

**ORIGINAL**

TENNESSEE VALLEY AUTHORITY  
U. S. ENVIRONMENTAL PROTECTION AGENCY  
TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

QUARTERLY PUBLIC MEETING

FEBRUARY 24, 2011

ROANE COUNTY HIGH SCHOOL  
KINGSTON, TENNESSEE

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**PANEL :**

STEVE MCCRACKEN, TVA

CRAIG ZELLER, EPA

CHUCK HEAD, TDEC

BRUCE ENGELBERT, FACILITATOR

- - -

PUBLIC SPEAKERS

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JONI MORGAN

50

DON SIMON

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GAIL OKULCZYK

59

JUSTIN BATTENBERG

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1                   STEVE MCCRACKEN: Good evening,  
2                   everybody. For those of you that I have  
3                   not met, my name is Steve McCracken. I am  
4                   the general manager of the Kingston  
5                   cleanup for TVA. I want to welcome you on  
6                   behalf of TVA this evening.

7                   For those of you who have been here  
8                   before, we're going to follow the format  
9                   that we have been using now for some time.  
10                  That will include a presentation by Craig  
11                  Zeller who is with the EPA and works at  
12                  our site. He'll give you a status update  
13                  on where we are. Following that, Bruce  
14                  Engelbert is our facilitator and he will  
15                  facilitate the question and answer period  
16                  and he'll sort of set the ground rules  
17                  when he is ready to go.

18                  I very much -- I would like to  
19                  recognize the important people. Everybody  
20                  is important, but some of the really  
21                  important people. Randy Ellis is the  
22                  Roane County Commissioner. He's with us  
23                  tonight and he's been with us the whole  
24                  way. I think he's been an important part  
25                  of what we are doing. Our Citizens

1           Advisory Group is here this evening and  
2           they're over on this side of the room and  
3           ready to talk to you and answer any  
4           questions and talk about what they do.

5                     Also around the room there are  
6           exhibits that people are -- will be there  
7           to answer any questions that you have. In  
8           addition to that, the State, TDEC is here  
9           tonight. Chuck Head is sitting in the  
10          back. He will join me and Craig Zeller up  
11          here in the front to I guess -- I guess he  
12          knows that. He's done it every other  
13          time. He will join me and Craig in the  
14          front to take questions following the  
15          presentation by Craig.

16                    Again, I want to thank you for  
17          being here and I'll turn it over to Craig.

18                    CRAIG ZELLER: Thank you, Steve,  
19          and thanks everybody for coming tonight.  
20          I've got about 25 slides or so. The  
21          purpose of tonight's meeting really is to  
22          kind of bring everybody up to speed on  
23          what we've been doing out here. I guess  
24          the last time we were out in this  
25          auditorium was toward the end of September

1 of last year. So over the next 30 minutes  
2 or so, the goal of this presentation  
3 really is to kind of bring you up to speed  
4 and give you an idea of what we have been  
5 doing for about the last four or five  
6 months here.

7 As of December of last, we're kind  
8 of crossed a critical milestone. That's  
9 two years after the recovery. The  
10 pictures here kind of show it then. On  
11 the left is one day after the initial  
12 spill occurred back on December 22, 2008,  
13 and then on your right was about roughly  
14 two years later. You know, besides the  
15 big, obvious things, of course over this  
16 two period -- two years of time we got  
17 about 4 million tons of cubic -- or 4  
18 million tons of ash out of the river. So  
19 you can see now the channel is quite open.  
20 In fact, the Emory River was opened for  
21 navigation and recreation again at the end  
22 of May of last year.

23 You can see the east embayment has  
24 been cleaned out back to original  
25 bathymetry, what it looked like before the

1 spill. This down here is some stuff we've  
2 been doing. We'll talk more about this  
3 later. This is armoring and buttressing  
4 the actual -- the perimeter dike we call  
5 Dike C. You can see it's been, you know,  
6 about 60 percent done. And we're starting  
7 to move out ash out of north embayment.  
8 So just a little kind of graphic to show  
9 you that over the last two years there has  
10 been a tremendous amount accomplished and  
11 I'll talk more about that here as we  
12 proceed.

13 So what have we accomplished  
14 since the last time I was up here talking  
15 to you all? Well, the biggest thing, I  
16 guess -- we've got four things here that  
17 we've accomplished here so far. The first  
18 thing was the construction of the Swan  
19 Pond Road or Swan Pond Circle bridge and  
20 underpass.

21 As you may recall from our previous  
22 discussions, this allows our construction  
23 equipment, namely our excavators, our dump  
24 trucks, and our pan scrapers to actually  
25 travel under Swan Pond Circle Road and get

1 back to about roughly a million cubic  
2 yards of ash that's in the northern  
3 embayment also known as Berkshire Slough.  
4 The big advantage of that, of course, is  
5 it keeps this big, yellow iron off the  
6 roads to try to eliminate any, you know,  
7 safety hazards that they might pose on  
8 these local roads, tearing up the roads  
9 and that kind of thing and allows us to  
10 move pretty freely and kind of mind our  
11 own business.

12 Another big milestone, the shipping  
13 of off -- via rail off site down to the  
14 Perry County landfill, the Arrowhead  
15 Landfill, started up around early July of  
16 2009. The last train left the project on  
17 December 1st. There was just over 4  
18 million tons that were safely transported  
19 down there without incident. It was about  
20 414 trains. We were all very, you know,  
21 happy and pleased that that went as well  
22 as it did. It was a long -- you know,  
23 that is that, about 18 months of hauling.  
24 It actually went very well.

25 The skimmer wall that is part of

1 really the active operations at the  
2 Kingston Fossil Plant, the skimmer wall  
3 was knocked down when the slide occurred,  
4 the spill occurred. That was actually  
5 completed the 2nd of December. This is  
6 really kind of a hanging wall where they  
7 pull water underneath, they pull the  
8 cooler water that goes into the plant for  
9 cooling water. That was constructed and  
10 completed late last year.

11 Then also something very important  
12 to the local community is the utilities  
13 that were disrupted, the water, the gas,  
14 et cetera. All those utility  
15 installations and the services were fully  
16 restored back to the communities there  
17 about the 20th of January. So those are  
18 some things that everybody that works on  
19 the project out there were extremely  
20 staffed with and glad we could, you know,  
21 check those off and move on to other  
22 things.

23 A word about safety. Safety is  
24 extremely important out there. We still  
25 probably have close to 400 people out

1           there that bill to this project on a daily  
2           basis. That includes, you know, the  
3           management as well as our craft labor in  
4           the field. There's been a tremendous  
5           amount of focus on safety, making sure  
6           that, you know, our workers are protected  
7           not only from the industrial hygiene  
8           standpoint, the air they breathe, the  
9           water they may drink, but also to be safe  
10          with all the yellow equipment. It can be  
11          a very dangerous place. We've got dozens  
12          of pan scrapers, dozens of tract  
13          excavators. And if you've ever been out  
14          there, we've got flagmen and we could  
15          probably use traffic lights. It's that  
16          busy.

17                        But our injuries continue to  
18                        decline. Certainly our goal, like every  
19                        other project, is to be injury free.  
20                        We've had a real good success rate. We're  
21                        in really the top 10 percentile or upper  
22                        90 percent, if you want to look at it that  
23                        way, as far as construction projects.  
24                        This is really a very large civil  
25                        engineering job at this point in time.

1                   We do continue, we being EPA and  
2                   the Gulf Strike Team from the Coast Guard,  
3                   do continue to perform quarterly audits of  
4                   TVA's health and safety program. They  
5                   have dozens of people that are dedicated  
6                   to this and we've continued to work with  
7                   them collaboratively to, you know, try to  
8                   strengthen the safety program as needed.  
9                   But my folks that audit this program on a  
10                  quarterly basis are very pleased with the  
11                  safety program that TVA has implemented  
12                  here.

