ORIGINAL

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TENNESSEE DEPARTMENT OF ENVIRONMENT & CONSERVATION

QUARTERLY PUBLIC MEETING

SEPTEMBER 23, 2010

ROANE COUNTY HIGH SCHOOL

KINGSTON, TENNESSEE

PANEL:

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CRAIG ZELLER, EPA

CHUCK HEAD, TDEC

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STEVE MCCRACKEN: Good evening, everybody. For those of you who don't know me, my name is Steve McCracken. I work for TVA and I'm the general manager in charge of the cleanup project that's going on out at the Kingston Steam Plant. I would like to, of course, welcome you all here tonight. I'd like to recognize Randy Ellis. Randy, raise your hand. He's the newly elected Roane County commissioner and he's vice chair of the Roane County Community Advisory Group and I would like to welcome all of them here tonight, too. And I would encourage you all to talk to them as the night goes on.

We're going to follow the format that's very similar to the format that we followed I think it was -- we were trying to figure it out -- I think it was last May 20th. I will tell you that a remarkable amount of work has been accomplished out at the Kingston plant over the last several months, including reopening the river for recreational use.

Craig Zeller who is the EPA

1 replacement for Leo Francendese, Craig is
2 going to be the guy to take this job --
3 he's going to represent EPA and take this
4 job to completion. He's going to talk to
5 you about -- he's going to provide an
6 update on where the work is today and a
7 little bit about where we're going.
8 Following Craig's presentation, we
9 will have a question and answer period
10 where you'll have the opportunities to ask
11 myself or Craig or Chuck Head with the
12 State any questions that you might have on
13 your mind. Bruce Engelbert -- Bruce, raise
14 your hand -- has been our meeting moderator
15 in the past and he will, you know, kind of
16 manage that question and answer process to
17 keep us on track.
18 A couple of details. The exits are
19 behind you and to your right and your left
20 and to your right are the bathrooms.
21 Other than that, there are also a
22 number of people from TVA's staff, from the
23 State's staff, from the EPA's staff, and
24 they're, you know, along the sides and
25 throughout the room. Again, I would

strongly encourage you to talk to them as the night goes on with any questions that you might have.

There's also a court reporter here tonight. She's to my right and she will record any comments that you have and that will help us to make sure that we follow up with any things that we need to do as a commitment to you after this meeting is over tonight.

Again, I want to thank you for being here. Again, there's a lot of work that's gone on. I think it's to the credit of the TVA people and our contractors and the State and EPA and Craig is going to tell you a little bit about that. Thank you.

CRAIG ZELLER: Thank you, Steve. Again, my name is Craig Zeller. I've been around I guess up here for about the last 18 months. Leo has finally left. You'll be happy to know he was in the office about three days before he realized this office work is not for him, so he's back out on the job site. He's actually cleaning up

that smaller oil spill up in upper Michigan. So I'm going to be here.

As Steve mentioned, I'm kind of the guy in charge now for the EPA, going to be overseeing this, working with the State of Tennessee, making sure TVA follows all these design plans and specifications. I'm in charge of the really the final 2 phase of this project. As we've explained before, Phase 1 was the time critical dredging piece. That work was largely completed at the end of May when we opened up the river right before Memorial day for recreational traffic and navigation stuff.

So phase 2 is what we're going to be talking about a little bit today. Phase 2, as we talked about I guess the last time I was up here in this room is when we had rolled out the action memo. So the Phase 2 part of the cleanup, which is dealing with the remainder of the ash that was released September 22nd, 2008, and closure of the dredge cell that failed that same day.

And then Phase 3. We'll talk a little bit about that today. Phase 3 then

is the last and final phase of this cleanup. It is the long-term ecological study of the residual ash that remains in the system after the dredging work was done.

So we're going to do these. We've kind of committed to do these quarterly update meetings, so you'll see me around from time to time. I'm going to be up in the Kingston area on the job site probably an average of about three days a week. I have on-site staff that will be doing day-to-day oversight for me that will remain to be here and committed to seeing this project through closure probably for the next four years or so.

So tonight is really just more of a little update of what we've been doing since the last time you saw me here. I guess I was last up here May 20th, I believe, and so we've been rather busy. The weather has cooperated. It's really good weather. It's been dry, hot, and it's great weather for hauling ash and compacting ash and getting ash transferred

1 to Alabama. I'll talk quite a bit about
2 that.
3 So just as a little reminder,
4 this is the area we're dealing with.
5 Everything in red was the time critical
6 phase. It was the removal of about 3 and a
7 half million cubic yards of ash from the
8 Emory River system that was released when
9 the spill happened.
10 Why was Phase 1 time critical?
11 Just as kind of a little background is that
12 we wanted to move this ash as quickly as
13 possible from the river because we were
14 concerned with flooding, concerned because
15 of this large wedge of ash that was in the
16 river that could back up into people's
17 property and cause some flooding upstream.
18 The wedge of ash was in -- also we were
19 worried about the subsequent downstream
20 transport that could be cause by those high
21 stream events or high flow events.
22 So we moved a little over 3 million
23 cubic yards of ash in the greater part of
24 about a year. Very proud of that
25 production. It was done primarily with

1 throwing a lot of dredges at it and it
2 was also done because of the settling
3 characteristics of ash. This stuff, when
4 you get it up and get it dry, it does
5 gravity drain real well. It's one of the
6 reasons why we were able to accomplish so
7 much in about a year's time frame.
8 Now, my responsibility -- now we're
9 done with everything in red. But my
10 responsibility then is everything here in
11 the blue. It's the closure of the cell
12 that sits in this area and then the removal
13 of about 2.8 million cubic yards of ash
14 that sits up here in what was once the
15 shallow backwaters of Watts Bar Reservoir.
16 Now it adds the middle embayment of Swan
17 Pond -- the Swan Pond Embayment and this
18 north embayment also known as Berkshire
19 Slough. So we're going to be talking about
20 the 2.8 million cubic yards.
21 So what have we been doing? Since
22 when Leo was working rapidly with TVA and
23 TDEC on removal of ash, the big fundamental
24 principle that we were using to guide all
25 these activities is that we wanted this --

1 it's cliché, it's been said a lot -- but
2 this seamless transition. We wanted to
3 make sure that ash kept moving and that
4 when the dredging work was done there
5 wasn't this big gap in time where we're
6 sitting around and scratching our heads and
7 wondering what to do next. So while the
8 dredging work was done, we were working on
9 getting this next phase of work cued up so
10 that there was no lag in activity.
11 So what we've been doing really
12 since the river has been opened up since I
13 was last here May 20th was really three
14 main things. We've been -- the north
15 embayment up there in Berkshire Slough is
16 loaded with a bunch of springs. Okay. And
17 so we've been pulling this ash off the
18 springs mainly that are occurring along the
19 west side of the north embayment. We've
20 been trying to daylight hose springs, get
21 that ash off the springs and get it up high
22 and dry so it can dry and be ready to move
23 when the Swan Pond Circle Bridge underpass
24 is completed.
25 So the second thing we've been

1 doing -- and those that are local have seen
2 it. The first thing we did was construct a
3 little bumpout road here on Swan Pond
4 Circle Road so we could keep traffic
5 moving. We've got a lot who live up in
6 this area as well as a lot of people that
7 work on the job site. So we wanted to make
8 sure that they could get to where they were
9 going, so we built this little detour
10 first. And since then, we've been building
11 a little overpass or underpass, a bridge,
12 if you want to call it that. So when it's
13 done, we can keep local traffic of the
14 bridge and we can run all our heavy yellow
15 iron equipment that we're using to move ash
16 with, we can move it underneath the bridge
17 and we can stay off public roads and insure
18 that we're not tearing up the roads and
19 insuring public's safety. So I'll show you
20 some pictures about that.
21 The third thing we've been doing is
22 contouring ash and doing a lot of grading
23 and stacking and rolling after ash in this
24 central area of the dredge cell. When it
25 failed, that's where most of the material

1 was displaced was from this central area of
2 the dredge cell. Months ago it was full of
3 big, steep hills and valleys and had a real
4 uneven surface. It's changed a lot. I can
5 show you some pictures of that. So those
6 are really the three main things I'll talk
7 about here as far as what's been happening
8 now.
9 Just a little reminder about the
10 numbers. Back on May 20th we had rolled
11 out the second action memo on this. It was
12 decided to permanently close out this cell
13 and to dispose of the remaining ash that
14 hasn't been dredged off site or trucked off
15 site or railed off site and dispose of it
16 in the on-site cell.
17 So the numbers really split down
18 like this. There's about 2.8 million cubic
19 yards of ash that I'm responsible for
20 getting out, there's about 4 million cubic
21 yards of ash down in that bottom half of
22 this section that was in the ash pond, a
23 lateral expansion, and there's about 10.8
24 million cubic yards remaining in the relic
25 dredge cell.

