface water resources. Thus, we conclude that national regulations would lead to substantial improvements in the management of coal combustion wastes.

### 3. Minefilling

We have determined that the establishment of national regulations is warranted for coal combustion wastes when they are placed in surface or underground mines because: (a) We find that these wastes when minefilled have the potential to present a danger to human health and the environment, (b) minefilling of these wastes has been an expanding practice and there are few states that currently operate comprehensive programs that specifically address the unique circumstances of minefilling, making it more likely that any damage to human health or the environment would go unnoticed or unaddressed, and (c) we believe that the cost of complying with regulations that address these potential dangers may not have a substantial impact on this practice because

minefilling continues to grow in those few states that already have comprehensive programs.

We recognize that at this time, we cannot quantify the nature of damage that may be occurring or may occur in the future as a result of using coal combustion wastes as minefill. It is often impossible to determine if existing groundwater quality has been impacted by previous mining operations or as a result of releases of hazardous constituents from the coal combustion wastes used in minefilling applications. We have not as yet identified proven damage cases resulting from the use of coal combustion wastes for minefilling.

We also acknowledge that when the complexities related to site-specific geology, hydrology, waste chemistry and interactions with the surrounding matrix, and other relevant factors are properly taken into account, coal combustion wastes used as minefill can provide significant benefits. However, when not done properly, minefilling has the potential to contaminate ground water to levels that could damage human health and the environment. Based on materials submitted during the public comment period, coal combustion wastes used as minefill can lead to increases in hazardous metals released into ground water if the acidity within the mine overwhelms the capacity of the coal combustion wastes to neutralize the acidic conditions. This is due to the increased leaching of hazardous metals from the wastes. The potential for this to occur is further supported by data showing that management of coal combustion wastes in the presence of acid-generating pyritic wastes has caused metals to leach from the combustion wastes at much higher levels than are predicted by leach test data for coal combustion wastes when strongly acidic conditions are not present. Such strongly acidic conditions often exist at mining sites.

Although we have identified no damage cases involving minefilling, we are also aware of situations where coal combustion wastes are being placed in direct contact with ground water in both surface and underground mines. We concluded in our recent study of cement kiln dust management practices that placement of cement kiln dust in direct contact with ground water led to a substantially greater release of hazardous metals than we predicted would occur when the waste was placed above the water table. For this reason, we find that there is a potential for increased releases of hazardous metals as a result of placing coal combustion wastes in direct contact with groundwater. Also, there are damage

cases associated with coal combustion wastes in landfills. The Agency believes it is reasonable to be concerned when similar quantities of coal combustion wastes are placed in mines, which often are not engineered disposal units and in some cases involve direct placement of wastes into direct contact with ground water.

We are concerned that government oversight is necessary to ensure that minefilling is done appropriately to protect human health and the environment, particularly since minefilling is a recent, but rapidly expanding use of coal combustion wastes. Government oversight has not yet "caught up" with the practice consistently across the country. There are some states that have programs that specifically address minefilling practices. We are likely to find that their programs or certain elements of their programs could serve as the basis for a comprehensive, flexible set of national management standards that ensure protection of human health and the environment. We also believe that these state programs will provide valuable experience in coordinating with SMCRA program requirements. However, at this time, few of the programs are comprehensive. Commenters pointed out, and we agree, there are significant gaps in other states. We believe that additional requirements for long-term groundwater monitoring, and controls on wastes placed directly into groundwater might be prudent.

#### *E. What Approach Will EPA Take in Developing National Regulations?*

We will not promulgate any regulations for beneficial uses other than minefilling. We do not wish to place any unnecessary barriers on the beneficial use of fossil fuel combustion wastes so that they can be used in applications that conserve natural resources and reduce disposal costs.

Once we concluded there is a need for some form of national regulation of coal combustion wastes disposed in landfills and surface impoundments and used as minefill, we considered two approaches. One approach would involve promulgating subtitle D regulations, pursuant to sections 1008 and 4004(a) of RCRA, that would contain criteria defining landfills and impoundments that would constitute "sanitary landfills." Any facility that failed to meet the standards would constitute an open dump, which is prohibited by section 4005(a) of RCRA. Such standards would set a consistent baseline for protective management throughout the country. We would also work with the Department of Interior,

Office of Surface Mining to evaluate whether equivalent protectiveness for minefilling could be afforded by relying on revision of existing SMCRA regulations or by relying on a combination of RCRA and SMCRA authorities.