13                  Here is kind of what we're doing  
14                  now. You've seen this schedule. You can  
15                  see the thing highlighted there in green  
16                  is really where we're at now in 2011. The  
17                  main things we're doing now -- it's kind  
18                  of sliding into really a routine ash  
19                  movement and ash stacking job. And I'll  
20                  talk more about that. I've got some  
21                  pictures to show you.

22                  But the main things we're doing  
23                  here through 2011, what we're up to right  
24                  now, is we have moved into the north  
25                  embayment, also known as Berkshire Slough

1 I think by the locals. We are beginning  
2 to haul ash out of there. I'll show you  
3 some figures about how much ash we've  
4 moved out of there. We are beginning to  
5 stack ash back in the on-site disposal  
6 cell. As you recall back last May, we  
7 issued the Phase 2 decision document that  
8 came to the conclusion that we're going to  
9 stack the remaining ash, about 2.8 million  
10 cubic yards that's left out there, stack  
11 that safely back in the cell that failed.

12 Some other things that are going on  
13 is you'll also recall that cell is going  
14 to be re-engineered so that what happened  
15 on December 22 of 2008 does not occur  
16 again. We call that the perimeter  
17 containment piece. I'll talk more about  
18 that in a little bit. And we're starting  
19 to do that. We're also kind of starting  
20 to move some material into the lateral  
21 expansion, which is just off of the main  
22 Cells 2 and 3.

23 So the current activities. Some  
24 areas of the site that I'll refer to over  
25 here in the next 10 to 15 minutes is that

1 this is the north embayment, also known as  
2 Berkshire Slough. This is where we're  
3 currently pulling ash out of. That ash  
4 then is being stacked here in the central  
5 area of the dredge cell, the central and  
6 north area. Some of the same processes  
7 are occurring that occurred during the  
8 time-critical hydraulic dredging. We have  
9 to get this ash to an optimum moisture  
10 content, so we've got to dry it using some  
11 of the same techniques we've been out here  
12 using for two years.

13 By wind rowing it, we are applying  
14 when, in fact, some wet weather, of  
15 course, in the December-January time  
16 frame. It had dried up for us until  
17 today. But where we are having real wet  
18 weather, we are using a little bit of  
19 lime, about 6 percent by weight when  
20 needed. It's not an everyday occurrence  
21 but just when we're very wet to help the  
22 drying process so we can get this stuff  
23 safely stacked back in the cell.

24 We're stacking, as I mentioned, in  
25 the north cell, in the central dredge

1 cell. We are starting -- quite a bit of  
2 work has been dedicated here recently to  
3 the perimeter containment piece. That's  
4 becoming kind of a critical milestone.  
5 There's over 2 miles of perimeter  
6 containment that needs to be installed, I  
7 think it's 11,500 feet, to withstand a  
8 local earthquake.

9 We have been very busy also on the  
10 Phrase 3 piece. As you recall, Phase 3 is  
11 the comprehensive ecological risk  
12 assessment and human health sampling of  
13 any residual ash that's remaining in the  
14 river system. It covers about 12 miles of  
15 the Tennessee, the Clinch and the Emory  
16 River, of course. And we're continuing --  
17 while this is all going on, we're  
18 continuing our monitoring program to make  
19 sure that the air is safe for our workers,  
20 that the air is safe for the surrounding  
21 community, and making sure that the  
22 receiving water quality in the Emory River  
23 stays adequately protected.

24 So a little bit more about -- we're  
25 going to drill down a little bit now and

1 talk about these a little bit more  
2 specifically. As I'd mentioned earlier,  
3 this underpass to get us in the north  
4 embayment was opened at the end of last  
5 year. That eliminates any impact on the  
6 local traffic. We're very pleased with  
7 that.

8 We've gotten a pretty good head  
9 start on this thing. We started moving  
10 ash out of the north embayment really in  
11 the fall. Thus far we've removed about  
12 470,000 cubic yards of ash from the north  
13 embayment. That's just under 20 percent  
14 of the 2.8 that we've got to get out of  
15 there. That's through February -- that's  
16 through the week ending February 13th, I  
17 believe.

18 And now where are we hauling this  
19 stuff to? Well, we've got short-term  
20 storage places and we've got long-term  
21 storage places. Of course, the long-term  
22 storage place is the central and north  
23 dredge cell area. If ash is too wet and  
24 it can't be sacked at that point in time,  
25 we are taking it to some short-term

1 interim storage places that we also used  
2 during the time-critical phase. Those  
3 were -- they've got the names like the  
4 west storage, it's right here close to  
5 Swan Pond Circle Road, the lateral  
6 expansion which is next to Cells 2 and 3,  
7 and we're also taking some ash to the ball  
8 field area where it was dried for the  
9 time-critical off-site shipment. The ball  
10 field is really our lime treatment area  
11 and where we have real wet ash that cannot  
12 be dried by gravity, the old fashioned way  
13 of doing business. We are doing some lime  
14 addition there. It's about 6 percent by  
15 weight.

16 This just gives you a little  
17 graphic of how we've done so far. Our  
18 goal -- when we set out or in concept back  
19 in, say, June, May of 2010, our goal was  
20 to get 16,000 cubic yards a day excavated.  
21 That's about 3,200 cubic yards per day, if  
22 you do the math. We are slightly ahead of  
23 baseline. The baseline here per that goal  
24 is the black line and you can see our red  
25 line is trending upwards.

1           The last week -- when it's dry, we  
2           can really move ash. Last week we  
3           excavated over 30 -- I'm going to say  
4           about 32,000 cubic yards. So you're  
5           almost double what our baseline was. Then  
6           we've had weeks in December and January  
7           where we had the goose egg. It was just  
8           too wet. You know, we had inches of  
9           rainfall and you really can't stack ash  
10          when it's wet.

11                 So we have -- as long as the  
12          weather cooperates with us -- and  
13          hopefully we're kind of looking for that  
14          to make a break here this spring, I will  
15          say that TVA is planning to gear up when  
16          the weather cooperates. TVA is planning  
17          to gear up to six 10-hour days. Of course  
18          we're not going to do a 10-hour day on a  
19          day like today. We wouldn't be doing  
20          that. TVA wouldn't be doing that. But  
21          when the weather cooperates, we're going  
22          to try and make hay when the sun shines,  
23          as they say. So we do see a commitment by  
24          TVA, you know, to expedite this as much as  
25          possible and then try to keep -- their

1 goal here is to keep that red line ahead  
2 of the black line. So as of right now we  
3 are ahead of baseline and we're happy  
4 about that. So about 470,000 cubic yards  
5 has been excavated to date of the  
6 remaining 2.8.

7 Ash stacking is the next piece.  
8 It's very important. When this stuff goes  
9 back into the cell -- some of the lessons  
10 we learned during some test programs that  
11 were conducted during the time-critical  
12 phase is we can get this stuff dried to  
13 optimum moisture content typically -- it  
14 depends on the material -- but 17 to  
15 23 percent moisture content is what we're  
16 shooting for. If we can get this stuff  
17 dried to that optimum moisture content,  
18 roll it out into 1-foot lifts, and then  
19 compact it with a roller, it stays put.  
20 Okay. So that's been the goal.

21 So once this material gets dried  
22 either via windrowing the old fashioned  
23 way or via some lime conditioning, once it  
24 gets ready we take it to the north and  
25 central dredge cells, we roll it out in

1 1-foot lifts, it gets dumped out there,  
2 and then it's rolled over with a smooth  
3 drum roller. We're doing some continued  
4 contouring on that.

5 We're also keeping up our dust  
6 control measures. Some of the stuff that  
7 we've used for the last two years out here  
8 and they're used virtually in every coal  
9 ash impoundment. For dust control we're  
10 using water trucks. We adjust the water  
11 trucks as needed. Of course, today we  
12 didn't need any dust suppression.

13 Correct? A couple of weeks ago when it  
14 was really dry, sunshine was out and the  
15 winds were gusting up, we actually had to  
16 add a few waters trucks to keep up on our  
17 dust suppression efforts.

