# ON-SITE DISPOSAL FACILITY WORKSHOP

ALPHA BUILDING, CLASSROOM B

JUNE 24, 1997

7:00 P.M.

1

2 MR. STEGNER: Good evening everyone, thank
3 you for coming, my name is Gary Stegner and I work as
4 Public Affairs at the Department of Energy at Fernald.
5 We need to probably get out of here about a quarter
6 after nine at the absolute latest tonight. We will
7 shoot for 9:00, I think they turn the air conditioning
8 off then at a quarter after nine. Tonight's topic is
9 the onsite disposal facility workshop and when we last
10 discussed this on the 27th of May, we were going to
11 give you a status report and overview of where we are
12 on it. You had some questions dealing I guess
13 primarily with the category 5 material and we
14 explained what it was and now you probably want to
15 know how does it go in so we are going to get into
16 that into some detail tonight and I think probably the
17 onsite disposal facility, we are looking at some of
18 the record is the most discussed topic that we have
19 had at Fernald for the last two and a half years,
20 although the way things are going right now, the OU4
21 may catch up in the near future. Let me give you the
22 agenda here very quickly, first, I think Mike Hickey
23 is going to give you an overview or review of what we
24 discussed in the past primarily on the 27th and bring
25 you up to speed from Rudy Bonaparte from Geo Syntec

1 and then FDA Vice President Dennis Carr will finish up
2 talking about the economic evaluation of oversized
3 materials. So I think because of the nature of the
4 material that we are going to be discussing,
5 particularly in Rudy's presentation if he does not
6 mind and Dennis, we will probably take questions as
7 they come to mind. It will be fairly technical and I
8 think we have plenty of time to get out of here by
9 9:00 so I'll turn this over to Mike.
10 MR. HICKEY: Just to let us know where we
11 are here with the workshops to go through I don't
12 intend to spend an awful lot of time on the slides
13 here. You have seen them a month ago so I'm going to
14 move kind of rapidly through them and just try to
15 bring us up to speed as to where we are. The OSDF
16 project, we're going to talk about the scope. We're
17 trying to get a construction schedule of the north
18 entrance of our closure plus the category 5 oversized
19 material discussions.
20 The last time we met we didn't have this
21 particular map in the handout so I can refresh
22 everyone's memory the Haul Road starts down in our
23 southern waste unit and comes up along the west side
24 and then terminates out by the south. The relocated
25 north entrance road is this red part here

1 (indicating). It is relocated in two phases. The
2 first phase is what we are talking about doing this
3 summer. This latter phase is around the turn of the
4 century as we are getting out there and the final
5 piece here is the first cell for the onsite disposal
6 facility.
7 The other piece that I didn't talk about here
8 is the leachate conveyance system which you see and
9 that is the system that will catch all the leachate
10 that comes through the waste and it is pumped over to
11 the advanced waste water treatment facility for
12 treatment for discharge.
13 To update you on the current year construction
14 schedule, you saw this in May and the only change here
15 is now down on the OSDF phase 1 that is started as of
16 last Friday, we started clearing and grubbing in the
17 northwest corner of the cell which is in the
18 footprint. We are getting ready to start the actual
19 excavation out there. Again to just remind everybody,
20 July 1 is when we close down the existing north
21 entrance road and that is expected to be closed down
22 for 4 months and open up the end of October. That
23 bring us to the category 5 placement again quickly
24 category 5 materials are materials which require
25 special handling and placing. Examples that we have

1 all seen before and have agreed to are double bagged
2 asbestos, sludges from the AWWT and piping insulation.
3 Total volume of the onsite facility it 2.5
4 million cubic yards. The oversized material estimate
5 is anywhere between 10,000 and 20,000 cubic yards
6 which is less than 1% of the total. What is in the
7 packet that is new is more pictorial as to what that
8 really represents by the various streams that most
9 people know. They have all talked about the soil that
10 is going in and as you can see that is 86% of the
11 total volume. The debris is another 13% and this
12 oversized material, 1%. When we first started, that
13 is only 1% when we look at everything. That is not
14 the short list. Again, some of the pictures that you
15 asked for before they are actually there, millrolls --
16 UNIDENTIFIED MAN: You might want to point
17 out where the millroll is?
18 MR. HICKEY: Sure, I don't know this
19 large arrested object.
20 UNIDENTIFIED MAN: The intent is that we
21 pull uranium and gets through there to reduce their
22 size and produce solid shafts of uranium metal to cut
23 down specific sizes for reactors and that operation
24 was hauled in the 70's.
25 MR. HICKEY: The millstands and housings,

1 the stands here and there's a stand out there
2 (indicating) and another stand back in the back there
3 and those will be disassembled, all those pieces will
4 be disassembled and individually placed. I'm going to
5 skip one that is in your packet because it is another
6 millroll. We talked about the machine stands and
7 lathe beds, again, here is the actual lathe that goes
8 in here. We are talking about the bed that it sits on
9 down in here (indicating). We would disassemble it to
10 what looks like in your next picture with this
11 material here is disassembled and we are just talking
12 about the lathe bed itself, that solid piece of
13 equipment that goes there.
14 MS. CAMPBELL: Where do the other ones, all
15 of them other pieces that you got laying around there
16 --
17 MR. HICKEY: It would be either size
18 reduced to meet the physical wac that we have or they
19 would be boxed up and sent off site for disposal.
20 MS. YOCUM: What does a physical wac, how
21 big is that?
22 MR. HICKEY: There are a number of different
23 dimensions in there. The length dimension is the more
24 critical one that we are talking about here which is
25 10 foot long and this will exceed the 10 foot length.

1 There is another physical wac which has to do with how
2 tall it is and right now anything over 18 inches can
3 be placed but it has to be placed as a category 3
4 material and that is a 4 foot tall piece of material
5 that would go out there and it has to be regularly
6 shaped.
7 From our discussions we wanted to get out and
8 focus in on the millrolls, the millstands and housing,
9 the machine stands, the lathe beds, millstands that
10 could be out there in the category A structural steel
11 that we are looking at and putting in at greater than
12 10 foot lengths. At our last meeting you were looking
13 at an inventory with numbers. This is the inventory of
14 the material that we would be placing into the onsite
15 disposal facility, relatively small numbers of pieces
16 of equipment that would actually go in there.
17 MS. YOCUM: How many categories do you have
18 for the type of waste like you said category A is
19 structural steel, what is the millrolls, category
20 what?
21 MR. HICKEY: The millroll would fall into
22 category 5 material which is special handling and
23 placing. All of the items that are on that sheet
24 would fall into category 5. Category A is structural
25 steel which we call the particular -- the different

1 pieces of material to go into the cell because as you
2 can see it represents like in the 5% of that 1% which
3 is you know way less than 1% of the entire volume of
4 material that's going in there. I can give you the
5 actual number, it's like .04% of the total volume that
6 would be in there but what we are really talking about
7 would be this very small, small percentage of the
8 actual material that go in there.
9 MS. CAMPBELL: How come they're not category
10 A, is it's category A, constructural steel, how come
11 it's not category B or whatever, how then they go to
12 category 5?
13 MR. TRYGIER: The difference is that for
14 the OSDF we've got 1 through 5 categories. On
15 Operable Unit 3 for the debris coming out of there,
16 we've got categories A through J, A being structural
17 heavy, heavy gauge structural steel, for example these
18 other categories for light gauged painted metals.
19 There is a category for the product residues that are
20 held up in the equipment; that is where we got A
21 through J and the categories relative to all
22 production facility. The only thing we are looking at
23 here category A for large structural steel members,
24 the I beams --
25 MS. YOCUM: So each operable unit has a

1 different definition for different uses, uses
2 different numbers in their categories?
3 MR. HICKEY: Not really.
4 MR. BONAPARTE: For the ODSF more material is
5 disposed, it will be categorized at either 1, 2, 3, 4
6 or 5. One is soil like material, that is 86%,
7 category 2 is debris but more like rubble so it can
8 handle that soil, category 3 is regularly shaped
9 metals and concrete so the structural steel is in
10 category A for OU3, when it comes to the landfill, I'm
11 sorry, it's a category A for the OU3, when it comes to
12 the landfill it is actually going to be disposed of as
13 a category 3 material --
14 MS. YOCUM: Category 5.
15 MR. BONAPARTE: No, category 3. It's
16 irregularly shaped metal, category 4 is a small amount
17 of material from the municipal solid waste landfill
18 and I believe the clearing and grubbing type with a
19 very small volume and category 5 is the special
20 handling material that includes the double bagged
21 asbestos and the oversized material that Mike is
22 talking about so he talks about the 500 to 1,000 cubic
23 yards, it is mostly the oversized metal like the
24 millroll from category 5 plus a little bit of the
25 structural steel that the category A steel from OU3

that we have called in our work category 3 so it is a little complicated but I think I had you from the last statement that I made.