1 So when we're all said and done
2 here and I'm done cleaning up Berkshire
3 Slough and the middle embayments,
4 surrounding my cell with my perimeter
5 containment system, there will be 17 --
6 about 17.6 million cubic yards of ash that
7 will be permanently deposed of here at the
8 Kingston Fossil Plant.
9 That's down -- it's about 3 and a
10 half million cubic yards lighter than what
11 was once there. Okay. And that 3 and a
12 half million cubic yards, where did it go?
13 It went to Perry County, Alabama. So there
14 will be a little -- about 3 and a half
15 million cubic yards less ash from what was
16 there at one time.
17 Okay. Here is our schedule.
18 You've seen this, kind of our general
19 schedule. This is what we've been doing
20 now. This is part of our action memo.
21 It's in our work plans and it's on our
22 webpages. You can see that this is really
23 a four-year project. You know, Leo's piece
24 was about a year and accomplished 3 and a
25 half million cubic yards. The next piece

is really going to transition into a big earth job.

The simple one sentence update of what we've been doing is picking up ash in one place and taking it to the dredge cell, rolling it out in one-foot lifts and compacting it. That's kind of what we're doing. So we're picking up ash at Point A, taking it to Point B, and getting it put in a situation where it's going to stay there.

So you can see all of our construction schedules here really run out to 2014. About four years from now, we expect to be done with this. What we're doing now, what we're going to focus on now here is what's going on in 2010, in the last half year of 2010.

So you can see our first line is the constructing underpass. We've been excavating some ash in the middle embayment and we're getting ready to move to the north embayment and Berkshire Slough and we're also starting to stack ash. Coming later, we'll talk a little bit more about the perimeter containment system and the

1 work that's going on there.
2 So here is our nice little bridge.
3 It's going to have a 38-foot opening
4 underneath to get big old dump trucks and
5 pan scrapers underneath there, keep them
6 off the roads. They're pouring the deck on
7 the very top section right there, on the
8 deck, on top of the concrete girders.
9 They're actually pouring the deck tomorrow
10 and putting concrete on top of that.
11 The bridge is expected to be open
12 for public traffic, to take traffic off the
13 Swan Pond Circle Road October 18th. I
14 heard today in a meeting that might move
15 back to the 22nd. It really depends on
16 whether or not we get the concrete poured
17 and all that stuff. But certainly by the
18 end of October, we're going to have public
19 traffic on our new road, our new bridge.
20 At that point in time, we have to
21 tear down the bumpout road, or the
22 temporary bypass. We've got to tear it out
23 of the way so we can then, you know, get it
24 out of the way so we can move our trucks in
25 and out. So it may not be available for

1 truck traffic, our truck traffic, until
2 maybe mid, early November, mid to late
3 November. But by mid to late October, that
4 road will be open for traffic. So expect
5 that to come. The haul road that connects
6 this area of the underpass to the actual
7 dredge cell, that has been completed. So
8 it's ready for truck traffic.
9 So we're about 80 percent done.
10 It's going along real well. Pretty typical
11 civil engineering job here, nothing really
12 environmental about this. The one thing I
13 do want to add is this bridge is permanent.
14 This bridge is going to stay here. So
15 when we're done moving ash out of the north
16 embayment, have revegetated it and returned
17 it to prespill conditions, that will be the
18 conduit or the conveyance of how water gets
19 up and back and forth between the
20 embayments. So it's going to be a huge
21 improvement over the little bit of itty
22 bitty corrugated metal pipes that were
23 there before the spill. So I think that's
24 a good thing for the community.
25 In the north embayment, the idea

here has been really to get ash off of these natural springs so we can get it dry and get it ready for moving into the dredge cell. It's pretty much just a pretty low tech operation, moving in with pan scrapers and excavators and bulldozers, getting it away from these natural springs and getting it up high and dry, really. Again, pretty much moving it from Point A -- in this case Point B is -- right now it's being temporarily staged up there in the north embayment pending the construction of our underpass. We're about 90 percent complete with that. Things are going very well up there.

Like I mentioned, we can't -- you know, the dust control people on our job site hate this dry weather. The guys that are moving it love it because it's really been -- we've really made a lot of good progress with regard to production because of the weather and the lack of rain.

You recall from the action memo conversations and how we're going to close this cell out and make sure it doesn't fail

in the future is that this system when it's closed out is going to rely on a perimeter containment system constructed of concrete columns. All right. These concrete columns are going to auger down through 60 to 70 foot of saturated ash and be keyed in or dug into the top of the shale bedrock that's underneath there.

This is a technology that I've mentioned before that has been tried and true to stiffen up weak foundations, okay, foundations that don't hold a lot of bearing capacity. So we wanted to do a little pilot. Deep soil mixing. It's called DSM technology, deep soil mixing. So by late summer, early fall there was a -- we actually installed 11 columns that were installed using a variety of portland cement mixtures to see what was going to be required to obtain the unconfined compressive strengths of these columns to make sure they were strong enough to hold back the ash.

11 columns of those were put in. They are now being cored, all right, to

1 test. You can core these little cylinders
2 of this concrete column and then crack
3 them, put them under unconfined compressive
4 strength tests to see if we're getting the
5 PSI that we need. That stuff is still
6 ongoing. We're looking for a report to
7 come out on that here very shortly.
8 And this was a pilot test, so like
9 any other pilot test there's some -- you do
10 these to learn things. Okay. This was not
11 full scale. We're not looking at produce
12 and do 3 miles of this stuff. As you may
13 recall, this is going to require about
14 12,000 borings and about 16,000 linear feet
15 which is going to be a real deep -- a real
16 big, deep soil mixing job. We had smaller
17 scale production equipment out there that
18 would not likely be used in a three-year
19 job. So we've learned some things from
20 that and we're writing those reports up and
21 we expect to kind of apply those lessons
22 learned to the full scale RFP and proposal
23 for the deep soil mixing contract that is
24 expected later this year.
25 Some other things we've been doing

is making that central dredge cell flatter. As I mentioned before, it's full of a bunch of ravines and deep crevices and real prone to erosion and movement during storm events. So we're trying to get a little flatter surface out there to resist movement during storm events.

We're pulling material -- to do this recontouring, we're pulling material from the top of the relic, okay, the big plateau that didn't move during the slide. As you may recall, the top of the relic before the spill was 820 feet tall. All right. Excuse me. Not feet tall. 820 feet above sea level. Okay. For a point of reference, Swan Pond Road going by the cell is about 765. Okay. So it was, what, about 80 feet above road surface elevation.

So when we're done out here and close the cell out, you may have heard a number of 790. When I'm done closing this cell out, it's going to be pulled to about elevation 790, 25 feet above the road elevation, 30 feet lower than it once was.

1 So it's got to come down anyhow and that
2 stuff is all pretty dry, a real good borrow
3 source for us to pull off of and restack
4 and contour in this central area. So we're
5 taking material from the relic and we're
6 also taking material from the test
7 embankment.
8 When we were testing the concepts
9 of whether we can dry ash and compact ash
10 and stack ash appropriately, there was
11 about a 300,000-acre -- 300,000 ton or
12 cubic yard little test that was done. Kind
13 of a proof of concept. The top of that
14 thing is also being scalped down and we're
15 pulling material from there and some other
16 borrowed sources in the middle embayment to
17 use as borrow sources for this stuff. That
18 work is going great. I'll talk a little
19 more about that in a while.
20 But the ash stacking that's now
21 going on in the central dredge cell, our
22 estimates for weekly production were 16,000
23 cubic yards a week on a compacted
24 framework. In a loose thing we're shooting
25 for 20,000 cubic yards a week. The very

first week, which as last week, that we started stacking out there we got 28,000. All right. So partly because of the weather and partly because we've got a lot of really good equipment out there. These pan scrapers we've got remove a lot of ash in a short of amount of time. So I would say right now things are looking very good as far as production-wise out there. I think we've gotten 50,000 cubic yards stacked out there in nine days. So it's just kind of underway.