18 When we get an area that won't  
19 likely be disturbed for a period of time,  
20 we are continuing to mulch it, cover it up  
21 with this paper mulch that we've use, this  
22 material called Flexterra. It was used  
23 during the time-critical phase, as well.  
24 And we're, you know, making sure that our  
25 lime treatment does not, you know, spread

1 fugitive dust around our project as well  
2 as the surrounding communities. So we are  
3 -- admit when we are adding lime, we're  
4 keeping mist on that to keep that dust  
5 knocked down.

6 We have the instrumentation in  
7 place to make sure this is done safely,  
8 within established geotechnical  
9 thresholds. We're monitoring the  
10 compaction. Okay. We've got to get this  
11 stuff compacted to what's called  
12 90 percent standard proctor. So it's --  
13 again, so it stays in place. We're  
14 monitoring that. On an as-needed basis  
15 we're doing standard proctor tests about  
16 every 10,000 cubic yards and we're also  
17 doing in-situ density tests to make sure  
18 that we're getting that correct impaction.  
19 We're pretty confident that if we get this  
20 stuff impacted correctly that it will stay  
21 in place and in combination with the  
22 perimeter containment system.

23 We have piezometers which is a  
24 fancy term for a tube suck in the ground  
25 monitoring pore water pressure and how it

1 builds up. One of the reasons for the  
2 previous failure was this material was too  
3 wet. So we want to keep an eye on the  
4 pore pressure to make sure we're not  
5 getting water pressures built up under  
6 this ash to eliminate problems that have  
7 happened in the past.

8 Then we're also monitoring vertical  
9 settlement, is this stuff settling over  
10 time. We're doing that with inclinometers  
11 and settlement plates. It's pretty much  
12 standards tools of the trade.

13 And this is -- we've got about 470  
14 excavated, thousand, that is, and we've  
15 got about 374,000 actually placed back in  
16 the cell so far. So we're making good  
17 progress on that. Really this is really  
18 a weather dependent activity, but you can  
19 see the equipment we're using, pan  
20 scrapers up there in the right-hand corner  
21 and bulldozers, pretty standard civil  
22 engineering and earth moving equipment.

23 Here is a little graph again. We  
24 are above baseline on this. You can see  
25 the black line is our baseline and what we

1 were targeting for production and we're  
2 trending up. You can see we're  
3 approaching 470,000 cubic yards there and  
4 we are above baseline and our goal is to  
5 stay above that and I think by adding that  
6 extra day and going to 60-hour weeks, I  
7 think we're going to beat baseline pretty  
8 well there. So EPA and TDEC I know are  
9 very happy about that. Things are going  
10 pretty well there.

11 This is becoming the real  
12 interesting piece. I'm an old civil  
13 engineer, so this is kind of, you know,  
14 right in my interest and wheelhouse. This  
15 is becoming the -- this is really the  
16 central feature, probably the sexy thing  
17 that's going on right now. I mean the ash  
18 excavation, ash drying and ash hauling  
19 isn't that exciting to watch.

20 This is going to be the perimeter  
21 containment system. This is being  
22 designed now to withstand -- we're on the  
23 East Tennessee fault line here, right,  
24 where we have these small kind of nuisance  
25 quakes, the 3 to 4 magnitude quakes.

1           The system that we're designing is  
2           using a very complicated 3-D seismic model  
3           to withstand a local magnitude quake of  
4           6.0 on the East Tennessee fault line  
5           and/or a 7.6 magnitude quake that would  
6           happen on the New Madrid fault which is  
7           over 400 kilometers away.

8           This thing is going to be a little  
9           over 2 miles around -- that's going to go  
10          around all four sides, if you will. It's  
11          more kind of a circle shape. You can see  
12          kind of the shape of that thing in the  
13          upper right-hand corner. It's about  
14          11,500 linear feet of this material that's  
15          going to have to be put down to safely  
16          contain this for the long-term.

17          On average it's going to go down  
18          about 50 to 70 feet through saturated ash  
19          into the underlying shale bedrock. 50 to  
20          70 feet down below our project out there,  
21          we have a shale bedrock. This system is  
22          going to be keyed into the upper --  
23          excavated into 2 to 3 foot of the upper  
24          rock to kind of key it and to lock it in  
25          so it won't slide.

1           TVA went out to bid on this thing  
2           late fall. They had, I believe, nine  
3           contractors bid on it. That was whittled  
4           down to a short list. They are in final  
5           negotiations with the selected contractor.  
6           That contractor or that contract award is  
7           pending and we expect that in the next  
8           week or two. And I'm not really at  
9           liberty -- because those negotiations are  
10          rather sensitive, not ready to talk much  
11          more about that until that contract award  
12          has been issued and let.

13           But the goal here is to do a  
14          demonstration project on it, what we're  
15          calling a test panel. It's actually going  
16          to probably be a 300-foot section I found  
17          out today in meetings. But it will be a  
18          small little piece to kind of test the  
19          concepts that we're dealing with here with  
20          the selected contractor that is going to  
21          win this project.

22           That demo project is going to -- is  
23          set to begin in March, probably looking at  
24          more mid to late March now. It's going to  
25          be several sections and we're going to do

1 a bunch of QA/QC boring on it to make sure  
2 -- really the design standard on this  
3 thing is that this perimeter wall will  
4 likely be constructed of some kind of  
5 soil, cement, bentonite grout to get an  
6 unconfined compressive strength of about  
7 150 to 200 PSI. All right. And this  
8 outer perimeter is going to serve as a  
9 buttress to make sure this thing doesn't  
10 break and slide into the future.

11 Once with we get the results from  
12 all the QA/QC coring on that pilot work,  
13 we expect to go full scale in maybe as  
14 early as late May, could slip into the  
15 June, July time frame depending on how  
16 things go. But I'm expecting to see not  
17 just one rig out there. It could be as  
18 many as two rigs. Some of that stuff is  
19 going to be left up to the contractor once  
20 it's awarded.

21 But, you know, that's becoming kind  
22 of the critical milestone. We've kind of  
23 got all this other stuff figured out.  
24 We've been excavating ash now for two  
25 years, we've been stacking ash now really

1 for the last six months. As long as the  
2 weather cooperates with us, we've got that  
3 down. We're getting to be pretty expert  
4 at that.

5 This deep soil mixing, slurry  
6 trench stuff is kind of -- I wouldn't say  
7 it's an unknown. It is really a proven  
8 technology. But until we get out on it  
9 and do the demo project -- you know, we're  
10 really pressing hard on this now. There's  
11 a lot of resources in the trailer city  
12 being dedicated to this right now.

13 Some other stuff that are ongoing,  
14 just to let you know what other things are  
15 going on out there. I mentioned Dike C.  
16 Dike C is the perimeter dike that was in  
17 place before. We are -- it was determined  
18 a while back that it needed some  
19 reenforcing or buttressing. So really  
20 what we're doing on this is grating down,  
21 kind of flattening the slope a little bit  
22 on the outer slope of Dike C, getting down  
23 to some native material and we're putting  
24 some filter sand down, some number --  
25 what's called number 57 stone about this

1 big and then on top of the 57 stone goes  
2 some large sized riprap to resist erosion  
3 because the Emory River comes whipping  
4 around that corner pretty fast.

5 There's a little over a mile of  
6 that buttressing that's got to go on for  
7 Dike C. We just passed the 3300-foot mark  
8 on that, so we've got about 60 percent of  
9 that work done. That work is scheduled to  
10 go through the end of the year. That's  
11 going along just fine on that.

12 Some other work, this plant intake  
13 right here. There's a bridge that was put  
14 in by the Active Ops Plan to get out to  
15 this peninsula area. This bridge is kind  
16 of in our way from a buttressing  
17 standpoint. This buttress extends into  
18 the water surface quite a ways. It's  
19 causing some constructability issues with  
20 us for our Dike C buttress. So we have  
21 made the decision or I guess I should say  
22 TVA has made the decision along with the  
23 Active Ops Plant there in Kingston that  
24 this bridge is coming out so we can finish  
25 our Dike C buttressing work. So really

1 not related to, say, my recovery efforts  
2 going on inside the exclusion zone, but  
3 nonetheless, a very important piece.  
4 There's a work plan out right now and we  
5 expect to start that work here shortly.