The second approach was to promulgate regulations pursuant to Subtitle C of RCRA, that would have been similar to our recent proposed regulation of cement kiln dust. Following this approach, EPA would develop national management standards based on the Subtitle D open dump criteria as discussed above, as well as a set of tailored Subtitle C requirements promulgated pursuant to RCRA section 3004(x). If the wastes were properly managed in accordance with the subtitle D-like standards, they would not be classified as hazardous wastes. When they were not properly managed, they would become listed hazardous wastes subject to tailored subtitle C standards. This scheme would be effective in each state authorized for the hazardous waste program when that state modified its hazardous waste program to incorporate the listing.

Under this approach, after states have adopted the contingent listing, facilities that have egregious or repeated violations of the management standards would be moved into the subtitle C program (subject to the tailored RCRA 3004 (x) requirements, rather than to the full set of subtitle C requirements). Thus, EPA would have authority to enforce the management standards.

The decision whether to establish regulations under subtitle C or D of RCRA for disposal of coal combustion wastes in landfills and surface impoundments and when minefilled was a difficult one. EPA believes that, in this case, either approach would ensure adequate protection of public health and the environment. Either subtitle C or D provides EPA with the authority to prescribe protective standards for the management of these wastes. Moreover, as described above, the standards that EPA would adopt under either regime, because of the flexibility provided by section 3004 (x), would be substantively the same. Also, under either approach, a facility that fails to comply with the standards is in violation of RCRA—in the case of subtitle C, the facility would be in violation of the tailored standards promulgated under section 3004(x). In the case of subtitle D, the facility would be in violation of the prohibition in section 4005(a) of RCRA against “open dumping.” The prohibition against open dumping is, however, enforceable only by private citizens and states, not EPA.

Management standards established under the authority of subtitle C (including tailored section 3004(x) standards) are also enforceable by EPA. It appears that more than 40 states already have sufficient authority to implement most, if not all of the national standards we contemplate would be appropriate for surface impoundments and landfills. One difference between the two regimes may be that states could cite revised subtitle D standards as a basis for exercising their existing authorities more vigorously, potentially promoting swifter adoption of appropriate controls for surface impoundments and landfills. In addition, subtitle D standards would be applicable and enforceable by citizens as soon as the federal rule becomes effective. subtitle C standards in contrast, would not apply until incorporated into state subtitle C programs. For minefilling, we would also explore SMCRA as a possible mechanism to speed implementation, even if we relied on subtitle D to establish protective standards, because minefilling operations already are subject to SMCRA permitting authority.

Taking into account the common and distinct features of these alternative approaches, EPA believes at this time, based on the current record, that subtitle D regulations are the more appropriate mechanism for a number of reasons. In view of the very substantial progress that states have made in regulating disposal of fossil fuel combustion wastes in surface impoundments and landfills in recent years, as well as the active role that this industry has played recently in facilitating responsible waste disposal practices, EPA believes that subtitle D controls will provide sufficient clarity and incentive for states to close the remaining gaps in coverage, and for facilities to ensure that their wastes are managed properly.

For minefilling, although we have considerable concern about certain current practices (e.g., placement directly into groundwater), we have not yet identified a case where placement of coal wastes can be determined to have actually caused increased damage to ground water. In addition, there is a federal regulatory program—SMCRA—expressly designed to address environmental risks associated with coal mines. Finally, given that states have been diligent in expanding and upgrading programs for surface impoundments and landfills, we believe they will be similarly responsive in addressing environmental concerns arising from this emerging practice. In short, we arrive at the same conclusions, for substantially the same reasons, for

this practice as we did for landfills and surface impoundments: that subtitle D controls, or upgraded SMCRA controls or a combination of the two, should provide sufficient clarity and incentive to ensure proper handling of this waste when minefilled. Having determined that subtitle C regulation is not warranted for all other management practices, EPA does not see a basis in the record for carving this one practice out for separate regulatory treatment.

