1
2 PUBLIC MEETING
3 ON
4 THE UNITED STATES DEPARTMENT OF ENERGY
5 PROPOSED PLAN FOR REMEDIAL ACTION AT THE
6 QUARRY RESIDUALS OPERABLE UNIT OF THE
7 WELDON SPRING SITE
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9 TRANSCRIPT OF PROCEEDINGS
10 APRIL 16, 1998
11 7:00 - 9:00 p.m.
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15 THE WELDON SPRING SITE REMEDIAL ACTION PROJECT
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THE UNITED STATES DEPARTMENT OF ENERGY

PROPOSED PLAN FOR REMEDIAL ACTION AT THE

QUARRY RESIDUALS OPERABLE UNIT OF THE

WELDON SPRING SITE

Be it remembered that on the 16th day of April, 1998, the above-entitled matter came up for public meeting at The Weldon Spring Remedial Action Project, 7295 Highway 94 South, in the County of St. Charles, State of Missouri, and the following is a transcript of the proceedings:

APPEARANCES

Cassandra R. Savage, Moderator

Panel Members:

Stephen H. McCracken, Project Manager

Dan Wall, Remedial Project Manager

Gene Valett, QROU Project Manager

Rebecca Cato, QROU Manager

Mary Picel, Argonne National Lab, Project Manager

TRANSCRIPT OF PROCEEDINGS:

MS. SAVAGE: Good evening. I am Cassandra Savage, community relations manager. And on behalf of the Weldon Springs site remedial action site, welcome to this evening's public meeting.

Now I've got a couple of things that Joe Enright wanted to make sure that I mentioned. First off, we have an exit there and there. Ladies' room and men's room is the main hallway to your right, and smoking is not prohibited -- well, is prohibited in the building.

The purpose of this evening's meeting is to give you, the residents, an opportunity to provide comments and input to proposed remedial action for the quarry residuals operable unit.

Now, I'm going to take just a couple minutes just to talk about what we plan to do this evening and how we plan to do it. But, first off, since this is a public meeting we must conform to specific federal regulations. One of which, the proceedings must be transcribed. Now in order to make sure that our transcription is accurate, we're also tape recording this evening's proceeding. Now, the sole purpose of the transcription will be just so that we have a record of what has occurred this evening, and we must have an official record of what has occurred. That's the only purpose for the

1 transcription.

2 Now, copies of the transcription will be available

3 to the public upon request. And we'll give you those

4 addresses and phone numbers with those of us that you can

5 contact if you'd like to have a copy of the transcript of

6 this evening's meeting.

7 The agenda for this meeting will consist of remarks

8 from Steve McCracken. Steve, would you stand, please?

9 For those of you who don't know Steve, Steve's the DOE

10 project manager of Weldon Spring site. And Dan Wall.

11 Dan, would you stand, please? Dan is remedial project

12 manager with the EPA.

13 Gene Valett. Gene's up here in front all raring to

14 go. Gene is the quarry residuals operable unit project

15 manager here at Weldon Springs, and he's going to give

16 you an overview of the proposed plan.

17 Now, I will ask that you hold your questions and

18 comments until the appropriate time of the program and

19 that will be following Gene's presentation and then a

20 couple remarks from the Citizens Commission. I think

21 Glenn Hachey, chairman of the Citizens Commission, is

22 going to have a couple of remarks as well as Bob Geller

23 with MD -- for the state, MDNR.

24 Following all remarks and presentations, then we

25 will open the floor to questions and comments. Now,

there are a couple ways that you can submit questions and comments. One is that you can indicate to me. And if you haven't guessed yet, I'm your moderator for this evening. Let me know, indicate, preferably while your hand is being raised, that you have a question, and I will recognize you at that time.

Or we have two people, one waving yellow cards back there, and we also have another one sitting right next to Charlotte Wienski and Launa Danielson will have yellow comment cards, and you should have received those when you came in. Okay. Fill out those if you would like and return them to either Launa or Charlotte, and they will give them to me, and we will entertain or address your questions at that time.

Now, I must ask that, don't throw eggs at me, but you are limited to two minutes on questions and comments. And we must adhere to that time limitation due to the time that we are limited to this meeting this evening.

In the event that you have a question or comment that will require further clarification, we'll do our best to come back to your question later on in the meeting. So don't be disheartened if we have to cut you off, but we will try to do our best to come back to the question later on.

We should ask, too, when presenting your question,

please give us your full name and the organization that you're affiliated with, and then ask your question or present your comment or issue at that particular time. And that's primarily for transcribing purposes. We would also appreciate it if you would speak clearly and loud enough so that everyone can understand what you're trying to relay to us this evening.

Now, comments received this evening or written comments postmarked on or before May 21st -- and we've changed the comment period. We've extended it from April 21st to May 21st. We had a couple requests to do so, and we've complied to do that. So you have until May 21st. Any comments written or comments this evening will be considered in the decisionmaking process.

Now, information as to where you can send those written comments are in your blue brochure. And again, we will give you an address and tell you exactly who you can forward those comments to very shortly in the meeting.

Now, I'd like to take a minute and introduce to you our technical panel or our panel of technical experts that are going to address your questions and comments later on. We have, as I introduced to you, Dan Wall, Steve McCracken, and Gene Valett. In addition to those three, Mary Picel, project manager with Argonne National

1 Laboratory here; and Rebecca Cato, quarry residuals
2 operables unit manager.
3 We're at a point in our program now where I will
4 turn the floor over to Steve McCracken for his remarks
5 and comments, and then we'll hear from Dan Rowell and
6 Gene Valett.
7 STEVE McCracken: She meant Dan Wall. You
8 said Dan Rowell. Dan Rowell retired a couple of weeks
9 ago.
10 For the benefit of the person that's keeping track
11 of all this, I'm Steve McCracken. I'm the project
12 manager for the Department of Energy. I'm going to keep
13 my comments very short. I think that Gene has the most
14 to say as far as giving people information on what it is
15 that we're proposing tonight.
16 In trying to think about what I thought would be of
17 some value to say. I know most of the people here,
18 whether they're people that work here or people that have
19 just been associated with this work for many years. And
20 many of you, most of you probably remember that we really
21 came up with our plan for how we would proceed at Weldon
22 Spring back in 1988. After a lot of effort on
23 everybody's part to figure out how to agree, we agreed on
24 a path forward, and we've stuck to that since then. And
25 I think that that has contributed a lot to where we are

1 today.

2 That path forward consisted primarily of doing those
3 things that we knew we could do right away that would
4 stabilize the site. We knew that we would have to get
5 back to making decisions on waste treatment and waste
6 disposal, and then finally get to decisions about how to
7 take care of the groundwater, both here at the site and
8 down at the quarry.

9 And to get to those things, we agreed that there
10 needed to be certain major decisions that had to be
11 made. Basically those major decisions that we knew we
12 needed to make were, and I'll do them in the order that
13 they were made, the quarry bulk waste operable unit. And
14 that was a decision to remove the waste from the quarry
15 and put it into safe storage. We made that decision, I
16 think, back in 1991 or so.

17 We needed to make a decision on how to finally clean
18 up the chemical plant site and how to handle all the
19 waste that we would generate over the years that we would
20 do the cleanup activity. We called that the chemical
21 plant operable unit. We made that decision back in 1993,
22 I think. I guess if I get a date wrong, someone correct
23 me.

24 And now today what we're trying to do is to get to
25 those decisions related to groundwater. And I'll be

1 honest with you, my opinion is that we made some very
2 good decisions. We, meaning us, the state, the EPA, the
3 public, and DOE, made some pretty good decisions back in
4 1988. And that was to say let's get on with the work,
5 and in doing that let's try to make decisions at a
6 logical point in time that will allow to us to make good
7 decisions. And that's why we put groundwater decisions
8 off until we have.
9 And I think that we did a darn good job. And the
10 fact that we've been able to stick with our plan kind of
11 shows that we did a good job of planning and reaching
12 agreements in those days.
13 I don't think, I know you can't see this. We can
14 pass these out. We put this -- do you want to pass some
15 of these things out?
16 I put together a story board about three or four
17 months ago to submit, to use for the '99 budget
18 submittal. Every year we have to submit to Congress what
19 our needs are for money for the budget year coming up so
20 that we'll be able to continue our work.
21 I put together what I called a story board to give
22 everybody an idea in Washington about why we are a good
23 place to spend money. And the reason we are a good place
24 to spend money, at least in my view, was that we are what
25 we call a closure project. We are very, very close to

1 being done.

2 And for that reason we are a very good opportunity

3 project for spending money to get the work done. And

4 what I did to show that is I just put together a time

5 line beginning back in 1986 when we arrived at Weldon

6 Spring to today, and from today until we plan to finish,

7 which is in the year 2002.

8 And if you go down through the schedule or the time

9 lines that I've shown, you can get a good idea of the

10 work that we've done over time, the interim actions that

11 we did to stabilize the site.

12 The decontamination/demolition of all the building

13 structures on the site.

14 The remediation of the soil and concrete material on

15 the site, the six hundred and forty thousand yards of

16 that.

17 The quarry remediation, which was the removal of the

18 hundred and twenty thousand cubic yards or so of the

19 waste material that's in the quarry.

20 Cleaning up of numerous vicinity properties, with

21 networks underway now. Some of them have been completed.

22 I think Gene's going to talk about one of them at least.

23 Right now we are commissioning the plant to treat

24 the two hundred and twenty -- I think that number is

25 wrong. The hundred and sixty thousand or so cubic yards

1 of raffinate sludges that are in the waste pits out back.
2 We expect to go operational with that plant in the next
3 several weeks and do all of that work this year. That's
4 our plan.
5 We have also constructed a large disposal cell
6 on-site, and we're in the process of moving the waste
7 into that cell. Our plan is, our work plan is to put
8 about forty percent of the waste material in that cell
9 this year. And if we can stick with it, we'll have as
10 much as ninety-five or ninety-nine percent of the waste
11 in the cell by the end of next year. Very aggressive
12 schedule.
13 But the point is after all this time we're down to
14 the last few things that need to be done and be able to
15 say that we're finished here at Weldon Spring with our
16 job. And, of course, coupled with that is these two
17 decisions that we need to make about groundwater and
18 whatever work would go along with that.
19 And the one tonight is called the quarry residuals
20 operable unit. It is that decision that we're making to
21 go from the end point, which was the excavation of all
22 the material from the quarry. And once we had
23 accomplished that, then we have to make a decision that
24 we have, what additional work we need to do in order to
25 say we're finally done, with the groundwater being the

1 focus of that.