MR. SARNO: Is this laid out in any of the materials? Anywhere laid out?

MR. BONAPARTE: The 5 categories of materials are described in the material placement plan as part of the design package for the OSDF.

MS. CAMPBELL: Is there a way to get us a one page all that --

MR. HICKEY: We're talking about a lot of things here that people don't have on the top of their heads so you know, cheat sheets or something would be helpful.

MS. CAMPBELL: Thank you. Some are calling it matrix, some are calling is cheat sheets.

MR. BONAPARTE: I think there's something.

MS. CAMPBELL: I think it would be, you know, when you come to these meetings to have this in your hand and that way we don't have to ask you to tell us all over again because you probably told us this before but you know, you forget. There are 500 blue billion things going on this last few weeks and --

MS. DUNN: Where in the rod exactly is it, I

1 have a copy of the rod, are you --

2

3 (Off the record conversation.)

4

5 MS. CAMPBELL: You all know what we are
6 saying, what we need is a one sheet piece of paper,
7 kind of listing this out and the subsets of A and 1
8 through 5 and A through J and whatever.
9 MR. SARNO: Also, the oversized material
10 description that you were talking about, with the
11 dimensions and everything, it does not seem to be
12 anywhere in this. Isn't that what we're talking about
13 tonight?
14 MR. HICKEY: Yes, I did not include it
15 because I think it was just an update and it was just
16 a month ago, you know, you are right, there are too
17 many things going on for you to remember it all.
18 MS. DUNN: One more question. OU3 rod is
19 going to give categories A through J so I'm assuming
20 1 through 5 categories is disclosed somewhere in the
21 OU2 rod?
22 MR. HICKEY: No, you have to go to the
23 impacted materials placement plan which is part of the
24 support plans for the onsite disposal facility.
25 MS. DUNN: Impact material what --

1 MR. HICKEY: Placement plan.

2 MS. _____: My name is Christine and

3 that will be in Section 5.

4 MR. HICKEY: Okay, bringing you back up.

5 We are here to talk about the 5% because we want to

6 consider resources out there and there are safety

7 issues that are involved with this material. What we

8 did was he had Geo Syntec go in and look and evaluate

9 placing these types of materials into the cell and

10 look at the performance and and what effect it may

11 have on the cell. They looked at both the status and

12 dynamic performance and with that I would like to

13 introduce Ruby Bonaparte who most of you know and he

14 will walk you though the analysis and what they did

15 for us.

16 MR. BONAPARTE: Thank you Mike. Good evening

17 everyone. As Mike said, we were tasked with

18 performing an evaluation of any impacts that the

19 placement of oversized material might have on the

20 performance of the onsite disposal facility and what

21 I would like to do in the next few minutes is just go

22 through that evaluation and conclusion. The potential

23 impacts of oversized material -- there are several.

24 They are listed here and these are the things that we

25 looked at. Potentially a placement of a lot of

1 oversized material could cause slope stability
2 problems and it could also result in the problems of
3 the foundation because steel, as you can imagine is
4 extremely heavy and too much of it could cause the
5 foundation to settle. If you place too much of it too
6 close to the liner system, you would damage the liner
7 system by excessive compressive stress so we looked at
8 that as well. If there materials were to collapse and
9 this would be the case with a drum or something, we
10 are not looking at, but theoretically material that
11 you put in this potential for it to collapse and maybe
12 cause the cover to sag and we looked at that and then
13 lastly when these materials are being placed is there
14 some potential that it could directly damage the liner
15 system by puncturing it. If you took on, off those
16 metal rods, millrolls and jammed it against the liner
17 system that wouldn't be too good. So, those are the
18 five things that we identified as the issues that we
19 should look at and address and confirm that there
20 would not be a problem placing it.
21 Mike described the different oversized objects
22 of the category 5 materials, the millrolls, millstands
23 and the lathe beds which you saw and at the risk of
24 adding to some confusion, I would like to come back
25 over her for one sec. I think this really is pretty

1 clear when it is written down. For the design there
2 are five, there are placement procedures for five
3 different types of materials and these OSDF design are
4 called category 1, 2, 3, 4 and 5. The cell for 1, the
5 soil like for 2, regular steel and concrete, the MSW
6 and green wastes 4 and oversized materials --
7 UNIDENTIFIED MAN: What is MSW?
8 MR. BONAPARTE: I'm sorry, municipal solid
9 waste. Also green waste, which is basically small
10 amount of grass or something that comes from an area
11 that is being excavated as part of the remediation,
12 that would be part of the soil that is disposed in the
13 landfill.
14 The oversized materials are the millrolls,
15 millstands and lathe beds. Mike also mentioned a
16 small amount of category A structural steel from OU3
17 which actually would be in this category so if you
18 take the volume of this material and the volume of
19 this material and group it together, that is where the
20 total volume of 500 to 1000 cubic yards come from so
21 it is mostly this and a little bit of that.
22 As Mike mentioned, the total volume of this
23 material is in the range of about 500 to 1000 cubic
24 yards. In comparison, the capacity of the onsite
25 disposal facility is 2.5 million cubic yards plus the

1 percentage of oversized objects actually going into
2 the landfill is only .02 to .04% of the total OSDF air
3 space so that is much less than 1% that is actually
4 going in.
5 MS. CAMPBELL: Can you give me an idea of
6 what 1,000 cubic yards is, is that like, would that
7 like fill this room up or -- I cannot visualize that.
8 MS. DUNN: How many truckloads?
9 MR. BONAPARTE; 1,000 cubic yards would be
10 about 30 truckloads.
11 MS. CAMPBELL: Okay, that makes more sense.
12 MR. BONAPARTE: And it's not, when you think
13 about a 60 acre, 65 acre landfill, that is not a lot
14 of material at all, in fact, a very small amount of
15 material.
16 MS. CAMPBELL: How big was that white box,
17 do you remember that white box we had, was that a
18 cubic yard -- the white cardboard box that we had
19 sitting in the middle of the room one time -- 500 of
20 them seems like a lot.
21 MR. SARNO: Well, if you think about it, if
22 you stacked them across the wall and up and then
23 across the room, you know, you can get a lot in this
24 room alone. You can stack them about three high and
25 you get quite a few.

1 MS. DUNN: What are the C land containers,
2 what do they hold roughly?
3 MR. SARNO: About the same as the truck.
4 MR. BONAPARTE: This room's about 35 x 35?
5 MR. SARNO: So you can get 10 of those cubic
6 yards across, three high, you would get 30 times 10
7 more so you could get about 300 cubic yards in this
8 room.
9 MR. CARR: So about 9000 bags of mulch.
10 MR. BONAPARTE: Do me a favor, calculate the
11 volume of this room -- all right, the -- it's a very
12 small amount of material compared to the size of the
13 OSDF. For analysis, for reasons that you'll see in a
14 minute, we actually made the conservative assumption
15 that there would be 1% oversized material placed in
16 the OSDF so we assumed the worst case, because even if
17 we assume the worst case when we calculated it and if
18 the calculations and it was acceptable, we would have
19 an acceptable result with the factor of safety, in
20 fact the factor of safety for the analysis was 25 to
21 50 because of this assumption of 1% so this is very,
22 very conservative.
23 MS. CAMPBELL: Rudy, let me ask you, how
24 many cubic feet is in like the little red box on the
25 cell?