6 Of course, air monitoring. You  
7 know, the one thing that we've all  
8 learned, I guess, over the last couple of  
9 years is that perhaps the real risk with  
10 coal ash, with fly ash is through the  
11 inhalation pathway. So one of the very  
12 first things implemented out there was a  
13 very comprehensive air monitoring system.  
14 It's got levels of redundancy, as you've  
15 heard my colleague Leo talk about before  
16 at previous meetings.

17 You know, our workers that are on  
18 site in the exclusion zone still have  
19 industrial hygiene monitors on them to  
20 make sure they're not being exposed. But  
21 in addition to that, we also have a  
22 perimeter monitoring network for air.  
23 It's realtime, 24.7. These things take  
24 samples all the time and we're monitoring  
25 that primarily for PM 2.5, which is the

1 small particulate, and PM 10 microns which  
2 is a little bit larger, about four times  
3 larger.

4 Like my air -- excuse me. Like the  
5 health and safety audits that we're  
6 conducting with the Coast Guard and my  
7 health and safety experts, we are also  
8 conducting audits of the air monitoring  
9 system. I have a group of people that  
10 work in my Athens laboratory in Georgia.  
11 They go around helping communities with  
12 air monitors as well. They have been up  
13 here quarterly making sure that the  
14 systems are calibrated, making sure that  
15 the air monitors are providing accurate  
16 data. To date they are very pleased with  
17 the air monitoring system, the adequacy of  
18 the coverage, and the performance of the  
19 instruments.

20 In fact, sometimes they say that,  
21 you know, plagiarism is the highest degree  
22 of flattery. My folks that have been up  
23 here looking at this system are so happy  
24 with the way this thing has worked that  
25 they're actually using the Kingston air

1 monitoring system in their yearly training  
2 system that they use and they train up the  
3 locals in the states on how to use these  
4 monitors and how to set up a good system.  
5 They're actually going to use the Kingston  
6 project as an example of a very good one  
7 that they're very happy with.

8 So here is some -- you know, some  
9 data coming off those monitors. This  
10 dates back to February '09 and goes all  
11 the way up through, I guess, January 1 of  
12 this year. The numbers -- this is for  
13 PM 2.5. EPA headquarters out of D.C.  
14 actually sets standards for PM 2.5 through  
15 the Clean Air Act. Those are called  
16 National Ambient Air Quality Standards.  
17 The number for PM 2.5, the Federal law is  
18 35 micrograms per cubic meter.

19 To kind of insert a degree of  
20 conservatism or add a degree of  
21 protectiveness, we have set our action  
22 level at 75 percent of that number. So  
23 the Kingston action level for PM 2.5 is  
24 actually 26 and you could see, you know,  
25 we've been underneath that level for PM

1 2.5. That's great news for all the  
2 stations.

3 This is a graph showing the PM 10,  
4 the larger particulate that we're  
5 monitoring. The National Ambient Air  
6 Quality Standard for PM 10 is 150  
7 micrograms per cubic meter. Again, our  
8 action level is 75 percent of that level  
9 to be adequately protected, give us a  
10 little factor of safety and some cushion.  
11 And you can see it's really good news with  
12 the PM 10. So, again, we're well under  
13 that action level and we're very pleased  
14 with those results, as well.

15 In addition to the air monitoring,  
16 we're also doing comprehensive storm water  
17 monitoring. The storm water monitoring  
18 out here at the job site has evolved with  
19 time. When we were in the time-critical  
20 phase and we were dredging up and stirring  
21 up ash, we had much more frequent, much  
22 more tight, tighter sampling. I believe  
23 we had 10,000 samples overall that were  
24 collected.

25 As we've moved away from the

1 dredging and stirring up ash in the river  
2 system, we have kind of backed into this  
3 type of surface water monitoring strategy.  
4 It really consists of two components. The  
5 first component is three stations that are  
6 monitored once weekly for TSS, which is  
7 total suspended solids, but also metals.  
8 Those weekly locations or grabs are really  
9 focused on our storm water management  
10 system out here. There's one collected at  
11 the discharge point of our dirty water  
12 pond, there's one collected where the  
13 clean water ditch discharges to the  
14 embayment, and then as part of TVA's storm  
15 water management and surface water  
16 management plan for the plant, we are also  
17 collecting here discharge of the stilling  
18 pond. Okay. So we grab one of those once  
19 a week, at each three locations.

20 And then we've moved to storm water  
21 sampling in the river system. Okay. So  
22 we've got six of these automated samplers  
23 that are triggered by rain events. Five  
24 are in the river, three are in the Emory,  
25 two in the Clinch and then one is located

1 up by the storm water management discharge  
2 point right up there by the east  
3 embayment.

4 The one in the embayment is  
5 triggered on a half-inch rainfall and the  
6 five in the river systems are triggered  
7 after an inch rainfall. So today, the  
8 last I heard, it rained about .64 inches  
9 and so our embayment sampler kicked off  
10 and it collected a sample and we have that  
11 analyzed.

12 Now, in addition to -- you've heard  
13 us, there's some level of redundancy in  
14 here as far as we want to make sure to  
15 check that the data is being collected and  
16 you know, our -- like we've been  
17 monitoring the health and safety, we've  
18 been auditing the air monitors. We're  
19 also doing what's called split samples on  
20 TVA's storm water sampling locations.  
21 Okay.

22 Historically we used to split those  
23 quite frequently. For the last six or  
24 eight months, we actually split those  
25 samples every other week, sent them to an

1 independent lab to verify that the  
2 laboratory that TVA is using is consistent  
3 with the laboratory we're using. We're  
4 now kind of backing that off to probably  
5 once a month. All our data that we're  
6 collecting matches up real good with TVA's  
7 data. It's plus or minus 10, 15, 20  
8 percent. You're going to see that  
9 variability from lab to lab. So we've  
10 been very pleased with the way our data is  
11 monitoring up with TVA's or lining up with  
12 TVA's.

13 And here is kind of what we're  
14 finding, a little summary slide of that.  
15 On your left you're looking at arsenic, on  
16 your right you're looking a selenium. The  
17 color codes here is red is bad, yellow is  
18 kind of in that caution, you know, using  
19 the traffic light analogy here, and the  
20 green is good.

21 So the numbers for arsenic and  
22 selenium are slightly different. These  
23 are -- the drinking water standard for  
24 arsenic is 10 parts per billion, whereas  
25 the State of Tennessee fish and aquatic

1 life number is 150 parts per billion,  
2 okay, where it's inverse for Selenium.  
3 The fish and aquatic life number for  
4 selenium is actually lower. It's, I  
5 believe, 5 parts per billion, whereas the  
6 drinking water standard is 50. Okay. So  
7 they're slightly -- they're slightly  
8 inverse.

9 But what you can see, what I gather  
10 from this graph, is that the river water  
11 quality for the most part during storm  
12 events when you'd expect movement of ash,  
13 movement of sediments, the river system in  
14 the Emory and the Clinch generally meet  
15 drinking water standards and/or fish and  
16 aquatic life standards which are the more  
17 astringent.

18 The still pond is doing quite well.  
19 We've got some levels just slightly above  
20 the green here in arsenic and selenium  
21 generally meet the fish and aquatic life  
22 standard, as well.

23 We are seeing a little bit of noise  
24 in the embayment. You can see we're kind  
25 of in this yellow area for arsenic, kind

1 of in the yellow area for selenium.  
2 Between the fish and aquatic life and the  
3 drinking water standard, in all cases we  
4 are below in this case the fish and  
5 aquatic life number for arsenic and the  
6 drinking water standard for selenium.

