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**U.S. DEPARTMENT OF ENERGY PUBLIC
MEETING MARCH 21, 1994**

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US DEPARTMENT OF ENERGY

PUBLIC MEETING

MONDAY, MARCH 21, 1994

THE PLANTATIONS, HARRISON, OHIO

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1 MR. STEGNER: Good evening. Thank
2 you for coming. My name is Gary Stegner. I work
3 at the Department of Energy at Fernald. Tonight
4 we're going to be discussing Operable Unit 4, which
5 are the silos, Silos 1 through 4 including the
6 basic five silos.

7 Briefly, very briefly, the way we're
8 going to set the evening up is, if you look at the
9 agendas on your chair, we'll start off with a
10 series of presentations which should last about a
11 total of about 45 minutes.

12 Following the presentations we'll
13 have an informal question and answer section. This
14 is informal as distinguished from the formal
15 comment period that will follow. During the
16 informal session, it will be a give and take with
17 the panel and any of the other experts who we might
18 have out there in the audience to answer your
19 questions regarding Operable Unit 4. We do want to
20 keep focused as much as possible on Operable Unit
21 4.

22 Following the informal questions and
23 answers, what we'll do is take a break for about 10
24 or 15 minutes. Then we'll come back, and then

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1 we'll have the formal comment period. The formal
 2 comment period is for the record. You know, it is
 3 something that will be included in our
 4 Responsiveness Summary, and it will be included in
 5 the Record of Decision for Operable Unit 4.

6 Before I introduce the panel tonight,
 7 a few logistical announcements. People will
 8 remind, I think everyone is registering at the door
 9 as they come in. If you want to make a formal on
 10 the record comment, please designate that when you
 11 sign in. The way I will do that is, following the
 12 break when we begin that, I will go through there
 13 and find out the number of people who want to and I
 14 will call them up.

15 Don't think that you have to come up
 16 here to the microphone tonight to make your formal
 17 comments because there are comment cards on your
 18 chairs. Also you can give those to me after the
 19 meeting. You can send them to Amy at the
 20 Department of Energy at Fernald, and you can also
 21 just write out your comments and send them to us at
 22 the Department of Energy at Fernald. We ask that
 23 you have those to us by April 20th, however.

24 I think there is ice water someplace

1 in this room. Rest rooms are out the door there.
2 There's also a pop machine if you want to get
3 something to drink during the break. We encourage
4 you to take the handouts that we have scattered
5 throughout the room, if you want to find out more
6 about Operable Unit 4.

7 So let me get on with introducing our
8 panel tonight. We have Randi Allen, who is the
9 Operable Unit Four Manager for the Department of
10 Energy here tonight. Wilf Pickles, her counterpart
11 with FERMCO, the manager there. We have Ed
12 Skintik, Regulatory Compliance for the Department
13 of Energy. His counterpart, Eric Woods, FERMCO
14 reformatory programs; and also Dennis Nixon, the
15 Assistant Unit 4 Director. So without further ado,
16 I will turn it over to Randi Allen.

17 MS. ALLEN: We also have Eric Woods
18 who works for FERMCO. All I'm going to do here
19 real quick is, in case there's anybody in the
20 audience that is not that familiar with Fernald,
21 I'm just going to introduce you to the operable
22 units, and then turn it over to Dennis Nixon. He's
23 going to go through some details on Operable Unit
24 4.

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1 Sure everybody has seen this before.
2 This is just to show you the location of the
3 Fernald. It's a 1,050 acre site located about 17
4 or 18 miles northwest of Cincinnati. What I'd like
5 to do here real quick is just run through the other
6 operable units to you, and then I'd like to present
7 a schedule. We're going to have a similar meeting
8 for all the other operable units in a little bit of
9 a later time scale here. I'll show that to you in
10 a minute.

11 Operable Unit 1, which you see in the
12 orange, is the waste pits, and Operable Unit 2 is
13 called other waste units. That's the flyash piles,
14 the south field, the sanitary field, and lime and
15 sludge fields. Operable 3, that's a bigger
16 operable unit. That's all the facilities located
17 on the site. Operable Unit 4 is obviously the
18 silos, one of the smaller units. And Operable Unit
19 5 is everything else not shown on the grid,
20 environmental media, the soils, and the ground
21 well.

22 Here's a schedule for the other
23 operable units. As you can see, in the yellow is
24 the period between like whenever you see the

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1 remedial investigation report, that's when the
 2 documents are beginning to become available for
 3 review by the public. Operable Unit 4 down there,
 4 we're right now between the feasibility stage,
 5 proposed plan. We've initiated preparation of a
 6 Record of Decision.

7 Some places you see the feasibility
 8 study, and shortly thereafter the US EPA, the DOE
 9 headquarters, and the Ohio EPA will review and
 10 comment on the document and approve the document.
 11 It becomes available for the public to review, and
 12 they'll have this type of evening for each one of
 13 the other operable units.

14 This is the process we go through to
 15 get in the file remediation. Actually, this is a
 16 pretty simple version of it, if you can believe
 17 it. Right now in Operable Unit 4 we are right here
 18 in beginning preparation of the Record of
 19 Decision. So we're getting ready in the near term
 20 to issue the Record of Decision of Operable Unit 4
 21 that gets submitted to the US EPA and Ohio EPA in
 22 June of this year.

23 After that, once we have reached an
 24 agreement on what that Record of Decision should

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1 say, the comments you provide on this proposed plan
2 are incorporated into that document. So once we
3 issue that Record of Decision, we will begin final
4 remediation.

5 At this time what I'd like to do is
6 introduce Dennis Nixon, and he is going to run
7 through the documents you guys have been asked to
8 review.

9 MR. NIXON: Good evening. What I'm
10 going to do, present this evening, is a brief
11 history of Operable Unit 4 and how we got to where
12 we're at today. As Randi said, Operable Unit 4 is
13 one of five operable units at Fernald. It's
14 located on the western portion of the site next to
15 Paddy's Run Creek. This is an areal shot of the
16 operable unit area.

17 There's a geographic area
18 encompassing the four waste storage silos. K-65
19 silos, which you'll see to the south, here Silos 1
20 and 2 contain the K-65 residues. Silo 3 is --
21 contains the cold metal oxide material. Silo 4 is
22 empty and was never used.

23 The operable unit also consists of a
24 radon treatment system and underground decant sump

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1 tank that was used in the process of filling the
2 silos, the surface soils, subsurface soils, and
3 the berm soils, as well as any perched water that
4 may be encountered during the final remediation.

5 The silos were constructed in 1951
6 and 1952 for use as interim storage vessels for
7 defensive program waste that was being produced at
8 that time at the Melloncrock Chemical Works in St.
9 Louis.

10 I have a group of shots on the
11 construction I'll just run through. This is a -- I
12 believe the foundation being prepared for Silos 4,
13 3, 2, looking south. The silos were constructed --
14 Silos 1 and 2 were constructed in the winter
15 months, which caused some problems within the
16 construction, causing problems with shutting down
17 the concrete pours which resulted later in cold
18 joints, which when they stopped pouring the
19 concrete, which we'll show you in later pictures,
20 that later would form cracks in the sides of the
21 silos.

22 Silos 1 and 2 during the construction
23 phases, shot looking to the west during
24 construction. The silos were filled during up till

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1 1958. If you'll notice the cracks on the south
2 face where those cold joints in the construction
3 occurred. Essentially due to those cracks, there
4 later was an asphaltic cover. Here again the
5 cracks in the sides of the silos looking to the
6 north, Silo 1, 2, and 3.