1 MR. BONAPARTE: That is about 250,000 to
2 300,000 cubic yards.
3 MS. CAMPBELL; So it would be 1/25th of
4 that.
5 MR. BONAPARTE: So 250,000 would be, so all
6 of this went into one cell you would put 250,000 times
7 this amount of material into one cell. That shows now
8 little, what a small amount it is.
9 MS. DUNN: It would not go into one cell,
10 though, right? It would be distributed throughout the
11 entire waste cell.
12 MR. BONAPARTE: Yes. We just had an
13 unofficial estimate -- this room is estimated to be
14 about 400 to 550 cubic yards, so if you are looking at
15 round numbers, total volume of material equal to 1 to
16 2 times the volume of this room spread out over the
17 entire onsite disposal facility. In fact, I will skip
18 over the next overhead which is just a cross section
19 and go to the next figure after that. This shows what
20 1% of material would look like. This shows 1% of the
21 volume of the LSDF with the dark diamonds representing
22 the oversized material so you can see it is indeed a
23 very, very small percentage. Remember this is 1% and
24 the actual amount is about 25 times or more less than
25 that and one of the reasons that I used a larger

1 number is so that you can actually see these. If it
2 was the actual amount of oversized material you would
3 not even be able to see these dots. Now, you could
4 place this 1% of material two different ways. You
5 could place it spread out like this or you could place
6 it in one, on one location. Nikki, this was the
7 question you were asking and the onsite, -- the impact
8 material placement plan requires that the material be
9 spread out throughout the length and it cannot be
10 placed like this. It has to be placed to spread out
11 like that which is desirable.
12 This overhead is a little technical but I
13 wanted to use it to make a point. All of the
14 oversized objects are solid metal. They're not, these
15 are not like drums or containers that can collapse.
16 They are solid metal. The main effect of placing
17 these in the onsite disposal facility is their weight.
18 They are solid metal. They have a unit weight of 490
19 pounds per cubic foot. What that means is if you take
20 a 1 cubic foot box of material that weighs 490 lbs..
21 In comparison the soil that is going to be placed in
22 the landfill is only about 125 cubic pounds per cubic
23 foot so the main effect of replacement of this
24 material is the additional weight.
25 MS. CAMPBELL: What is that funky little

1 thing down there, that little Y thing?

2 MS. BONAPARTE: That is a gamma, that is a

3 gamma seba. What this is saying is if we come back

4 here --

5 MS. CAMPBELL: Now for those of us who have

6 no clue about algebra and stuff like that --

7 MR. BONAPARTE: What that says is there is no

8 oversized materials that this is all soil. That gamma

9 is the average unit weight, it is 125 and there is no

10 change and that there is 1% oversized material because

11 you are putting 1% steel in there, you increase the

12 average weight from 125 to 129. Does that make sense?

13 MS. CAMPBELL: Not really, but that's okay.

14 MR. BONAPARTE: Basically what you are doing

15 is the average for the entire facility becomes

16 slightly heavier because of that steel -- if you were

17 like to spread it like mayonnaise across the whole

18 thing, that amount of metal would lose the soil weight

19 so to speak on the 125 to 129, that's the main effect

20 putting it in there. I don't know if mayonnaise is a

21 good analogy but --

22 Well, the first thing we looked at was the

23 effect on slope stability and I know this is a busy,

24 busy table, but what this table shows is the results

25 of the series of analysis and what we have here is a

1 certain case that we analyze using computer slope
2 stability model and the first case is basically post
3 construction so that means that the end of
4 construction when the cell is at an intermediate
5 filling stage, so when it is part filled, we analyze
6 that. The required factor of safety of the slope,
7 this is for slope stability analysis, the first step
8 to check and impact has to be at least 1.3 and what
9 that means is if you can imagine when you are placing,
10 filling the OSDF gravity wants to pull that, the waste
11 and soil down the slope and the material itself wants
12 to remain on the slopes and the higher this number,
13 the more stable the slope. So, for the design, we ar
14 required to have a factor of safety of at least 1.3.
15 Anything above that is good so the original design, no
16 oversized material, the factor of safety was 1.51.
17 When we put all this metal in the computer, the factor
18 of safety dropped to 1.47 so there is a 3% reduction
19 due to the placement of steel. The reduction is not
20 good but it's such a small reduction that it is pretty
21 much insignificant and furthermore this 1.47 is still
22 well above the 1.3 so the original design was just
23 fine because it was well above the 1.3 and even with
24 the considered amount of oversized material it is
25 still above, well above 1.3 so everything is fine and

1 if you go through the different analyses, you see the
2 same thing in each case. In fact, one of the
3 analyzes, the landfill actually became more stable by
4 putting the steel in it.
5 These cases are all spelled out again in the
6 onsite disposal. I did not try to prepare
7 (inaudible), the main point is that in each case, the
8 effective additional material is 3% or less and that
9 in terms of slope stability that is a negligible
10 effect. This was inadvertently left out, that number
11 should be 1.50.
12 MR. ONTKO: Maybe this gets to your
13 question a little bit. It just illustrates the kind
14 of analysis that was done where it was assumed that
15 the steel would be placed into the slope and we would
16 look at all of the forces acting on the slope and
17 calculated those factors.
18 MR. SARNO: All these calculations were done
19 on an average weight of material?
20 MR. BONAPARTE: Yes.
21 MR. SARNO: Was any credibility or anything
22 given to the effect of the hedonaity of this material
23 and the effect that these large pieces would have on
24 the slope?
25 MR. BONAPARTE: We made a determination at

1 the start that it would be conservative to do this
2 compared to the actual placement of the material
3 because one material can be spread out. That is
4 required by the impact and placement plan but the
5 material cannot be placed within a certain height of
6 the cover of the slope and it cannot be placed, the
7 crest can't be placed near the edge of the slope.
8 It's got to basically be buried in the body of the
9 landfill so if we had assumed more of the weight was
10 near the center as opposed to the edge, the safety
11 would have gone up in comparison to assuming uniform
12 distribution so we concluded that a simple uniform
13 distribution would be conservative and give us lower
14 factors of safety and try to do a more detailed
15 analysis.
16 So in conclusion for slope stability is that
17 the effect is 3% or less which is negligible for the,
18 all practical purposes and that the factors of safety
19 criteria are met for all conditions.
20 The next I looked at was settlement. If this
21 is the initial ground surface before construction of
22 the OSDF, you can imagine that building the liner
23 system on top of that foundation and then filling it
24 with this impact of material and building a cover
25 system is going to put a lot of weight on the

1 foundation and on the tills beneath the landfill and
2 then on the deeper standing gravel and even deeper
3 bedrock layers. This weight is going to cause the
4 landfill to settle as it is filled and in fact on the
5 original design we did a series of calculations for
6 long term settlement of the entire OSDF and for
7 example calculated that the maximum settlement of the
8 entire facility would be about 2.8 feet in the middle.
9 That sounds like a lot of settlement of the foundation
10 but in fact that is a very acceptable number and the
11 landfill has been designed to accept that level of
12 settlement without any adverse impact. So we have
13 those calculations from the original design and the
14 next step was to see how much that settlement changed
15 due to the placement of the millrolls and millstands
16 and other materials in the OSDF. They weight a lot
17 more, would they cause more foundation settlement?
18 This next overhead shows the results of those
19 calculations. If you remember point A, B, C and D, A
20 was the point right under the middle of the landfill
21 and I indicated that and there was for the case of no
22 steel, no millrolls, millstands, etc., the settlement
23 of point A was calculated to be 2.84 feet.
24 MS. CAMPBELL: And it was settled 2.84 feet?
25 MR. BONAPARTE: Right, due to the placement

of all of the liner, all of the waste and the cap and if we assumed 1% steel added to the landfill, that increase in weight, that would increase the settlement to 2.8 up to 2.89 feet so that the increase, the change is half an inch so that amount of steel in the landfill would increase the settlement by about half an inch here and half an inch here and a little less than half an inch here and less than a quarter of an inch there.