7 We're going to continue to see that  
8 noise kind of in that yellow range.  
9 There's still a little bit over, what,  
10 about 2 million cubic yards of ash that's  
11 up in that embayment. This water is still  
12 flowing through there. So as long as that  
13 ash is there, we're still going to see a  
14 little bit of noise. But for the most  
15 part, this stuff looks pretty good to me.  
16 We're pretty happy with the way that  
17 system is running.

18 We just doubled the size of our  
19 primary sedimentation basin out there and  
20 made it longer, made it bigger. We expect  
21 as it comes on line and continues to  
22 perform we're going to get longer  
23 retention times, longer hold times, and we  
24 should see this water improve. The more  
25 ash we get out of there, this should

1 continue to look better and better.

2 Almost done here. The third and  
3 final phase, we've been very busy on this  
4 as we've been working inside the exclusion  
5 zone. As you recall, Phase 3 deals with  
6 this river system sampling analysis plan.  
7 It's the comprehensive ecological  
8 assessment of any risks posed by the  
9 residual ash in the system. And we often  
10 like to joke that if it wiggles, if it  
11 walks, if it flies, if it swims, it's  
12 likely going to end up in a sample jar by  
13 one of our people and analyzed for the  
14 constituents of interest out there.

15 Some of the things that we've  
16 completed. All this data has been  
17 collected. We've really flooded our  
18 biological lab and our analytical labs  
19 with all kind of biological samples. We  
20 have completed some surface water sampling  
21 at our fixed locations. You may recall we  
22 added about 20 additional groundwater  
23 wells in the cell. Those wells were  
24 completed late summer, sampled in late  
25 fall. So the groundwater sampling has

1           been done. All the results from the  
2           groundwater wells now are going into a  
3           very complex groundwater model called  
4           Modflow. It's a 3-D look at what the fate  
5           and transport of the groundwater out there  
6           in the cell is doing.

7                        We've done a bunch of sampling in  
8           the Tennessee and Clinch looking for  
9           residual ash deposits, stuff that would  
10          have been left behind by the dredging  
11          work. Everything done in the Tennessee  
12          and Clinch for submerged deposits and ash  
13          deposits, it's done. The seasonally  
14          exposed sediment, the stuff that's in,  
15          say, the mud flats, as you may know, Watts  
16          Bar fluctuates about 5 feet between  
17          winter pool and high pool. So when the  
18          water level is drawn down, we have these  
19          seasonally exposed sediments that we've --  
20          we've basically completed that in the  
21          Emory and Clinch.

22                       A bunch of biota sampling going on  
23          with fish of all sizes, benthic  
24          invertebrates which is a fancy word for  
25          bugs that live in sediment, doing a lot

1 of bird eggs and hatchling sampling with  
2 our -- you may have seen this past spring  
3 and fall these little bird boxes we had  
4 set out. Those were tree swallows. Lots  
5 of frogs, three different types of frogs.  
6 And this one always gets me. Turtle blood  
7 and toenails. We're actually doing some  
8 pedicures on turtles out there and looking  
9 how they're doing.

10 Ongoing work, that we have left to  
11 do really is focus on the Clinch and  
12 Emory. We have submerged sediment yet to  
13 do, more ash deposit work. We've started  
14 up the sediment pore water -- sediment  
15 pore water is that water that's kind of in  
16 the interstitial spaces of the sediment --  
17 to see how that pore water that's mixed  
18 with sediment, how it looks, and some  
19 assays using bugs who live in sediment to  
20 see how the bugs perform in some of this  
21 sediment that's mixed with ash. When it  
22 gets warm again, we're going to go back  
23 out and start sampling some aquatic  
24 vegetation, or water plants.

25 Where that's added to. I guess

1 people have asked, you know, how is it  
2 looking? A lot of this stuff is  
3 preliminary, still undergoing data  
4 validation. But we have been out through  
5 various technical conferences and stuff  
6 presenting this information. I did  
7 provide a Power Point presentation to the  
8 Community Advisory Group at the first of  
9 the month. These are some slides that  
10 we're seeing and so far people have always  
11 asked, well, what are you seeing?

12 So while this data is preliminary,  
13 I wanted to share that with this group.  
14 When you're dealing with coal ash from an  
15 ecological standpoint, generally the  
16 contaminant you might be most concerned  
17 about would be selenium. At high levels  
18 selenium can cause reproductive impacts in  
19 fish.

20 The protective threshold that our  
21 fisheries biologists and the literature  
22 like to use is this 10 parts per million  
23 or 10 milligrams per kilogram level in  
24 fish ovaries. So far we are seeing, I  
25 don't know -- I don't know if this would

1 be a statistically significant increase --  
2 this is ERM-3 here, this purple bar.  
3 That's about where the spill occurred.  
4 This is down river on Clinch River mile  
5 1.5 for bluegill sunfish and large-mouthed  
6 bass.

7 Currently, right now, selenium  
8 concentrations are below that magic number  
9 of 10. It's my hypothesis that now that  
10 we've gotten 4 million cubic yards of ash  
11 out of the river that you should see these  
12 levels start to decline. All right.

13 We're going to continue to monitor this.  
14 We're doing spring and fall this year.  
15 That would give us six. We started -- we  
16 did spring and fall in February -- we did  
17 spring and fall of '09, spring and fall of  
18 2010, spring and fall in 2011. So we  
19 should start to see some trends emerge  
20 here shortly.

21 So far I think good news with  
22 regard to selenium and fish ovaries.  
23 There was an aquarium study done. These  
24 are researchers out of Oak Ridge National  
25 Labs, Dr. Greeley and Dr. Adams. We were

1 actually pretty fortunate that because of  
2 the issues at Oak Ridge, these fellows  
3 would be monitoring this water body, Watts  
4 Bar, for probably decades. They're very  
5 familiar with the system and they're very  
6 familiar with the ecosystem and what lives  
7 there. So we've got some very seasoned  
8 Ph.D.s that really know what they're  
9 doing. They're a big part of our eco  
10 team.

11 One of the studies that had been  
12 recently completed was how did fathead  
13 minnow, little itty bitty fish, how did  
14 they do as far as reproductive and egg  
15 production. What we did is a series of  
16 experiments here. The blue box was a  
17 controlled sediment, all right, so  
18 unimpacted material, the red bar here is  
19 reference sediment, okay, clean stuff that  
20 we got from background location, and the  
21 green box here was pure fly ash.

22 The experiment here involved  
23 cutting a PVC tube. You'll see up here at  
24 the top this is an aquarium that they have  
25 set up over in Oak Ridge National Labs.

1 And these are half pipes, just good old  
2 PVC pipes, for fish to lay their eggs on.  
3 And so we sent them in for seven days and  
4 see how they did with their egg  
5 production. We were quite surprised. I  
6 don't want to jump to any conclusions  
7 here, but we were quite surprised to find  
8 that the fathead minnows laid about twice  
9 as many eggs in the aquarium filled with  
10 pure fly ash than they did in the  
11 controlled and the reference sediments.

12 All right. Now, it's a caution  
13 again. This is preliminary and it's  
14 one-line evidence. When you do an  
15 ecological risk assessment, you don't put  
16 all your -- you know, excuse the pun --  
17 egg in one basket. Okay. You're looking  
18 at fish, you're looking at bird eggs,  
19 you're looking at a variety of things, and  
20 at the end of the day this is just one  
21 line of evidence and we're going to look  
22 at dozens of them.

23 But, you know, you can see here  
24 there really was no statistically  
25 significant difference between the control

1 at these various samples. So we're not  
2 seeing any apparent adverse impacts at  
3 this time with regard to egg production in  
4 little fish.

5 All right. So maybe that's the  
6 good news. Maybe some slightly bad news  
7 is that we are seeing the fish -- the  
8 health of fish immediately below to spill  
9 appears to be compromised to some degree.  
10 Now, it does appear to be localized in  
11 small resident species that, what they  
12 call, have a high site fidelity, fish that  
13 stay in one area over their lifetime.