The contouring going on -- oops. Technical difficulties. It's kind of all in the middle there. It just kind of shows you -- my pointer is not working very good. But the test embankment and central area is where it's all being stacked. The relic area is here where we're pulling material from and the test embankment is right here.

Okay. This is Phase 3 slide. The EE/CA sampling. As I mentioned, Phase 1 was time critical dredging from the river. Phase 2 is this ash stacking from the embayments and sloughs and getting it back

in the cell for closure. The Phase 3 study, which this slide is about, is really then by most estimates when the dredgers were pulled out of the river, we may have as little as 250,000 cubic yards of ash left in the river system on the low end, could have as much as 500,000 cubic yards of ash left in the river on the high end. So this objective of this Phase 3 study that I'm also in charge of, then, is to evaluate the nature and extent of that ash, where is it present. Okay. We're going to do that by collecting hundreds and hundreds of samples to track it and find out where it is and to add to our already existing database. Then we're going to be developing sediment transport models that will then say, okay, here is where the ash is. What is the transport risk of that? Will it be buried with sediment over time? Will it be transported down river in the Tennessee River system? That type of thing.

The third thing this river system sampling analysis plan will attempt to

1 achieve is then to characterize and
2 quantify what are the risks posed by that
3 residual risk. What are the human health
4 risks posed by the residual ash in the
5 system and what are the ecological risks
6 posed by that residual ash in the system.
7 That work is already underway.
8 A bunch of sediment sampling of
9 ash, residual ash and sediment going on.
10 It's on the order of 4- to 500 locations, a
11 tremendous amount of work in shallow water
12 and deep water. In submerge sediment
13 that's under water all the time and in
14 sediment that's exposed when the winter
15 pools dropped down. It involves a bunch of
16 continued monitoring of water. Over an
17 eight-week period, we're monitoring all
18 different strata of the reservoir, the
19 water that's up high that stays oxygenated
20 all the time and the water that's in the
21 dead part of the lake, the hypolimnion,
22 we're sampling it, as well.
23 There's been a bunch of groundwater
24 wells, new wells that have been in place in
25 the closed out or the soon to be closed out

1 dredge cell, on the order of about 20
2 additional wells that went there for us to
3 better understand water quality in the
4 dredged out cell. Those wells are being
5 sampled.
6 The last piece is really a monster
7 effort really with regard to the biological
8 monitoring and what's going on with all the
9 ecological receptors. So we're sampling --
10 you've heard me use the term if it walks,
11 crawls, flies we're sampling it. This
12 gives you just a little idea of what's been
13 collected to date. We're collecting
14 amphibians, we're collecting fish of all
15 sizes from all different locations, birds,
16 bird eggs, benthic macroinvertebrates or
17 bugs, fancy term for bugs that live in
18 sediment and ash. We're looking at turtles
19 and we're looking at raccoons. And that's
20 just what we've collected thus far.
21 All of that data then is going to
22 be plopped into this fancy little diagram
23 as a conceptual site model. Okay. Before
24 you start one of these investigations, you
25 want to develop this conceptual site model

of how your contaminant is present at a site and may be transported up through the ecosystem. A food web, if you will. So this is a fancy little drawing to show how we're looking at -- you know, how we're going to monitor and model the uptake of constituents found in fly ash and how they might get into the ecological receptors.

I'll use an example. Some may have seen one of the 500 birdhouses that we have on site. You'll see these little birdhouses. They're for tree swallows. Tree swallows have a small feeding range. They stay close to where their nests are. Tree swallows also like to eat bugs that come from sediment. Okay. So in order to construct this food web, we're sampling the bugs in the sediment to see what they have in them, we're sampling eggs of tree swallows that we're stealing from these -- kind of rude to do so, but we're stealing their eggs from these birdhouses and we're sampling to see if during the reproduction cycle if they're downloading potentially contaminants that are traditionally found

in coal ash, if those are downloading those to the eggs. That's how -- and all that data then will go into a food model like this so we can, you know, determine what potential risks on the long-term, short-term and long-term, what they could be imposing to the ecological system out here.

That sampling analysis plan, a bulk of the work has been conducted. The biological lab that we're sending this stuff to kind of early on threw their hands up and said, wow, we can't keep up with all these samples. We have worked with them quite a bit and they are picking up the pace and we've kind of sent a little priority scheme of web data we need to see out of them first. But we really overwhelmed our lab on what we're doing.

But a bulk of the sampling has been done on the biological side, sediment sampling is going on right now, and we have some work to do yet this following spring. Fish are being collected right now for the fall. Actually they're going out next week to do their fall sampling for fish. That's

1 all still ongoing. Most of the work should
2 be done next April, April to May. By the
3 spring of next year we should be done with
4 the actual sampling stuff. Then it's time
5 to analyze data and determine what that
6 data means and write reports.
7 I will be back up here and talking
8 about an action memo as far as what options
9 we have to deal with the residual ash in
10 the system. I don't expect to have that
11 meeting for any decisions on that until
12 later 2011, maybe early '12 before we're at
13 a position to make that decision. But
14 there will be -- there will be one more
15 action coming, one more decision document
16 coming on this project.
17 Some of the work plans that have
18 come out since the action memo was written,
19 these are all kind of transition work plans
20 that close that gap from what Leo was doing
21 time critical to what I'm doing on the
22 non-time critical phase. The first thing
23 that we did -- the first document that's
24 out currently for public review is this
25 non-time critical removal action work plan.

1 It's really kind a continuum of what the
2 action memo said. It puts a little more
3 meat on those bones, if you will. It's out
4 for public comment. The current comment
5 period on that runs through September 30th.
6 We are going to extend that comment. The
7 Roane County CAG did ask for a 30-day
8 extension on that. We'll put notice in the
9 paper next week. But we are going to
10 extend that an additional 30 days and that
11 will run out through October 30th.
12 Some other plans that we have
13 recently prepared, approved, and put out on
14 our webpage -- for those that don't know,
15 we do maintain a public webpage. All this
16 stuff is out there. It's a very good page.
17 It's www.epakingstontva.com. All these
18 documents can be found there.
19 We have revised the Community
20 Involvement Plan to update it to the new
21 elected officials and talk about how we're
22 going to continue to keep the public
23 involved through forums like this as well
24 as attendance at monthly CAG meetings,
25 periodically dumping fact sheets out there.

1 It explains how we're going to keep you
2 folks and others that are interested in
3 this project involved and aware of what
4 we're doing.
5 We have modified, I guess, two
6 monitoring plans, one for surface water and
7 one for air. And I'll talk more about
8 these next. Here is our air monitoring
9 system. It consists of five fixed-base air
10 monitoring stations. The predominant wind
11 direction here is kind of that way. So
12 we've got the entire perimeter of our
13 working area surrounded with these five air
14 monitors. They are taking continuous air
15 monitoring for particulate matter. Okay.
16 This is PM 2.5 and PM 10, which are
17 the size of the particles. They are
18 monitoring 24-7 and we're continuing to
19 keep an eye on them. That's so we can make
20 sure that they're not releasing fugitive
21 dust emissions in the surrounding
22 communities.
23 On top of this fixed-base system,
24 we're also sticking with our industrial
25 hygiene monitors. Okay. You know, our

first concern, of course, is to make sure we're adequately protecting the workers that are actually standing on the ash, working on the ash every day. So those people that are exposed to ash every day, we actually have little respirators on them here in the breathing zone, pulling filtered samples to make sure we're not exposing them.

So it's really kind of a redundant system. So our first level of protection is to make sure our workers are adequately protected by these industrial hygiene samples. Our next line of protection is our outer perimeter monitoring network that's shown here. We'll continue to monitor air for the four years -- as long as we're moving out here, those air monitors will be actively monitored.