7 In 1964 those cracks were sealed with
8 a Gunit material, and then an asphaltic sealant
9 was placed on that, and the first of two berms were
10 added. The berms were added not only for -- They
11 were mainly added for structural stability. They
12 were also there to provide some shielding due to
13 the radiation that was given off by the silo
14 material. The decant sump tank, which was a buried
15 tank, this is the -- an access way, a corrugated
16 pipe that was used to access that tank after the
17 berm was added.

18 And this is an areal shot of the
19 original berm. Again, the K-65 silo is here. In
20 1983 that berm, the original berm, had resided, and
21 we had another berm added in 1983 due to the
22 erosion problems. Furthermore, in 1987 these dome
23 caps were placed on the K-65 silos to enhance the
24 structural integrity of the dome itself. The foam

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1 was added to insulate the silos and to assist in
2 the radon problem, which we'll talk about a little
3 later.

4 Again, in 1991 -- I'll talk about the
5 history, is the clay that was added. We had a
6 removal action in 1991. Due to the radon concerns,
7 the chronic radon emissions, as well as concerns of
8 the silos collapsing and releasing material, we
9 added a one-foot layer of bentonite clay to the
10 residues.

11 As I said, the material was added up
12 until 1958 in the silos. The majority of the
13 material, as I said, was processed at -- the K-65
14 material was processed at the Melloncrock Chemical
15 Works in St. Louis. Essentially, they had a
16 problem in St. Louis with storage. So we
17 constructed the silos at Fernald for storage of
18 that material. It was shipped from Melloncrock as
19 well as Lake Ontario Ordinance Works to the Fernald
20 site.

21 You can see here the incoming drums
22 that were received at the site. Those drums were
23 slurried in the drum handling building. They were
24 reslurried, pumped in the silo. That material was

1 allowed to sit over night, essentially, and the
2 liquid was decanted off into the decant sump tank
3 that I spoke of earlier.

4 As well, some K-65 material was
5 processed at Fernald in our refinery. Those
6 raffinates were pumped in a liquid form through the
7 trench that you see here running east west to Silo
8 2.

9 The Silo 3 material was all processed
10 on site here in our refinery at Fernald. Those
11 raffinates were unlike the K-65 material, would
12 calcine at a very high temperature and would rot,
13 and would pneumatically convey through the same
14 trench to the pipe in Silo 3.

15 The K-65 material generally takes the
16 form of a wet clay material ranging from gray to
17 brown. It is defined as technically as 11E2
18 by-product material under the Atomic Energy Act,
19 which makes that an exception from the RECRA
20 regulations, even though we do consider RECRA as a
21 helpful and appropriate requirement.

22 The material in K-65 silos generally
23 the contaminates of concern are radium, thorium,
24 and lead-210. Due to that radium content, the

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1 residues give off a considerable amount of radon
2 gas, which again was the reason for the removal
3 action to add the one-foot layer of bentonite clay
4 in 1991.

5 There are elevated concentrations in
6 the residues, the untreated residues, of barium and
7 lead. There are very low concentrations of PCB and
8 tributyl phosphate used that probably occurred
9 during the processing at the refinery or at the
10 Melloncrock Chemical Works.

11 Total volume of material, including
12 Silos 1 and 2, including the bentonite clay is
13 roughly 8,900 cubic yards. In your packets you
14 have tables from the remedial investigation, the
15 actual characteristics of the residues themselves.
16 I won't go over those tonight.

17 The Silo 3 material is called cold
18 metal oxides. As I said, those are a dry powdery
19 material like a talcum powder, again defined
20 technically as 11E2 by-product material, the much
21 lower concentrations of radium nuclides in the Silo
22 3 materials.

23 The predominant contaminates of
24 concern here are the thorium-230, uranium, and

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1 lead-210 again. The Silo 3 material also leaches
2 rare earth metals listed here. Little to no
3 organics in the Silo 3 material due to that high
4 temperature calcine process.

5 And here the total volume of Silo 3
6 material, approximately 5,000 cubic yards, for a
7 total residue volume of roughly 13,000 cubic yards
8 to be processed in our final remediation. Again, I
9 have the tables of the characteristics of that
10 waste.

11 In addition to the residues, Operable
12 Unit 4 will remediate surface soils, contaminated
13 surface soils, contaminated berm soils, the
14 subsurface soils below and surrounding the silos,
15 and again any perched water that is encountered
16 during the final remediation.

17 As Randi said, we are in the process
18 of a remedial investigation feasibility study. We
19 currently have completed our remedial
20 investigation. It is conditionally approved by the
21 US EPA. The feasibility study and the proposed
22 plan have been completed, and again are
23 conditionally approved by the US EPA.

24 We are at the phase that we are

1 getting the public comments, public involvement in
2 our proposed plan, and responding to the comments.
3 We are making progress with our Record of Decision
4 based on this proposed plan. It's due to the
5 agency in June of this year. That will include a
6 Responsiveness Summary which will respond to the
7 questions and comments that are raised tonight and
8 in other meetings or other discussions, formal
9 comments.

10 And then after that Record of
11 Decision, hopefully by October, November time frame
12 of this year, we'll have a Record of Decision.
13 We'll be moving forward into the remedial design
14 and remedial action phases of the project.

15 All of the points are important that
16 we make and go into detail with later. The
17 documents that have been prepared today are fully
18 integrated with the NEPA process and act as the
19 site's draft of the Environmental Impact
20 Statement.

21 In the feasibility study, we
22 evaluated a full range of alternatives, you know,
23 alternatives that included on-site and off-site
24 disposal, various treatment options, and the DOE

1 proposed alternative, preferred alternative, is as
2 follows:

3 Essentially, the major components of
4 that preferred alternative are to remove the
5 residues from the silos, stabilize those residues
6 by the use of vitrification and dispose of those --
7 that vitrified waste off site at the Nevada test
8 site.

9 Again, we evaluated a full range of
10 alternatives, and those alternatives were evaluated
11 under the nine criteria which were provided by
12 CERCLA. We're currently involved with the
13 modifying criteria, which is to get the public
14 involved. Again, the major components, to remove,
15 treat, and dispose of the materials in the silos;
16 but in addition to that, we're going to be
17 demolishing. After the residues are removed and
18 treated, we'll be demolishing and decontaminating
19 the silos themselves, the remediation facilities
20 required.

21 We'll be excavating any contaminated
22 soils, that's surface and subsurface soils, the
23 perched ground water. And then, of course, the
24 disposal of the soils and debris will be consistent

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1 with the Operable Unit 3 and Operable Unit 5
2 Records of Decision, respectively. They will not
3 be finally disposed of with this operable unit.

4 As for the cost of this action, the
5 cost is roughly \$90 million from start to finish,
6 which is made up of the capital cost for the
7 facility as well as various remediation costs and
8 operations and maintenance costs.

9 This is the schedule. Essentially,
10 we are at the end of the proposed plan period. We
11 are entering into the Record of Decision. We have
12 a draft Record Decision right now at the DOE
13 headquarters that's being reviewed. We have
14 initiated some work on the remedial design work
15 plan based on this proposed plan.

16 Following the Record of Decision, we
17 will go into full-blown remedial design, and then,
18 of course, remedial action will follow. The
19 construction you see here, the construction phase,
20 will be roughly through March of 1997.

21 We'll initiate the remedial
22 operations shortly thereafter, and the facilities
23 will operate roughly until the year 2,000. After
24 the operations are complete, this is the period in

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1 which we demolish and decontaminate the facilities
2 that were used to treat and stabilize the
3 materials.