2 So with that, that's all I've got to say. I'm going

3 to turn it over to Gene and let him bring you up to date

4 on what the proposed plan is.

5 MR. VALETT: Good evening. My name is Gene

6 Valett, and I'm the project manager for the quarry

7 operations here at Weldon Spring. And it is my pleasure

8 to be up here tonight and let you know about some of the

9 work that we have completed at the quarry in the past and

10 also some work that we propose to do in the future.

11 I'm going to use overheads for the presentation. I

12 also have copies of overheads up here in case we want to

13 pass them around. They're convenient to take notes on

14 and things like that. So if you want to pass them

15 around, fine.

16 Steve mentioned that we're here tonight to talk

17 about the quarry residuals operable unit.

18 This is work that we propose to do in the future.

19 But I'd like to take just a few moments to step backwards

20 and fill you in on some work that we performed at the

21 quarry to get to this point.

22 Back in 1993, about May of 1993, we started

23 excavation of the bulk waste in the quarry. We completed

24 that job October of 1995. As Steve said, we took out

25 approximately a hundred and twenty thousand cubic yards

1 of bulk waste in the quarry. Now that consisted of
2 soils, railroad ties, drums, structural steel, rubble,
3 rebar, you name it. It was basically what was ever,
4 whatever was put in the quarry. Our primary contaminants
5 were thorium, uranium, and also nitroaromatics. We
6 completed that job at the end of 1995.
7 To give you an idea of what the quarry looked like
8 before we began our excavation, can you see that or can
9 you turn that off?
10 To give you an idea of what the quarry looked like
11 before we began our excavation. I don't know if you can
12 see in your papers that I handed out, but there was a lot
13 of soils dumped in here. You can see some drums. There
14 are a lot of metals. And there was a pond of about three
15 million gallons of water that we had to treat to get the
16 quarry bulk waste out.
17 If you're not familiar with the quarry, it's about
18 four miles south of here. Here's Highway 94 running on
19 the north edge of the quarry.
20 As the work progressed on the quarry, again we were
21 successful in getting the bulk waste out. So here's a
22 picture of a typical day of operations at the quarry and
23 taking out the soils and whatever we encountered down
24 there.
25 The real purpose of the quarry bulk waste excavation

1 was to take the waste in the quarry and take them from an
2 uncontrolled state to a controlled state. So what we did
3 was we sorted and segregated the waste at the quarry and
4 hauled all the waste up to the chemical plant site to a
5 facility we called the temporary storage area.
6 So what you can see in this picture is, this is the
7 fine grain soil pile. And around the fine grain soil
8 pile is rubble that we took out of the quarry. Here's
9 some metals, some drums. And also we had separated some
10 soils out that we thought might be contaminated with
11 nitroaromatics that we may have to do some special
12 testing and treatment.
13 Along with the work at the quarry, we also took
14 advantage of having a project team and subcontractors in
15 the area to clean up a small area along the Katy Trail.
16 This is the Katy Trail right here. The small area was
17 called Vicinity Property No. 9. It was an area that was
18 contaminated with uranium. We took out approximately
19 three thousand cubic yards.
20 Let me just point out for geography purposes real
21 quick. Again, this is the Katy Trail. This is the
22 slough that you'll be hearing a lot about tonight. This
23 was our water treatment plant and ponds that we had in
24 the quarry. The area of excavation for bulk waste was on
25 the other side of this bluff, out in this area.

1 If you were to fly over the quarry today, this is
2 what you'd see. I don't know how many of you people have
3 had that opportunity to visit the quarry, but it's quite
4 a sight now that the bulk waste is out of there.
5 You can see, again, this is Highway 94 running
6 north, right in here. You can see the exposed limestone
7 from the quarry. The fracture patterns that are in the
8 quarry, we spent quite a bit of time at the end of our
9 bulk waste operation flushing those fractures out.
10 There is, it's difficult to see on this picture, but
11 if you want to get around a little later, I can show you
12 on some of the pictures we have on the walls. There's
13 some benches and high walls that we exposed in the quarry
14 also. You can also see that there is water in this
15 picture.
16 Now, we took out the pond that was initially down at
17 the quarry and also the interstitial water within the
18 bulk waste. But we allowed the sump in the quarry to
19 fill up with water as part of our remedial investigations
20 for the quarry residuals operable unit. We wanted to see
21 if water was flowing in from formations or flowing out
22 from formations, or where water was coming from.
23 Actually what we found out was most of the water, if not
24 all, basically comes from rainfall. It's a very tight
25 formation.

1 Throw this up here real quick.

2 This really is the end point of the bulk waste

3 operable unit and the starting of the quarry residuals

4 operable unit. So there certainly are some things that

5 we still need to investigate, even though the bulk waste

6 was out of the quarry.

7 And some of them are, there are some soils that are

8 in the quarry that remain to be characterized because

9 they're inaccessible. There is a small area up in this

10 area that we suspect may have some radium contaminated

11 soils. And also as Steve mentioned, the groundwater in

12 the area. And what we did was, for the residuals, that

13 really expanded our study area from the quarry to the

14 surrounding areas, the groundwater, the slough, and

15 whatnot.

16 So the boundary for the quarry residuals operable

17 unit is much larger than our quarry that we took our bulk

18 waste out of. The quarry we took the bulk waste out of

19 is here. The boundary for the quarry residuals operable

20 unit basically follows this red line.

21 And that study area was determined by the presence

22 of contamination found during the preliminary sampling

23 that we did for our RI.

24 And some of the geography that you need to be

25 familiar with in this slide is, again, the Katy Trail,

1 Highway 94, the Missouri River, the slough, Little Femme
2 Osage Creek down through here, and the St. Charles County
3 Wellfield is located in this area.
4 Now, there's a process that we use, the CERCLA
5 process, that we use to evaluate remedial decisions here
6 on the project. Not only do we sample to characterize
7 during this process but we also perform risk calculations
8 based upon that data and also perform alternative
9 analysis. So as I go forward you are going to see some
10 summaries of this process that we use here on-site.
11 Now where are we at in this process now? We've
12 worked our way through the characterization, remedial
13 investigation, and baseline risk, feasibility study, and
14 proposed plan. I believe I saw copies of the proposed
15 plan outside in the hallway. The public meeting is where
16 we're at now and heading for Record of Decision for this
17 operable unit.
18 Okay. Now, as part of the CERCLA process, we
19 complete a baseline risk, risk calculations, and use the
20 recreational scenario that we consider to be appropriate
21 for the study area. And this scenario follows EPA
22 procedures.
23 I wanted to make a slide up real quick and give you
24 an idea of what this scenario consists of. If you were
25 to spend time in the quarry residuals operable unit study

1 area, four hours, say you visited, say, two weeks every
2 month, about twenty visits per year. Spend about four
3 hours per visit, and you went back for thirty years.
4 Okay. And while you were there you ingested a hundred
5 and twenty milligrams of soil or sediment, you ingested
6 about twenty milliliters of water and fifty-five grams of
7 fish. So you can see that's a pretty conservative
8 scenario for calculating exposure factors for the quarry
9 residuals operable unit.
10 Now, as far as quarry groundwater goes, we consider
11 that it has no access because this is a recreational
12 scenario. Under this scenario there is no access to the
13 groundwater.
14 Now, as a result of sampling and risk assessment,
15 uranium and nitroaromatics were considered for further
16 evaluation. And I might say that as far as nitroaromatic
17 compounds go, we've seen levels in the groundwater go
18 down dramatically since we have excavated the bulk waste
19 out of the quarry. Because you've got to remember, the
20 bulk waste in the quarry was really the source of the
21 contamination in the area. But still, that leaves
22 uranium in the groundwater. And we came to the
23 conclusion, using this recreational scenario, that the
24 focus of additional work should be centered upon the
25 uranium in the groundwater, particularly that groundwater

1 north of the slough area.

2 Now, the extent of that groundwater, we throw this

3 air photo back up. Remember, I showed you where the

4 quarry residuals study area was at. It was a larger area

5 here. The extent of the uranium groundwater in the

6 quarry is north of the slough, between the slough and the

7 quarry proper we call it. Okay. This area right here.

8 Again, that's the red circle in there.

9 This is based upon over ten years of sampling and

10 characterization information. We know that we have high

11 uranium levels consistent north of the slough. We know

12 that. We also know that south of the slough levels of

13 uranium are similar to naturally occurring levels. So

14 that's the reason why we decided to focus our study on

15 that part of the groundwater.

16 So we made some conclusions. We decided to have

17 remediation to reduce, remediation to reduce human health

18 in the environment. The studies that we did with the RI

19 and baseline risk assessment indicated that we didn't

20 have -- let me say this one more time. I'm glad Mary's

21 here tonight. Remediation to reduce human health and

22 environmental risk was not indicated in the studies that

23 we did. Okay. Thankfully, we have good people like Mary

24 that do these kind of studies so guys like me can stand

25 up here and at least stumble over it. Okay.