On the surface water, we've slightly modified this because we've pulled dredges out of the river. Okay. When we had dredges in the river actively stirring up ash -- like when you dredge, you get resuspension. That's just part of the

1 game. It goes with the game. So during
2 the dredging we were monitoring probably a
3 little bit more robustly because we were
4 worried about the resuspension and making
5 sure that we weren't transporting things
6 downstream.
7 We've now moved towards -- now that
8 most of the ash is out of the river, we're
9 now moving to more of a storm-based
10 sampling. Okay. So we have six of these
11 automated samplers. They're called ISCOs.
12 It's the manufacturer of them. We have
13 three locations in the Emory at ERM 4 which
14 is upstream, we have one at ERM 2 which is
15 right about where the spill happened, we
16 have one right above the Clinch River at
17 ERM .3, and we have one at the Clinch River
18 Bridge, and we have one right near the
19 Interstate 40 bridge. Okay.
20 The five locations in the river,
21 now, are set for an inch of rainfall. So
22 if it rains an inch or more -- and it's
23 triggered to a meteorology station -- if it
24 rains an inch or more or if the flows
25 exceed 10,000 CFS, it will take four

1 composite samples over a 24-hour period.
2 Okay. And that's to kind of catch this
3 hydrograph. As the peak flow comes
4 through, it's intended to kind of catch
5 that -- a representative sample of what's
6 flowing through that river system during
7 that storm event. Okay.
8 On top of those five river sample
9 stations that are automated, we also have
10 one right there at the embayment where Dike
11 2 is -- our surface water system is
12 settling out solids and then discharging
13 there, right there by the eastern slough,
14 east embayment, and it's triggered for a
15 lower threshold. It's triggered at a
16 half-inch rainfall. So if it rains a half
17 inch or more, it's going to do the same
18 thing. It's going to pull an automated
19 sample and those samples will be analyzed
20 for TSS and all the metals that we expect
21 to find out there.
22 Now, in addition to the automated
23 samplers that have been installed, we are
24 continuing to collect weekly grab samples
25 at three locations to monitor the

1 effectiveness of our storm water management
2 and settling system. So we're collecting a
3 weekly grab at the settling basin, a weekly
4 grab where the clean water ditch discharges
5 and then a weekly grab at the stilling
6 basin. The stilling basin is part of the
7 plant's Clean Water Act permit and that's
8 dealing with kind of their active process
9 water. So that's kind of where we're
10 headed to for the next four years with
11 regard to surface water monitoring.
12 So my key point here is we're not
13 going away. We're going to continue to
14 monitor this thing and make sure it stays
15 adequately protective of our workers first
16 and foremost and stays adequately
17 protective of our surrounding community.
18 All right. Some other interesting
19 things that are going on is we're doing
20 some leach testing. As you may recall in
21 the action memo days back in May there was
22 a lot of concern over leach. What does
23 coal ash do? Does coal ash leach? Are we
24 going to have a groundwater problem? That
25 kind of thing. So we're continuing to

evaluate the leachability of coal ash. We're doing it in several batches. I myself was maybe a little concerned that early on when it was very wet we were using a little bit of portland cement or lime to condition or to dry ash. I wanted to make sure that if we continued to use that lime to dry and condition ash to optimum moisture content and if we were putting that material back in the cell that that lime wouldn't cause some geochemical consideration to maybe have this stuff start to leach. So we are looking at -- we're doing a bunch of column tests and batch tests and shaking tests of a variety of different mixes to make sure that we aren't creating a problem here by adding lime. It's about 70, 75 percent complete. All of the results from this leaching stuff is going to go into our groundwater monitoring and modeling to help us better understand groundwater conditions in the cell under a closed-out condition. So that's ongoing.

We put in a bunch of new wells.

1 You can see there they are. They have all
2 been installed and we are currently
3 sampling those. These wells are at a
4 variety of vertical horizon, some are
5 shallow, some are intermediate, some are
6 down in the rock, so we can understand not
7 only what groundwater is doing horizontally
8 but how it's moving vertically. All that
9 data is going to be dumped into this three
10 dimensional groundwater model called Mod
11 Flow, a pretty state of the art model. We
12 use it on a lot of these big jobs to
13 understand, again, what groundwater is
14 doing in that 250-acre cell that, again,
15 will be closed out and capped.
16 Instrumentation, a very important
17 part of ash stacking. When you stack ash,
18 you want to make sure it doesn't slide
19 vertically or settle horizontally. So how
20 we're doing that is we're putting in 18
21 piezometers. It's a fancy word from a PVC
22 pipe stuck into the ash. We're using those
23 piezometers. They're outfitted with
24 monitoring equipment. We're monitoring
25 pore pressure. Okay. There's some pore

1 pressure requirements to make sure that we
2 don't exceed or don't get excessive buildup
3 of pore pressure. When ash gets wet, it
4 has a tendency to move on you. So, again,
5 we want to try and keep this stuff as dry
6 as possible and so those piezometers are in
7 there to be monitoring to make sure we
8 aren't getting excess pore pressure
9 buildup.
10 And we're also then monitoring
11 vertical movement of this material as we
12 place it. We're doing that with these
13 inclinometers and we're actually using on
14 the low tech side just settling plates,
15 putting plates in there and see if they
16 settle over time. So those are going in
17 now. There's about half of those are in in
18 this cell that we're reconstructing right
19 now.
20 Okay. What we're doing now -- I
21 guess that's kind of what's been going on
22 the last three or four months. What's
23 going to happen the rest of the year until
24 you see me next up here talking about this
25 stuff? We're going to start moving and

1 excavating ash in the north embayment, that
2 top yellow line. We're going to start this
3 perimeter containment piece. In the first
4 part of 2011, we hope to have some
5 contracts awarded for that construction
6 work. We're going to probably see that
7 work start in early 2011.
8 And we're going to start stacking
9 ash in the north and central dredge cell.
10 Where is that? Here is a little concept
11 picture. You've seen this back in May.
12 This is the concept about how these
13 concrete columns are going to be put in
14 some kind of orientation here to buttress
15 that up and to keep that ash from
16 liquifying and prevent this spill that
17 occurred back in December 22, 2008.
18 As I mentioned before, the design
19 event for these columns is to withstand an
20 earthquake. Okay. So the design events
21 that we're using to withstand it or the
22 governing the design efforts is an
23 earthquake of 6.0 locally on the East
24 Tennessee fault line or an earthquake in
25 magnitude 7.6 that would happen on the New

1 Madrid fault. We're guarding against that,
2 should that event happen that this landfill
3 is going to stay put. It's using these
4 deep soil mixings and capillary breaks and
5 all that stuff. That design is still
6 happening and that will be hopefully
7 wrapping up at the end of this year so we
8 can start that work next year.
9 The next step is on the dredging
10 piece -- excuse me -- the stacking piece.
11 That's the central area where we're
12 stacking ash right now. When it gets full,
13 we're going to move kind of to the northern
14 area right there. There's about --
15 collectively there's going to be about
16 800,000 cubic yards of ash that we can
17 stack there. That's the volume we have
18 that we're biting off right now.
19 As I've mentioned, we've gotten
20 about 50,000 cubic yards of ash stacked in
21 there in the last nine years. So it's
22 going real well. It's actually exceeded
23 our production. We were hoping to get
24 16,000. We're getting about -- in a week
25 we're getting 28 right now. Now, we'll

1 average 16,000 a week. We're going to have
2 weeks that are going to be 28,000 and we're
3 probably going to have weeks that are going
4 to be 10 depending on the rain. But so far
5 we couldn't be happier about our production
6 and how things are going up there.
7 Okay. This, I think, is my last
8 slide and we can go to the Q and A phase
9 out here. But, you know, this is what
10 we're doing now. We're hauling ash. It's
11 really -- I'd never call this job simple.
12 Because it's so big, it makes it
13 challenging. You know, we don't have a lot
14 of million cubic yard jobs. I think
15 everybody working on this project could
16 concur on that.
17 But it's actually -- you know, with
18 these pan scrapers that they've moved out
19 there, these things are pan scrapers, belly
20 scrapers, they open up their belly and a
21 bulldozer pushes them along and they fill
22 it up and they're getting about 22 cubic
23 yards of pop on these things. They really
24 save a lot of time because you don't have
25 to have an excavator sitting there loading

a dump truck. Okay. So with this equipment, we've got I think 12 on site, they are really doing a good job of getting ash out of these borrow areas and then getting it to the central dredge cell for disposal. Once we get that underpass opened up here late October, early November, you'll see trucks moving back and forth underneath that underpass. That's kind of really what we're doing.