4 There are a couple of key questions,
5 my last couple of slides here, that need to be
6 answered. Why remove the silo waste at all? I
7 think everyone that's involved with this, this
8 project, will agree that the silo materials need to
9 be taken out of the silos and put into a safe
10 configuration.

11 The silos have questionable
12 structural integrity. There is the potential,
13 always the potential, for a continued leakage from
14 the silos, proposes an unacceptable risk to both
15 the off-site residents as well as any future
16 trespassers for the site.

17 After they've been removed, why
18 vitrify these wastes? Vitrification is a very --
19 it's a proven technology, and due to our extensive
20 rehabilitative studies, we found it to be a very
21 good treatment technology for the K-65 silo
22 materials. The silo K-65 materials have high
23 silica contents which is very conducive to this
24 process.

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1 There is significant volume
2 reduction. There is up to a 60 percent reduction
3 when vitrifying the K-65 materials. We have
4 significant reduction of radon emanation rate.
5 Essentially, once the material has been vitrified,
6 it has the radon flux of the common building
7 materials like bricks and wood.

8 It also reduces the leachability of
9 metals that are in the material. For example,
10 those metals we are concerned with listed here, the
11 untreated waste, the leaches in excess of the RECRA
12 maximum allowable concentration; after
13 vitrification all well below the regulatory
14 limits. Radon emanation rate, very high for the
15 untreated waste, and it is obviously a significant
16 reduction there.

17 That's all I have for you this
18 evening. I'd like to introduce Eric Woods, who's
19 going to talk in detail on the process in which we
20 integrated the CERCLA and NEPA in these documents.

21 MR. WOODS: Good evening. What I'd
22 like to do is provide a short presentation on
23 CERCLA/NEPA integration, basically focusing on
24 three things: a little bit about the history of

1 NEPA compliance at the site, and then look at the
2 Operable Unit 4 feasibility study and proposed
3 plans specifically and kind of walk through how we
4 are integrating NEPA into these documents, and
5 then, lastly, provide a summary of the Operable
6 Unit 4 environmental impacts and the cumulative
7 environmental impacts.

8 So we're all on the same page with
9 respect to NEPA, NEPA is the National Environmental
10 Policy Act signed into law in January of 1970. The
11 goal of NEPA was to provide a national policy on
12 protection of the environment, and one of the
13 specific aspects of NEPA in order to accomplish
14 this goal is that it established a process by which
15 federal agencies, such as the Department of Energy,
16 will need to consider environmental impacts when
17 they made decisions.

18 This is formally known as the
19 Environmental Impact Statement Process, what we're
20 going through here for Operable Unit 4, and a very
21 important aspect of that is the public involvement
22 aspect.

23 The first Environmental Impact
24 Statement proposed at the Fernald site was a

1 renovation EIS. When the site mission changed from
2 production to remediation, the need for this
3 document went away, and the Department of Energy
4 subsequently canceled the renovation EIS.

5 As I said, the mission was changing
6 at that point from production to remediation, and
7 there was still the need to address NEPA for the
8 clean-up activities that were being planned at that
9 time. Therefore, the Department of Energy issued a
10 second notice of intent in May of 1990. This was
11 followed by scoping meetings in June, and this
12 basically announced that it intended to prepare an
13 Environmental Impact Statement for the Operable
14 Unit 4 remedial activities.

15 This document was designed or was
16 planned to do a couple of things. Mainly, it was
17 to look at the environmental impacts of the
18 Operable Unit 4 alternatives, specifically, and
19 reach a decision for OU4 and OU4 only.

20 However, because it was the lead EIS
21 or the first of five integrated documents to be
22 prepared at the site, it was also to address
23 cumulative impacts, and we'll walk through the
24 document and I'll show where and how we've done

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1 that.

2 I'll mention that the remaining
3 operable units, 1, 2, 3, and 5, will also be
4 prepared as documents at a lower level, and we'll
5 make decisions for those operable units
6 specifically.

7 I think a key question is, why did we
8 integrate, why not do an individual EIS process and
9 an individual RI/FS process? The main reason is
10 there's a similarity between the two. The RI/FS
11 process under CERCLA, there's an awful lot of the
12 same things we need to do with the EIS under NEPA.
13 Primarily, NEPA evaluates the site, the
14 alternatives to reach an end goal, and it does
15 mention some of the criteria we look at. In the
16 end it identifies preferred alternatives. These
17 are similarities in the two.

18 There are some differences, primarily
19 in the way the alternatives are evaluated, and
20 where these differences occur is where we simply
21 utilize the CERCLA framework and infuse or
22 integrate NEPA into the documentation.

23 This does several things for us. It
24 avoids duplications, the duplications of preparing

1 two separate documents. It also minimizes the
2 potential for inconsistencies, and it's consistent
3 with DOE policy.

4 Looking specifically at the Operable
5 Unit 4 documentation, I want to point out the
6 various parts of the document where NEPA has been
7 infused or integrated. The first place is right up
8 front in the Executive Summary in the introduction
9 in Chapter 1.

10 We provided a discussion of
11 CERCLA/NEPA or NEPA/CERCLA integration, basically
12 what role the various documents play, why we do
13 this, how the remaining operable units will
14 follow. This just gives an overview of the
15 process.

16 The next place where we have
17 integrated NEPA is in Chapter 4. This is really
18 the most important part of the document from the
19 NEPA perspective. This is where we identify
20 environmental impacts that we anticipate for the
21 alternatives that have been identified.

22 Basically, as you go through the
23 alternatives, there is a short-term effectiveness
24 discussion and a long-term effectiveness discussion

1 for each alternative. Under short-term we provided
2 an analysis of the environmental impacts
3 anticipated during remedial activities. And then
4 in the long-term effectiveness section, we provided
5 an analysis of environmental impacts that are
6 anticipated after remedial activities are
7 complete.

8 When we evaluate environmental
9 impacts, these are some of the criteria we look
10 at. As you go through the document, you will see
11 short-term environmental impacts, just this is a
12 format of the evaluation you will see. Rather than
13 talk through these, I thought I would provide some
14 photographs to kind of illustrate what we're
15 talking about.

16 This slide illustrates several
17 things. This is Paddy's Run. Obviously, water
18 quality is related to Paddy's Run. Also the belton
19 king fisher and the various habitats of biotic
20 resources which evaluate wildlife, wildlife
21 habitat, any species that may be listed at the
22 state or federal level protected.

23 Also flood planes, there are flood
24 planes we must deal with along the Great Miami

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1 ~~River~~ There's also flood planes along Paddy's
2 Run. Flood planes extend to various points on the
3 banks of Paddy's Run depending on what the
4 topography is like in that area.

5 Another example of biotic resources
6 is this overhead. This is along the eastern
7 portion of the site, and this basically shows a
8 typical field or pasture type habitat we have, and
9 as we went through the cumulative impact analysis
10 and for the purposes of that analysis looked at the
11 possibility of on-site disposal, this was typically
12 the kind of habitat that we identified being
13 disturbed.

14 Another important aspect is cultural
15 resources. Cultural resources could be historic or
16 prehistoric artifacts, such as projectiles or some
17 of the ceremonial pieces that are identified on
18 this overhead. They also could be structures such
19 as homes that this area is very rich in cultural
20 resources, and we have an active program to insure
21 that we don't impact these types of things.

22 This is another shot of the flood
23 plane area. This is along the Great Miami River.
24 You can see the site in the distance. It's upside

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1 down. The flood planes obviously extend in the
2 flat, cultivated fields adjacent to the Great Miami
3 River, and what we're concerned about when we look
4 at flood planes is basically changing elevations.