Once these subtitle D regulations are effective, facilities would be subject to citizen suits for any violation of the standards. If EPA were addressing wastes that had not been addressed by the states (or the federal government) in the past, or an industry with wide evidence of irresponsible solid waste management practices, EPA may well conclude that the additional incentives for improvement and compliance provided by the subtitle C scheme—the threat of federal enforcement and the stigma associated with improper management of RCRA subtitle C waste—were necessary. But the record before us indicates that the structure and the sanctions associated with a subtitle D approach (or a SMCRA approach if EPA determines it is equivalent) should be sufficient.

We also see a potential downside to pursuing a subtitle C approach. Section 8002(n)(8) directs us to consider, among other factors, “the current and potential utilization of such materials.” Industry commenters have indicated that they believe subjecting any coal combustion wastes to a subtitle C regime would place a significant stigma on these wastes, the most important effect being that it would adversely impact beneficial reuse. As we understand it, the concern is that, even though beneficially reused waste would not be hazardous under the contemplated subtitle C approach, the link to subtitle C would nonetheless tend to discourage purchase and re-use of the wastes or products made from the wastes. We do not wish to place any unnecessary barriers on the beneficial uses of these wastes, because they conserve natural resources, reduce disposal costs and reduce the total amount of waste destined for disposal. States and industry have also expressed concern that regulation under subtitle C could cause a halt in the use of coal combustion wastes to reclaim abandoned and active mine sites. If this were to occur, it would be unfortunate in that when done properly, we recognize this practice can lead to substantial environmental benefits. EPA believes the contingent management scheme we discussed should diminish

any stigma that might be associated with the subtitle C link. Nonetheless, we acknowledge the possibility that the approach could have unintended consequences. We would be particularly concerned about any adverse effect on the beneficial re-use market for these wastes because more than 23 percent (approximately 28 million tons) of the total coal combustion waste generated each year is beneficially reused and an additional eight percent (nine million tons) is used for minefilling. EPA believes that such reuse when performed properly, is by far the environmentally preferable destination for these wastes, including when minefilled. Normally, concerns about stigma are not a deciding factor in EPA's decisions under RCRA, given the central concern under the statute for protection of human health and the environment. However, given our conclusion that the subtitle D approach here should be fully effective in protecting human health and the environment, and given the large and salutary role that beneficial reuse plays for this waste, concern over stigma is a factor supporting our decision today that subtitle C regulation is unwarranted in light of our decision to pursue a subtitle D approach.

As we proceed with regulation development, we will also take enforcement action under RCRA section 7003 when we identify cases of imminent and substantial endangerment. We will also use Superfund remedial and emergency response authorities under the Comprehensive Environmental Response Compensation and Liabilities Act (CERCLA), as appropriate, to address damages that result in risk to human health and the environment. We will also take into account new information as it becomes available. We are awaiting a National Academy of Sciences report scheduled to be released in June 2000. This report will present a comprehensive review of mercury and recommendations on appropriate adverse health effects levels for this constituent. We believe that this report will enhance our understanding of the risks due to exposure to mercury, and we will review and assess its implications for today's decision on fossil fuel combustion wastes. These efforts may result in a re-evaluation of the risks posed by managing coal combustion wastes.

### 3. What Is the Basis for EPA's Regulatory Determination for Oil Combustion Wastes?

#### *A. What Is the Agency's Decision Regarding the Regulatory Status of Oil Combustion Wastes and Why Did EPA Make This Decision?*

We have determined that it is not appropriate to issue regulations under subtitle C of RCRA applicable to oil combustion wastes because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) except for a limited number of unlined surface impoundments, we have not identified any significant risks to human health and the environment associated with any waste management practices.

We intend to work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface impoundments to ensure that their wastes are managed in a manner that protects human health and the environment.

#### *B. What Were EPA's Tentative Decisions as Presented in the Report to Congress and Why Did EPA Make That Decision?*

In the Report to Congress, we stated that the only management scenario for which we found risks posed by management of oil combustion wastes was when oil combustion wastes are managed in unlined surface impoundments. The Report to Congress further explained that we were considering two approaches to address these identified risks. One approach was to regulate using RCRA subtitle C authority. The other approach was to encourage voluntary changes so that no oil combustion wastes are managed in unlined surface impoundments. This voluntary approach is based on recent industry and state regulatory trends to line oil combustion waste disposal units and implement groundwater monitoring.