The moral of this presentation is we're moving ash from Point A and we're moving ash and putting it in Point B. Point B right now is the central dredge cell and the north dredge cell. We're going to continue to monitor and we're going to continue to stay committed to this job for the next four years. You know, I'm just one of like 400 people out here. So, you know, what's going on out there, I'm just one piece of the puzzle. I've got the oversight piece, making sure everything is designed to spec and stuff. I couldn't do this, either, without the State of Tennessee, you know. They've been up here.

1 They've had numerous people up here, as
2 well. But there's also, you know, a whole
3 fleet of contractors, TVA people, and
4 people working for TVA that are part of
5 this.
6 So, you know, I'm pleased to be a
7 part of this job, very happy with the way
8 it's going, but we're going to be around
9 here and committed to this job for the next
10 four years to make sure it keeps going that
11 way. So I think with that, I'm done
12 talking.
13 BRUCE ENGELBERT: Thank you, Craig.
14 Let me introduce myself again. I've been
15 moderating the last few public meetings.
16 My name is Bruce Engelbert and I work for a
17 small consulting firm called E Squared in
18 Charlottesville, Virginia. Before that I
19 worked for EPA in its Superfund community
20 involvement branch in Washington, D.C., so
21 I have some familiarity with the kinds of
22 things that are going on here.
23 Like the last few meetings, this is
24 an opportunity to engage with the folks up
25 here in front. We ask that if you have a

1 comment or a question, you come up to one
2 of the two microphones here and our court
3 reporter Tracy has asked that you be
4 willing when you come up, either before or
5 after you speak, if you'd print your name
6 so that she can get it correctly into the
7 record. There's a yellow sheet here and
8 there's a yellow sheet over here.
9 If you can try and be concise in
10 your question or your comment, that would
11 certainly be appreciated. There isn't a
12 huge audience here, so we should have some
13 time. We ask that your comments or
14 questions, what you have to say, be
15 constructive and respectful and including
16 when our panelists respond they will abide
17 by the same format and rules.
18 Just one other reminder. This is
19 not a forum to deal with personal issues so
20 much or resolve any disagreements. It's
21 really an opportunity to engage with one
22 another and understand each other a little
23 better. So with that, I think we already
24 have somebody who would like to make a
25 comment. So if you could also when you

1 come up give your name and where you live.
2 RICK CANTRELL: Okay. My name is
3 Rick Cantrell. I'm from Kingston. My
4 concern is with the numbers you gave us on
5 3.5 million cubic yards that you say you've
6 removed from the river of coal ash. Well,
7 there was 3.5 million cubic yards emptied
8 into the river, but it was also mixed with
9 a lot of mud and sediment. So isn't that
10 kind of an exaggeration or manipulation
11 saying that you got the 3.5 million cubic
12 yards of coal ash out of the river?
13 Because, you know -- can you give us an
14 amount of what's left in the river?
15 Because you didn't get 3.5 million cubic
16 yards of coal ash out.
17 CRAIG ZELLER: Yeah, I can take
18 that. The volume that was pulled out,
19 through surveys and also getting a
20 secondary check on actually the tonnage
21 that's actually shipped to Alabama, is 3.5
22 million cubic yards and it's going to
23 approach about 4 million tons. Now, was
24 that pure ash? No, it wasn't all pure ash.
25 No. It's a valid point. It was mixed with

1 some sand and native sediments and stuff.
2 That's what we got out.
3 Now, I did mention the Phase 3
4 study. By the estimates that are supported
5 by coring and sediment transport modeling
6 that we have done to date indicate there
7 could be as little as 250,000 cubic yards
8 of ash left in the river system, could be
9 as much as 500,000. That's kind of the
10 range we're using. Now, will we go get
11 that remaining ash? That has yet to be
12 determined. There is one more action that
13 will be issued here and that action will be
14 issued on what to do with that residual
15 ash. Okay. What to do with the 250 to
16 500.
17 The first thing we've got to do is
18 track the nature and extent. All right.
19 We're going to do that through physical
20 sampling. The second thing we're going to
21 do is then determine based on where that
22 ash is at what is the nature, what is the
23 fate and transport risk of that material,
24 is it going to erode and transport down to
25 the Tennessee River system? Is it going to

1 stay net depositional? In other words, is
2 current sediment coming down the Emory and
3 Clinch system, will it cover it up with
4 time? Those type of things we don't know
5 yet.
6 The third thing we'll have to
7 determine then is based on one and two,
8 what are the real risks, what are the --
9 CERCLA, the program I work in, Superfund,
10 makes decision on risks. All right. So
11 if there is an unacceptable risk posed
12 either to human health or the ecological
13 receptors, there will be a subsequent
14 action, though, all right, for them to
15 address that residual ash.
16 I think I mentioned back in May,
17 those actions can really be summed up into
18 three or four alternatives in general.
19 Okay. If the risks are negligible or low,
20 we will likely monitor this system forever.
21 Okay. And there's a fancy term for that
22 called monitor natural recovery, okay, that
23 we will monitor recovery of the system with
24 time.
25 If the risks are, say, moderate

1 posed by this stuff, we may look at capping
2 pockets of ash that are causing these
3 unacceptable risks. Capping is a technique
4 that's used in the environmental arena. If
5 you can't dredge it or don't want to dredge
6 it, you actually cap it with clean material
7 to break that transfer. You saw my fancy
8 little ecological food web thing up there.
9 When you put down, say, a layer of clean
10 sand or a layer of clean silt, that
11 isolates the material down there and
12 doesn't -- so, therefore, it's not
13 bioavailable.
14 The third general option that could
15 be, you know, implemented is if pockets of
16 ash -- if we say we have missed the honey
17 hole or, wow, we've found 8 foot of ash
18 over here or there's a big pocket of ash
19 over here that has a high risk potential of
20 a high transport potential, we could dredge
21 some more. Okay.
22 Now, the dredging in the Phase 3
23 wouldn't likely be the production hydraulic
24 dredging that was conducted in Phase 1.
25 The dredging -- you know, I'm kind of

1 speculating here. But the dredging may
2 look more like a mechanical or a clam
3 shell, where you actually go out and get
4 hot spots that may have been lost. Okay.
5 Now, the option could be a combination of
6 all three. I've implemented remedies in
7 complicated river systems like this where
8 you have a little bit of monitor action
9 recovery, you have a little bit of cap, and
10 you have a little bit of dredging. Like a
11 hybrid remedy.
12 So that's -- when I look into my
13 crystal ball -- and I've done a lot of
14 sediment remedies. It's one of the reasons
15 why my manager put me on here is to, you
16 know, kind of take charge of that study and
17 oversee it because I've got a lot of
18 experience in it. You know, that's what
19 may happen, okay, if I'm looking in my
20 crystal ball. But I won't be in a
21 position -- we will be back up here talking
22 about what that Phase 3 is. We're doing a
23 lot of sampling on it. The sampling won't
24 be completed until April of next year,
25 after which we have to write reports and

1 characterize and actually determine what
2 the data actually means. But there will be
3 an action coming I'd say late 2011, early
4 2012. And that will be the last thing --
5 you know, the last -- virtually the third
6 and last phase of this cleanup project.
7 RICK CANTRELL: Thank you.
8 BRUCE ENGELBERT: Lots of long
9 lines up here at the microphones. I guess
10 you did a good job, Craig. You answered
11 all their questions ahead of time.
12 STEVE MCCRACKEN: If somebody
13 doesn't ask questions, there's a television
14 facing us and we may end up having to do
15 karaoke or something, so.
16 DON SIMONS: My name is Don Simons.
17 It live in Swan Harbor, Harriman. My
18 question is maybe to TDEC or somebody
19 environmentally here. At about mile marker
20 1.6, which is kind of known as the Blue
21 Heron Island, before the Kingston sandbar.
22 For some reason the blue herons that used
23 to be quite plentiful in there have all
24 disappeared. Has anybody looked into what
25 has happened and why they've disappeared?

CHUCK HEAD: I would say that at this time I'm not aware of that having happened. We are working with EPA and TVA about going out and looking at the -- both the fish and aquatic populations as well as the avian populations. So what I'd like to do is just take that question down and go back and kind of look at that.

DON SIMONS: I think we need an answer. They've been gone for the last at least three weeks or more.

CHUCK HEAD: Yeah. Just for my -- just to help me, exactly where is mile marker 1.6? Is it between where the Clinch and the Emory merge and the TVA plant or is it upgradient of the plant itself?

DON SIMONS: What is your position?