MS. DASTILLUNG: But the other was an average of the whole thing? If you had one big chunk of heavy metal right there, that is, it would be more --

MR. BONAPARTE: Remember, these are not going to be placed, they will be placed in individual pieces in the scheme of the landfill. That is not a big chunk and these pieces need to be placed at least a few feet apart so the foundation is going -- with the foundation it's going to feel so to speak if dirt feels anything is a uniform increase. You are not going to feel those things locally. But your question is a good one because the foundation is way down deep, way below the ground. There is where the settlement has occurred and the liner is a lot closer and the liner will feel an individual so the conclusion on the settlement is that the placement of 1% of oversized

1 material will increase the foundation settlement one
2 half inch or less which is a very very small amount of
3 no adverse and has no effect whatsoever on the liner
4 so the foundation settlements are not --
5 MS. DUNN: I am following up on what Vicki
6 said. You said before this is an average, did you say
7 uniform or standard distribution?
8 MR. BONAPARTE: Right, uniform distribution.
9 MS. DUNN: So what is your standard deviation
10 of various plus one minus with that distribution?
11 MR. BONAPARTE: Well, the calculations assume
12 it is uniform but remember we have assumed 1% in
13 reality that is at least 25 times more than naturally
14 is going to be there so we feel like we have accounted
15 for the possibility that there may be a little more
16 material placed in some areas than others by the fact
17 that we did the calculation based on 1% versus based
18 on the actual amount which is going to be .02% to .04%
19 MS. DUNN: So would it be fair to say that
20 your standard deviation would be the difference .02
21 and .04 and 1?
22 MR. BONAPARTE: No that would not be the
23 standard deviation.
24 MS. DUNN: Are you doing any kind of
25 distribution where you could come up with the standard

1 deviation plus or minus that would go their way?
2 MR. BONAPARTE: Well, let me turn it around.
3 I see where you are going now.
4 MS. DUNN: You're 95 percentile could be off
5 the scale somewhere and your 25 would be down here and
6 you would have a couple of things really off the scale
7 and still have an average that does not look too bad,
8 you know, so I mean --
9 MR. BONAPARTE: If we take the actual amount
10 being the .02 and .04 and we assume it has to be
11 placed at least 8 feet apart, I think the confidence,
12 I think we are at least these calculations at least
13 cover two standard deviations would be 95% confidence.
14 In other words, you could make almost any distribution
15 of material in the OSDF as long as you respected the
16 8 foot spacing and you would and then if you put the
17 calculations for that exact case this here and this
18 here, that would be better than this in the sense the
19 impact would be smaller so I think I stated the
20 conclusion from that kind of thinking is that this is
21 a very reliable conservative result that would
22 encompass as long as you did respect the 8 foot
23 spacing, just about any lay out of the material.
24 Well, the next, I will pull an overhead out a
25 little bit later of a presentation. The next thing we

1 looked at is compressive stress on the liner system.
2 This one is a little bit hard to see but what it shows
3 is this is the liner system at the bottom of the
4 facility and this is the cap system at the top and we
5 looked at what would happen -- let me just point out
6 a few of these layers first actually. This is the
7 double liner system on the bottom with the 3 feet of
8 clay and the lower liner, the leak detection system,
9 the upper liner, the leachate collective system and
10 then one foot of protective soil layer and then a 3
11 foot thick selected impacted material there which is
12 also selected. We looked at what would be the worst
13 case from the standpoint of if you were to come in
14 with the biggest object millroll and place it as close
15 as you could to the liner system, how much stress
16 would that induce and the worst case would be so to
17 speak, if a millroll was placed right on top about
18 that big, say two feet in diameter, right on top of
19 the selected impacted material, there was no more soil
20 placed before the millroll was placed, in that case,
21 if you placed a millroll right at this location, it
22 would be 5 feet above the general membrane. The 5
23 feet comes from 3 feet of selected impacted material,
24 one foot of protective layer material and the one foot
25 of the gravel and what we were interested in was with

this additional weight of material here, would that cause the leachate collective system gravel, which is a fine gravel to exceed the capacity of the cushion layer between the geo membrane and the gravel? If you look on your figures you can see there is a geo membrane right above it and that is the cushion.

MS. DUNN: While you are on this, there was discussions passed and Doug jumped in there about trying to do some monitoring device underneath the disposal cell, how would the additional weight affect the, putting the extra cell --

MR. SARNO: Horizontal drilling under the --

MS. DUNN: Yeah, horizontal drilling.

MR. BONAPARTE: It would not have any effect, that half inch but there would be kinds of things that would be very flexible that would not make a difference.

MS. DUNN: So it would not sink along with --

MR. BONAPARTE: They would go down with everything else but it would not have any -- like if you were putting a horizontal well in, that is part of the design now that goes under the sump, that is a polyethylene pipe, very flexible so as the landfill settles, that is just going to go down with it. It will move with the soil on down so instead of moving

2.84 feet, it just moves 2.89 feet so, we assumed a 40,000 pound millroll placed on top of the impacted material there, that is 5 feet above the geo membrane, we wanted to see if that heavy millroll exceeded the capacity of that geo textile cushion to protect the liner. The calculated increase on stress in the geo membrane due to the millroll was 205 lbs. per square foot. Now, you can compare that to the maximum vertical stress on the geo membrane due to the filling of the OSDA which is about 8,000 lbs. per square foot so just the weight of the soil alone is going to exert 8,000 PSF and the millroll will increase that by 255 PSF and again it turns out to be about a 3% increase in the allowable stress to protect the geo membrane, you could go as high as 25,000. So you can see that this increase in stress due to the millroll is very small compared to what could be allowed.

MS. DASTILLUNG: Is that the heaviest thing that you could consider putting in?

MR. BONAPARTE: Yes, that's the heaviest. This is reported to be the heaviest millroll that would go in. So the conclusion again is no impact.

MS. DASTILLUNG: When they place that in there, will that be like a crane or something that would lower it into place?

1 MR. BONAPARTE: It would probably come out in
2 a flatboy or --
3 MR. HICKEY: It could be coming on a
4 lowboy, it would have to be some kind of crane.
5 MS. DASTILLUNG: What is a lowboy?
6 MR. CARR: Some kind of a truck you see
7 driving a bulldozer around.
8 MS. DASTILLUNG: Okay, so we're unheading with
9 this is say that the thing gets dropped hard into the
10 placement, that would be a lot more stress at that
11 moment --
12 MR. BONAPARTE: Yes.
13 MS. DASTILLUNG: Would that cause a problem
14 with the sudden weight coming down on it?
15 MR. BONAPARTE: If you dropped it from like
16 20 feet or something like that, that could cause a
17 problem so it would need to come out on something like
18 a lowboy and then be rolled off, say down some timber
19 steps or something like that and if it fell from a
20 couple of feet, that would not be enough. The dynamic
21 energy is not that much more.
22 MS. DASTILLUNG: Okay.
23 MR. BONAPARTE: Getting towards the end here,
24 the last thing, the second to the last thing that we
25 looked at was whether one should have any concern

about these things collapsing and causing a sag or something in the cover and I think the answer there is obvious that these are all solid metal. There is no inherent potential for collapse. There really should not even be much corrosion in the landfill once it is encapsulated. We need oxygen and moisture for corrosion and it would be a lack of oxygen in the landfill once it is covered with the soil so it's really not even going to corrode but if it did corrode, the rust occupies about the same volume as the original metal so it is not going to go anywhere. Once they are buried, they are there for good and there is no concern here as it might be with a drum or something that was placed.

MS. DUNN: At the last meeting there was discussion about some kind of stuff that is inside of the white metal boxes that you would want to put in there. That could collapse, right or --

MR. CARR: The boxes are not going in there.

MR. BONAPARTE: So that's not a possibility and then lastly, there is just a concern for one of these millrolls or lathe beds to actually physically puncture --

MS. DUNN: You would at least bring up ten feet of soil before you started with that stuff in?