1 We considered it prudent though to identify an
2 option that could reduce uranium from that quarry
3 groundwater. And we figured that would reduce the amount
4 of uranium that could potentially migrate to the
5 wellfield. Okay. So we started taking a look at some
6 alternatives.
7 These are alternatives that are in the feasibility
8 study. And we looked at actually over thirty-six
9 applicable technologies to reduce uranium in this area
10 but boiled it down to six alternatives that we decided to
11 carry forward in the evaluation.
12 Alternative No. 1 is no action. That's basically an
13 action you have that compares with other alternatives.
14 No. 2 was monitoring with no active remediation.
15 That's simply continuing sampling and analysis of
16 groundwater in the wellfield area north of the slough.
17 No. 3, groundwater removal with on-site treatment.
18 That's basically installing trenches in the slough area.
19 And the problem we had with that was that it took over a
20 hundred years to capture that groundwater and remediate.
21 The fourth one we had was containment. Basically
22 that's a vertical barrier that would contain the
23 groundwater in the area north of the slough.
24 Number 5, in situ treatment using permeable
25 barriers. Basically that's an underground structure much

1 like an interceptor trench that's filled with a media
2 like iron where the groundwater passes through the iron
3 and the uranium stays behind.
4 And then the final one was groundwater removal in
5 selected areas with on-site treatment. That's much like
6 Alternative No. 3, except it focuses on the area that has
7 the highest amount of contamination.
8 Let me just say real quick that No. 5, permeable
9 barriers, that's really a new technology. And because of
10 that, that alternative is not considered any further.
11 No. 4, containment, there's a lot of uncertainty in
12 containment. If the structure breaks down, then you
13 either have to replace the structure or you have
14 groundwater flow that's not contained like you wanted it
15 to have.
16 Again, I mentioned No. 3, about the time, well over
17 a hundred years to capture the groundwater in the larger
18 area of the plume. And to be honest with you, there is
19 levels of uranium in that large area of the plume that
20 just doesn't make any sense to be capturing it.
21 So with that in mind, we boiled that down to our
22 proposed alternative, and that was No. 6. And this
23 alternative would involve the removal of groundwater in
24 those selected areas, those areas that have high
25 groundwater concentrations. And this would be with an

1 interceptor trench that would be built underground. And
2 water meeting discharged limits would be released at an
3 appropriate discharge point.
4 Let me show a real simple schematic. And you have
5 to understand that this is simply a proposal. We haven't
6 completed it in any detail, design work at all. So what
7 we would do, is that area of higher uranium concentration
8 is basically in this area, north of the slough, between
9 monitoring Wells 1014 and 1016. The trench would be
10 installed to bedrock. And we would also have a piping
11 system within this trench that we could pump, pump the
12 groundwater that came into the trench and then transport
13 that water to treatment, if treatment would be necessary,
14 and then again released to an approved area.
15 Now, what we intend to do is operate this facility
16 for a two-year period and compare our actual results that
17 we get from the trench with the expected performance.
18 And if you're interested in expected performance that
19 we've calculated through models, the feasibility study
20 has a graph in there that you can take a look at.
21 Now, there is other work that needs to be done at
22 the quarry also. And I apologize for the, you're not
23 being able to see this well. I brought in the picture
24 with me that the slide was made off that hung on the
25 wall. We had one of our people in our engineering

1 department, who's obviously better at art than I am, come
2 up with a conceptual picture, a vision, if you will, of
3 what the quarry could look like under a backfill
4 situation.
5 We intend to backfill the quarry basically to reduce
6 physical hazards in the quarry. You can see from the
7 picture I showed you before, high walls, and benches.
8 And there's large cracks and fissures that are open in
9 the quarry as a result of the flushing that we did in the
10 bulk waste project.
11 Also by backfilling we have no more ponding in the
12 quarry. And this is also effective to prevent residual
13 contamination in the cracks and fissures from mobilizing
14 to the surface. So that only further enhances the low
15 potential risk associated with external gamma and
16 ingestion.
17 So, when do we propose to do this work? We propose
18 to do our engineering work and have that completed by May
19 of '99. Go through a procurement phase, and that's
20 basically where we hire a subcontractor to do the
21 interceptor trench construction and also the quarry
22 backfilling construction. That construction, or those
23 two items, would take place from July '99 to September of
24 2000. The operation of the interceptor trench, like I
25 mentioned before, would operate for two years.

1 So what would happen is, we would be working in the
2 quarry and also in the interceptor trench area at the
3 same time so we could get the trench in operation by May
4 of 2000. The cost of all this work would be around 8.7
5 million dollars and that would be construction and
6 operations costs.
7 Finally, I wanted to put a slide up to tell you just
8 a little bit about an additional element of protection
9 that we have the groundwater in the slough area. In
10 1992, we prepared a wellfield contingency plan. Now,
11 that plan was intended to supplement our bulk waste
12 removal project. If for some reason during bulk waste
13 the St. Charles County Wellfield would have been
14 affected, we had the plan in place. Again, this plan is
15 also based upon over ten years with the sampling and
16 characterization.
17 And the reason that we prepared the plan is that in
18 the unlikely event that one or more of the production
19 wells became threatened, and the production wells again
20 are in this area. And we have monitoring wells in this
21 area. But if one or more of those production wells
22 became threatened due to migration of uranium, we had
23 appropriate levels of response. And those levels run
24 from sampling, monitoring, even to well replacement.
25 So I just wanted to take a minute to let you know

about the contingency plan that we do have on the books. And with that, I am finished. And Cassandra.

MS. SAVAGE: Here I am.

MR. VALETT: It belongs to you. Next phase. Thank you very much. I appreciate it.

MS. SAVAGE: I now would like to invite Bob Geller. He has a few comments.

MR. GELLER: Did the EPA want to speak first?

MR. WALL: You can go first.

MS. SAVAGE: I'm sorry. Dan Wall.

MR. McCRACKEN: Come on, Dan, you go first.

MS. SAVAGE: I'm sorry, Dan, I apologize.

MR. WALL: Well, my name is Dan Wall. I work for the EPA out of the Kansas City Region 7 office and I've been involved in this project since 1985. Guess that's, you know, most of my adult life.

And my job is to become involved with and to review what it is the DOE is proposing to do out here, not just on this, but over the entire scope of the project. And, you know, I offer technical input where I can and work to assure that what we're doing out here complies with the environmental laws and is technically appropriate.

I'm here tonight just to let you know that I've been pretty heavily involved in the ongoing study that's gone down at the quarry and involved in the conceptualization

of the activity that Gene proposed or the proposal that Gene explained.

I guess my primary purpose here tonight is just to be available in case anybody has any specific questions of EPA. I guess that there is a couple of things that I would hope that people would get out of reading the feasibility study and get out of what they may hear here tonight.

Number one, I think I agree, or we agree, that there has been substantial data collected down there over a decade or so. That data indicates that we're not seeing measureable impacts in the alluvial well, the larger alluvial wellfields at the slough. That's good news in that we don't have immediate threats to the wellfield. And on the flip side of that, the natural factors that make it, that prevent that sort of, that are minimizing that sort of migration also make it very difficult to recover these materials.

Gene didn't talk much about our predictions regarding the success of extracting this material. But I think you can, if you look at the feasibility study you will see some of that. We still think it's prudent to do what we can to recover as much of that material as we can, even if we can't get it all.

And I guess the success or the level of success or

1 failure we achieve will remain to be seen assuming that
2 we go ahead with this proposal. I think we think that
3 the option as proposed gives us our best opportunity to
4 recover as much of that uranium as possible. But I think
5 the bottom line is that, as I said first, that we're not
6 seeing measureable impacts in the larger alluvial aquifer
7 and so I guess with that, I'll just finish.
8 MS. SAVAGE: Thank you. Bob?
9 MR. GELLER: Since I'm not quite as old as
10 Dan, I'll go ahead and read some prepared remarks here.
11 Once again, my name is Robert Geller. I'm with the
12 Missouri Department of Natural Resources, and I will
13 provide you with a copy of these comments when I get done
14 in case you have a hard time understanding me.
15 I'm in the Hazardous Waste Program, and I work in
16 Jefferson City. In the role that I play, as far as chief
17 of the Federal Facilities Section, I'm responsible for
18 overseeing the cleanup of the federal government's
19 actions as they relate to cleanup of Department of Energy
20 or Department of Defense sites throughout the state of
21 Missouri that are essentially contaminated with either
22 radioactive or hazardous waste.
23 For several years our agency, the Missouri
24 Department of Natural Resources, has focused considerable
25 effort on the cleanup of Weldon Spring. Our engineers

1 and environmental specialists oversee all phases of the
2 site activities from the initial planning of remedial
3 investigations to the final design, including
4 implementation and confirmation of cleanup actions.
5 Weldon Spring field staff and our field office is
6 staffed full time to provide daily onscene oversight
7 activities of the Weldon Spring site, primarily to assure
8 that the cleanup complies with the applicable laws and
9 regulations, and the activities are performed in a manner
10 which is protective of the public and for the
11 environment.
12 As some of the information was presented earlier, in
13 the 1940s the Army used the quarry to burn -- I don't
14 know if you're familiar with this, but they did use the
15 quarry to burn and dump waste from its manufacture of
16 explosives. That was followed in the 1960s with the
17 Atomic Energy's Commission activities, the predecessor to
18 the Department of Energy, when they use the quarry to
19 dump waste from the processing of the uranium and thorium
20 ores, including waste from uranium and thorium
21 concentrates, uranium- and radium-contaminated rubble,
22 and thorium residues.
23 While we acknowledge that the circumstances in the
24 state-of-the-art public purpose of the past activities,
25 we do affirm DOE's agreement to ensure that the

1 environmental impacts of the Weldon Spring site are
2 thoroughly investigated and appropriate remedial actions
3 are taken which are necessary to protect the public
4 health, welfare, and the environment.
5 Our primary concern at the Weldon Spring quarry has
6 been, and continues to be, the protection of the St.
7 Charles County Public Wellfield, which is located just a
8 half mile, as Gene has shown on the photos, south of the
9 quarry along the Missouri River.
10 Chemical and radioactive contamination from the
11 quarry have migrated from the quarry and has contaminated
12 the groundwater in the alluvial aquifer which serves as a
13 drinking water source to over seventy thousand residents
14 in St. Charles County. No contamination of the public
15 water supply has been detected that we are aware of, but
16 the ultimate fate and the long-term risk to the public
17 and the environment and the best method to clean up the
18 contamination from the quarry remains uncertain.
19 Much of the radioactive and hazardous waste in the
20 quarry was removed under the quarry bulk waste, as
21 previously described, and transported to the chemical
22 plant site for placement in the ultimate final disposal
23 cell currently under construction. The removal of the
24 quarry bulk waste and its temporary storage at the
25 chemical plant eliminate a significant source of

1 radioactive and chemical contamination to the environment
2 and was a major milestone in the cleanup of this site.
3 However, the quarry bulk waste constituted only the
4 waste which could reasonably be removed using standard
5 construction equipment and activities.
6 Contamination, including flakes of the yellowcake,
7 the uranium ore concentrate, remains in the cracks and
8 crevices of the quarry, quarry floor, and the walls as
9 well as along, contamination along the rim of the high
10 walls.
11 The quarry residuals operable unit is designed or
12 was designed to address any remaining radioactive and
13 hazardous contamination that was left in those cracks,
14 fissures, soil sediments, and/or along the perimeter of
15 the high walls as well as the groundwater contamination.
16 The Department of Energy's proposed plan to
17 construct an interceptor trench to extract and treat
18 on-site contaminated groundwater from selected areas and
19 long-time monitoring of the groundwater is what we
20 understand to be the preferred alternative that's being
21 proposed tonight. While there remains significant
22 concerns regarding the details of the proposed plan, at
23 this point we do strongly support DOE's decision to
24 actively clean up the groundwater instead of relying on
25 the wait-and-see approach of monitoring only.