5 A flood, if it were to occur, either
6 a hundred-year flood or a 500-year flood, it's
7 typically accustomed to proceeding a certain distance
8 from the river, in the case of Paddy's Run from the
9 stream. If we change elevations significantly, the
10 water can no longer go where it was accustomed to
11 going and will magnify down stream floods.

12 Kind of hand in hand with the flood
13 planes are wetlands. This is a typical wetland
14 that we have on site, basically this drainage ditch
15 with the cat tails. We have about 35 acres of
16 wetland on the Fernald site, and approximately 10
17 to 15 fall under this category of drainage ditch
18 wetlands. There's a larger area of forested
19 wetlands in the northern part of the site, which
20 are a little bit higher quality than this.

21 When we look at impacts in the
22 Operable Unit 4 document, both specific and
23 cumulative related to all of the operable units,
24 drainage ditch wetlands are primarily wetlands that

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1 could be impacted. Wetlands on site are shown in
2 red. This is a large area of forested wetlands I
3 was speaking about.

4 We're taking steps, as we did very
5 early on in the process, to avoid this wetland
6 area. However, if we cannot avoid this area, we're
7 developing a strategy to compensate for the loss of
8 wetlands. We're going to be negotiating that with
9 the Army Corps of Engineers and various other
10 agencies. So those are just some of the kinds of
11 things we look at as we go through our impact
12 analysis.

13 Back to the document itself, also in
14 Chapter 4, at the end of Chapter 4, we have several
15 short sections that we've added to comply with NEPA
16 guidelines. These are irreversible, irretrievable
17 commitment of resources and several others. So
18 that essentially takes care of the body of the
19 feasibility study.

20 As I said, this document is
21 functioning for the Environmental Impact Statement
22 at the site. So the other aspect of it is
23 cumulative aspects that occur in Appendix I in the
24 feasibility study. We've taken remedial

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1 alternatives, the latest information we had
2 available, and provided an analysis of the impacts
3 related to the overall remediation of the site.

4 Obviously, we're going to be
5 proceeding through the RI/FS process for the other
6 operable units. Decisions will be made for those
7 other operable units, and that -- the decisions
8 that are made at the very -- from the LRA's that
9 we've utilized for our evaluation in Appendix I.
10 If that happens, we'll update this analysis and
11 provide it for future feasibility studies for
12 submittance for other operable units.

13 Looking at some of the impacts we
14 anticipate for OU4 specifically, alternative, as
15 Dennis discussed, was removal, vitrification of the
16 contents of the silos, removal and on-property
17 disposal contingent upon decisions in OU3 and 5 for
18 storage.

19 Basically, there's an overall
20 beneficial impact for eliminating or controlling
21 the source or potential source of contamination of
22 the silo, contents in the silos. On the negative
23 side, the excavation of the Operable Unit 4 area
24 and the potential excavation for on-site disposal

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1 facility will result in less than 15 acres of the
2 site being disturbed in the short term. Depending
3 on the decisions that are made in Operable Unit 3
4 and 4, a portion of these could be committed in the
5 long-term for disposal. Also potential for a small
6 area of wetlands to be disturbed as a result of the
7 excavation activities. Again, we're looking into
8 compensating for the loss of these wetland areas.

9 And minor increases in traffic due to
10 goods and materials, fill material, being brought
11 on to the site. This is on the order of ten trips
12 per day for the life of the remedial activity. And
13 those we've identified as substantive. There are
14 others, some of the other categories are evaluated
15 and discussed in the document as well.

16 As far as cumulative impacts go,
17 again, an overall beneficial impact due to the
18 elimination of sources of contamination. Due to
19 the potential sources to the air, water, and soil,
20 again, we're looking at all five operable units
21 being remediated.

22 So we've got a larger area that will
23 be disturbed during that activity up to 250 acres.
24 And, again, the LRA's that we use for this

1 evaluation primarily looked at on-site disposal.
2 So this is somewhat of a worst case scenario.

3 Hand in hand with the disturbances at
4 the site, a portion of habitat, such as the field
5 habitat I showed in the overhead previously, and
6 some forested areas in the northern part of the
7 site would be disturbed.

8 We do have -- Probably the most
9 important impact we need to identify is, we do have
10 the potential to lose most of the wetland areas on
11 the site. We are trying to work with the various
12 crews to insure or to the extent possible avoid the
13 wetland areas. Wetlands that we do lose due to
14 excavation or commitment of land, we will begin to
15 compensate or mitigate the loss of those areas.

16 In the area of socioeconomics, which
17 looks at impacts from the action to the local or
18 area economy infrastructure such as public
19 services, we do expect a significant amount of
20 material to be purchased in the area.

21 And in addition, we've done a lot of
22 evaluation as to the level of work force at the
23 site, and we expect the level to stay fairly
(24 consistent through the life of the remedial

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1 activities. Therefore, socioeconomics in the short
2 term should be primarily beneficial. And as we
3 complete remedial activities, the need for a lot of
4 the work force will decline, which could result in
5 minor socioeconomics after the activities are
6 complete.

7 That concludes my presentation, and
8 I'll turn it over to Randi Allen.

9 MS. ALLEN: I just have a couple
10 slides here. These are the last three slides in
11 your package, and I promise I'm not going to go
12 through all of those. Sitting up there looking out
13 at you guys, looks like not a moment too soon I'm
14 winding up this packet here.

15 This is really what we've gone
16 through in Operable Unit 4 so that we could relate
17 what we are intending to do with the residue to
18 advise you out there. Initially starts back when
19 we submitted the document to US EPA and Ohio EPA,
20 the document and the EIC.

21 Essentially, what we've gone through
22 here is beginning really in October, we have tried
23 to meet with the public to tell them what is in the
24 proposed plan and the feasibility study, and have

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1 gone through really risk assessment, ground water,
2 and different little round tables I guess.

3 And when we get down to the bottom of
4 this first slide, this is pretty much when we
5 started the distribution of this document. Because
6 it's an EIS the distribution of this document was
7 2,500 copies or something along that. This takes
8 us pretty much to where we are now. This is March
9 7th, this is just notifying this is an EIS
10 feasibility study.

11 The last sheet here will take us to
12 where we are now, to March 21st. And as I think
13 Dennis has told you, April 20th is the date that we
14 are asking for everybody's comments. You can give
15 us some comments this evening if you'd like to,
16 written or verbal comments. And I think the last
17 chapter in the proposed plan, there's -- also you
18 can send it, there's the address for submitting
19 your comments to the US DOE, Ken or Gary, or you
20 can send them out to Jim Saric.

21 What we're going to do at that point
22 in time is prepare a responsiveness study. When we
23 submit our Record of Decision down here on June
24 10th to US EPA, that Responsiveness Summary will be

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1 part of that document. So that's your opportunity
2 to see how we responded to your comments.

3 This last one down here, there's been
4 quite a few questions on what kind of public
5 involvement do we have from this point on. Now,
6 they have revised the Community Relation Plan in
7 1986 and 1989. And it takes us pretty much up to
8 the Record of Decision point; is that right, Gary?

9 MR. NIXON: That's right.

10 MS. ALLEN: So what we need to do,
11 in the next three months I think the Public
12 Relations Department will be sending out some
13 questionnaires and folders to members of the
14 community to get some communication, when we get
15 into remedial design what part do you want to play,
16 how involved do you want to be to, do you want to
17 continue to have round tables.

18 We need to get some communication and
19 revise that plan. I think this is a pretty
20 standard format for all of the operable units once
21 they get to the feasibility study point as we go
22 through the round tables and have a public
23 meeting.