We also tentatively decided that the existing beneficial uses of oil combustion wastes should remain exempt from RCRA subtitle C. There are few existing beneficial uses of these wastes, which include use in concrete products, structural fill, roadbed fill, and vanadium recovery. We determined that no significant risks to human health exist for the beneficial uses of these wastes. For the case of facilities that accept these wastes to recover vanadium from them, we explained that if the wastes resulting from the metal recovery processes are hazardous, they will be

subject to existing hazardous waste requirements.

We found in most cases that OCW, whether managed alone or co-managed, are rarely characteristically hazardous. Additionally, we identified no significant ecological risks posed by land disposal of OCW. We identified only one documented damage case involving OCW in combination with coal combustion wastes, and it did not affect human receptors.

Although most of the disposed oil combustion wastes are managed in lined surface impoundments, we did identify six utility sites where wastes are managed in unlined units. We expressed particular concern with management of these wastes in unlined settling basins and impoundments that are designed and operated to discharge the aqueous portion of the wastes to ground water. Our risk analysis indicated that, in these situations, three metals—arsenic, nickel, and vanadium—may pose potential risk by the groundwater pathway.

#### *C. How Did Commenters React to EPA's Tentative Decisions and What Was EPA's Analysis of Their Comments?*

Because we were able to identify so few unlined surface impoundments, the only management scenario for which we found risks, the primary focus of the comments regarding oil combustion wastes was on the six unlined surface impoundments that we identified. In addition, there were extensive comments on our modeling and risk assessment methodology for the groundwater pathway that are applicable to our assessment of risks posed by oil combustion wastes.

##### 1. How Did Commenters React to the Six Unlined Oil Combustion Waste Surface Impoundments That We Identified?

*Comments.* Industry commenters supported the approach to encourage voluntary changes in industry practices on a site-specific basis, and explained why they believed hazardous waste regulations are unnecessary. The environmental community supported the development of hazardous waste regulations.

*EPA's Analysis of Comments.* In the RTC, we identified that our only concern about oil combustion wastes was based on the potential for migration of arsenic, nickel, and vanadium from unlined surface impoundments. We requested information on this issue and did not receive any additional data and/or information to refute our tentative finding stated in the RTC that these



unlined surface impoundments could pose a significant risk.

As stated in the RTC, there are only six sites involving two companies that have unlined surface impoundments. Four of the sites are in Florida and are operated by one company. The company operating the four unlined impoundments in Florida is undertaking projects to mitigate potential risks posed by their unlined management units. At a May 21, 1999 public hearing, the company announced its plans to remove all the oil ash and basin material from its unlined impoundments and to line or close the units. The company informed us in January 2000 that it had completed the lining of all the units. Based on this information, we do not believe that these units pose a significant risk to human health and the environment.

The other two sites with unlined impoundments are operated by one utility in Massachusetts. Both sites are permitted under Massachusetts' ground water discharge permit program and have monitoring wells around the unlined basins. Arsenic is monitored for compliance with state regulations. Although the company expressed no plans to line their impoundments, they are preparing to implement monitoring for nickel and vanadium in ground water around the waste management units. We have been working with the State and the company to obtain additional information to evaluate these two management units. We will continue this effort and will work with the company and the State to ensure that any necessary measures are taken so that these wastes are managed in a manner that protects human health and the environment.

## 2. How Did Commenters React to the Groundwater Modeling and Risk Assessment Analyses Conducted by EPA to Support Its Findings in the Report to Congress?

*Comments.* Industry and public interest group commenters submitted detailed critiques of the ground water model, EPACMTP, that we used for our risk analysis. Industry commenters believe that the model will overestimate the levels of contaminants that may migrate down-gradient from disposed wastes. Environmental groups expressed the opposite belief; that is, that the model underestimates down-gradient chemical concentrations and, therefore, underestimates the potential risk posed by oil combustion wastes.