1 Our agency continues to review the proposed plan and
2 will make our final comments after reviewing comments
3 from the public as well as the Department of Energy's
4 responses to those comments.
5 Among some of the specific concerns we have of the
6 proposed plan are that the Department of Energy's
7 proposed remedy does not appear to have as its ultimate
8 goal achieving the groundwater cleanup standards that are
9 already established. The interceptor trench appears
10 intended to provide necessary data to demonstrate what is
11 considered technical impracticability and waive the
12 groundwater cleanup standards. We do not object to the
13 proposed plan, including as an additional goal the
14 collection of data intended to demonstrate this effort.
15 However, the proposed remedy should have as its goal
16 attainment of groundwater cleanup standards, and the
17 remedy will continue to operate until cleanup standards
18 are attained or waived.
19 In addition, no cleanup criteria are provided for
20 the remaining contamination in the cracks. We don't see
21 in the proposed plan an approach to clean up the
22 contamination in the cracks, crevices, and/or along the
23 perimeter areas of the quarry proper or for the Femme
24 Osage Slough. Any contamination left in the quarry is a
25 concern because it is still a source and can remain a

1 source of contamination to groundwater because it
2 currently involves a risk from direct exposure. At a
3 minimum, the cleanup criteria should be at least as
4 protective as those criteria established for other areas
5 of the Weldon Spring site.
6 The proposed interceptor trench does not include
7 containment as a remediation goal. Including plume
8 containment with groundwater extraction as a remediation
9 goal is appropriate because the proposed plan would leave
10 residual contamination in the quarry, which is a source
11 of further groundwater contamination which may ultimately
12 enter the alluvial aquifer and cannot leave except
13 through the public wells.
14 The proposed plan as described this evening takes
15 credit for the Wellfield Contingency Plan, which
16 ultimately describes groundwater monitoring, action
17 levels, and planned responses to ensure the safety of the
18 drinking water supplied to the residents of St. Charles
19 County from this wellfield. In addition to whether the
20 action levels and plan responses are appropriate, it
21 remains unclear to us who will be ultimately responsible
22 for implementing any response.
23 Since the proposed plan would leave contaminated
24 groundwater as described, which may continue to threaten
25 the St. Charles County Wellfield, it may limit the

1 ability of that community to expand production of the
2 wellfield, ultimately providing drinking water sources as
3 the area rapidly grows. The Director of the Missouri
4 Department of Natural Resources, who is identified as the
5 trustee for natural resources, may act on behalf of the
6 public to assess and recover damages to this natural
7 resource.
8 Our goal is the cleanup of the contaminated
9 properties to levels protective of unrestricted use.
10 Reliance on institutional controls should be minimized
11 and used only as a last resort when active cleanups are
12 impracticable. Future generations should not be unfairly
13 burdened with the legacy of radioactive and hazardous
14 waste and the responsibility to manage, perhaps into
15 perpetuity, those wastes to prevent unacceptable
16 exposures. We question the prudence of leaving
17 contamination in the aquifer near the drinking water
18 wells in one of the fastest growing areas in Missouri.
19 The drinking water is presently yours, as residents
20 of this area, but the water itself is a resource which
21 belongs to the future generations. We encourage you to
22 weigh the limited actions the Department of Energy
23 proposes against the risk for the public and the
24 environment presented by the remaining contamination.
25 The Missouri Department of Natural Resources

1 appreciates the opportunity to comment on this proposed
2 plan. We look forward to working with the Department of
3 Energy and the public to clean up any residual
4 contamination at the Weldon Spring Quarry effectively and
5 in a manner which adequately protects public health,
6 welfare, and the environment. Thank you.
7 MS. SAVAGE: Now comments from Glenn Hachey.
8 DR. HACHEY: My name is Glenn Hachey. I'm
9 chairman of the Weldon Spring Citizens Commission. We
10 are a group of volunteers that were formed in 1995.
11 We're appointed members, and we've been tracking the
12 progress in this project approximately two and a half
13 years now.
14 What I would encourage all of you who are residents
15 here or have an active interest in following this project
16 in which to make comments, is the Citizens Commission
17 will basically be formulating some comments as the
18 regulatory people are doing as well and will be
19 submitting written comments. And if any of you have any
20 concerns, questions, or what have you, we will be more
21 than happy to listen to them and incorporate them into
22 our comments, our written comments.
23 We have monthly meetings. Coffee meetings, I guess
24 is what they are. We sit around and we do not hold our
25 meetings in a formal fashion. We hold them in a

relatively informal fashion. We would be more than happy to have any of you attend. Once a month, I think they're the third Thursday of every month. You can call our office in the old courthouse in St. Charles at 949-7545, and we can help you arrange to meet with us at one of our monthly meetings.

If you have any questions tonight, Larry Sharp is another member. Larry stand up, you can't hide.

Larry and I represent the commission. Grab us, tell us what your concerns are, introduce yourself, and we would be happy to talk to you.

Have any other individuals that would like to make comments tonight, like I said, feel free to comment, tug us on the shirt and let us know who you are. Thank you.

MS. SAVAGE: I would now like to invite the panel, Steve McCracken, Gene Valett, Mary Picel from Argonne National Laboratory, Dan Wall, and Rebecca Cato to convene up front, please.

If you have question cards completed, would you please pass them to the end of the row, and we can collect those. If not, we will entertain verbal comments and questions.

We are ready now for questions and comments.

Yes.

MR. MCQUEEN: John McQueen, technical

1 consultant for Francis Howell School District.

2 Gene, have you made any estimates of the amount of

3 sludge you'd generate from treatment and how you'd handle

4 the sludge?

5 MR. VALETT: No. We haven't made any estimates

6 of the sludge yet, but certainly it would be a lot less

7 than our current plant generates. And how we would

8 handle that, if the cell were open at the time of the

9 sludge generation I'm sure that we would transport that

10 up to the site and put it in the cell. And quite

11 obviously, if the cell's not open we'd have to find other

12 means off-site to handle that.

13 MR. MCQUEEN: I was leading up to that. This

14 process is not going to affect the schedule of completion

15 of the cell then, I take it?

16 MR. VALETT: No, not at all.

17 MS. SAVAGE: Any other questions?

18 MR. GARVEY: Mike Garvey.

19 There was some discussion that the slough was some

20 form of barrier to the migration of the contaminants.

21 And is there, I realize it's a difficult thing to try to

22 remediate that slough, but what, other than a plume of

23 contaminants that entered into alluvium, I guess my

24 question is, where did it go from there? Did it go into

25 the slough? Did it go in large bedrock cracks, fractures

1 under the slough, and is it being dissipated across the
2 whole alluvium? And what is the reason for not
3 attempting to remediate the slough itself?
4 MS. CATO: The best I can answer the question
5 is regarding fate and transport with -- Rebecca Cato,
6 with the PMC. We've done some, through our testing we've
7 modeled, not modeled, but monitored the geochemical
8 processes that are occurring and got into the adsorption
9 that can occur under the soils. And what we found is
10 occurring, is uranium-contaminated groundwater was
11 seeping from the quarry through the bedrock into the
12 alluvium. And a combination of the tight soils and the
13 uranium binding onto the soils, binding onto the organics
14 that are down there, having reactions with the
15 geochemistry of the groundwater, was causing uranium to
16 precipitate out, is one of the major reasons that the
17 uranium has not migrated south of the slough. And then
18 also you have the large dilutional effect of the
19 wellfield itself of any others that would possibly go
20 through.
21 But it's not migrating through the bedrock under the
22 slough. It's entering the alluvium, and it's going
23 through many reactions in that area. And it's one of
24 reasons that we haven't seen it south of the slough.
25 So I don't know about the, you talk about the

1 remediation, remediation of the slough itself. Our
2 characterization has shown that the uranium levels in the
3 sediments of the slough are within background ranges. So
4 the slough sediments aren't contaminated, and the surface
5 water is -- I can't give you the number -- is low. It
6 shows some impact, but mainly the area next to where the
7 groundwater impact has occurred there's some seepage of
8 groundwater into the slough. But Mary can discuss the
9 risk assessments that were associated with those results.
10 Does that answer your question?
11 MR. GARVEY: What is the concentration of
12 uranium in the slough water?
13 MS. CATO: Presently fifty picocuries has been
14 about the maximum picocuries.
15 MR. GARVEY: That's the lower or the upper?
16 Lower slough?
17 MS. CATO: The upper slough. The lower slough
18 is significantly less.
19 MS. SAVAGE: Does that answer your question,
20 sir?
21 MR. GARVEY: Clear as mud.
22 MR. McCRACKEN: I want to go back to Don
23 McQueen's question on affecting the schedule.
24 The slough, this action will not affect the
25 restoration if we get it done within the time frame that

we have the cell open. And if we generate contaminated material prior to, subsequent to closing the cell, then obviously that contaminated material is going to have to go somewhere else.

All that hinges on getting a decision made for those things that would generate contaminated materials down. And it's not just the water treatment itself, it would also be any cleanup along the rim and things like that, which can only be done after we restore the quarry. So all those things have got to get done in order to get access to that material and remediate it while the cell is open. Or else it will either impact the schedule for the workup here, or else we'll have to find another place to take this stuff.

So it is not nontime critical. It is time critical.

MS. DREY: Kay Drey.

Is somebody going to explain why you're not, you're not cleaning up the slough? Because you say the levels are not significant enough; is that what you're saying?