14 Here's some fancy graphs that I'll  
15 try to explain. The ash spill occurred  
16 right here. All right. So everything on  
17 the left here for bass, bluegill and  
18 catfish, everything on the left here would  
19 be classified as reference or background  
20 stations not impacted by the ash spill.  
21 Everything then to the right is then areas  
22 downstream of the ash spill. On the left  
23 here we have selenium in fish tissue and  
24 on the right here we have a composite  
25 score that talks about the health of the

1 fish. It's called the histopath score.

2 So you can see in comparing the  
3 concentrations or the levels on the left  
4 to the levels on the right, at least at  
5 this present time we are seeing some  
6 compromised health to some degree, but it  
7 does appear to be localized to that area  
8 where, you know, there was greatest  
9 impact by the spill.

10 Another slide. This is our frog  
11 data and our blue heron and osprey data.  
12 Most of this work is being led by a doctor  
13 that teaches at Virginia Tech. He's part  
14 of our team. His name is Dr. Bill  
15 Hopkins. And we've collected three types  
16 of frogs or toads or amphibians, whatever  
17 you want to say. One is an American toad,  
18 one is the spring peeper, and then the  
19 upland chorus frog.

20 So on the left here you're seeing  
21 the reference background stations. These  
22 are all of the individual samples we see.  
23 So, you know, let's look at the American  
24 toad here. You know, concentrations in  
25 those -- in the American toad were in

1 range from about a half a part per million  
2 up to about just under 2.5 and then you  
3 can see in the impacted area our high was  
4 just over 3. So when we say seems to be  
5 elevated, we're seeing some slight  
6 elevations here. Similar trends for the  
7 spring peeper toad and the upland chorus  
8 frog.

9 If eggs are your thing, we're also  
10 collecting eggs from heron nests and  
11 osprey nests. And, again, you can see  
12 here on your left is the great blue heron.  
13 On the right here is the osprey eggs. You  
14 know, again, reference stations for the  
15 heron eggs range from just under 2 to just  
16 over 3 and we had a high of 5. So  
17 slightly a double.

18 Not so pronounced in the osprey  
19 eggs. The reference, you can see, we  
20 actually had a higher concentration in the  
21 reference egg here for -- and our impacted  
22 eggs for osprey were tightly compacted  
23 around the 2 to 3 range.

24 What else are we seeing? Okay.  
25 We've got Canada goose eggs. I mentioned

1 we've sampled a lot of stuff. This is  
2 back to the lines of evidence. Probably  
3 the most pronounced impact that we're  
4 seeing right now is that everybody can  
5 look at this and make their own  
6 conclusions. This is the reference for  
7 the Canadian goose eggs that we're  
8 stealing, just under PPM, and you can see  
9 we had a high of just over 5. If anybody  
10 has seen how many Canada geese we have out  
11 here and how they have such a voracious  
12 appetite for the grass that we plant, we  
13 joke that as soon as we're starting to  
14 grass out on our ash, you can see they're  
15 almost kind of waiting for the next meal  
16 to come out. We're seeing some slightly  
17 elevated levels there.

18 Tree swallows, similar trends.  
19 Here's our reference stations. Slightly  
20 elevated for tree swallow eggs. Turtle  
21 blood. We've got three types of turtles  
22 we're sampling, too. The musk mud turtle,  
23 the snapping turtle which have a mean,  
24 nasty disposition. Try giving them a  
25 manicure. They don't like it so much.

1           Then the soft shell turtles.

2                   The nice part about the turtle work  
3           is we don't have to kill them to do this  
4           work. All right. We're actually cutting  
5           their toenails and we're actually making  
6           pieces of their shell and getting the  
7           blood out of that. So that's non-lethal  
8           methods. I think it's over 300 turtles.

9                   So that's really the data that I  
10          have right now. The data from the river  
11          system sampling analysis plan is going to  
12          be rolled out in a series of tech memos.  
13          The first tech memo we're expecting to see  
14          is over the distribution of residual ash  
15          in the system. I hope to see that in mid  
16          March, I believe.

17                   So what are we doing? This is my  
18          last slide and then we'll open up for  
19          questions. Hopefully I didn't talk too  
20          long and bore you to death.

21                   We are going to be ash stacking and  
22          ash excavating for years. Probably a  
23          couple of more years yet. As I mentioned,  
24          we're kind of ramping up the workforce.  
25          We expect to speed that up and stay above

1 baseline. The big piece that's coming on  
2 line here is the perimeter containment  
3 system stuff. The demo project for about  
4 a 300-foot section is going to be  
5 conducted in March. Depending on the  
6 results of that, we hope to go full scale  
7 this summer. We're going to bring on --  
8 there will be more people coming on. I  
9 think that crew is probably going to be on  
10 the order of 20 to 30 people. So it's  
11 really not that much more people.

12 All the sampling that we're doing  
13 in the river system, my schedules show  
14 that we're going to be continuing to  
15 sample that stuff really through the fall  
16 of this year and then it's going to be  
17 time to assess that data, what it means,  
18 time to write reports.

19 There will be one more action memo,  
20 one more EE/CA report that comes out of  
21 this recovery project. We expect that  
22 Phase 3 action memo to be done -- I'm  
23 scheduling that for kind of like mid year  
24 of next year.

25 So we'll continue to do these

1           quarterly updates or updates as needed.  
2           And besides those little quarterly updates  
3           and formats just like that, the next time  
4           we're up talking about new proposals for  
5           what to do with any residual ash left in  
6           the river system will likely be spring,  
7           summer next year. We'll have another  
8           round of public comment periods and all  
9           this stuff and it will be very similar to  
10          the Phase 2 work that we did last May.

11                        So with that I think I've probably  
12                        talked too long. I think we can take  
13                        individual questions for me now and I can  
14                        probably turn this over to the Bruce show.

15                        BRUCE ENGELBERT: Thank you very  
16                        much, Craig. As Steve mentioned, my name  
17                        is Bruce Engelbert. I work for a small  
18                        environmental consulting company in  
19                        Charlottesville, Virginia, called Skeo  
20                        Solutions. And just for disclosure, prior  
21                        to joining them in 2006 I did work for the  
22                        Environmental Protection Agency for a  
23                        while, but I've been a facilitator working  
24                        with this company for several years now.

25                                We're going to have an opportunity

1 for some public input here. But before we  
2 actually get started on that, I think Joni  
3 Morgan who is in new chair of the  
4 Community Advisory Group has a few  
5 comments that she'd like to say.

6 JONI MORGAN: Thank you. I just  
7 wanted to introduce myself to everyone who  
8 is here. Joni Morgan, the chair of the  
9 Roane County Community Advisory Group  
10 which is a community group that's mandated  
11 by the Superfund which dictates what all  
12 gets done with this cleanup.

13 We do have public meetings. They  
14 are every other month and our next  
15 scheduled meeting is April 7th at 6:30 in  
16 the evening. We have a very nice website  
17 and we have a lot of contact with all  
18 these wonderful folks, the TVA, the EPA,  
19 the TDEC, all of those people. They have  
20 a representative at our meeting to give us  
21 a regular update and we also get e-mail  
22 updates on a fairly regular basis.

23 So I would like to invite all of  
24 you to stop by our booth over here and get  
25 your e-mail address on our list. We'd

1 love to include you on everything that we  
2 know about the updates. And, hopefully,  
3 we will get you to help us out to make  
4 sure that this recovery process goes as  
5 smoothly as possible and does things for  
6 the betterment of our whole community.

7 Thank you.

8 BRUCE ENGELBERT: Thank you, Joni.  
9 Before we get started, I just want to let  
10 you know that we do have a court reporter  
11 over here who is preparing a transcript of  
12 the conversation, Craig's presentation and  
13 the conversation we're going to have now.  
14 So it's an opportunity for you now to come  
15 up and ask a question or give a comment to  
16 the folks. Again, Steve McCracken, Chuck  
17 Head and Craig Zeller.