*EPA's Analysis of the Comments.* We are carefully reviewing all of the comments on the model and have determined that the process of

thoroughly investigating all of the comments will take substantially more time to complete than is available within the court deadline for issuing this regulatory determination. At this time, we are uncertain of the overall outcome of our analysis of the issues raised in the comments. Accordingly, we have decided not to use the results of our ground water pathway risk analysis in support of today's regulatory determination on fossil fuel combustion wastes. As explained above, we believe that actions have been taken or are under way by specific companies and/or the State of Massachusetts to address potential risks at the six impoundments that we have been able to identify. Therefore we believe that further groundwater analysis is unnecessary at this time.

Meanwhile, we will continue with our analysis of comments on the groundwater model and risk analysis. This may involve changing or restructuring various aspects of the model, if appropriate. It may also include additional analyses to determine whether any changes to the model or modeling methodology would materially affect the groundwater risk analysis results that were reported in the RTC. If our investigations reveal that a reanalysis of groundwater risks is appropriate, we will conduct the analysis and reevaluate today's decisions as appropriate.

In addition to our ongoing review of comments on the groundwater model, one element of the model—the metals partitioning component called "MINTEQ"—has been proposed for additional peer review. When this additional peer review is completed, we will take the findings and recommendations into account in any overall decision to re-evaluate today's regulatory determination.

## D. What Is the Basis for Today's Decisions?

We have determined that it is not appropriate to establish national regulations applicable to oil combustion wastes because: (a) We have not identified any beneficial uses that are likely to present significant risks to human health or the environment; and (b) except for two remaining unlined surface impoundments, we have not identified any significant risks to human health and the environment associated with any waste management practices. As explained in the previous section, we intend to work with the State of Massachusetts and the owners and operators of the remaining two oil combustion facilities that currently manage their wastes in unlined surface

impoundments to ensure that any necessary measures are taken so that their wastes are managed in a manner that protects human health and the environment. Given the limited number of sites at issue and our ability to adequately address risks from these waste management units through site-specific response measures, we see no need for issuing regulations under subtitle C or D of RCRA.

## 4. What Is the Basis for EPA's Regulatory Determination for Natural Gas Combustion Wastes?

### A. What Is the Decision Regarding the Regulatory Status of Natural Gas Combustion Wastes?

For the reasons described in the Report to Congress (pages 7–1 to 7–3), EPA has decided that regulation of natural gas combustion wastes as hazardous wastes under RCRA subtitle C or D is not warranted. The burning of natural gas generates virtually no solid waste.

### B. What Was EPA's Tentative Decision as Presented in the Report to Congress?

The Agency's tentative decision was to retain the subtitle C exemption for natural gas combustion because virtually no solid waste is generated.

### C. How Did Commenters React to EPA's Tentative Decision?

No commenters on the RTC disagreed with EPA's findings or its tentative decision to continue the exemption for natural gas combustion wastes.

Specific comments on this issue supported our tentative decision to retain the exemption for natural gas combustion waste. One industry association encouraged us to foster the use of natural gas as a substitute for other fossil fuels. While some public interest group commenters disagreed broadly with our tentative conclusions to retain the exemption for fossil fuel combustion wastes, they did not specifically address natural gas combustion wastes.

### D. What Is the Basis for Today's Decision?

The burning of natural gas generates virtually no solid waste. We, therefore, believe that there is no basis for EPA developing subtitle C or D regulations applicable to natural gas combustion wastes.

## 5. What Is the History of EPA's Regulatory Determinations for Fossil Fuel Combustion Wastes?

### A. On What Basis Is EPA Required To Make Regulatory Determinations Regarding the Regulatory Status of Fossil Fuel Combustion Wastes?

Section 3001(b)(3)(C) of the Resource Conservation and Recovery Act (RCRA) as amended requires that, after completing a Report to Congress mandated by section 8002(n) of RCRA, the EPA Administrator must determine whether Subtitle C (hazardous waste) regulation of fossil fuel combustion wastes is warranted.