MS. PICEL: Yeah. The levels that we have found in the surface water and the sediment and the fish, there were some levels of uranium but they're low. They're just, I think Becky mentioned for the sediment, just almost background, close to background. Surface

1 water, we found as high as fifty picocuries per liter in
2 the upper part of the slough and that's because it's
3 nearer the groundwater discharge area. And then the
4 fish, we also had samples where we got some
5 concentrations and plugged it into a calculation, that's
6 per EPA procedures, and found that those risk levels are
7 within, below actually, below the acceptable levels that
8 EPA has given us as guideline.
9 MS. DREY: Permissible levels. I don't think
10 they're acceptable.
11 MS. PICEL: Yes. Acceptable levels, right.
12 MS. DREY: Do you know what the highest level
13 was in the fish per gram?
14 MS. PICEL: Do you have --
15 MS. CATO: I do. It's point two one picocuries
16 per gram.
17 MS. PICEL: Of uranium..
18 MS. CATO: Of uranium.
19 MS. DREY: Was that in the edible part of the
20 fish or the whole fish?
21 MS. CATO: No, it was a whole fish sample.
22 MS. DREY: So you put everything in together?
23 And you said fifty picocuries per liter was the upper
24 slough?
25 MS. CATO: That was the upper.

MS. DREY: Was that average or the highest?

MS. CATO: That was the max.

MS. DREY: That was the maximum? It's very, it's really very perplexing because, that you don't find higher levels in the sediment and in the fish and in the water. Because all these years they've said the reason the highly contaminated groundwater in the quarry didn't get to the wellfield is because it all got stopped by the slough. Somehow miraculously it never went beyond the slough. And yet the slough you're saying -- I mean, fifty picocuries per liter is a lot, a lot higher than natural background.

MR. McCRACKEN: I would like to comment. My name's Steve McCracken.

Actually fifty picocuries per liter is not a lot.

MS. DREY: What is it in nature, Steve?

MR. McCRACKEN: The drinking water standard being proposed by EPA is twenty. So it's about two times drinking water standard. It may be perplexing that there isn't contaminants in the sediments of the slough, but there isn't because we've characterized the slough and they're not there.

And so my question to you would be, are you suggesting that perhaps we just haven't looked and haven't found it, or are we just -- or, I mean, are you

1 questioning our studies would be what I'm asking you.
2 You're suggesting that it ought to be there but we're not
3 finding it. But we have not found it.
4 MS. DREY: I think it's in the wellfield.
5 MR. McCRACKEN: I see. And what --
6 MS. DREY: And the reason I say that is because
7 it had -- Mike was trying to ask you, where is it? Where
8 is the groundwater that's the highly contaminated
9 groundwater that has been leaving the quarry all these
10 years that you all have said, the Department of Energy
11 has said it's all in the slough, that's why it's not in
12 the wellfield. I'm asking just as Mike did, where is it?
13 MR. McCRACKEN: And my question again would be,
14 on what basis do you make that statement? There's no
15 data that would indicate it.
16 MS. DREY: Where did the groundwater go?
17 MR. McCRACKEN: The groundwater is in, the
18 groundwater is the groundwater. What we're saying is the
19 contaminants are in the groundwater north of the slough.
20 That's where we find them. And our data is very capable
21 of detecting them there. But the same, the same methods
22 that we use to find the contaminants north of the slough,
23 we applied to groundwater south of the slough, and it's
24 not there. Therefore, if the science is correct that it
25 shows that it's north of the slough, then the science

1 must be correct that it shows it's not south of the
2 slough.
3 MS. DREY: Maybe you read the article in the
4 New York Times on March 23rd. It starts out, well, the
5 headline is: Admitting Error at a Weapons Plant. "For
6 almost fifty years, managers at the nuclear weapons plant
7 with the nation's largest concentration of radioactive
8 waste in Hanford, Washington, steadfastly maintain that
9 leaks from underground tanks were insignificant because
10 the radioactive material would be trapped by the
11 surrounding soil. But they now admit that were wrong.
12 And" --
13 MR. McCRACKEN: What's your point, Kay? What's
14 your point?
15 MS. DREY: I want to know, where did the
16 contaminated groundwater go? We have been told all these
17 years --
18 MR. McCRACKEN: -- It hasn't gone anywhere.
19 It's still there. The contaminated groundwater is right
20 where it's always been.
21 MS. DREY: Oh, it just doesn't move? Then how
22 do you keep -- you thought there would be three million
23 gallons of water in the quarry and you've dumped what,
24 fifty million?
25 MR. McCRACKEN: Let me comment on that. You've

1 tried very many times to twist our words.

2 The sump in the quarry, that when we started the

3 work, was about a three-million-gallon sump. We also

4 knew that the interstitial pores of the quarry waste

5 material would probably add up to another eleven million

6 gallons. We also knew that during the course of the

7 cleanup of the quarry, it would probably rain, which it

8 did, because it took about two years to do the work. So

9 that would generate more water. So, ultimately, I think

10 we've treated around thirty million gallons of water down

11 there. Frankly, I don't see --

12 MS. DREY: -- I think it's more than thirty.

13 Isn't it fifty --

14 MR. McCRACKEN: Pardon me. When I get done,

15 you can have a turn.

16 Frankly, I don't see the issue. The reason I don't

17 see any issue is because every bit of water we have ever

18 treated down there, we have treated it far better than

19 the criteria necessary to release it. So what difference

20 does it make how many gallons that we have treated?

21 Whether it's three million or thirty million gallons,

22 what is the difference; what difference does it make?

23 MS. DREY: I am curious -- okay. So fifty

24 million gallons have accumulated --

25 MR. McCRACKEN: -- No, no.

MS. DREY: As I understand it, they have just dumped batch number fifty something from the quarry.

MR. McCRACKEN: I'm not sure.

MS. DREY: And I don't know whether it's one million per batch or two million. Somebody here should know.

MR. McCRACKEN: Before we're done it will be that many.

MS. DREY: I think it's already that. But the point is, there is groundwater that leaves the quarry.

MR. McCRACKEN: True.

MS. DREY: And it's contaminated. I don't mean right now because you -- I mean, it's still contaminated but it's less contaminated because you've taken most of the solids away. But I'm asking about what's happened over the years to the slough, and I have a report that shows contaminated fish in the slough. But if you all have been saying all these years that contaminated water from the quarry has gone to the slough and stopped there, how come the slough isn't more contaminated?

MR. WALL: I'll just take a shot at it. It's a function of the geochemical reactions that she is trying to explain. Where you have an environment with low flow, tight soils, lots of clays, heavy organics, you have a situation that's conducive to absorption of the uranium

as it moves through the contaminants --

MS. DREY: -- stone, which is what they had trouble with out in Hanford?

MR. WALL: As you move beyond that -- I don't think anyone's saying that no uranium has migrated into the wellfield. But as you move into the, farther out into the wellfield, or out into the alluvial regime, the flow becomes greater and has a diluting effect. The concentration of uranium in the ground, in the groundwater becomes less due to the absorptive effects, and you just don't see a measurable significant, if you will, impact in the alluvial aquifer. No one's, I mean, it's not -- there is no magical boundary that prevents uranium from going past the slough. It's just a function of those natural processes that are occurring that make it hard to detect.

MS. SAVAGE: With that, I think we've reached our time limit, and we will come back, Kay, if we have time.

Are there any other questions or comments? Then we can continue with this discussion, if not.

MR. McCRACKEN: So you can get another two minutes, Kay.

MS. SAVAGE: I have one from Mary Halliday.

MS. HALLIDAY: What will happen if the

1 untreated water is still showing high levels of uranium
2 in May of 2002?
3 MR. McCRACKEN: Let me try that one, Kay --
4 Mary. What we would plan to do, what we would do during
5 the course of the work that we're proposing to do is
6 evaluate how good we're doing. And if we find that there
7 is a substantial benefit to continuing the work, then
8 that's what we would do.
9 But what we're looking to do -- but during the
10 course of trying to put this trench into the most
11 contaminated area and try to make, and try to achieve a
12 remedial action that achieves some benefit, we would also
13 be collecting data to determine whether or not proceeding
14 would have a substantial benefit.
15 And that would mean that if we find, for instance,
16 that our extraction works better than we think that it
17 would right now, then we've agreed in our discussions
18 with the state and the EPA that we would be compelled to
19 reconsider based on these, the fact that we're finding
20 that it's achieving much more than we would anticipate.
21 Having said that, though, we feel as though we would
22 be looking to be able to determine that it would achieve
23 something substantially beneficial in order to continue,
24 but we're certainly not ruling it out.
25 MS. HALLIDAY: So at this time it's really

unknown as to --

MR. McCRACKEN: Well, it depends on who you talk to. There's a lot of people that think this trench, we know exactly what's going to happen. But it will be an unknown by the time we get to the year -- it will not be an -- for those people that are optimistic perhaps that it will do better than the studies that we have done so far would indicate that it would do, we will certainly know that by the year 2002. Yeah, if we start in 2000, then in 2002.

MS. SAVAGE: Mr. Garvey, do you have a question?

MR. GARVEY: When you look at the characterization of what we've got in the last ten years, it seems as if RMW 2 is picking up something slightly higher than any of the other monitoring wells and it's screened all the way down. Granted it's not picking up, you know, contaminants where it's a health risk at this point in time, but it indicates a plume of some form.

And I guess my question is, what's going to happen with DOE's monitoring of that wellfield after DOE is gone? At what point, I don't know that you can ever say it's a closed deal, because you've got contamination in the wellfield. So what's the long-term monitoring, I guess, of the situation?