24 At this time what I'd like to do is

1 ask Jim Saric from US EPA and Tom Schneider from
2 the Ohio EPA if they'd like to make some comments.

3 MR. SARIC: I guess when I look at
4 the meeting we're having here tonight, the proposed
5 plan for Operable Unit 4 silos, I kind of sat back
6 and started thinking about some of the first times
7 I was involved in this project in 1987 for a few
8 months. And then I went and was working for EPA on
9 another Department of Energy project and came back
10 several years ago in '91, and the K-65 silos were
11 an issue of a very heated debate. They were a very
12 strong public concern.

13 I think if it was the one symbol of
14 the Fernald site that was representative, it was
15 the K-65 silos, and a very significant source of
16 contamination, a very significant source of concern
17 for all of us involved.

18 And I think today we're really at a
19 key pivotal point, a crossroad, where DOE is
20 proposing a remedy, one which we've looked at and
21 reviewed several times as well as Ohio EPA. And
22 we've looked at various options, and we think we've
23 got one that's very reliable, a very good option
24 for handling this material.

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And, you know, we're hopefully going
2 to be able to move forward. We're encouraging you
3 to come forward with comments on this thing, and
4 then you'll have the Record of Decision coming in
5 in June which will basically begin finalizing this
6 decision. Obviously, if you look at some of the
7 earlier slides, there's still a lot more work to be
8 going on.

9 I mean, this is a decision on what
10 we're going to do, and now it's actually let's go
11 out and do it, remove the silo waste or whatever
12 the action. This will continue, and there's a lot
13 of work to be done, and I think the dates in 2,000
14 are, you know, ongoing as far as when activities
15 will be completed in 2,000 or 2,002.

16 So I guess, personally, I think we're
17 at a big crossroad here, and I guess it's important
18 really to understand what action is being taken,
19 and I encourage all your comments to give. If
20 you've got any questions, please ask any of us,
21 myself or Tom Schneider, and we can go over those
22 things with you. Thanks.

23 MR. MITCHELL: At the last meeting I
24 showed a new table of organization for the new

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1 officers for the facility over the site, and Tom
2 Schneider has been selected as the Fernald
3 Coordinator, and this is his first meeting.

4 MR. SCHNEIDER: Well, I just want to
5 reiterate what Jim said. I think he said it very
6 clearly. We're at a very significant point in the
7 process. You know, we've all come a long way, and
8 you're all to be congratulated for having stuck it
9 out so long.

10 We're finally at the decision point.
11 We've spent all this time investigating this site,
12 now we're making the decision. Now is not the time
13 to give up on your involvement, and now is probably
14 the time to make your comments count the most.
15 Your comments on this plan and the future proposed
16 plans is really where you have a chance to make a
17 substantial difference.

18 We along with US EPA participated in
19 the review of these documents and the proposed
20 remediation, but we're always open to your
21 suggestions and comments. So like I said, we look
22 forward to your comments on this document. If you
23 have questions, we'll be here to answer them.

24 In the future there will be probably

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1 a few more of us from Ohio EPA. We're hiring some
2 more staff, so hopefully that will be a little more
3 proactive to your needs and help you out as far as
4 information you might need. So like I said, feel
5 free to contact me outside of this at the office or
6 wherever. - Thanks.

7 MR. STEGNER: Thank you. What we'll
8 do now is, we'll have an informal question and
9 answer session. It might be best if you use a
10 microphone back there. If you don't feel
11 comfortable, just stand up and shout it. We have a
12 recorder here tonight. Please just state your name
13 and the question, and we'll let the panel pick it
14 up. So whoever wants to be first, feel free.

15 MS. NUNGESTER: I'm Norma
16 Nungester. I'm a Fernald resident, and a member of
17 Fresh. I have a question of Dennis Nixon. He made
18 the statement that I don't agree with, and I
19 wondered if he could clarify for me. He said that
20 when you vitrify waste, it reduces radon emanation
21 to that of building materials. To my
22 understanding, when you vitrify radionuclides, that
23 they still are very, very hot.

24 MR. NIXON: That's correct. The

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1 concentrate, due that reduction, is the radon
2 generation from the treated waste itself that is
3 significantly reduce. The radon is actually held
4 up, and the surface area is significantly reduced.
5 Did you get every other word?

6 You're exactly right, that due to
7 that fact that there's a significant volume
8 reduction, you actually concentrate the
9 radionuclides, so you have a higher concentration
10 of say uranium in a set volume, but the radon
11 itself is much less. The generation or the
12 emanation from the vitrified waste is much less
13 than in its natural form.

14 MS. NUNGESTER: Okay, thank you.

15 MS. YOCUM: Edwa Yocum, Fresh member
16 and a resident of the Fernald area. I was asking a
17 question, this concerns Subunit C2 on your
18 preferred alternative demolition removal on
19 property disposal. When you were talking about the
20 OU4 NEPA compliance with the substantive cumulative
21 impact up to 250 acres of surface disturbance, does
22 that mean that would be what would be part of where
23 the waste will be put?

24 MR. WOODS: Yeah. Again, we looked

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1 at an LRA and assumed on-site disposal.

2 MS. YOCUM: Okay.

3 MR. WOODS: And that acreage would
4 incur areas where waste would be disposed of.

5 MS. YOCUM: Okay. Then, you also
6 are talking about the loss of 220 acres of
7 habitat. Is that included in the 250 acres?

8 MR. WOODS: Yeah. That 250 would be
9 a total that would occur during the short term, in
10 other words, during excavation activities. Once
11 remediation is completed, we would look at
12 approximately 220 acres being permanently
13 committed, so yes, that's correct.

14 MS. YOCUM: Okay, all right, that's
15 what I wanted to know.

16 MS. NUNGESTER: Can you expand on
17 that permanently committed? I missed something.
18 Permanently committed for what, waste disposal
19 facility?

20 MR. WOODS: Yeah, correct.

21 MS. NUNGESTER: Not for the waste
22 itself but for the --

23 MR. WOODS: For the facilities that
24 would house the waste.

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1 MS. NUNGESTER: That's the inground
2 facility, the upgrade vault, as you so say?

3 MR. WOODS: Correct.

4 MS. NUNGESTER: Now can you give me
5 an explanation of what is in an upgrade vault?

6 MR. WOODS: The alternatives that we
7 used for the evaluation utilized the vault concept,
8 which would be a portion of the waste being
9 disposed of below grade, and, you know, basically a
10 portion above. There would be facilities that the
11 waste could be retrieved from, and what we used was
12 the calculation of the area.

13 MS. NUNGESTER: Disposal means
14 permanent?

15 MR. WOODS: Yes.

16 MS. NUNGESTER: But now you're
17 talking interim?

18 MR. WOODS: Well, what I'm saying is
19 the design of the facility wasn't as important as
20 the area that the facility could include. Designs
21 are going to be finalized as we go through the
22 remedial process.

23 MS. NUNGESTER: Well, this is
24 another thing, when you go through the RA and

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1 that's where the final decision and designs are
2 actually made --

3 MR. WOODS: Correct.

4 MS. NUNGESTER: -- how can you come
5 out with a Record of Decision before you actually
6 know what the vault is going to look like and if it
7 is really going to do the job?

8 MR. WOODS: No, you cannot reach a
9 Record of Decision until, you know, we've gone
10 through the full analysis of what the vault will be
11 designed like and how it will work. What we did is
12 utilize the alternatives that were available at
13 that time for the purpose of the evaluation, which
14 is really the best we can do. We can't foresee.