CRAIG ZELLER: Is it ERM 1.6 or CRM 1.6?

DON SIMONS: Well, all you can go by is channel markers. All he's got to do is look at a map.

CRAIG ZELLER: Yeah.

DON SIMONS: And 1.5 is basically the white poster child house at the

1 Lakeshore entrance to that slough and it's
2 just shortly north of there on the left
3 side or from the Curtis Humphrey farm you
4 can see it. All you've got to do is get in
5 a boat and go upriver. I think you can do
6 that.
7 STEVE MCCRACKEN: I know which one
8 it is.
9 CRAIG ZELLER: Don, we've got a lot
10 of people on the river. We've been out
11 there all summer. We'll get with our --
12 the folks that have been on the river doing
13 all the bird sampling setup and --
14 DON SIMONS: Like where are we at
15 with the Coast Guard as far as resetting
16 channel markers all the way up to downtown
17 Harriman, please?
18 STEVE MCCRACKEN: That's another
19 one we'll have to get back with you on. I
20 thought we had reset all the channel
21 markers.
22 DON SIMONS: They've not been out
23 by GPS. They were not moved, the one they
24 made an error with. They moved some
25 around. But the Coast Guard boat was in

1 dry dock and they've not been up with the
2 GPS to reset the river.
3 STEVE MCCRACKEN: I'll check into
4 it. I thought they were already all back
5 in.
6 DON SIMONS: Okay. Thank you.
7 ELLIOTT BARNETT: Hey. My name is
8 Elliott Barnett. I leave here in Kingston.
9 I don't know if you've got any information
10 on the swallow houses that you put all up
11 and down the river. Can you just talk for
12 a minute about the -- have you got any
13 summary information from what you're
14 learning there?
15 CRAIG ZELLER: Yeah. We're done
16 with that work. There was approximately
17 500 boxes put out. I don't know if you
18 caught that part of the presentation. The
19 idea behind this --
20 ELLIOTT BARNETT: Was that tonight?
21 CRAIG ZELLER: Yeah. That's fine.
22 ELLIOTT BARNETT: I was a little
23 bit late.
24 CRAIG ZELLER: No. No. That's all
25 right. I'll repeat it. I've gotten a lot

1 of questions on it, what in the heck are
2 all those birdhouses?
3 ELLIOTT BARNETT: Well, I knew what
4 they were. But I just wondered if you've
5 -- what's the data showing you.
6 CRAIG ZELLER: Yeah. We haven't
7 seen the data. The data is being analyzed
8 right now.
9 ELLIOTT BARNETT: All right.
10 CRAIG ZELLER: The concept behind
11 that -- it's a good question. We've had
12 it, so it's very valid. We're trying to
13 construct this food web, okay, of tracking
14 contaminants commonly found in ash, how do
15 they migrate up, how do they bioaccumulate,
16 do they bioaccumulate, do they cause
17 reproductive issues, that kind of thing.
18 So these birds, these tree swallow
19 boxes actually have a small home range,
20 feeding range. Okay. So they usually stay
21 pretty close by. So if you put a cluster
22 of boxes by, they'll feed in that area.
23 Okay. They feed on bugs that come out of
24 sediment. Okay. That's what they like to
25 eat. So we're trying to test the bugs that

1 reside in the sediment, mayflies and what
2 have you. We're trying to fill out that
3 data gap. Then we're assuming that these
4 birds eat the stuff that comes out of the
5 sediment in this general area and then they
6 go back to their birdhouse and lay eggs.
7 Then when they're not in there, we stick
8 our hands in their bird box and we take
9 their eggs and analyze their eggs. It's
10 kind of a rude thing to do, as I mentioned.
11 But all that stuff has been -- is
12 under work -- like I say, a work in
13 progress. I think when we're all said and
14 done with that, we will take those bird
15 boxes down because we've have a lot of
16 questions about it. Good God, you know,
17 what are you doing with all these things?
18 So that's kind of the general concept.
19 ELLIOTT BARNETT: I understand the
20 concept. I just wondered if you had any
21 data yet.
22 DENNIS YANKEE: We should have some
23 sort of preliminary results maybe in
24 November or December some time.
25 CRAIG ZELLER: Yeah. We should

1 start to see some of the work that's been
2 done. There's a big environmental
3 conference going on at the end of the year.
4 It's called CTAC and we have a lot of
5 researchers that want to present this data,
6 so there's a priority placed on getting
7 this data. We hope to see some of these
8 packages, like Dennis said, before that
9 conference which is in November.
10 FLO HOPKINS: Flo Hopkins, Smith
11 Mountain, Cumberland County. First of all,
12 Craig, I'd like to thank you for what
13 appears to be a really successful effort
14 and a lot of expertise and enthusiasm going
15 into this cleanup. I'm frankly quite
16 nervous for EPA to leave. We like your
17 presence here as residents. I want to ask
18 all of you the same question I asked back
19 in May. When I asked that question in May,
20 there wasn't an answer yet, but there was
21 going to be an answer in a month or so and
22 this is later than that. So I want to ask
23 that question again, if you don't mind,
24 since there aren't that many people here.
25 The question is, I understand that

until December the daily ash is being commingled and disposed of off site. After December my question is what will be done with the daily ash until the dry ash conversion and then what will be done with the daily ash after dry ash conversion in 2012?

CRAIG ZELLER: I will defer that to Chuck and Steve.

STEVE MCCRACKEN: The alternatives for what we would do with future fly ash production are still being looked at. But clearly it will -- they will be limited to on-site storage either temporary or permanent or an off-site permitted facility. That's the best I can tell you right now. But I know those alternatives are being looked at, I know that your concern is for Smith Mountain, and right now that is not, you know, one of the alternatives that, as I understand it, are being looked at.

FLO HOPKINS: Well, thank you, Mr. McCracken, and that's my understanding as well from having talked with TVA about

that and based on that assurance we've started building our house. But nonetheless, we want to stay on task and try to stay conversant with what's going to be happening with the daily coal ash. We understand that TVA is going to be coming up with a plan soon to present to TDEC; is that correct?

STEVE MCCRACKEN: Yes, ma'am.

FLO HOPKINS: Okay. Thank you so much.

PAT HART: Yes. My name is Pat Hart and I live on the Sugar Grove Valley side of the river. I have a question about the -- I think you mentioned you were going to be doing around 500 sediment samples and I wondered how are you determining the locations for those samples and also if someone had an area they would like to have sampled, could they contact you and request that? Then another part of my question is are you going to post your results based on the actual percentage of ash in the sediment or are you going to do like you've done in the past and say it has to be more

1 than 50 percent sediment to even count as
2 being there?
3 CRAIG ZELLER: Good question. The
4 determination on these samples -- there's
5 two types of, I'd say, ash samples that are
6 being collected and it's about half and
7 half. One is pure physical, is it there,
8 okay, using the 50 percent type of stuff
9 you talked about, using this polarized
10 light microscopy. I can't even say the
11 word. But a microscope looking at this
12 stuff to see if this ash material is there.
13 So 50 percent of that roughly speaking,
14 half of that sediment sampling is is it
15 there or is it not there. The other half
16 is actual chemical analysis. All right.
17 You collect the sample, put it to a lab and
18 find out what the concentrations you have
19 are. Okay.
20 The determination of the sample
21 locations was based on probably a half
22 dozen meetings and development of work
23 plans and this multi-agency group that I
24 call the technical review work group that
25 had representatives on it from EPA, TDEC,

1 TWRA, Fish and Wildlife Service, and the
2 like, external stakeholders that have, you
3 know, a lot of interest in this stuff. So
4 a lot of it was based on, you know,
5 feedback we got from reviewers on those
6 internal documents. That work plan is out
7 on our webpage. It's called the River
8 System Sampling Analysis Plan.
9 It was some biased, all right,
10 based on what we knew about the sediment
11 transport. We have enough information on
12 the sediment transport model that's been up
13 and running to know what's net erosional,
14 what's net depositional. All right. So we
15 obviously want to sample in depositional
16 areas, right, to see what's being deposited
17 there. Some of it was just pure random.
18 Some of it was based on, you know, some
19 understanding we had of the system.
20 If there are -- you know, we have
21 outreach centers, you know, for recovery.
22 We receive from time to time, hey, can you
23 come out and look at my dock or, hey, can
24 you come out and look at my mud flat? We
25 will certainly do so. Sampling is

actually, you know, the easy part. It's the determining what to do is the hard part.