### B. What Was EPA's General Approach in Making These Regulatory Determinations?

We began our effort to make our determination of the regulatory status of fossil fuel combustion wastes by studying high volume coal combustion wastes managed separately from other fossil fuel combustion wastes that are generated by electric utilities. In February 1988, EPA published the Report to Congress on Wastes from the Combustion of Coal by Electric Utility Power Plants. The report addressed four large-volume coal combustion wastes generated by electric utilities and independent power producers when managed alone. The four wastes are fly ash, bottom ash, boiler slag, and flue gas desulfurization (FGD) wastes. The report did not address co-managed utility coal combustion wastes (UCCWs), other fossil fuel wastes generated by utilities, or wastes from non-utility boilers burning any type of fossil fuel. Because of other priorities at the time, we did not immediately complete a determination of the regulatory status of these large-volume coal combustion wastes.

### C. What Happened When EPA Failed To Issue Its Determination of the Regulatory Status of the Large Volume Utility Combustion Wastes in a Timely Manner?

In 1991, a suit was filed against EPA for not completing a regulatory determination on fossil fuel combustion wastes (*Gearhart v. Reilly*, Civil No. 91-2345 (D.D.C.)). On June 30, 1992, the Agency entered into a Consent Decree that established a schedule for us to complete the regulatory determination for all fossil fuel combustion wastes in two phases:

- The first phase covers fly ash, bottom ash, boiler slag, and flue gas emission control wastes from the combustion of coal by electric utilities and independent commercial power

producers. These are the four large volume wastes that were the subject of the 1988 Report to Congress described above. We refer to this as the Part 1 regulatory determination.

- The second phase covers all of the "remaining" fossil fuel combustion wastes not covered in the Part 1 regulatory determination. We refer to this as the Part 2 regulatory determination, which is the subject of today's action. Under the current court-order, EPA was directed to issue the Part 2 regulatory determination by April 25, 2000.

### D. When Was the Part 1 Regulatory Decision Made and What Were EPA's Findings?

In 1993, EPA issued the Part 1 regulatory determination, in which we retained the exemption for Part 1 wastes (see 58 FR 42466; August 9, 1993). The four Part 1 large-volume utility coal combustion wastes (UCCWs) are also addressed in the Part 2 regulatory determination when they are co-managed with low-volume fossil fuel combustion wastes not covered in the Part 1 determination.

## 6. Executive Orders and Laws Addressed in Today's Action

### A. Executive Order 12866—Determination of Significance

Under Executive Order 12866, (58 FR 51735, Oct. 4, 1993) we must determine whether the regulatory action is "significant" and therefore subject to review by the Office of Management and Budget (OMB) and the requirements of the Executive Order. The Order defines "significant regulatory action" as one that is likely to result in a rule that may:

- Have an annual effect on the economy of \$100 million or more or adversely affect in a material way the economy, a sector of the economy, productivity, competition, jobs, the environment, public health or safety, or State, local, or tribal governments or communities;
- Create a serious inconsistency or otherwise interfere with an action taken or planned by another agency;
- Materially alter the budgetary impact of entitlements, grants, user fees, or loan programs or the rights and obligations of recipients thereof; or
- Raise novel legal or policy issues arising out of legal mandates, the President's priorities, or the principles in the Executive Order."

Under Executive Order 12866, this is a "significant regulatory action." Thus, we have submitted this action to OMB for review. Changes made in response to OMB suggestions or recommendations are documented in the public record.

### B. Regulatory Flexibility Act (RFA), as Amended by the Small Business Regulatory Enforcement Fairness Act of 1996 (SBREFA), 5 U.S.C. 601 et seq.

Today's action is not subject to the RFA, which generally requires an agency to prepare a regulatory flexibility analysis for any rule that will have a significant economic impact on a substantial number of small entities. The RFA applies only to rules subject to notice-and-comment rulemaking requirements under the Administrative Procedure Act (APA) or any other statute. This action is not subject to notice and comment requirements under the APA or any other statute. Today's action is being taken pursuant to section 3001(b)(3)(C) of the Resource Conservation and Recovery Act. This provision requires EPA to make a determination whether to regulate fossil fuel combustion wastes after submission of its Report to Congress and public hearings and an opportunity for comment. This provision does not require the publication of a notice of proposed rulemaking and today's action is not a regulation. See *American Portland Cement Alliance v. E.P.A.*, 101 F.3d 772 (D.C.Cir. 1996).

### C. Paperwork Reduction Act Information Collection Requests

Today's final action contains no information collection requirements.