1 And is there any consideration to, I know we've
2 talked about, you know, whether there is more
3 contaminants at a lower level where there is a more
4 transport potential because of the size of the granules,
5 etc. Is there any consideration of trying to do a staged
6 well before the whole thing is said and done in addition
7 to the wells that are already out there?
8 MR. McCRACKEN: I'll start and somebody else
9 will have to finish when it gets to the more technical
10 part.
11 But clearly long-term monitoring is a given. I
12 mean, that -- let's assume that our models are correct
13 and it would take a hundred -- regardless of how long
14 you're having to pump and treat, as long as there is
15 substantial contamination down there that we're not
16 confident wouldn't migrate into the wellfield, we're
17 going to have to monitor. And that's going to require
18 long-term monitoring. That's a given.
19 What's not a given is whether we -- how long it's
20 beneficial to really try and pump and treat down there if
21 you're really not getting anywhere. That's what's not a
22 given. The other part is. There is just no question
23 about it.
24 MR. MCQUEEN: Yeah, Don McQueen again.
25 I notice you've got eight months there for

1 engineering. Are you doing additional investigation for
2 that engineering during that time?
3 MR. McCRACKEN: Yeah. Certainly we plan on
4 doing some geotechnical tests along the access of the
5 proposed trench area. And Becky I think is planning on
6 doing some characterization on that also.
7 MR. MCQUEEN: Will there be another public
8 hearing prior to implementation of this remediation?
9 MR. VALETT: Not that I know.
10 MR. McCRACKEN: There is not one planned.
11 That brings up an interesting point though. One of
12 the things we have discussed is what happens in the year
13 2002 when you have carried out this proposed plan,
14 assuming that this is the decision we've made.
15 And, frankly, there was a question raised by the
16 state. Their interest is what public involvement there
17 would be. And we have discussed that. We would
18 certainly expect there to be public involved at that
19 time, irrespective of what you would do at that time. So
20 that we would commit to, plan to commit to so that we
21 don't let that fall in a crack anywhere.
22 But no, Don, to your point, there are no plans to
23 have additional public meetings. Certainly, we're
24 willing to meet with anybody at any time to talk about
25 where we are and what we're doing. You know that.

1 MS. DREY: I'm surprised at the finding that
2 the water in the quarry accumulated from rain. So that
3 means that, you know, why didn't the three million
4 gallons in the sump keep getting more and more if there
5 was no way for it to get out because it was so tight as
6 you've describe it?
7 MR. McCRACKEN: Well, again, I'm not -- I'll
8 defer to someone else. But one, you get up to a certain
9 level in a quarry, clearly there are cracks and fissures
10 that are connected to the groundwater. I mean, we know
11 that. And I think that what Gene was getting at is that
12 that very bottom portion of the quarry is a very tight
13 formation, but once you get up a little bit higher, we
14 know that there are many cracks from the quarry. At
15 least in my opinion, that's what explains the significant
16 reduction in nitroaromatics perhaps, because we were
17 getting those right there in the rim wells. And as soon
18 as we removed the waste, the levels in the rim wells in
19 the nitroaromatics went down dramatically. So we know
20 there is a connection once you get up high enough in the
21 quarry.
22 Now, do you want to add to that?
23 MS. CATO: I think you answered it.
24 MS. DREY: I mean, in a limestone quarry you'd
25 think there'd be -- limestone is porous.

1 MS. CATO: What there is, we've done
2 characterization. There's three bedrock units. There's
3 the Kimmswick, which is the upper one; the Decorah, which
4 is what the base the quarry is located in; and then the
5 Plattin, which wasn't encountered during quarrying
6 activities.
7 And the Kimmswick is highly fractured and weathered.
8 And as you look in the photos of the quarry, you can see
9 one of the side shot, and you'll see that the fractures
10 pinch out into the Decorah. And part of that is because
11 it's a less fractured formation and the higher shale
12 content of it, which the majority of the water in the
13 quarry right now has gone up to that level more or less
14 of what we're calling the Kimmswick-Decorah contact.
15 Below that it doesn't leave from the quarry. Above that
16 it will go through some of the fractures that are in the
17 quarry wall.
18 MS. DREY: Can you remember what the levels of
19 uranium were before the exhumation began? What were
20 they?
21 MR. McCRACKEN: In the water?
22 MS. DREY: In the water.
23 MR. McCRACKEN: It ranged up to 2000. Not that
24 high?
25 MS. CATO: Nine hundred.

1 MR. McCRACKEN: It was up to 2000 at times in
2 the sump. 2000 picocuries per liter.
3 MS. DREY: Do you remember what the gross alpha
4 was?
5 MR. McCRACKEN: No.
6 MS. DREY: Do you know what it is now, the
7 gross alpha? In the slough, I should say, forgetting the
8 quarry question. In the slough?
9 MR. McCRACKEN: (Shakes head.)
10 MS. CATO: I have an upper concentration, upper
11 concentration of about thirty-seven.
12 MS. DREY: Less than uranium is what you're
13 saying?
14 MS. CATO: Correct.
15 MS. DREY: Can you explain that?
16 MS. CATO: It's not present.
17 MS. DREY: Why would it be less than the
18 uranium which gives off alpha particles?
19 MS. BLUNT: Well, the uranium was the maximum
20 number.
21 MS. DREY: Which was fifty?
22 MS. BLUNT: But she's saying the maximum --
23 MS. SAVAGE: What's your name?
24 MS. BLUNT: Deb Blunt.
25 MS. SAVAGE: Deb Blunt.

MR. McCRACKEN: Kay, we'll get you an answer to that. I don't know what the answer is. We know that the uranium that we're seeing in the water now is running around fifty picocuries per liter. We also know that in the past it's been higher than that. That's my recollection.

MS. SAVAGE: Another two-minute warning here, Kay.

MS. DREY: What is the schedule for tonight? Can you explain it?

MR. McCRACKEN: We've got till nine o'clock.

MS. DREY: Okay. But what happens? I mean, I don't know when all of a sudden we're going to be told we can't talk anymore. I mean, I'm trying not to interrupt anyone else.

MS. SAVAGE: Right, right. Well, probably about ten till nine or five till we'll start trying to wrap up it up. Right now we're just trying to make sure everyone has an opportunity to ask questions and to give comments.

Steve, did you want to say something?

MR. McCRACKEN: The only thing, normally we just have a dialogue in these things as small as they've become.

I'm amazed at how you're keeping up with us. But

1 trying to keep her, I mean, we just keep talking and you
2 just go like this again as soon as a new person pitches
3 in that you don't know their name. And we can go from
4 there.
5 Other than that, Kay, we're here until nine o'clock,
6 and I would suggest that we just keep panning the crowd.
7 And if there is someone else that wants to talk, fine.
8 But we're here that long.
9 MS. SAVAGE: Anyone? Dr. Hachey?
10 DR. HACHEY: Glenn Hachey.
11 I've heard terms in commentary on trying to assess
12 how beneficial your preferred alternative is. And I
13 guess one of the questions I have is, trying to get back
14 to some standard of benefit to whoever says in the
15 public, has any risk assessment translation been done
16 since the initial baseline risk assessment to try and put
17 some sort of quantification on what the preferred
18 alternative, the interceptor trench, might do eventually
19 to either reduce risk or maintain it or what have you?
20 Or has that been done or is it even contemplated so that
21 we have some benchmark of which to measure this. Because
22 it sounds as though, you know, the best expectation is
23 we're going to get some remedial, you know, contamination
24 collected.
25 But what I'm trying to do is assess, what, how does

1 that affect the ultimate risk? The risks are already
2 low. How much more risk or reduction are we likely to
3 see, or is that possible even to come up with?
4 MS. PICEL: Mary Picel.
5 Your question has to do with can we estimate the
6 risk that we would reduce if we removed some of the
7 uranium. And the way I would answer that is that right
8 now from our evaluations that we have already documented
9 in the BRA, the RI/BRA, and also the FS, to determine
10 that the quarry area groundwater we're talking about
11 tonight is contaminated with uranium and because under
12 the recreational scenario, right now there is no access
13 to that water.
14 So when you don't have access, you don't really have
15 risk, you can't get exposed to. We recognize that the
16 water in the wellfield is being used by residents of St.
17 Charles County. The data that we collect there basically
18 say it's similar to background. So if you plug those
19 numbers you collect from the wellfields into the risk
20 calculation, you would not get a risk. You would fall
21 within an acceptable risk range.
22 So in answer, a long answer to your question, we
23 tried to remove some uranium where we are now at the
24 quarry, if we could get a concentration. And the final
25 concentration that we'd end up with in an area after we

1 remove some water, we could plug that concentration in
2 the calculation. We could find that out. But we have to
3 postulate some sort of use of that water at that time,
4 okay?
5 But in our evaluations we also determined that,
6 because we're talking about volumes of water, we're not
7 sure that when we finally get in the trench that we could
8 really equate that volume or mass to concentration. So
9 that remains to be seen to us. We talked about some of
10 our uncertainties that we want to verify out there.
11 Did that answer your question?
12 DR. HACHEY: I think there was an answer there.
13 I think you answered my question. I didn't use up my
14 whole two minutes. Can I ask a follow-up question?
15 MS. SAVAGE: Sure.
16 DR. HACHEY: One of the other speakers, I
17 believe it was Mr. Geller, commented that the current
18 preferred option still does not meet or will not meet
19 cleanup standards. I believe that was his comment; is
20 that correct?
21 MR. GELLER: That's correct.
22 DR. HACHEY: I don't want to misquote you.
23 MR. GELLER: Okay.
24 DR. HACHEY: What are those standards?
25 MR. McCRACKEN: I don't know.

DR. HACHEY: That's not good.

MR. McCRACKEN: Oh, I know what he --

MR. GELLER: -- There are several standards that we're referring to. I referenced standards related to soils and sediment in the cracks and fissures. There is no proposal to address any of that contamination in their proposed plan. There is currently contamination that exists along the high wall, as we understand it, in some of the cracks and fissures.

DR. HACHEY: Okay. So your comments were directed towards the quarry proper?

MR. GELLER: There are also standards that we consider as far as the groundwater.

DR. HACHEY: Which are?

MR. CARLSON: Glenn Carlson. The UMTRA groundwater standards, thirty picocuries per liter.

MR. McCRACKEN: What law is that? Can you help us out?

MR. CARLSON: That's the Uranium Mine Tailing.

MS. PICEL: Mill Tailing. Remedial action.

MR. GELLER: I think we answered the question. It was the Uranium Act is what we were referencing instead of groundwater standards that were references under the UMTRA regulations.

DR. HACHEY: Those are standards the state

1 recognizes.

2 MR. GELLER: At this point those are the ones

3 we are referring to as far as the uranium.

4 MS. DREY: And that was the thirty picocuries

5 per liter; is that right?