But, yeah, you have my information, I hope? If not, I can give it to you after the meeting as far as how you get in contact with me to ask such things. If we can't do it, TDEC does a lot of this, as well. Over the course of the last 18 to 24 months, they've done a lot of water sampling and done a lot of dock sampling and it's been a great help to all of us. So we'll get it addressed one way or the other.

DONNA LISENBY: Good afternoon. Thank you for holding the meeting and allowing us to speak and ask questions. My question is for TVA. My name is Donna Lisenby. I'm from Boone, North Carolina. When this spill happened, Tom Kilgore and many representatives of EPA -- or sorry -- TVA promised to clean up the community and the Emory River and clean up the ash. We heard clearly today that 250,000 to 500,000 cubic yards of ash remain in the Emory

1 River.
2 The question that's on my heart and
3 that I want answered most with a lot of
4 honesty and integrity is why does it
5 appear that y'all have broken that promise
6 to remove the ash from the river? I was on
7 the river today. I reached down in the
8 water and picked up ash out of the river.
9 It's easy to find. It's still there. Help
10 me understand why y'all aren't -- don't
11 appear to be keeping that promise, because
12 there wasn't any equipment on the river
13 that I saw today taking that ash out of the
14 river that I found.
15 STEVE MCCRACKEN: You want my
16 honest answer, I'll give it. I believe
17 that we are doing what we said we would do
18 and if there's some confusion, maybe the
19 best way to explain it is that there's
20 three actions that have to be decided. The
21 first one is -- only the first one has been
22 done and that was for time critical work
23 and the time critical work was for two
24 reasons. That was to limit migration down
25 river and to prevent flooding up river.

1 That's what it was for. It was not
2 intended to receive -- to remove all of the
3 ash from the river.
4 The decisions that will get to that
5 matter are the ones that Craig decided and
6 are yet to come. I believe, I believe that
7 by the time we're done that we will have
8 returned the river system to the way it
9 was. That doesn't mean that every spec of
10 ash is going to be removed. It's just not
11 -- it's just not -- you just can't do it.
12 But I do believe that by the time we're
13 done, we will have removed the threat from
14 this spill and that in many ways, just like
15 was said by Tom Kilgore, and particularly
16 back in the Swan Pond Embayment area, it
17 will be as good as it was before, perhaps
18 better.
19 DONNA LISENBY: May I have a
20 follow-up? I guess promises are important
21 to communities and I clearly heard TVA say
22 they would clean up the ash out of the
23 river very clearly. It's also very clear
24 that the ash remains. And so keeping that
25 promise to me is a covenant between the

1 company, its values, its integrity, and the
2 community. And so I appreciate that
3 there's testing that's going to be done to
4 evaluate the risk and do the risk
5 assessment and I appreciate the schedule
6 that Craig put up on the screen that showed
7 all the activity moving forward to 2012.
8 Nowhere on that activity, though, on that
9 chart did I see additional dredging or
10 removal of ash from the river. So I'll say
11 again, what does it take for us, the
12 community, to be your accountability
13 partner and hold you accountable to your
14 promise so that you make good on your
15 promise?
16 STEVE MCCRACKEN: First of all, I
17 don't agree with what you're saying, just
18 as you didn't agree with what I said. I
19 just don't. But how do you hold us
20 accountable? That's what this process is
21 all about. It is transparent, it is out
22 there, it is meeting with the public
23 frequently to hear what their concerns are
24 and try to answer them in the best way we
25 can.

1 This process that was really
2 created by the EPA called CERCLA was
3 designed for just the reason that you're
4 bringing up and that is because years ago
5 there was not enough transparency in how
6 these cleanups were decided and executed.
7 And I believe that it's a process that is
8 very highly technical, it is done by
9 competent people, and everything that we do
10 is shared with you and you are given an
11 opportunity to provide your input. And
12 it's our obligation to do the best we can
13 to answer your questions and I believe that
14 this is -- I believe that that's what we're
15 doing.
16 DONNA LISENBY: Last comment, if I
17 may. Well, let me just say clear to you --
18 clearly to you as an accountability partner
19 and someone who cares about ecosystems,
20 river health and seeing corporate America
21 be accountable for its actions, my
22 expectation is that you keep your promise
23 and you clean the ash up out of the Emory
24 River and I look forward to seeing the plan
25 that will do that. Thank you for your time

1 today.
2 LOUISE GORENFLO: Hi. I'm Louise
3 Gorenflo with the Cumberland Stewards up in
4 Cumberland County. Back in April,
5 February, March, I forget now, there was an
6 environmental assessment that TVA had out
7 for public comment on the fate of the new
8 coal ash and I was wanting to know for
9 Kingston and I was wanting to know what the
10 status is of that assessment.
11 CHUCK HEAD: Let me try to address
12 that. That requirement was through an
13 order issued by the Department of
14 Environment and Conservation to TVA to look
15 at first the short-term and long-term coal
16 ash management here at Kingston as well as
17 their other six locations in Tennessee. We
18 have met with TVA on three or four
19 different occasions. We have talked about
20 what that's going to be. There's not been
21 a final plan submitted to us for that. We
22 think we're going to receive that in the
23 next month or so. Once we receive that
24 that will be out there for public review
25 and the opportunity to comment to us.

1 So I guess what I'd say is we're
2 working on it. This is a -- because of a
3 lot of things that are going on, it's a
4 difficult situation. We have state law
5 that requires certain things for all waste
6 landfills and then we also have some
7 pending federal regulations for disposal of
8 coal ash. I think everybody is trying to
9 sort of read the tea leaves a little bit
10 there to figure out which way that may go.
11 You know, our position with the
12 State has been that once there's no clear
13 commingling of new process ash and ash from
14 the spill that that new ash needs to be
15 managed and disposed of in a landfill that
16 meets our Class 1 standards. I think what
17 TVA is struggling with is, one, how quickly
18 they can get there and where that disposal
19 site would be or sites. And given the cost
20 and the transport and all those things that
21 are involved with that, I think they are
22 trying to make sure that when they give us
23 a plan for consideration that it's well
24 thought out and well based. You know,
25 there's issues from some perspective about

1 hauling it on roads. You know, is that a
2 good thing, or should it go by rail, and
3 where those disposal sites will ultimately
4 be located.
5 So hopefully we'll have that in the
6 next month and a half or so and we'll go
7 from there.
8 LOUISE GORENFLO: Well under
9 current state law that TDEC can issue a
10 permit, by permit, by rule, that coal ash
11 can be transported in an open truck with a
12 cloth tarp on top, that there has to be no
13 assessment of the transportation, that
14 there is no requirements for air quality
15 monitoring and that's current state law.
16 CHUCK HEAD: Well, our position on
17 the permit type has been that we would
18 require that the ash if it's disposed of
19 in Tennessee would go to a Class 1 landfill
20 or a landfill that's Class 2 that's
21 designed to meet the Class 1 standards.
22 I understand your comment about the
23 transport off site and there are some
24 highway standards in place, safety
25 standards in place about covering trucks.

1 That's not part of our environmental
2 regulations.
3 I will say that as we have dealt
4 with TVA on this issue and brought things
5 to their attention, they have been most
6 responsive to concerns of the public. I
7 mean we -- it's not a perfect world that we
8 live in because we don't have a state law
9 that requires those very specific things,
10 but I think they have acted out of an
11 abundance of caution when there's been
12 issues like that pop up.
13 LOUISE GORENFLO: Well, in the
14 environmental assessment that we commented
15 on that -- it had transport of coal ash in
16 an open truck with a cloth tarp on top.
17 CHUCK HEAD: It did. And that was,
18 I think, a first effort to look at all the
19 different opportunities out there. We
20 haven't gotten a final plan yet, so I'm not
21 sure what that's going to contain. We're
22 going to try to make sure that we address
23 those things. We want to make sure that
24 the management of this ash and if it's
25 transported off site by truck does not

present a public health problem or a transportation problem. But we'll do the best we can.

LOUISE GORENFLO: Is TDEC wanting to submit new legislation this year?

CHUCK HEAD: No, ma'am. We've talked about that and if -- I think you can understand our position on that.

LOUISE GORENFLO: So currently there's nothing separating the public from the lack of air quality transportation except for the goodwill of TVA?