15 MS. NUNGESTER: Okay. As of today?

16 MR. WOODS: That's correct, that's
17 correct. As we go through the various operable
18 units and decisions are made as to the final design
19 of the vaults and changes are made to the area,
20 that may be required. We'll update the analysis
21 and provide it in the future integrated documents
22 for the other operable units.

23 MS. NUNGESTER: Okay. So then our
24 decisions of the -- So your alternatives for the

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1 Unit 4 can change by the time after arriving at a
2 decision?

3 MR. NIXON: We were specific with
4 the subunit wastes the Record of Decision. For
5 Operable Unit 4, specifically the Record of
6 Decision, the proposed plan in the future Record of
7 Decision will be that the Subunit C waste is -- you
8 remember us talking about being held in abeyance or
9 delayed operable units, the Subunit C waste will be
10 handled in accordance with the Records of Decisions
11 for Operable Unit 3 and Operable Unit 5,
12 respectively. Okay.

13 So as far as our Record of Decision,
14 essentially we carry it through the removal of the
15 soil, interim storage of that soil in accordance
16 with Removal Action 17, which is the management of
17 those soils, demolition of the structures and
18 storage of that debris in interim until OU3 comes
19 up with a final decision for the debris.

20 OU5 will have a final decision on how
21 the soils will be treated, and those all integrate
22 very well. When we start that remediation process,
23 when we have those soils excavated and stored, at
24 that time Operable Unit 3 and 5 Records of

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1 Decisions will be in place, and we'll have very
2 good integration.

3 At that point we'll be able to
4 deliver -- Theoretically, we'll be able to take the
5 soils out and take those to a Operable Unit 5
6 facility for treatment. They'll be disposed of in
7 accordance with their Record of Decision, and that
8 may or may not be on-site disposal.

9 MS. NUNGESTER: Okay. You're
10 saying, you're taking the debris, the structure,
11 the equipment, the surface soil, you're putting
12 them all in the underground vaults?

13 MR. NIXON: Operable Unit 4 is
14 delaying that decision. That's going to be
15 actually be stored in an interim fashion --

16 MS. NUNGESTER: Okay

17 MR. NIXON: -- until OU5 and OU3
18 have records of decision. Now, their Record of
19 Decision may very well be that we will treat soil
20 by washing it and disposing of that on site.

21 MS. NUNGESTER: Right, but it
22 doesn't say that, that it's going to be interim
23 until Unit 5 is considered.

24 MR. NIXON: The proposed plan does

1 clearly state, as well as the Record of Decision
2 will clearly state those, that integration.

3 MS. NUNGESTER: It does?

4 MR. NIXON: Yes, it does.

5 MS. NUNGESTER: Okay. Well, I know
6 on the proposed plan booklet on page 43 talks about
7 that specific issue.

8 MR. NIXON: Right.

9 MS. NUNGESTER: If anybody has that
10 book, and they want to look at it, they can, but I
11 don't believe it says -- It says something about
12 that it will be combined with 5, Unit 5, but it
13 does not say that would be interim disposal until
14 5.

15 MR. NIXON: Disposal, it is interim
16 storage.

17 MS. NUNGESTER: Or storage, but they
18 use "disposal" as the word throughout the whole --

19 MR. NIXON: In the proposed plan,
20 the proposed plan has, for Subunit C waste, it has
21 a selected or preferred alternative which is
22 on-site disposal identified, and the reason that's
23 in there is because on-site and off-site disposal
24 was so close we had to select the one for the sake

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1 evaluating the full alternative from start to
2 finish. Okay.

3 Later in the document it talks about
4 the integration effort that will occur with OU3 and
5 OU5, and puts -- holds that decision in abeyance
6 for final disposal of those debris and soil until
7 OU3 and OU5 have their Records of Decision.

8 MS. ALLEN: The confusion could be
9 the fact sheet on page 12 states that the soil
10 debris will be disposed of on site.

11 MR. NIXON: There is an area in the
12 fact sheet on page 12, the last paragraph I
13 believe.

14 MS. NUNGESTER: Then, this shows
15 more of a reason why the public should have a
16 comment period before -- after -- in between the
17 ROD's and even during the remedial, the RA, then,
18 to understand it. Thank you.

19 MR. STEGNER: Other questions?

20 UNIDENTIFIED SPEAKER: I have one,
21 and it goes to back to when you were talking about,
22 Randi about, the community and stake holders or
23 public or whatever we're called these days, plays a
24 part in this process. I'll echo what Edwa just

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1 said. We give our comments, then there's a Record
2 of Decision. You respond to our comments, and you
3 follow this thing down.

4 But what if we don't like your
5 responses, you know, I don't see another -- I guess
6 as a stakeholder, which is kind of an okay word
7 these days, I guess I have a little bit of a
8 problem with that because once I give you my
9 comments on this as of April 20th, I don't get to
10 say nothing else, and if you don't like what you
11 choose or I don't like the way you responded to my
12 comments, you know, how am I going to be able to
13 come back and say I don't like this?

14 MS. ALLEN: Just like with any other
15 primary document, we submit them to US EPA, and
16 that same document also goes over to the PEIC, and
17 I'm assuming that the Record of Decision will be
18 like any other document in that once it hits the
19 PEIC, you guys are invited and welcome to comment
20 on the document and provide comments over to Gary
21 and Ken.

22 UNIDENTIFIED SPEAKER: And they
23 would be considered as official comments? Because
24 as I read this thing here, it doesn't indicate that

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1 at 11:11

2 MS. ALLEN: It also doesn't in the
3 remedial investigation report, but if you can
4 remember --

5 UNIDENTIFIED SPEAKER: I guess what
6 we're asking for is that we need to be walked
7 through this process, you know. Once the Record of
8 Decision is made, we need to be talked to before
9 your remedial design stuff. We need to be involved
10 in that remedial design stuff.

11 Then we need to talk about the
12 remedial action stuff, and it's going to create a
13 lot of work for people, but we're afraid if we're
14 not walked through that process that we're going to
15 end up at the end with an alternative that people
16 in this community are really going to be upset
17 with.

18 MS. ALLEN: I think that's where the
19 input on the edition that's coming out of the
20 public relations group is going to be critical
21 because it doesn't take us past the point we are
22 right now, and I think we need to get some kind of
23 idea of what kind of part you guys want to play in
24 that.

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1 MR. PICKLES: Really the FS and
2 proposed plans for Unit 5 is coming out, you do
3 have a comment period. I assume from your comments
4 about what we're doing in the -- are you satisfied
5 with the issue; is that right?

6 UNIDENTIFIED SPEAKER: Well, I mean
7 some of us might be. I can't speak for everyone in
8 this room, but, you know, at the same time we're
9 going to walk through this process of designing how
10 we're going to do this, I want to know what's going
11 on and what's happening so I can verbally say I
12 don't like this or I like this or this isn't right
13 or whatever.

14 You know, I don't want to say, yeah,
15 yeah, I'm all for your alternative here, this
16 sounds great, let's do it, and then you don't talk
17 to me until the year 2,000, and I don't like what
18 you did.

19 You know, I think, you know, if we're
20 going to stick through this process as we've done
21 for ten years, and I guess we'll do it for the next
22 how many ever, we want to make sure that we're
23 making good and tough decisions as we move along
24 here so when we get done, we have a cohesive

1 decision in this community that we can live with
2 what is left here.

3 MR. STEGNER: I think it's safe to
4 say that we'll be involving you throughout the
5 whole entire process, walking you through the
6 process, you and the Citizens Task Force.

7 UNIDENTIFIED SPEAKER: We need to
8 see that as being a real life thing. Somewhere on
9 here it needs to be written in here we'll talk to
10 the public, we'll seek public input, we'll
11 whatever. That needs to be added in here somewhere
12 because we don't see that in here right now.