18 So when you come up, please give us  
19 your name and either your affiliation or  
20 the community in which you live here. I  
21 would ask you that you keep your comment  
22 or question as concise as possible. And  
23 it looks like we'll have plenty of time  
24 for people, if there are more questions  
25 that you have, to come back up and ask

1 another question.

2 This is an opportunity to exchange  
3 information. It's not a forum for making  
4 any decisions or for dealing with  
5 individual issues that you might need to  
6 have resolved. There are people from TVA  
7 who are going to be here after this public  
8 input section and you can talk to them if  
9 you have a specific issue that is personal  
10 that you would like to raise with them.

11 So would somebody like to get us  
12 started? A lot has happened.

13 DON SIMON: Good evening. One  
14 question, Craig. What is the status of  
15 the gypsum pond? That's my first question  
16 to you. The second, when are you going to  
17 be able to advise us what amount of ash is  
18 actually left in the river? We're looking  
19 at 14 to 16 months of three different  
20 surveys. We still have an arbitrary  
21 figure that you've given us at one point  
22 in time. Those two questions for you.

23 BRUCE ENGELBERT: Just name and  
24 affiliation.

25 DON SIMON: Don Simon, resident,

1 Swan Pond Harbor.

2 CRAIG ZELLER: Okay. I will defer  
3 the first question to Chuck Head. The  
4 gypsum pond is not in my authority, but I  
5 can answer the second question.

6 All the sampling, there was  
7 hundreds of locations that were gone over  
8 about 10 miles of river for all three  
9 river systems. Most of that work is done  
10 as far as the actual coring and the  
11 sampling of residual sediment to confirm  
12 the initial estimate that we threw out  
13 there, the 250 to 500,000 cubic yards we  
14 believe is left in the system. That was  
15 verified or attempted to verify that with  
16 State in discreet sampling. Most of that  
17 work is done and we expect to see that  
18 memo documenting that work mid March. It  
19 will take us a while, me and TDEC, to look  
20 through that. So we hope to have some  
21 data out on that, Don, probably by spring.

22 DON SIMON: Okay. Thank you. Most  
23 of these are probably for EPA -- I mean  
24 TVA.

25 CRAIG ZELLER: The gypsum pond

1           these two fellows can handle.

2           CHUCK HEAD: I'll go ahead and try  
3           to answer that. We met with TVA on  
4           Tuesday of this week to talk about the  
5           gypsum pond. The gypsum upon is out of  
6           service. We issued an order to TVA  
7           requiring them to investigate the gypsum  
8           pond and find out the cause for the  
9           release from the pond and then to propose  
10          back what they would do to fix the pond.  
11          So right now they're in the process of  
12          completing the investigation of the pond  
13          itself and determining the cause of  
14          release.

15          They've given us some big picture  
16          ideas of what they would do once they have  
17          completed their investigation as far as  
18          putting the pond back into service. There  
19          are certain things they're going to be  
20          doing that meet a higher design criteria  
21          than was there before and so we're waiting  
22          on plans for that to come in.

23          DON SIMON: Am I correct? The  
24          first storm water holding pond leaked and  
25          you lined it. This is the second pond

1 that had some gypsum in it, some storm  
2 water in it, and it leaked as well and  
3 according to the announcements we've been  
4 given, you're supposedly lining this. Is  
5 there some confusion as to you still don't  
6 know what to do to solve this problem?

7 CHUCK HEAD: Well, we want them to  
8 do a complete structural analysis of the  
9 pond. So we're not just looking at the  
10 one place where the release occurred. So  
11 they're going to actually be examining the  
12 whole landfill itself, giving us a report  
13 of what they find from that, and then they  
14 are going to line the pond. We've talked  
15 in general -- I guess what I would call  
16 generally about what the redesign would  
17 be, but part of that would include a  
18 liner.

19 DON SIMON: Okay. Thank you.  
20 Steve McCracken, we talked about the fact  
21 that the river has not completely been  
22 released from a no-wake status due to this  
23 spill. Has that been addressed since our  
24 last meeting, that from mile marker zero  
25 through mile marker 6, other than

1 markings, the fact that it is a  
2 construction area, has that been addressed  
3 and corrected with either the Coast Guard  
4 or whoever it needs to be corrected with?

5 STEVE MCCRACKEN: I think Michelle  
6 knows the answer to this. We have  
7 submitted a request to -- what have we  
8 done on that, Michelle?

9 MICHELLE TAGLEY: We have submitted  
10 a request to TWRA to have the no-wake zone  
11 that was posted from the spill removed.  
12 But given the change in administration,  
13 that's taking longer than it might have  
14 normally. So it may be a while before  
15 that's completely released by TWRA, but  
16 that's the agency that has to give the  
17 release.

18 DON SIMON: Okay. Thank you. The  
19 other question I have, too, is those of us  
20 residents that live on the river that  
21 received a letter from the TVA that if you  
22 flood us you would pay for the damages,  
23 where are we at with that as far as  
24 removal of the impediment? Is that still  
25 in effect, that if we're flooded there is

1 still a problem that you at TVA would have  
2 to pay for the flood damage?

3 STEVE MCCRACKEN: I don't know  
4 about that. Do you know anything about  
5 that, Katie?

6 KATIE KLINE: I am fairly certain  
7 that's been removed, but I'll confirm it  
8 for you.

9 DON SIMON: I can't remember,  
10 either.

11 KATIE KLINE: I'll confirm that for  
12 you.

13 DON SIMON: Another question  
14 probably for you, Steve. The public  
15 access loading ramp by the plant that's  
16 been pretty much destroyed by the barges  
17 and so forth, is there a plan in place to  
18 repair or improve or redo that public  
19 access loading ramp for boats?

20 STEVE MCCRACKEN: I know that we  
21 have reopened that area for use by the  
22 public now. I'm pretty sure we have.

23 DON SIMON: Yes.

24 STEVE MCCRACKEN: And, frankly,  
25 you're asking a question that -- it's the

1 first time I've heard that it's damaged  
2 over there, but we'll go take a look at it  
3 and if we -- my general answer to that  
4 would be that if we have damaged something  
5 as a result of our work, we'll fix it.

6 DON SIMON: As of Tuesday it was  
7 open to the public and it is damaged. And  
8 last, but not least, Steve, I always  
9 complimented you on building the bridges  
10 at Oak Ridge, but I'm a little bit  
11 disappointed in the bridge you built for  
12 us as residents because the northeast  
13 corner of it does have a sag in it and  
14 during the winter months when water would  
15 melt and thaw and freeze, it creates a  
16 ponding area on the northeast corner of  
17 the bridge. I know it's not a finished  
18 project. Both of the approaches are sort  
19 of like roller coasters that come up to  
20 the bridge, which is shame on everybody  
21 for approving the substructure to be that  
22 uneven and then next to have a sag in that  
23 northeast corner of the bridge that ponds  
24 water. Today was a good example of it. I  
25 would like somebody to address and see if

1 we have a corner of that bridge that's  
2 settling or sagging.

3 STEVE MCCRACKEN: Obviously, I'll  
4 -- we will look at that and answer your  
5 question, Don. But I would be surprised  
6 if it's a settlement problem. It may be  
7 that the paving -- until we do the final  
8 paving that that's an issue. I don't  
9 know. Again, that's the first time I've  
10 heard of that, but we'll check it.

11 DON SIMON: All right.

12 GAIL OKULCZYK: Hi. I'm Gail  
13 Okulczyk and I reside in Rockwood,  
14 Tennessee. I serve on Roane County's  
15 Environmental Review Board. Last May we  
16 had a tour of the fly ash spill, but most  
17 of the ERB members, Environmental Review  
18 Board members, were concerned about the  
19 gypsum pond and TVA's plans for that  
20 gypsum material.