6 MR. GELLER: That's right.

7 DR. HACHEY: Is that a state law or --

8 MR. GELLER: Federal.

9 DR. HACHEY: That's a federal law.

10 MS. DREY: And you all are aiming for what?

11 MR. WALL: Dan Wall.

12 We recognize, or I do and we do, that those

13 standards are out there. They're -- specifically the one

14 he mentioned. They're applicable to situations other

15 than what we have. But they are appropriate to consider

16 as relevant health based standards in this case perhaps.

17 But what we're saying here is not that we don't have

18 significant levels of uranium in the effected area. We

19 do. What we're saying is that we're perhaps limited,

20 technologically limited in our ability to get all of that

21 out, get all of that uranium out. And the evidence is

22 that we won't be able to achieve such health based

23 standards through any, through application of any

24 available technology.

25 This proposal, the purpose of this proposal is to do

1 the best we can do. It's to apply what we think will
2 work best and see how well it works. We can't predict at
3 this point that we're going to be able to achieve a
4 drinking-water-like health based standard. We just don't
5 think that's achievable down there, which you know. So,
6 I mean, that's understood going in.
7 So what he said is correct. Based on the
8 information we have we probably won't be able to achieve
9 that standard.
10 MS. PICEL: To add something to that
11 feasibility study report, when we did our evaluations for
12 the alternative to find out if there is something that we
13 could do to reduce, to remove some of that uranium, we
14 did use thirty as our end point. Because you have to
15 have an end point to do your calculations. Like how many
16 years would it take for this water to go through the
17 cycle and all that stuff. So we did use thirty as the
18 number to attain.
19 And our conclusions are that it takes a long time to
20 get to that point. Because of the conditions that you
21 have at the site, you have -- I think Becky talked about,
22 or Gene did, about the soils in the area, it absorbs the
23 uranium. And there is also some other geochemistry in
24 the area that tends to bind these uranium, grabs it from
25 the groundwater and keeps it.

So, Kay, you were talking about flow to the wellfield. I think Dan said there is some flow to the wellfield but that flow is very slow, and the uranium that goes with that flow is very small because of this binding effect. That seemed to be north of the slough. That's based on our RI investigations, the soil in the area, the geochemical data that we collected, including Kd values, if you're familiar with those. We got some of those too. Found out that there is this binding effect in that area for uranium.

MS. SAVAGE: Do you have a question?

MR. SHARP: Larry Sharp.

Do you have the total dimensions on this interceptor trench right now?

MR. VALETT: It's obvious that this trench hasn't been designed yet. What we're looking at is something in the realm of one thousand to fifteen hundred feet long, perhaps sixteen feet deep, and about three foot wide.

MR. SHARP: What, if any, impact would it have on that if we had some flooding in that area?

MR. VALETT: In our design basis for that facility, we intend to put a requirement for like a clay cap over that, so that if it were to flood we could continue operations.

1 MS. SAVAGE: Any other questions?

2 MR. GARVEY: Mike Garvey.

3 Let's talk a little bit about flooding. We're in a
4 flood plain. And we've had some floods and you've got,
5 you know, this water that's bound in this slough. It's
6 like local water that has between fifty to maybe as high
7 as ninety picocuries per liter of uranium.

8 Now, if it's adhering to soil, clay, it certainly
9 has the clay there in the slough. So what is the end
10 effect of flooding in this whole scenario? Because
11 nobody talks about that a lot and I think it's a real
12 advantage to remove this at this, you know, and how is it
13 that this water, if it is, if it adheres to clay and it's
14 in a slough, it's not adhering to the clay? It just
15 doesn't make sense.

16 MS. CATO: I want to make a clarification on
17 the binding on the slough. What it is is it's the soils
18 between the bluff and the slough have these
19 characteristics. It's almost acting as like the reactive
20 wall alternative that we discussed as a remedial
21 alternative. It's the materials themselves, and then
22 some of the geochemistry in the area that's having the
23 uranium contaminated water, it flows through and the
24 uranium is pulled out of the groundwater and then the
25 groundwater moves on into the wellfield area. But what

it is is the uranium is pulled off and held onto the soils. The organics are precipitated out into the soils.

So it's not in the slough. It's in the soils between the bluff and the slough.

MR. GARVEY: I'm talking about specifically the slough.

MS. CATO: The slough sediments themselves are at background levels. So any sediments that were to be caught up in the flood aren't contaminated and wouldn't be disbursed. And then any surface soils that were there were remediated during the VP-9, during the -- under the Chem Plant ROD. And so there's no surface contamination available to be picked up anymore.

MR. WALL: The water in the slough itself would be flushed out.

MS. CATO: Yeah. The water in the slough itself is flushed out.

MR. MCCRACKEN: Yeah. That's happened several times over the last several years.

MS. CATO: But also it's, it's cycled in and out due to Conservation usage of the area anyway. So it's not a stagnant body of water.

MR. GARVEY: Right.

MS. CATO: Did that clarify?

MR. GARVEY: How did flooding help the whole

1 picture?

2 MS. CATO: Flooding?

3 MR. GARVEY: Yes.

4 MS. CATO: Based on our groundwater data,

5 flooding really had no impact, positive or negative, on

6 the uranium levels in the groundwater.

7 MR. GARVEY: What was the consideration or the

8 opinion of the Department of Energy and others about the

9 possibility for Department of Conservation using it as a

10 controlled wetland area, and whether that would hurt or

11 possibly help in the contaminate slough?

12 MR. MCCRACKEN: Let me try that one. We tried

13 to be, I'm not sure what we -- you know, the idea of

14 turning the wellfield area into a wetland came up, and

15 there was a lot of concern raised by several groups of

16 people. And those concerns centered on, as it related to

17 us, what would it mean to our cleanup activity. As it

18 related to the wellfield, there was questions how would

19 it impact the drinking water quality down there.

20 And about all I can really recall is that those

21 concerns together, I think, discouraged the Corps from

22 going on with that, proceeding with that idea. I don't

23 even remember what the position of the state was. I

24 think that we were -- I don't -- we tried to remain

25 mostly neutral. But I think there was enough concerns

1 out there that the Corps decided to back off, and it
2 wasn't just because of the impact to what we would be
3 doing.
4 As far as the impact to us, the things that were on
5 our mind at the time where we had that VP-9 that we had
6 to get cleaned up. It's done now. I don't know how we
7 would design around -- I'm not even -- were they even
8 going to flood the north side of the slough with that
9 wetland? So it wouldn't even affect what we're proposing
10 to do right now.
11 I think all the area they were going to flood was
12 south of the slough, I think. So I don't know that we
13 really thought that it would impact us all that much,
14 Mike. Except, well, I don't think we thought it would
15 affect us all that much.
16 I think the Corps, after seeing what the concerns
17 were, decided that it would be less hassle to do it in
18 other places. And for the duck hunters around here, they
19 were pretty discouraged by that.
20 MS. DREY: I'll let him talk.
21 MR. SHARP: How difficult would it be to move
22 the three wells that are closest to the contamination?
23 MS. PICEL: Production wells?
24 MR. SHARP: Uh-huh.
25 MR. MCCRACKEN: Actually the contingency plan

that we developed, that's exactly what it would do. I don't know if it's the three, but what we looked at doing was acquiring land upstream, just across the Femme Osage Creek. There's a farm there, and we looked at acquiring land there to buy those wells, to install those wells.

And I don't remember what the cost was right offhand, but it seems to me that it was in the low millions. I can get that number for you.

But that's exactly what we -- back in '92 when there was a lot of concern about the wellfield and we developed that contingency plan, that's exactly what we would have done if we had started to see any indication that it was going to impact the water quality down there. We were going to move upstream with some wells and take some of those off line that were nearest the slough.

So I can get that cost if you'd like. I don't know where it is offhand. Unless somebody else here does, I'll get it for you Larry.

MS. SAVAGE: Kay Drey?

MS. DREY: Can you please describe the interceptor trench again, please? You would do pump and treat; is that right? You'd pump and treat the groundwater? Or would this just be for water that might happen to end up in the trench or is it treated?

MR. VALETT: Well, again, we anticipate the

design would be such that there would be a piping system and a series of collector wells within the trench. That we would capture water that would enter the trench and that water would be pumped to perhaps a holding tank or a pond. And then we would have to see if it required treatment or not.

And if so, we're looking into a couple of options, of the existing water treatment plant or a package plant, and then it would be discharged according to the permits that we would have.

MR. MCCRACKEN: What we're doing is studying now what's the best approach. Is it to use the existing water treatment plant or to drag a little one in there? Because they only anticipate generating about twenty gallons per minute out of this trench, which is four times less than the capacity of the plant. We have five times less than the maximum capacity of the plant we have right now. So we have to look at it to see what would be the best approach.

MS. DREY: Are you thinking of just dismantling the existing plant?

MR. MCCRACKEN: We are definitely going to dismantle the existing plant. I just don't know when.

MS. DREY: The question is before or after the trench?

1 MR. MCCRACKEN: Right.

2 MR. VALETT: Actually there's an option where
3 we would hybrid the plant also, where we would keep parts
4 of that plant and dismantle part and keep part. So that
5 option is also being looked at.

6 MS. DREY: Okay. So for the water after it
7 goes either into this holding pond or tank and then after
8 treatment, if you treat it, and then does it, is it
9 piped, would it be piped to the Missouri River?

10 MR. VALETT: We would certainly take advantage
11 of the existing pipeline that's part of the current
12 system. But we'd also take a look at other discharge
13 points if it made sense.

14 MS. DREY: I guess I would like to ask that the
15 state consider, not just the people who drink water from
16 the wellfield, but those of us who are nine miles
17 downstream from a discharge pipe.

18 MR. McCRACKEN: Well, I feel like, Kay, we
19 always have considered people downstream. That's the
20 reason we have done such a good job of treating that
21 water. In fact, the amount of uranium that's in it when
22 we put it in the river is less than what's in the river
23 naturally.