1 MR. BONAPARTE: Yes, that is exactly the
2 answer. It's the minimum would be 5 feet. I just go
3 back to this same plot here where you have five feet
4 at the base of the foot of the gravel put a protective
5 level and the 3 feet of selected impacted material and
6 at the top, before you place the cap you have another
7 3 feet and then another one foot of what we call the
8 contouring layer and then you have two feet of the
9 compacted play cap so you've got a lot of soil buffer
10 both below and above where this material would go and
11 basically you are looking at a piece of metal so it
12 really does not have that much potential to do
13 anything bad anyway.
14 So, just to go on -- well, before the
15 conclusion of this, actually I forgot. In terms of
16 placement procedures, oversized object placement
17 procedure would be in accordance with the OSDF
18 impacted material placement plan and each object will
19 be placed as flat as possible against the surface that
20 it's going to be placed on. Adjacent objects will be
21 placed at least 8 feet apart as I said and then back
22 filling and compaction will occur around each object
23 so it would be sort of encapsulated into the soil and
24 the soil would be compacted and that would be done in
25 accordance with the requirement in the plan for

1 category 3 material. Basically it would do a millroll
2 the same way we have already described in the plan
3 where we compacted around a piece of structural steel.
4 The same type of thing. The next overhead just
5 illustrates that process. For a hypothetical, this is
6 actually a hypothetically a 4 X 4 piece of concrete.
7 A millroll would be in contrast of something about
8 that size that would be placed about 8 feet apart on
9 a flat surface and then lists of soil will be placed
10 and compacted around that encapsulate and you could
11 not put anything else in here other than compacted
12 soil because that is nice and firm and stiff and, in
13 other word, you could not put a millroll here and then
14 put some of the material from the MSW landfill here.
15 That would have to go into another area and be
16 aggregated further.
17 MS. DUNN: The rubble being mixed in with the
18 soil or would that have to go away from it, on the
19 concrete?
20 MR. BONAPARTE: It could only be mixed in if
21 it can be compacted like a soil so it would have to be
22 so fine that you could compact it so it would require
23 density into the soil.
24 So in conclusion, as Mike described oversized
25 objects will constitute only .02% to .04% of the OSDF

1 volume and that is basically 1/50 or 1/25 of 1% or one
2 and two times that room volume of the OSDF of the
3 entire OSDF so 50 to 60 years to combine the facility
4 (inaudible). For the analysis we can conservatively
5 assume 1%. Our evaluation indicates that these
6 objects will not have a significant effect on slope
7 stability and it will not have a significant effect on
8 foundation settlement. They will not have
9 significantly increased on the compressive stress on
10 the minor system as a result of that analysis and
11 there will be solid metal so there is no potential for
12 collapse and they will be encapsulated in these
13 various soil layers so there is really no potential
14 for them to puncture or otherwise adversely affect the
15 liner system so in the conclusion of all of the
16 placement of these materials in the OSDF acceptable
17 and they won't have any dilatorius effect on the
18 performance of the liner system or final cover system.
19 MS. DUNN: That will be D&D who will
20 determine that before they go in there to a point --
21 MR. HICKEY: Yes.
22 MR. CARR: That would be the physical weight
23 acceptance criteria and also the chemical and
24 radiological waste acceptance criteria and those are
25 laid out in the records of decision.

1 MS. DUNN: That is 5 or 2 --

2 MR. BONAPARTE: Well, I would like to go
3 ahead and introduce you to Dennis Carr who will talk
4 a little bit more about these materials.

5 MR. CARR: To answer your question Pam on the
6 materials that you saw there like the millrolls,
7 millstands, those criteria are defined in Operable
8 Unit 3. Soil is clearly in Operable Unit 5.

9 MS. DUNN: And the rubble is in 5?

10 MR. CARR: No, actually the rubble is in
11 Operable Unit 3.

12 I just want to real quickly take a step back
13 before we launched into economic evaluation of
14 oversized materials, let's just venture on and get us
15 up to speed where we are. Put together impacted
16 material placement plan and we have made reference
17 here a bunch of times that impacted material placement
18 plan is essentially the rule book for the operation of
19 the onsite disposal facility. It was submitted to the
20 regulatory agency and there has been quite a bit of
21 discussion and it's apparently not an approved
22 document. One portion has been held kind of in
23 advance, category 5 material meaning that U.S. EPA and
24 Ohio EPA does not agree with anything on category No.
25 5 material specifically in regard to oversized

1 material and I think the original concern stems from,
2 you know, input from the community, input from the
3 project regarding concerns that we would be driving
4 trucks into here and then basically once you open up
5 this category no. 5 we'll be bringing everything out
6 there and the concern was for void space, just putting
7 in some of this large material without cutting it up.
8 DOE took a step back and looked at the situation and
9 I think the original volume estimate of all this
10 material, trucks and trains and everything else was
11 around 20,000 cubic yards. DOE took a step back and
12 basically made a decision that this oversized material
13 with the exception that we're talking here are going
14 to be cut up before they go in. Meaning a direct
15 decision right now providing all materials is
16 generated, if it means the radiological chemical waste
17 acceptance criteria would go in to the on property
18 disposal facility and that material will now go in and
19 it must meet this physical waste acceptance criteria.
20 This impact of material placement plan basically takes
21 all the records of decision having anything to do with
22 the on property disposal facility and boil down the
23 requirements and put it into one plan and they're all
24 right there so they include the radiological chemical
25 waste acceptance criteria but they also then provide

1 Geo Syntec derived at the physical waste acceptance
2 criteria they go along with each one of these
3 categories. They basically are creating a rule book,
4 what is going to be the rules for placing material in
5 each one of these categories so this basically becomes
6 a one plan rule book for the whole process and what we
7 are talking about here is no longer talking about
8 20,000 yards. The Department of Energy made a
9 decision we will not put in anything other than
10 perhaps these materials that we're about to talk about
11 or have been talking about. Everything else we need
12 to physical wac before -- it will be cut up before
13 it's put in so what we're really talking about here
14 then is there is a current proposal by DOE and this
15 proposal is both with the community and to the
16 regulatory agencies that sought materials would not be
17 cut up and that it would be considered special
18 handling material being placed in accordance with the
19 way Rudy just talked about before it was placed in the
20 on property disposal facility and that material again
21 will be the millroll, millstand, these machine stands
22 which I believe we had a listing of those and again,
23 those are the only materials with the exception of one
24 more that I'm going to talk about here in a minute,
25 that would be considered to go in and a formula that

1 exceeds this 18 inch and 10 foot long physical wac
2 right here and the reason these are being considered
3 is again, if we went back to the 20,000 yards, the
4 concern there stems around large pieces, vessels,
5 pipes going in and have massive large void space and
6 the concern was that that void space was at some point
7 in time causing the sides on the cell -- I think
8 that's a lot of the issue and what we're dealing with
9 here is bulk metal. All these things I have described
10 here have no void. There is pieces of equipment being
11 stripped down to pieces that are basically bulk, cast
12 iron metal that the question is what is the benefit
13 associated with cutting them up and putting them into
14 the cell versus just putting them into the cell
15 directly. Don't get me wrong, they can be cut up. I
16 am sure Bob can describe methods of cutting up those
17 cast iron. It can be broken out, it can be cut, but
18 it is not easy to do. The question is what advantage
19 is there to cutting these things up before you put
20 them in the on property disposal facility versus just
21 putting them in? That is kind of where we are at. We
22 are not talking about things that had void space.
23 We're talking about bulk metal. So clearly the cost
24 is associated with this, not to kind of launch into
25 this here but the cost associated with doing this and

1 looking at the various options that we have here is
2 that we can take this bulk metal which is again is
3 millrolls, millstands and machine stands and we can
4 take it out and put them into the on property disposal
5 facility in accordance with the methods that Rudy
6 described in their bulk form, no size reduction. The
7 second thing we can do is we can cut them up and put
8 them in the on property disposal facility. Both of
9 those fully meet the records of decision and that is
10 what the record of decision, the visions of what would
11 happen to these materials. They would go to the on
12 property disposal facility and they left up to the
13 impacted material placement plan and figured out how
14 to get it in here. What we're saying here is they can
15 go in in their current configuration in a larger than
16 18 inch by 10 foot long configuration. There is a
17 code associated with doing that and we have taken a
18 shot at trying to do that and I just wanted to, before
19 I go through this I wanted to talk first about the
20 first three and then we will talk a little bit about
21 the next one here. So right now we're talking about
22 millrolls, millstands, machine stands. What we tried
23 to do was a quick economic analysis. Again, we're not
24 dealing with a whole lot of materials here so numbers
25 aren't that large. Again, you are used to looking at

1 millions of dollars when we talk about our budget,
2 $365,000 a year. Nonetheless there is a difference in
3 the cost and this is our attempt at doing a fair
4 comparison comparing apples and apples associated with
5 all the different options and what we rule out here is
6 we took a look at the millrolls and went out and did
7 an inventory of how many millrolls we had and are
8 associating that with our old rolling mill at the site
9 and there's about 40 of them out there and again the
10 millrolls vary in size and diameter based upon what
11 product we're trying to produce. Sometimes we're
12 trying to produce a large diameter for different
13 reactors versus a smaller diameter. So as a result the
14 millrolls vary in size and in length but generally
15 there are about 40 rolls, I think the maximum size is
16 about 40,000 lbs., whatever it was that's the largest
17 one.
18 MS. CAMPBELL: That's not per roll, that is
19 total?
20 MR. CARR: That is total. We took all 40 of
21 those, again, no matter what we do we've got to
22 disassemble the piece of equipment, bring it down into
23 pieces like you saw and that price is not in here.
24 Once you've got disassembled pieces, are we going to
25 cut it up, bring it over there or are we going to