### D. Unfunded Mandates Reform Act

Today's action is not subject to the requirements of sections 202 and 205 of the Unfunded Mandates Reform Act of 1995 (UMRA), Public Law 104-4. Title II of UMRA establishes requirements for federal agencies to assess the effects of their regulatory actions on state, local, and tribal governments and the private sector. Under section 202 of the UMRA, EPA generally must prepare a written statement, including a cost-benefit analysis, for proposed and final rules with "federal mandates" that may result in expenditures to state, local, and tribal governments, in the aggregate, or to the private sector, of \$100 million or more in any one year.

Before we issue a rule for which a written statement is needed, section 205 of the UMRA generally requires us to identify and consider a reasonable number of regulatory alternatives and adopt the least costly, most cost-effective, or least burdensome alternative that achieves the rule's objectives. Section 205 doesn't apply when it is inconsistent with applicable law. Moreover, section 205 allows us to adopt an alternative other than the least costly, most cost-effective, or least



burdensome alternative if the final rule explains why that alternative was not adopted. Before we establish any regulatory requirements that may significantly affect small governments, including tribal governments, we must have developed under section 203 of the UMRA a small-government-agency plan. The plan must provide for notifying potentially affected small governments, enabling them to have meaningful and timely input in the developing EPA regulatory proposals with significant federal intergovernmental mandates, and informing, educating, and advising small governments on compliance with the regulatory requirements.

Today's final action contains no federal mandates (under the regulatory provisions of Title II of the UMRA) for state, local, or tribal governments or the private sector. Today's final action imposes no enforceable duty on any state, local or tribal governments or the private sector.

In addition, we have determined this action contains no federal mandate that may result in expenditures of \$100 million or more for state, local, and tribal governments, in the aggregate, or the private sector in any one year.

#### *E. Executive Order 13132: Federalism*

Executive Order 13132, entitled Federalism (64 FR 43255, August 10, 1999) requires us to develop an accountable process to ensure meaningful and timely input by state and local officials in the development of regulatory policies that have federalism implications. The executive order defines policies that have federalism implications to include regulations that have substantial direct effects on the states, on the relationship between the national government and the states, or on the distribution of power and responsibilities among the various levels of government.

Under section 6 of Executive Order 13132, we may issue a regulation that has federalism implications, that imposes substantial direct compliance costs, and that isn't required by statute, only if the federal government provides funds the direct compliance costs incurred by state and local governments, or if EPA consults with state and local officials early in the development of the proposed regulation. Also, EPA may issue a regulation that has federalism implications and that preempts state law, only if we consult with state and local officials early in the development of the proposed regulation.

If EPA complies by consulting, Executive Order 13132 requires us to provide OMB, in a separately identified section of the rule's preamble, a

federalism summary impact statement (FSIS). The FSIS must describe the extent of our prior consultation with state and local officials, summarizing the nature of their concerns and our position supporting the need for the regulation, and state the extent to which the concerns of state and local officials have been met. Also, when we transmit a draft final rule with federalism implications to OMB for review under Executive Order 12866, our federalism official must include a certification that EPA has met the requirements of Executive Order 13132 in a meaningful and timely manner.

Today's final action does not have federalism implications. It will not have a substantial direct effect on the States, on the relationship between the national government and the States, or on the distribution of power and responsibilities among the various levels of government, as specified in Executive Order 13132. This is because no requirements are imposed by today's action, and EPA is not otherwise mandating any state or local government actions. Thus, the requirements of section 6 of the Executive Order do not apply to this final action.

#### *F. Executive Order 13084: Consultation and Coordination With Indian Tribal Governments*

Under Executive Order 13084, EPA may take an action that isn't required by statute, that significantly or uniquely affects the communities of Indian tribal governments, and that imposes substantial direct compliance costs on those communities, only if the federal government provides the funds necessary to pay the direct compliance costs incurred by the tribal governments or EPA consults with those governments. If EPA complies by consulting, Executive Order 13084 requires us to describe in a separately identified section of the preamble to the rule the extent of our prior consultation with representatives of affected tribal governments, summarizing of the nature of their concerns, and state the need for the regulation. Also, Executive Order 13084 requires EPA to develop an effective process permitting elected officials and other representatives of Indian tribal governments "to provide meaningful and timely input in the development of regulatory policies on matters that significantly or uniquely affect their communities."