13 MS. ALLEN: Well, we almost have to
14 because I'm already getting asked questions right
15 now that I can't answer until remedial design. As
16 far as long term during final remediation, I don't
17 have the answers right now. So I mean, this
18 process going to have to continue through final
19 clean-up because I just can't answer the questions
20 right now.

21 UNIDENTIFIED SPEAKER: On February
22 1st the Ohio EPA issued a notice of deficiency and
23 closure. Were those deficiencies ever corrected?

24 MR. NIXON: Which closure plan?

1 UNIDENTIFIED SPEAKER: On Unit 4,
2 the one you just gave us an elaborate presentation
3 on.

4 MR. NIXON: I believe there might be
5 some confusion there. Can the State of Ohio clear
6 that up? RECRA Unit 4 Solid Waste Unit possibly,
7 it is not this operable unit.

8 UNIDENTIFIED SPEAKER: Not this
9 operable unit?

10 MR. SCHNEIDER: That's correct.

11 UNIDENTIFIED SPEAKER: So two
12 different hazardous waste units on this facility?

13 MR. SCHNEIDER: This isn't a
14 hazardous waste unit.

15 UNIDENTIFIED SPEAKER: Could we ask
16 them to stand when they speak?

17 MR. SCHNEIDER: We're saying
18 Operable Unit 4 is it not a hazardous operable
19 waste unit, not Operable Unit 4. I don't know what
20 exact letter you may have there, but we can talk
21 about it. I think it's probably a RECRA unit.

22 UNIDENTIFIED SPEAKER: It was issued
23 February 1st out of your office, 1994.

24 MR. SCHNIEDER: Must be a RECRA

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1 unit, then.

2 UNIDENTIFIED SPEAKER: Okay. I'll
3 discuss it with you.

4 UNIDENTIFIED SPEAKER: I'm Lou
5 Bogart. I'm a resident of Ross. I have some
6 technical questions. In looking at data tables for
7 Operable Unit 4, one of the things that strikes me
8 is that you always report uranium 254/236. Does
9 that mean there's U-236 there? If so, I don't
10 believe it because U-236 doesn't exist in nature.

11 Secondly, the ratio of U-234 to U-238
12 in many cases look very odd, odd in the sense that
13 in nature and in this ore and in the raffinate the
14 234, 238 ratio ought to be very close to unit. For
15 example, when in the table that you've given a
16 handout, the Silo 1 number looks pretty wrong. The
17 Silo 2 number is more acceptable.

18 And the reason I think that's
19 important is because you're going to focus the
20 clean-up levels on U-238. I don't quite know how
21 you're going to do that without doing some very
22 sophisticated isotopic analysis. But in any case
23 those numbers don't look right, and you see that in
24 many, many tables.

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1 On the inorganic chemicals, is there
2 somewhere in all the OU4 documentation a list of
3 all of the inorganic constituents? For example, I
4 note that in most of the recent documents you don't
5 list gold. Now you can. There is about, about
6 four times as much gold in this material as
7 silver.

8 Just as a side light for my own
9 amusement, I calculated this afternoon. There's
10 about \$2.3 million worth of gold in those two
11 silos, and that may not be important, but what
12 other elements are not reported which may have some
13 impact on the processing of the material by
14 vitrification?

15 For example, there should be a fair
16 burden of rare earths, the whole lamprophyllite
17 series should be in these ores, and I don't see any
18 of that being reported. Anybody have an answer for
19 that one?

20 MR. NIXON: Well, you had about five
21 questions, so I'll start in the beginning. One was
22 235 to 236, those are analyzed and reported the
23 same. You are correct. We don't feel there is any
24 uranium-236 in the residues. It's a good point.

1 Whether the ratio between U-234 and U-238 is
2 correct, I do not have the answer to that, but we
3 can discuss that and get back with you within the
4 next couple of days.

5 MR. BOGART: How about a complete
6 list of --

7 MR. NIXON: Complete list, the
8 remedial investigation did do a complete list of
9 the organics, inorganics. Whether gold was
10 evaluated, I'm not sure. I'm looking at my team.

11 MR. BOGART: You were supplied gold
12 by TLCP.

13 MR. NIXON: But we also do a full
14 HSL, Hazardous Substance List, which gold would not
15 be part of. So I'm not sure whether gold was
16 particularly reported in the RI.

17 MR. BOGART: How about rare earths?

18 MR. NIXON: I couldn't answer that,
19 either. We've got a copy of the remedial
20 investigation here. Whether these fellows can
21 quickly find answers to those questions or again we
22 can get back with you.

23 Amy Engler I know is sitting out here
24 somewhere taking very good notes, and we'll respond

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1 to any of the questions which we don't have answers
2 to tonight. We've committed to have answers back
3 within 48 hours from this evening.

4 MR. BOGART: Well, I -- not so much
5 for myself, but I think for the general public.

6 MR. NIXON: Any question that is
7 raised even in the informal conference will be
8 addressed in the responsiveness.

9 UNIDENTIFIED SPEAKER: Can we use
10 that gold as collateral, can we use that? You said
11 there's like \$2 million worth of gold. Can we use
12 that as collateral somehow?

13 MR. BOGART: It's going to cost 90
14 million bucks, maybe we can make it 88 million
15 bucks. On page 21 or whatever this thing is
16 called, the proposed plan, the spiral-bound thing,
17 on page 12 about the middle of the page is an
18 initiation of a discussion about risk.

19 And this is the area that concerns me
20 the greatest, because although you point out
21 that -- And I presume in all cases you're talking
22 about fatal cancers because there are, of course,
23 nonfatal cancers also. And that's not terribly
24 clear in anything that's written.

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1 Risk from exposure, the radiation
2 naturally occurring in the environment is about 1
3 in 100 primarily from radon; however, incremental
4 risks targeted by the upper end of EPA range means
5 if all persons within a population of 10,000, 1
6 person might get cancer from the exposure, and
7 cancer is expected from all other causes. I think
8 the whole business of risk assessment needs to be
9 put into some kind of context.

10 If you look at the latest NCRP
11 guidance, 115 and I guess 116, you can talk about
12 risk in terms of about 4 or 5 times 10 to the minus
13 10 and you do the hocus-pocus chemists like to do.
14 And that turns out the average resident from
15 natural radon, that risk becomes about one half
16 times 10 to the minus 2 and the range is 0 to 90
17 years old. And when 90 years old, I guess cancer
18 is the last thing I'm going to worry about.

19 But in any event, you make the
20 statement that the normal cancer risk is about 10
21 to the minus 2, and then you proceed to march down
22 the road of things that are 2 to 4 to 5 orders of
23 magnitude smaller, and it's never put in context.
24 And I think these documents need to discuss what

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1 are we paying for, and that becomes a real
2 problem. I don't know how many people feel
3 comfortable with a 10 to the minus 6 risk, and I'm
4 not real sure that that's a fatal cancer risk.

5 There is a problem with the
6 methodology of using the health effect summary
7 table slope factor thing as opposed to methodology
8 that's used by people who do the beer studies and
9 the NCRP studies because we're talking about vast
10 orders of magnitude differences.

11 Now, the last comment I guess, I'd
12 like to see something in these documents that more
13 clearly explains why the CERCLA process has elected
14 to use such abominably small risk estimates.

15 My last comment perhaps goes to EPA
16 back in 1986, was a bad year for me, EPA published
17 a notice of intent that they were going to
18 promulgate residual regulation standards. It is
19 now 1994, and, to the best of my knowledge,
20 residual radiation level standards have not been
21 promulgated.