1 bring it over there the way it is in its current
2 configuration so we looked at just that okay, so
3 obviously it dealt between those two as to the price
4 to cut it up based on what we think is the best
5 methodology to cut it up and also then the cost
6 associated with the placement.
7 Last thing we took a look at if we were to
8 take these materials and put them into a shipping
9 configuration and send it to the Nevada test site
10 again, the equipment has already been disassembled and
11 all we're doing is loading it into the packet,
12 certifying it for shipment, manifesting it and getting
13 it out of here and disposing of it in the Nevada test
14 site including their variable cost which we're
15 estimating at $7.75 a cubic foot which is the lowest
16 price and right now we're getting, because of our
17 large capacity that we're sending out there, what
18 would be the cost associated with these materials?
19 That is providing you kind of the perspective of what
20 we're dealing with.
21 MR. SARNO: Now, those numbers looks a little
22 funny, maybe I'm just not sure which is the millstand
23 and which is the machine stand. Are the machine
24 stands that much smaller than the millstands or is it
25 that much larger?

1 MR. CARR: Right, exactly what it is I think
2 Todd can -- the machine stand that you are talking
3 about primarily the lathe bed vision here stand is
4 maybe 10 feet long.
5
6 (Inaudible conversation between Mr. Clark and
7 Mr. Sarno.)
8
9 MR. CARR: Anyway, we just took a look at
10 each one of those and again this is the total
11 population of what we've got on the site. These are
12 the millrolls, these are the millstands, this is some
13 of the machine stands and we talked about the lathe
14 bed again, stripped apart, down to the bulk metal
15 lathe bed and this provides kind of a perspective.
16 All right, the second thing that we want to talk about
17 real quickly is I guess it's kind of a merging
18 consideration. At the last meeting we really, you
19 know, we were still putting our numbers together and
20 thoughts together and that gets down to steel beams
21 and --
22 MS. CAMPBELL: Do you send those to NTS, all
23 those can go to the Nevada test site? Is everything
24 here --
25 MR. CARR: What I was getting at with, let's

1 just go through it real quickly is that the
2 consideration that we have right now, we have a lot of
3 beams on the side that I was surprised. We went
4 through and basically were counting the beams that we
5 have on the site and we have about 14,000 pieces or
6 14,000 beams on the site that are currently greater
7 than 10 foot in length and that is basically all of
8 the structural, all of the buildings that we have on
9 site. The issue here comes down to is our current
10 impact material placement plan provides that no
11 greater than 10 foot lengths would on the on property
12 disposal facility. What we're out here is discussing
13 the viability and again a lot of the analysis has not
14 been done yet but we are just bringing in force and
15 merging consideration would be that a 20 foot length
16 would go on the on property disposal facility. What
17 is the advantage of that is that we've got really a
18 data point in that the bid package associated with
19 boiler plant, we put an option in there and with the
20 option that we are after really focused on viability
21 of the recycle meaning that the recycle vendors, their
22 feedback to us is basically it comes back that it's a
23 lot easier for them to deal with a more economically
24 beneficial for them if they deal with lengths longer
25 than 10 foot, preferably up to 20 feet in length. It

1 is better for them, it's more settled of a product for
2 them so we put an option in the boiler plan contract
3 which would say okay guys give us a price by leaving
4 them a 20 foot length versus cutting them in half and
5 making 10 foot lengths and what they came back with
6 basically was $100,000 cheaper to leave them at the 20
7 foot lengths, actually about 18 foot lengths which
8 obviously improves the viability of it for recycle but
9 the main thing really here is a data point that says
10 we can save $100,000, in this case for the boiler
11 plant which when could be potential and extrapolate
12 every other feeling that we have that we're going to
13 rip down out there to basically come up with the cost
14 savings and if we were to place 18 foot length beams
15 into the on property disposal unit and so we went off
16 and calculated it and if we use that data point and
17 assume that that similar situation was going to occur,
18 the rest of the buildings on the site, how much money
19 would we save by placing them into the on property
20 disposal facility? Again, this is just the increment
21 of cost savings associated with putting them into the
22 on property disposal facility so what we're basically
23 trying to find out is that we would cost us, to cut
24 them in half and put them into the on property
25 disposal system, just the cost of cutting them up

1 would be about $1.6 million and again, what this
2 charge is basically saying is if we were just showing
3 a relative difference between the two and I say not
4 applicable there. There is no intent to dispose of
5 the structural steel beams at the Nevada test site.
6 They're going to go in the on property disposal
7 facility one way or another or be recycled. There is
8 no intent to put them into NTS so the issue is do they
9 go in as is or do they go in cut in half and that --
10 it is kind of a merging issue, certainly not proposed
11 at the U.S. EPA or however, we've just got a data
12 point in and that is kind of what we do, we take a
13 look at it and that's kind of where we stand at it.
14 I guess I real quickly will go through the status of
15 some of the thing that we've got and why.
16 MS. CAMPBELL: Wait a minute. How does that
17 then affect the presentation that Rudy just gave us?
18 MR. CARR: Again, Rudy gave you a
19 presentation on the first three here. We would have
20 to go back and do a re-analysis -- I am just trying to
21 put information out here as it is coming available.
22 The first three is what Rudy analyzed and he has
23 completed that analysis and that is what he discussed.
24 MR. BONAPARTE: If I can make one point in
25 our original 125 number, the baseline, that includes

1 cut up steel. We went back to, you know, a year ago
2 when we first did calculations to the original
3 estimate of the amount of steel going in so much of
4 that is probably already in our numbers, but these are
5 dated.
6 MR. CARR: The steel is going in, it's in
7 their estimates. The question is whether it be 20
8 feet long or will it be 10 feet long. It was always
9 proposed to go to the cell so it's in his calculation.
10 Our issue here would be does it make sense for us to
11 pursue further analysis on whether or not this is a
12 good thing to do.
13 MS. DUNN: The extra length then deals with
14 the placement issue within the south?
15 MR. CARR: Yes, that becomes a singular issue
16 is the placement issue because it is going to go in.
17 The question is should we cut it up and again, right
18 now, our data point would say that is going to cost of
19 $1.6 million to cut it up and put it in.
20 MS. CAMPBELL: If you don't cut it up, you
21 won't have to spend that $1.6 million?
22 MR. CARR: That is right. That is based on
23 the bid from the guy at the --
24 MR. SARNO: Are there any obvious problems
25 with putting that in the cell?

1 MR. BONAPARTE: None that I am aware of. I
2 would like to think about that a little bit. The
3 first time I saw that number we had thought about
4 length before and there is nothing obvious. If Fluor
5 Daniel Fernald -- it's really a handling issue. You
6 still need all of the same buffers with respect to the
7 top, side, bottom, etc, spacing. You need all that
8 criteria and the impact material all placement plan,
9 I don't see a reason why that would not be acceptable.
10 MS. DUNN: Would it be still like be a butt
11 to each other or would they have to be so far apart?
12 MR. CARR: He is saying right now we would
13 have to separate that out restrictions that apply.
14 That's my interpretation, is that --
15 MR. BONAPARTE: If it satisfies the category
16 3, if it's more than 18 inches it would have to, less
17 than 18 inches, it can be placed closer.
18 MR. CARR: It would be always less if you
19 have 18 inches -- the issue is not 18 inches, the
20 issue is length.
21 MR. BONAPARTE: That's what I'm saying but --
22 MR. CARR: It would be less than 18 inches.
23 MR. BONAPARTE: The spacing on site, yes.
24 MR. TABOR: Dennis, Bob Tabor, on that
25 information on that white board over there, Rudy was

1 talking about structural steel there, talking about
2 the millrolls now, I think the situation here or the
3 explanation on the millrolls or the millstands and
4 machine stands is somewhat clearer. You are saying
5 that the steel based on the broiler _____
6 estimate is going to cost or we can say $1.6 million
7 leaving it oversized versus cutting it in my, can I
8 make the assumption that cutting it also meets the
9 placement criteria size for the site but the
10 oversized, that does not say it does not meet the
11 placement criteria, what kind of assumption is that?
12 MR. CARR: Wait a minute, our issue here is
13 that the beams that are out there are 20 foot in
14 length. Basically it is 20 foot from column to column
15 out there. The proposal would be to snip those off at
16 the edges and leave them that way. The second
17 proposal here for $1.6 million more we could cut them
18 in half one more time. $1.6 million more would take
19 that 18 foot and all of a sudden it becomes 2 9's but
20 it meets the onsite disposal facility acceptance
21 criteria. If I can do that, it would cost $1.6
22 million.
23 MR. TABOR: Well, can you put them in there in
24 the 18 foot lengths?
25 MR. CARR: That's what Rudy just said we were

1 going to do further analysis but yes, --

2 MR. TABOR: But that changes the criteria.

3 MR. ONTKO: Yes, actually let me go into two

4 stages. Category 3 criteria now I think is no more

5 than 10 foot long and it can go out to 18 foot so the

6 question is is it 10 foot versus 18 feet?