21 At the time of our tour, TVA  
22 committed to storing that gypsum material  
23 as dry. And, of course, I don't know if  
24 that's -- what they've done now during the  
25 time of the breach of those storage ponds.

1 I think it was indicated that it was  
2 liquid at the time or some sort of state  
3 of liquid and it was now going to be  
4 stored at a dry state.

5 Our other concern is the recycling  
6 of the material. About 10 to 15 years ago  
7 when I was first on the Environmental  
8 Review Board, TVA presented their plans  
9 for the scrubbers to meet the Clean Air  
10 Act and this gypsum material that they  
11 touted as being recyclable. In recent  
12 news articles that have been released,  
13 according to Barbara Martocci, she said,  
14 there is no market at the present time.  
15 Although we could sell the gypsum for  
16 wallboard from Kingston, we cannot find a  
17 buyer.

18 I think as waste generators, a  
19 waste generator wants to be paid for  
20 material and as a recycler they want the  
21 material for free. At some point in time,  
22 we're going to have to come to some sort  
23 of agreement on the material if TVA is  
24 going to have a product in those storage  
25 facilities that is recyclable. I think

1 they need to take a position that at times  
2 they may not be able to sell it at the  
3 price that they are asking.

4 So in the long run, my expectation  
5 is to see from the time that TVA proposed  
6 the scrubbers and the possibility of  
7 recycling the material up until today,  
8 I've not seen any plans from TVA or any  
9 indication that they've solicited industry  
10 to come and look at this material for  
11 recycling. I've asked for plans, I've  
12 asked to see what their proposals have  
13 been, requests for proposals to industry,  
14 participation. To date I have not  
15 received anything. If you could answer  
16 that.

17 STEVE MCCRACKEN: Well, I'm lucky  
18 because Barbara is back there but in  
19 front of her is the vice president for  
20 TVA that has probably got a far better  
21 understanding than I do of what is -- what  
22 is going on with the gypsum and what the  
23 future is, particularly wet to dry. So  
24 how about John Kammeyer.

25 JOHN KAMMEYER: Good evening. My

1 name is John Kammeyer, TVA. On the gypsum  
2 dry storage facility, we have put plans  
3 together. In fact, last Friday at the TVA  
4 board meeting the gypsum dewatering  
5 project was voted on and approved by the  
6 Board, so that project is moving forward  
7 and we have a March of 2012 commissioning  
8 date. At that point all the gypsum  
9 produced at the plant will be dry and dry  
10 stacked within the storage facility on the  
11 peninsula. That's the current schedule.

12 As far as marketing, that's a  
13 challenge. I will admit that's a  
14 challenge. Our Cumberland facility is a  
15 large producer of good, clean gypsum and  
16 we use up all the market in basically the  
17 Tennessee Valley. We don't make much  
18 money on that. Basically we pay to have  
19 it dried out and somebody else pays us  
20 back for having it dried. So we really  
21 don't make any money, per se, but we do  
22 sell it. 100 percent of what we make at  
23 Cumberland, we sell.

24 But that precludes us selling it  
25 anyplace else. We can't give it away,

1 particularly in the market that we have  
2 today. There is very little construction  
3 going on in comparison with the past  
4 years. So there's just no market there.  
5 We'd like to give it away. In fact, we  
6 are willing to pay a nominal amount equal  
7 up to and equal to the amount it costs us  
8 to store, we're willing to pay. But we  
9 can't give it away even at that price.

10 GAIL OKULCZYK: Have you got plans  
11 or have you got actual data or objective  
12 evidence that has shown that you've tried  
13 to give it away?

14 STEVE MCCRACKEN: Yes. Yes, we do.  
15 In fact, we pay -- we have a consultant on  
16 board, a company, SEFA, that does  
17 marketing for us and they market it all  
18 across the Southeast and we send gypsum  
19 and fly ash as far down as Atlanta, up  
20 into Missouri. We market outside of the  
21 Valley. But right now and at least in the  
22 foreseeable future, there's no market in  
23 this area for gypsum from Kingston. But  
24 we are going to be dry by the end of March  
25 of next year.

1                   GAIL OKULCZYK: That was one of the  
2                   convincing or what I would call a selling  
3                   point as to why. But, of course, we  
4                   needed the scrubbers due to the Clean Air  
5                   Act and various other things. So I know  
6                   it's a tradeoff. If you want the clean  
7                   air, you're going to have to put up with  
8                   the byproduct from that process. But I'd  
9                   still like to see an active role by TVA or  
10                  at least to make it public because that's  
11                  a question that's continually asked, is  
12                  the recycling of that material, what  
13                  actions have they taken and we don't  
14                  really see that.

15                 JOHN KAMMEYER: Let me get your  
16                 business card after the meeting because we  
17                 have a business plan. We have a group  
18                 that doesn't work for me but within my  
19                 organization -- within an organization  
20                 that I work in, we've got a number of  
21                 folks that work on this full-time and have  
22                 a pretty extensive business plan.

23                 But the thing we can't control is  
24                 the economy. We built and we took off --

25                 GAIL OKULCZYK: With competition

1 with foreign markets and that makes it  
2 tough.

3 JOHN KAMMEYER: Yeah, it is. And  
4 the economy, since we went forward with  
5 the scrubber project a few years back and  
6 it was a strong economy and it looked very  
7 promising and now it's not.

8 GAIL OKULCZYK: Appreciate it.  
9 Thank you very much.

10 BRUCE ENGELBERT: Thank you, John.  
11 Other folks have any questions for Craig  
12 about his presentation? Come on up to  
13 the -- step up to the microphone.

14 JUSTIN BATTENBERG: I'm Justin  
15 Battenberg. I'm a student. Are your  
16 slide shows going to be available on line?

17 CRAIG ZELLER: Yes. We'll get this  
18 slide show posted to epakingstontva. It's  
19 already there.

20 JUSTIN BATTENBERG: Thank you.

21 CRAIG ZELLER: And on that there's  
22 more detailed information if you're  
23 interested in any specifics. There's a  
24 whole -- there's six or seven Power Points  
25 as well as dozens of posters that were

1 given at SETAC, Society for Environmental  
2 Toxicology and Chemistry, conference. It  
3 was held out in Portland in November.  
4 There's links on the EPA webpage -- or  
5 excuse me -- TVA webpage that will take  
6 you to all that stuff.

7 JUSTIN BATTENBERG: Thanks.

8 BRUCE ENGELBERT: There doesn't  
9 seem to be anybody leaping to his or her  
10 feet. So if there aren't any more  
11 questions or comments, I think all three  
12 of these gentlemen will be here to talk  
13 with you a little bit more for the next  
14 half hour or so if you have any other  
15 questions or just want to have a more  
16 individual chat. Any other comments from  
17 any of you?

18 STEVE MCCRACKEN: No more comments.  
19 Just thanks again for coming. I think  
20 that those of us at the site feel like  
21 we're making real progress. I think that  
22 over the summer it will become even more  
23 evident as we begin to clean out the north  
24 Berkshire Slough and it begins to look a  
25 lot like the other embayments that we've

1 already cleaned up like the Church Slough  
2 and the east embayment. Thank you very  
3 much.

4 BRUCE ENGELBERT: Thank you for  
5 coming.

6 (Meeting concluded.)

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REPORTER'S CERTIFICATE

STATE OF TENNESSEE:  
COUNTY OF HAMILTON:

I, Tracy A. Beamon, Certified Court Reporter and Notary Public, do hereby certify that I reported in machine shorthand the February 24, 2011, Public Meeting in the above-styled cause; that the foregoing pages, numbered from 1 to 67, inclusive, were typed under my personal supervision and constitute a true record of said proceedings.

I further certify that I am not an attorney or counsel of any of the parties, nor a relative or employee of any attorney of counsel connected with the action, nor financially interested in the outcome of the action.

Witness my hand in the City of Chattanooga, County of Hamilton, State of Tennessee, this 7th day of March, 2011.

  
Tracy A. Beamon,   
My Commission Expires  
18th day of February