Today's final action does not significantly or uniquely affect the communities of Indian tribal governments. This is because today's action by EPA involves no regulations or other requirements that significantly

or uniquely affect Indian tribal governments. So, the requirements of section 3(b) of Executive Order 13084 do not apply to this action.

#### *G. Executive Order 13045: Protection of Children From Environmental Health Risks and Safety Risks*

"Protection of Children from Environmental Health Risks and Safety Risks" (62 FR 19885, April 23, 1997) applies to any rule that: (1) Is "economically significant" as defined under Executive Order 12866, and (2) concerns an environmental health or safety risk that EPA has reason to believe may have a disproportionate effect on children. If the regulatory action meets both criteria, we must evaluate the environmental health or safety effects of the planned rule on children and explain why the planned regulation is preferable to other potentially effective and reasonably feasible alternatives considered by the Agency.

Today's final action isn't subject to the Executive Order because it is not economically significant as defined in Executive Order 12866, and because we have no reason to believe the environmental health or safety risks addressed by this action present a disproportionate risk to children. Risks were thoroughly evaluated during the course of developing today's decision and were determined not to disproportionately affect children.

#### *H. National Technology Transfer and Advancement Act of 1995*

As noted in the proposed rule, section 12(d) of the National Technology Transfer and Advancement Act of 1995 ("NTTAA"), Public Law. No. 104-113, section 12(d) (15 U.S.C. 272 note) directs EPA to use voluntary-consensus standards in its regulatory activities unless doing so would be inconsistent with applicable law or otherwise impractical. Voluntary-consensus standards are technical standards (such as materials specifications, test methods, sampling procedures, and business practices) that are developed or adopted by voluntary-consensus standards bodies. The NTTAA directs us to explain to Congress, through OMB, when we decide not to use available and applicable voluntary-consensus standards.

Today's final action involves no technical standards. So, EPA didn't consider using any voluntary-consensus standards.

*I. Executive Order 12898:  
Environmental Justice*

EPA is committed to addressing environmental justice concerns and is assuming a leadership role in environmental justice initiatives to enhance environmental quality for all populations in the United States. The Agency's goals are to ensure that no segment of the population, regardless of race, color, national origin, or income bears disproportionately high and adverse human health or environmental impacts as a result of EPA's policies, programs, and activities, and that all people live in safe and healthful environments. In response to Executive Order 12898 and to concerns voiced by many groups outside the Agency, EPA's Office of Solid Waste and Emergency Response formed an Environmental Justice Task Force to analyze the array of environmental justice issues specific to waste programs and to develop an overall strategy to identify and address

these issues (OSWER Directive No. 9200.317).

*J. Congressional Review Act*

The Congressional Review Act, 5 U.S.C. 801 *et seq.*, as added by the Small Business Regulatory Enforcement Fairness Act of 1996, does not apply because this action is not a rule for purposes of 5 U.S.C. 804(3). Rather, this action is an order as defined by 5 U.S.C. 551(6).

**7. How To Obtain More Information**

Documents related to this regulatory determination, including EPA's response to the public comments, are available for inspection in the docket. The relevant docket numbers are: F-99-FF2D-FFFFF for the regulatory determination, and F-99-FF2P-FFFFF for the RTC. The RCRA Docket Information Center (RIC), is located at Crystal Gateway I, First Floor, 1235 Jefferson Davis Highway, Arlington, VA.

The RIC is open from 9 a.m. to 4 p.m., Monday through Friday, excluding Federal holidays. To review docket materials, it is recommended that the public make an appointment by calling 703-603-9230. The public may copy a maximum of 100 pages from any regulatory docket at no charge. Additional copies cost \$0.15/page. The index and some supporting materials are available electronically. See the Supplementary Information section for information on accessing them.

**List of Subjects in 40 CFR Part 261**

Fossil fuel combustion waste, Coal combustion, Gas combustion, Oil combustion, Special wastes, Bevill exemption

Dated: April 25, 2000.

**Carol M. Browner,**  
*Administrator.*

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