7 MR. TABOR: Okay, well let me continue on here

8 just a second. Up on the white board over there, that

9 structural steel that refers to there as being part of

10 that 500 cubic yards at the 1000 cubic yards, what

11 kind of structural steel is that? Is that some of

12 this, what you're talking about here?

13 MR. CARR: Where are you at Bob, I'm

14 confused.

15 MR. TABOR: I'm trying to figure out what that

16 structural steel that you told us about that makes up

17 this 501,000 cubic yards -- that would be nice to

18 know.

19 MR. CARR: One set of structural steel on the

20 site, what we are talking about is that same

21 structural steel, do we want to snip it in half or do

22 we leave it at the 18 length?

23 MR. TABOR: And you are telling me all of that

24 structural steel in these buildings plus those machine

25 rolls, we put that in the cell and that's only 500 to

1000 --

MR. CLARK: Wait a minute, wait a minute, I don't know that off the top of my head but yeah, 500 to 1000 is focusing on those three.

MR. CARR: Yes, this is the 500 to 1000 right here. That's where I think you are --

MR. TABOR: Well, that's not what his chart over there says and that's not what he said. He said that included the steel and that's what I'm trying to get at, is it 500 to 1000 --

MR. BONAPARTE: When I put that up, I had not seen this before. I did not know how many --

MR. TABOR: Well, I am, I know this looks pretty good, but I can see where we are getting lost. That's what I'm trying to do, trying to get some re-clarification here. If the 500 to 1000 cubic yards, we are only talking about millrolls, millstands and machine stands, that's fine, but if we're talking some of that --

MR. BONAPARTE: I thought there is apparently more --

UNIDENTIFIED LADY: That was a category over there. That is what he was trying to show.

MR. TABOR: Yeah, but those categories made up material. All right, that would lead me to

1 believe that we're talking about some steel --

2 MR. CARR: These 5 categories make up 2.5

3 million yards. What we are talking about here are

4 these first three things that make up 500 to 1000

5 yards and this shows the economic advantage associated

6 of putting them in without cutting them. Okay, we

7 talked about the technical feasibility of placing,

8 what would it take and is there any detrimental effect

9 of the stability of the onsite disposal facility. The

10 conclusion was no. The proposal was that we go ahead

11 and do this. That is the current Department of Energy

12 proposal.

13 Forthcoming since the last meeting has been

14 and since we are here to discuss it, we want to make

15 sure that everybody understands there is another

16 category out there. I recognize this is added on here

17 at the last minute but again, the purpose is to make

18 sure that everybody is up to speed on what is

19 happening. These things happen on a day to day basis.

20 We got a bid in that shows we could save $100,000 with

21 the boiler plant by leaving it 18 foot lengths and the

22 issue is we can save $1.6 million on the site if we

23 leave it at 18 foot lengths and all we're doing is

24 saying that category is out there. We will go further

25 analysis on it and initial indications are that we

could place it and we will determine what restrictions are associated with that placement but we can place it. We could save $1.6 million. The question is what is everybody's general feedback, comfort level of doing this? Should we pursue it further, what's the input?

MS. CAMPBELL: But there are questions that have to be answered first.

MS. DUNN: Did you say that by leaving it longer the odds are better to recycle? If it stays in the 18 to 20 foot length, there is a better chance of having it recycled than it being cut and if that is the case with the recycle methodology plan to reflect that and a better effort made to recycle it?

MR. CARR: Let me give a run at that one, okay? You guys can jump in there. This kind of gives a status of what happened. Plant No. 7 we cut them in half and they meet the onsite disposal facility criteria. That's a non issue.

MS. DUNN: That was mangled a little bit.

MR. CARR: Yeah, it was mangled and that's why they wouldn't recycle it. You know, the whole there came back, you know, it would go into the on property disposal facility. Plant No. 4 same thing, it meets the on site disposal facility criteria.

1 Plant No. 1 complex, they are sitting out there in 18
2 foot lengths right now. The boiler plant again, the
3 proposal is that their proposal came in at $100,000
4 cheaper and they stay at 18 foot lengths. Plant 9
5 complex which is the current RFP which is to be issued
6 or is issued, it is out on the street, currently
7 proposals with an optional effort I believe 18 foot
8 lengths. So that's the status. Now, in the future,
9 when we move to the future buildings, we talked about
10 recycling and that means that there's an
11 implementation plan that goes along on each building
12 and we would make the recycle decision in the
13 implementation plan. We would go through the
14 methodology for building by building basis and the
15 DOE would issue their position regarding the viability
16 of recycling in the implementation plan. Which
17 basically says that we will have made a decision on
18 the viability of recycling before we issue any future
19 buildings RFP's, future building contracts on the
20 street for bids. We would have already made the
21 decision whether recycle is viable or not so, you
22 know, in the future we go to plant No. 6, before we
23 ever go out for bids for that thing we know whether or
24 not we will recycle or not. The decision of recycle
25 or not will be known up front is almost irrelevant to

1 this thing. The decision is to put it in the cell
2 meaning recycle is not viable. Are we going to cut it
3 in half and put it in or are you going to put it in in
4 18 foot lengths?
5 MS. CAMPBELL: How would you know that --
6 how will you know if it's viable or not?
7 MR. CARR: Because we committed to apply the
8 recycle methodology building by building and then
9 build the decision into the implementation plan and
10 put the implementation plan out for review.
11 MS. DUNN: We had discussion to, it sat there
12 waiting for a year, two years or whatever before it
13 went into the cell, you might find that methodology
14 because a price might be better and more likely to be
15 --
16 MR. CARR; I think we have committed to do
17 that here. The stuff that is sitting on the slabs
18 right now we're doing that but hopefully in the future
19 we are staging material out there right now because we
20 don't have a cell. In the future, the idea would be
21 to bring down the building, it won't be staging we are
22 putting it in, basically real time so there won't be
23 any staging opportunities.
24 MR. TABOR: And if at the time you are ready
25 to do this on a real time basis, you have not had a

1 buyer or taker for recycle and the decision was, well
2 we got this stuff in 18 foot lengths because it is
3 really cheaper to do it that way just in case we have
4 the opportunity to recycle it but just if it happens
5 that there is no taker we are sitting here with 18
6 foot lengths which is cool and in my estimation it is
7 and I think that what I heard from Rudy that probably
8 in reality from a technical logical standpoint in
9 physics, we are not really talking about very
10 negligible types of impact, as far as weight and
11 stress and everything else on the cell if you follow
12 a certain configuration and layout and placement. The
13 question I am coming to is what about the criteria,
14 are we going to go have to go through something
15 special to change the acceptance criteria because --
16 MR. CARR: No, that's why I know the impact
17 materials placement plan is not improved. But what we
18 are doing is we're submitting the final plan for EPA
19 approval includes basically this proposal. It would
20 include, it would define the special handling
21 requirements that would be required to place first
22 these three, Rudy just described them, they would be
23 put in the impact material placement plan that would
24 be approved by the agency and secondly, we would build
25 into the impacted material storage replacement plan