24 MS. DREY: I have to say, because I say it all
25 the time and I haven't changed, I'm still not comfortable

1 with the amount of thorium that's in the water. And I'm
2 not, also I'm sorry that I'm not hearing more about the
3 levels of thorium in the sediment and so forth.
4 I'm still very confused about this zone between the
5 quarry and the slough. Apparently that soil must then be
6 very hot because it has absorbed all the contaminants
7 that have come out of the quarry water, is that right,
8 because it never has gotten to the slough?
9 MR. McCRACKEN: That's true. There is a --
10 MS. DREY: -- It must be really hot stuff where
11 the Katy Trail is.
12 MR. McCRACKEN: No. The conversion of taking
13 picocuries per liter out of water to picocuries per gram
14 in soil, it takes a lot of picocuries.
15 MS. CATO: About a thousand to one.
16 MR. McCRACKEN: About a thousand to one. Take
17 about a thousand picocuries per liter in water to equal
18 picocuries per gram. So it's a significant,
19 significantly less is what you would see as far as
20 contamination absorbed in the soil.
21 In other words, it's a very small number.
22 MR. WALL: And the reason you see uranium out
23 there and not thorium is the relatively higher solubility
24 that uranium has.
25 MS. DREY: That's where we have some

1 differences of opinion, okay. I realize uranium is more
2 soluble, but I also think that thorium is also soluble in
3 certain conditions.
4 DR. HACHEY: Glenn Hachey.
5 What is the perceived impact of the reclamation of
6 the alternative being considered for the quarry and how
7 that will affect any potential migration of the plume as
8 it stands now or even the effectiveness of the proposed
9 alternative, the trench? Does that have any impact at
10 all with regard to filling up the quarry with any number
11 of different materials that are being considered right
12 now? What was the likely impact of that? Is there a
13 timing aspect that is important as far as getting that in
14 place first ahead of this other project with regard to
15 the trench? Or how are those two connected?
16 MS. CATO: Rebecca Cato.
17 I can answer the question on the materials. We're
18 doing some evaluations right now. In some of the
19 predesign phase on different backfill scenarios, material
20 types, and the impacts they will have on groundwater flow
21 into the area south of the quarry or in the north of
22 slough area, that is being evaluated. So schedules, I
23 guess I would pass on.
24 MR. McCRACKEN: To me?
25 MS. CATO: Yeah, you get the schedule.

1 MR. McCRACKEN: We talked about this about a
2 week ago, Glenn. And the reason we talked about it, we
3 were trying to decide, does there need to be a sequencing
4 of restoration in the quarry and this trench in order to
5 really understand what the trench can achieve. And the
6 choices being, do we do the restoration first and then do
7 the trench? Do we do the trench first and then do we do
8 the restoration? Or do we just disconnect them and do
9 them independently?
10 And the discussion we had led us to the conclusion
11 for a number of reasons to just go at your own pace with
12 both of them. Because we didn't feel as though it was
13 going to be, it was going to be -- first of all, the
14 feeling of most people was that backfilling the quarry
15 would probably benefit from the standpoint of what it
16 would do to groundwater migration. But irrespective of
17 that, we felt as though disconnecting them and letting
18 them both go at their own pace was the right thing to do.
19 And that's kind of where we landed the other day.
20 And there's a lot of reasons for that, not just --
21 well, there's a lot of reasons for it. It gets to Don's
22 point over there. We're working to try to close out up
23 here. We're trying to make sure we get everything in
24 this cell up here as soon as we can.
25 DR. HACHEY: Follow-up question, very quickly.

1 The baseline risk assessment that was done, did it assume
2 a scenario where the quarry was restored or did it assume
3 an open quarry?
4 MS. PICEL: An open quarry. The way it is
5 now.
6 DR. HACHEY: What would you predict the -- that
7 may be unfair. You don't have --
8 MS. PICEL: I can predict anything.
9 DR. HACHEY: Would your best guess be that it
10 would probably, those risk scenarios would at least stay
11 the same or would that be the same, or go lower possibly
12 with a restoration with your understanding right now?
13 MS. PICEL: I think baseline calculation said
14 it would be a benefit. Because based on the pathways
15 we've looked at, the most -- the pathway that gives you
16 the most risk is the gamma. So if you covered some of
17 those areas, the gamma -- and the gamma is low. It's
18 within acceptable limits right now. But I think with
19 that cover, it would make it even lower.
20 MR. MCCRACKEN: The other thing is that I
21 promised Mary Halliday back in 1993 I would fill that
22 quarry up. Because she asked me if I was going to do it,
23 and I said I would and I'm going to, I hope.
24 MS. DREY: Are you all still doing radon
25 monitoring at the quarry?

MR. MCCRACKEN: I don't know, Kay.

MS. CATO: Yes.

MS. DREY: And what are the levels compared to what they were?

MS. CATO: Bulk waste levels have gone to background, except in an area upon the -- on the northeast corner that we know where we have some residual contamination, and they're slightly above background.

MS. DREY: What?

MS. CATO: I couldn't tell at this moment. They're just reported to be slightly above background.

MS. PICEL: Those numbers are in the RI, in the documents.

MS. CATO: They're summarized in the remedial investigation report.

MR. McCRACKEN: And we're going to get you a copy of that.

MS. PICEL: I could also help you find it if you want us to.

MR. GARVEY: Where are you going to get the soil to fill in the quarry?

MR. McCRACKEN: As it looks --

MS. DREY: From a temporary storage area?

MR. VALETT: We've done, we've done some preliminary looks at where our borrow sources might be.

1 And we have a couple of hillsides adjacent to the inner
2 quarry that provides us some volume of soil. And
3 interestingly enough, we also have some soils that are
4 underneath the existing water treatment plant, between
5 inner quarry and the water treatment plant, that gives us
6 a significant volume. Which is another reason why I'm
7 interested in getting the water treatment plant out of
8 there as soon as possible, to get to that soil.
9 But we also know that even with all of this volume
10 available to us, we'll have to import a certain amount
11 of soil. And we've been successful working with the
12 Department of Conservation in the past with some borrow
13 areas. And we have a borrow area of our own that you
14 passed coming down to the site tonight. We also know
15 that there's a surplus of material here on the site in
16 some of the clean areas that we have. So finding the
17 volume shouldn't be a problem.
18 As a matter of fact, we've even been approached by
19 the Corps to see if we're interested in the old water
20 treatment plant as some backfilled volumes. We're not
21 interested in that. I'm not.
22 MR. VALETT: My personal opinion is that, like
23 to backfill that quarry with clean natural material so we
24 don't have to dig it back up again.
25 MR. MCCRACKEN: Kay, we've got a good water

1 treatment plant we'll give you guys to use down at the
2 FUSRAP site if you want it.
3 MS. DREY: Thanks.
4 MR. MCCRACKEN: Send the Corps on over and
5 we'll give it to them.
6 MS. DREY: We can give you some fill material
7 from the airport site.
8 MR. MCCRACKEN: Let's agree not to have any
9 exchanges, what do you think?
10 MS. SAVAGE: Additional questions, comments?
11 MR. GARVEY: Is there any consideration for any
12 of the St. Louis waste to come into the disposal cell
13 here?
14 MR. MCCRACKEN: No.
15 MR. GARVEY: At this time or just no?
16 MR. MCCRACKEN: Mike, that question has been
17 asked many, many times. And it was asked before we ever
18 agreed to on-site disposal. And the request of the St.
19 Charles countians was that, in general it was they agreed
20 to go along with on-site disposal with the condition they
21 didn't want to accept off-site waste. And we said okay.
22 And we memorialized that in the Record of Decision,
23 which is, I mean, a legal document.
24 So even if it were technically feasible, which I'm
25 not sure it is, there are those things that would have to

1 occur just to reopen the Record of Decision to decide
2 that you could do it. And my opinion is and my attitude
3 is that we're not, we are not going to propose to do
4 that. Nor have I, do I know of anybody in the DOE that's
5 suggesting that. And --
6 MR. WALL: Plus, it's someone else's problem
7 now from the DOE's standpoint. The Corps of Engineers
8 has been given the responsibility for the St. Louis
9 FUSRAP.
10 MR. MCCRACKEN: There are a lot of people that
11 think it's a good idea, including some people that work
12 here. My feeling is we made a commitment not to do it.
13 And we'll -- and we formalized it by putting it in the
14 Record of Decision. We did it so it wouldn't be easy to
15 change that commitment and that's where we're at.
16 MS. DREY: I realize you have to make decisions,
17 but I do want to recommend one publication to people here
18 tonight, which is a General Accounting Office publication
19 called Nuclear Waste, Understanding of Waste Migration at
20 Hanford is Inadequate for Key Decisions. And it talks
21 about some of the mistakes that were made by the
22 Department of Energy out at Hanford, Washington.
23 And some of it is very relevant, like about whether
24 soils absorb radioactive materials or not. So if anyone
25 wants to know how to get the report, and it's free, they

can ask me after the meeting.

MS. SAVAGE: Okay. Inside, I just want to remind you that inside your blue brochure is the address and Steve McCracken's name and address. However, you can also contact Community Relations if there are additional questions or comments you would like to forward to us, especially during this comment period, public comment period which will end May 21st.

Steve, I'll turn it over to you for closing remarks at this time.

MR. MCCRACKEN: One thing that I don't think that we have mentioned, or if we did I missed it, because I was thinking about Kay and trying to get her those documents so I may have missed it when it was said. And that is that we're extending the end date for the comment period. Did we say that?

MS. SAVAGE: Yes, it was.

MR. MCCRACKEN: Well, I was so worried about not having sent those documents to Kay, I just didn't think. I'll remind everybody again that the comment period is extended to May 21st. And so that will give Kay plenty of time to get these documents and read them.

MS. DREY: Do you want to admit publicly about the fact that you visited my basement with all its high radon?

MR. MCCRACKEN: I did and I had a headache. But fortunately, I don't have to go in Kay's basement anymore, because she has elevated Weldon Spring to the upstairs bedroom. So now I get to go upstairs to the, I get to go upstairs if I want to see the Weldon Spring files, which I can tell you are substantial. If there is any question on our part about what happened to something, we've just got to go see Kay because she's got it.

MS. SAVAGE: If that's the end of your closing remarks, that's the end of our public meeting this evening. We thank you very much for joining us, and if there are any questions, a few of us will hang around.

Thank you.

CERTIFICATE

I, Sandra McGraw, Certified Shorthand Reporter, do hereby certify that on the 16th day of April, 1998, I was present at the Public Meeting held at 7295 Highway 94 South, in the County of St. Charles, State of Missouri. I further certify that I reported all of the proceedings had and that the foregoing pages contain an accurate transcription of my shorthand notes of said proceedings.

Sandra McGraw

Sandra McGraw, CSR