CHUCK HEAD: I don't think we know the answer to the question until we see what they propose, and once they propose that, we will work with them on that.

LOUISE GORENFLO: So what is the timeline for that again?

CHUCK HEAD: I think I mentioned earlier we're hoping to get that in the next month, month and a half. The time is running close. December is getting here quickly.

LOUISE GORENFLO: And it will be available for public comment?

1 CHUCK HEAD: Well, all of our
2 information that we receive is public and
3 you're more than welcome to --
4 LOUISE GORENFLO: But will there be
5 a public commenting period upon their
6 proposal?
7 BRUCE ENGELBERT: Is there a formal
8 process for getting -- requesting and
9 receiving comments?
10 LOUISE GORENFLO: I'd request that
11 commenting period.
12 CHUCK HEAD: Okay. I'll take that
13 comment -- I'll take your concern back and
14 I think we've shown that we've been more
15 than open to those --
16 LOUISE GORENFLO: Right. You have.
17 You've been very good about all of that.
18 CHUCK HEAD: Okay.
19 LOUISE GORENFLO: Thank you.
20 BRUCE ENGELBERT: Any other
21 comments while we're in full session?
22 Certainly all these folks and the others
23 around the room are going to be here to
24 speak with you individually for the next --
25 I think they are committed to stay here

until 8:00 o'clock or until all the questions have been answered. Anybody else want to ask, ask one now. It doesn't look like it and we're not going to have any singing from these guys.

CRAIG ZELLER: Thank God.

BRUCE ENGELBERT: So any final comments from any of you?

STEVE MCCRACKEN: Not really. I am proud of the people that are working at the Kingston plant and the work they've done. As you all probably know, it was a hard nine months that we've been through and I think that what the State and what EPA and what the TVA and what our contractors have done is impressive. And I know it's to correct a problem that shouldn't have happened, but I'm proud of those people that have done that work. I've been around this stuff for a long time and I haven't seen anybody work any harder or be more productive than they have. And if you come out there and look at it some time when you have a chance, I think you'll see that.

CRAIG ZELLER: Yeah. I guess I'd

like to add just one thing on this remove all ash thing. When you talk about removing all ash, there's some easy stuff to do and there's some difficult stuff to do. Removing all ash from the river system, because it's underwater and because you're dealing with a hydraulic dredge that has an accuracy of plus or minus a foot and because you have resuspension that goes along with that territory, you're going to have resuspension that runs anywhere from 5 to 20 percent, so taking literally this removal of all ash in the river system is an unachievable goal. Okay. It doesn't mean we're going to result with something or leave something here that's unprotective.

But now when you're talking about the embayments, removal of all ash, it is something that's rather achievable. In fact, we've already done it on the east embayment, also known as Lakeshore Slough, you know, a smaller, more confined body of water that we could actually dredge and excavate a good portion of it in the dry.

1 Okay. If you drive by there on Lakeshore
2 Slough now, it looks beautiful. It will be
3 revegetated and returned to prespill
4 conditions. I've talked to a lot of folks,
5 some that work at the facility and some
6 that just call me and they're already
7 catching a bunch of fish, tiny little fish,
8 young year fish that have come up since
9 this spring.
10 So the east embayment, Lakeshore
11 Slough that was impacted has now been
12 restored to prespill conditions, it's
13 probably better than it was. So in that
14 instance in this goal of -- lofty goal of
15 all ash I think has been achieved. We've
16 got backup data to prove it. The ecosystem
17 has recovered.
18 The same, I think, can be said for
19 Swan Pond Embayment and the north -- you
20 know, Berkshire Slough area. Because we're
21 not dredging in 40 feet of water with
22 cutter head dredges that resuspend, I think
23 getting to prespill conditions in that
24 area, again, is very achievable. Restoring
25 the complex mosaic of scrub shrub and

1 emergent wetlands and all that kind of
2 stuff, we can do that. We've proven that
3 we can't just do it here, we've done it
4 elsewhere. I've done a ton of marsh jobs
5 that a year later you don't even know were
6 there.
7 The benthic recolonization happens
8 very quickly. I'm getting news from the
9 field from people sampling bugs as part of
10 my river system SAP that the benthic
11 communities, the bugs that live in
12 sediment, have already recolonized. We
13 just pulled dredges in May. It's
14 September. Three months later, they come
15 back.
16 So I think the moral of the story
17 is that, you know, while all -- perfection
18 is elusive. Okay. Getting every last
19 grain of silica dioxide from a system that
20 has a flow of 1000 CFS base all is hard.
21 Will we return this system to, you know,
22 what it was, perhaps even better and leave
23 this system in a situation that's
24 adequately protective of human health and
25 environment? I guarantee it. You know,

1 and that's the objective.
2 The reason I didn't have that
3 schedule -- it's a valid comment. I'll get
4 that schedule adjusted. The reason you
5 didn't see that, that was more of a
6 construction diagram, the 2014 schedule
7 that took out for the next four years.
8 Those are really more of the major
9 components associated with closure of the
10 dredge cell. We'll get our schedule
11 updated to make sure I've got that and kind
12 of start scheduling when that third and
13 final option will come out. It really
14 depends on the data and how it comes out.
15 I've done a lot of these river
16 system studies. We're going to be done
17 collecting in April. Will that be the last
18 data collection event for this river system
19 SAP? I've done a lot of these and usually
20 you've got to go back out and fill in some
21 data gaps. Okay. Oops, we've got a little
22 area we've got to further characterize.
23 We've been talking about late 2011,
24 early 2012 for that river system decision.
25 It's fluid. All right. I can guarantee

1 you we're going to finish it, but we're
2 going to finish it with the right data and
3 to make sure we don't have any, you know,
4 unanswered questions. So I will get that
5 projected and get it on our schedule. But
6 I can guarantee you we will complete it and
7 we will be back up here in this forum
8 talking about what that third and final
9 action will be, so.
10 CHUCK HEAD: I'll just make a
11 couple of comments. I think everybody here
12 wishes this had never happened. It's been
13 a tough thing to deal with. For people in
14 the community, it's really been disturbing
15 to them. What I hope we can do moving
16 forward is learn lessons about how we can
17 do things better. I will say from my
18 perspective in working with the state
19 government that the level of activity here
20 in trying to get things out of the river
21 and move forward and cleanup has been as
22 remarkable as I've ever seen. But that
23 still doesn't mean that we shouldn't
24 understand the concerns of the community.
25 When you have this happen, the

thing that we as regulators need to do is be sensitive to your concerns and try to address those. So I think we have made an earnest effort to do that. But, you know, we're like anybody else. We can always do better. I would say from how things have progressed here that we are making our best effort to make sure we hear from the community.

I think that's been very important. One, because you need to let us know what your concerns are and, two, as regulators and as the regulated, we have a project that we're moving forward with and we think we're doing a good job, but often times there are things that people have out there in the community to say that we need to hear, that sometimes we don't think about those things.

I have appreciated the honesty and sincerity of every person that's come to these meetings. At the end of the day, this will be a success in a lot of ways and hopefully we will have the same level of fish and aquatic life and avian life in a

1 good clean site. I think we're going to
2 get there. So I just ask you to work with
3 us as we go along. If you feel like that
4 we haven't listened to you, then I'd just
5 ask you to call my boss. My boss is Paul
6 Sloan, he's the deputy commissioner for
7 Environment, and he and Commissioner Fyke
8 from my department are very concerned,
9 making sure things are done right. If they
10 think we can do things better, they'll let
11 us know. So I appreciate your time.
12 BRUCE ENGELBERT: All right. Well,
13 thank you very much. Again, they will be
14 around for further questioning.
15 (Meeting concluded.)
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1 REPORTER'S CERTIFICATE

2

3

4 STATE OF TENNESSEE:
COUNTY OF HAMILTON:

5

6 I, Tracy A. Beamon, Certified Court Reporter and Notary Public, do hereby certify that I reported in
7 machine shorthand the September 23, 2010, Proceedings in the above-styled cause; that the foregoing pages,
8 numbered from 1 to 78, inclusive, were typed under my personal supervision and constitute a true record of
9 said proceedings.

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

13 Witness my hand in the City of Chattanooga, County of Hamilton, State of Tennessee, this 4th day of
14 October, 2010.

15

16 Tracy A. Beamon, CCR-1003
My Commission Expires on the
17 12th day of February, 2012.

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