22 In 1993 in a GAO report to Congress
23 somebody in EPA said that in March of 1994 they
24 were going to finally publish residual radiation

1 standards, not publish them, but they would take
2 them to OMB, which would be the first step in
3 getting them published -- well, not the first step,
4 but a key step in getting them published in the
5 Federal Register.

6 March 1994 is now. My concern is, is
7 there one part of EPA working on residual radiation
8 level standards which may very well impact on the
9 clean-up levels that are being talked about here
10 for the clean-up of OU4?

11 MR. NIXON: Was there any response?

12 MR. SARCA: Yeah, I can answer that
13 from my understanding. One of the people involved
14 from the EPA perspective that works with me, he's
15 been commenting that he's involved in working on
16 some of those standards. Will they directly impact
17 this investigation, I don't know. I don't think
18 so. Hearing some of the numbers, I think they may
19 even be moving towards the side of being equally as
20 conservative, could be more conservative.

21 I don't know what the final will come
22 out with. When they do come out of the numbers,
23 they'll go to budget and move forward from there.
24 I do know that they are being worked on. One of

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1 the people from my office is doing that right now.
2 I don't know the exact state.

3 UNIDENTIFIED SPEAKER: If memory
4 serves, I think that the gold Lou was talking about
5 was contained in the pitch blend or whatever it was
6 that came over from Africa that the United States
7 bought and dumped into the K-65 silos. I heard or
8 read that somewhere. You might want to check that
9 out.

10 MR. NIXON: It is in the K-65
11 material, yes.

12 MR. BOGART: It all came from one
13 mine..

14 UNIDENTIFIED SPEAKER: The reason
15 they took that pitch was they wanted to strike
16 gold?

17 MR. BOGART: No, radium and gold.

18 UNIDENTIFIED SPEAKER: As far as I'm
19 concerned, it can be vitrified.

20 MR. BOGART: The question was, what
21 else is there?

22 UNIDENTIFIED SPEAKER: Okay.. I just
23 have another question. When you said they were
24 filling the silos, especially 1 and 2, did they

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1 transport it through a pipe?

2 ~~DAVE~~ MR. PICKLES: Yes, ma'am.

3 UNIDENTIFIED SPEAKER: That's not
4 what I recall. If my memory serves me correctly,
5 some of that material may have been put in that
6 way, but I remember the workers saying at different
7 times that they also carted barrels out there from
8 the silos.

9 MR. NIXON: Most of the material in
10 Silos 1 and 2 were in a drum form that came from
11 Melloncrook Chemical Works in St. Louis. Those
12 drums were taken to the drum handling building
13 between Silos 2 and 3. The drums were dumped and
14 then mixed into a slurry with water and pumped into
15 the silo and then allowed to settle. The water was
16 decanted off into the decant sump tank, and then
17 that water was used to reslurry additional material
18 coming from off site.

19 The material -- The majority of the
20 material, that was processed here on site, because
21 we did process both at the Melloncrook Chemical
22 Works as well as some of the material being
23 processed here, K-65 material being processed at
24 the site in our Refinery Plant 2 and 3.

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1 That material as it was processed
2 from the production area at Fernald, it was
3 transported hydraulically in a slurry through that
4 underground trench, through the pipe back to Silo
5 2. But the majority of the material was in drum
6 form and reslurried at the silos.

7 UNIDENTIFIED SPEAKER: I think that
8 should have been mentioned in your report there,
9 you know. It says, from the way I read it,
10 everything went through that pipe and everything,
11 which it wasn't really.

12 MR. NIXON: I tried to talk to that
13 point in showing that one areal shot where you can
14 see all of the large numbers of drums that were
15 being stored by the silos. That is the incoming
16 material that was coming in from Melloncrock in St.
17 Louis and then reslurried at the site.

18 MR. STEGNER: Thank you. Let's take
19 our break now and reconvene for the formal comment
20 period.

21 (A brief recess was taken.)

22 (All panel members except Mr. Stegner stepped
23 down.)

24 MR. STEGNER: This is the beginning

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1 of the formal comment section where your comments
2 will be entered to the Responsiveness Summary in
3 the Record of Decision. We will do this as we have
4 some folks who have signed up to make comments.
5 You do not have to sign up to make comments. You
6 can have an open mike at the end. There's only
7 about four or five folks here that indicated they
8 wanted to make comments.

9 Again, you do not have to use this
10 forum to make the official comments. You can
11 submit comments on one of these cards and leave
12 them here at the end of the meeting or you can
13 submit comments to the Department of Energy at the
14 Public Affairs office. We also ask before you
15 leave, if you don't mind, to fill out the
16 evaluation forms we have sitting on all of the
17 chairs.

18 The first person we have is Kevin
19 Sorrel. I guess can Kevin's not here.

20 UNIDENTIFIED SPEAKER: There's some
21 folks still out here in the hallway.

22 MR. STEGNER: You want to check out
23 there.

24 UNIDENTIFIED SPEAKER: Not there.

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1 MR. STEGNER: Is Lee Bolver still
2 here?

3 UNIDENTIFIED SPEAKER: He left.

4 MR. STEGNER: Bob, do you have
5 something to say?

6 UNIDENTIFIED SPEAKER: I'll turn it
7 in later.

8 MR. STEGNER: Bob Gessel -- Godsel,
9 I'm sorry? Going very well so far. Tom Wagner,
10 Citizens Task Force? Okay. We have an open mike,
11 folks, if anyone wants to make a comment.

12 MS. NUNGESTER: You want my address,
13 too?

14 MR. STEGNER: Not necessary, as long
15 as we have your name.

16 MS. NUNGESTER: Norma Nungester,
17 Fernald resident and Fresh group. I have several
18 comments. First of all, I want to cover again what
19 was stated in the question and answer period. I
20 think between the draft ROD and the final ROD we
21 need a public comment official time, and you need
22 to formalize this. On down here below you say the
23 public involvement, public involvement, that means
24 nothing to us. You need to formalize that.

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1 Thank you.

2 MR. STEGNER: Thank you, Norma.

3 Edwa?

4 MS. YOCUM: Edwa Yocum. Some of
5 this will sound repetitious, but I'm asking for a
6 public comment period between the ROD's, the draft
7 and final; and we need an official public comment
8 period after the RA process. And also I'm asking
9 for a public comment period between the beginning
10 and completion of remediation. And then, too, when
11 dismantling the K-65 silos and also the 3 and 4,
12 I'd like to have a protective cover be used around
13 the silos.

14 And as far as I read in there, that
15 EPA would be reviewing the vault or the disposal
16 sites every five years, I'd like to know the
17 definition of "reviewing," and I would like
18 continuous monitoring and maintenance of on-site
19 disposal vaults or at least one time a year as long
20 as they're on site. And also, who would be paying
21 for this monitoring and maintenance? And this way
22 I recommend a trust fund for monitoring and
23 maintenance of the disposals.

24 MR. STEGNER: Thank you, Edwa. Open

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1 microphone still, folks. Thank you all very much.

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MEETING CONCLUDED AT 8:45 P.M.

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C E R T I F I C A T E

I, LISA CONLEY, RPR, the undersigned, a notary public-court reporter, do hereby certify that at the time and place stated herein, I recorded in stenotypy and thereafter had transcribed with computer-aided transcription the within (65), sixty-five pages, and that the foregoing transcript of proceedings is a complete and accurate report of my said stenotypy notes.

Lisa Conley

MY COMMISSION EXPIRES: LISA CONLEY, RPR
JULY 28, 1994. NOTARY PUBLIC-STATE OF OHIO

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