1 what are the placement requirements, the rule books
2 that go along with placing the 18 foot lengths. What
3 I am getting at here is that that plan when it comes
4 out within and be proposing these materials go in and
5 that the category 5 rule book that is in that plan
6 would describe the placement methodology on each one
7 of these things but that is it.
8 MR. TABOR: As well as the big beam?
9 MR. CARR: Right, all four of them. It would
10 describe the methodology, it is proposing to do
11 nothing else. Everything else is cut up to go in and
12 that is it. And that's basically where we stand.
13 MS. DUNN: The cost is the primary reason.
14 MR. CARR: The only reason. The recycle
15 decision in the future ought to be made before we get
16 to the point.
17 MS. DUNN: Bob had made the comment about
18 recycle, that is not primarily --
19 MR. CARR: No, primary drive is nothing more
20 than this $1.6 million cost. That's it. It's going
21 into the cell either way unless there is a recycle
22 decision made. The question is do we cut it in half or
23 not?
24 MS. DASTILLUNG: The $1.6 million is how much
25 the cost to make that extra cost, if the fact that a

1 larger piece have any impact as far as the actual
2 placement? Does it take longer to handle a big or
3 small piece or is there more danger to the workers
4 that are handling it because it is longer or do you
5 have to purchase some kind of bigger equipment or
6 stuff to place it, you know, that you would have to
7 take off and it would not be that $1.6 million
8 savings, you would have to come back down because
9 there are other increases in other areas?
10 MR. CLARK: When we looked at it, most of the
11 container or dump trucks would take these kinds of
12 things to the cell are going to be about 20 foot beds
13 or bigger anyway, so the vice they're going to take
14 them to the cell would be large enough to handle that.
15 The vise will pick it up out those trucks and it
16 would probably be the same no matter how long those
17 beams are -- when you are done with those, there is
18 not really much impact, just that extra length. There
19 may be some stuff that Rudy comes back with later and
20 says it needs to be (inaudible). At the first look it
21 looks like there is really not an impact to the
22 handling analogy though.
23 MS. DUNN: It would be weight distribution
24 because of the extra length?
25 MR. CLARK: To the cell or -- I don't know.

1 MS. DUNN: Even though it's the same weight
2 of the two smaller ones, the weight would be
3 distributed differently.
4 MR. BONAPARTE: I would not see that as being
5 an effect. We have already accounted for the weight in
6 the OU3 material.
7 MS. CAMPBELL; Dennis, explain the machine
8 stand. You've got 22,000 if you put it in the onsite
9 cell and you've got 23,000 if you ship it off to the
10 Nevada test site. So, there is only $1,000 difference
11 as far as --
12 MR. CARR: Because of the weight and the
13 physical size, these things are conducive to go right
14 into a box out of here. You have that special
15 handling and shipping provision because of the weight
16 of these things.
17 MS. CAMPBELL: I didn't quite understand how
18 it could just be $1,000 --
19 MR. CARR: You have 40,000 lb. small chunk of
20 metal. There are different shipping requirements, you
21 know, packaging requirements for something like that
22 whereas these things, they're kind of, they are
23 smaller and they don't weigh as much and they fit
24 right into a box and it can go. It's almost like any
25 other shipment and that's why it is, you know, either

1 way.

2 MR. ONTKO: The last column there, that cost

3 includes disposal and shipping?

4 MR. CARR: That's correct. It takes each one

5 takes the disassembled piece and disposition so this

6 would be all cause to get into --

7 MR. TABOR: Dennis, on the stuff that is under

8 10 foot maybe somebody can answer this, maybe there is

9 a lot of it, first of all, we are talking about stuff

10 that is extremely large Rudy and you were saying, okay

11 place them here and you leave 8 foot and there was

12 some rules or criteria that said if you put down so

13 much of a certain type of debris and you fill in so

14 much soil and you know, you have a certain ratio and

15 so much debris and so much soil I guess some of that

16 would change in that initial glaring ratio because the

17 oversizedness of some of those particular things but

18 on the things that met the criteria, the stuff that is

19 under 10 foot and it's 18 inches, was there some

20 particular placing criteria for that type of stuff too

21 or is it, can it just be scattered at random?

22 MR. BONAPARTE: No, nothing can be scatted at

23 random even soil have to be placed in control lifts

24 and small debris has to placed in control lifts and

25 covered with soil and smaller structural material has

1 to be placed into certain configuration and through
2 all of this material in terms of the steel beams, as
3 I said those are accounted for in the analysis we did
4 because we, in our average unit weight, the 125 and we
5 did initial calculations for all of the original OU3
6 estimates, so the way I would almost think about it is
7 like placing a rail, like a railroad rail and you have
8 two -- the difference between the original proposal,
9 if you have had two additional rail, they are ten foot
10 long and the new proposal you have two rolls, 18 feet
11 long. In terms of changing procedure in the landfill
12 with the OSDF really would not because it is just
13 longer so if you're going to place soil in the gap
14 between them, just a longer gap and you're going to
15 compact with certain equipment between them and you
16 just compact over a longer length so I don't see any
17 fundamental change there very much.
18 MR. TABOR: That answers my question.
19 MS. DUNN: Hypothetical question, the extra
20 length you have, you have 14,000 pieces so before it
21 was 28,000 at 9 foot so now you're talking about
22 14,000 18 foot places. Could you do the placement in
23 the extra length, could that cause an additional cell
24 to have to be used that you might not have for when it
25 was shorter?

1 MR. ONTKO: It's actually the same volume of
2 materials. It should not take up that much more
3 space. I am assuming it shouldn't take, force you to
4 space them more further apart than they were before.
5 MR. BONAPARTE: So it should be about the
6 same space.
7 MR. STORER: I am Gary Storer. I am really
8 more concerned about recycling and I kind of notice
9 that you are sidestepping the issue. This is already
10 going into the disposal cell. Are recyclers being
11 actively pursued on these things set over here?
12 MR. CARR: Oh yes, DOE has commenced to apply
13 the recycle methodology. I am not trying to diminish
14 that. That is going to happen. The only thing I'm
15 getting at is the Operable Unit 3 rod, basically said
16 the materials that met the radiological chemical waste
17 acceptance criteria would be put into the cell,
18 however there would be further consideration for
19 recycling so the basic remedy is they go into the on
20 property disposal facility and there is a
21 consideration then that is being given through the
22 application of recycle methodology on a building by
23 building basis and we'll look for opportunities to
24 recycle. That is being done again --
25 MR. STORER: But, we are not all focused

1 on building, I mean the millrolls and the millstands
2 and machine stands, I mean, --
3 MR. TRYGIER: Millrolls, for example, I
4 mean you've got a solid piece of steel that would
5 possibly be ground out on the exterior and pre-
6 released for recycle, I think recycling would be very
7 interesting. 40,000 pound piece of solid steel that
8 is pre-released to recycle so hopefully what this
9 thing will show is a lot of this stuff won't go in
10 because it's pre-released and it turns out for
11 recycling but that would be looked at and evaluated
12 and explained in the plan. That recycling methodology
13 is what you've got, where you've got a large solid
14 piece of steel that can be released. That is --
15 MR. CARR: The methodology is not just get
16 applied to structural steel. It is anything that has
17 a potential and actually viable for recycle.
18 MR. STORER: I want to be sure that that
19 is being done.
20 MR. TRYGIER: I think one of the things,
21 when you say you are really interested in this
22 recycling --
23 MR. STORER: Well, I see a lot of money
24 being spent on studying the placement of these pieces
25 in the cell.

MS. CAMPBELL: There is a meeting on July 8.

MR. STORER: Maybe I'm getting an early start on it because these things have already been assigned to the cell and I thought wait a minute, we have not discussed this thoroughly yet.

MR. TABOR: Recycling efforts have been going on for some period of time.

MR. STORER: Refresh my memory on why they cannot be, I guess it's --

MR. TABOR: You've got to have a buyer.

MR. STORER: I want to be sure that they are pursuing that.

MR. CARR; They have gone through that and they have data points from vendors. I guess the first attempt was plan number 7 and we did not do too good of a job there but we particularly learned from that one a little bit now we have gone back and tried to get some other data. I think that was the July 8 meeting.

MS. CAMPBELL; That is what I was talking about, the recycling methodology.

MR. CARR: There is nothing better that I would like to see happen and not put the stuff in the cell, but meeting the criteria --

MR. STORER: I know this has been brought

1 up many many times but I would like to avoid that. I
2 don't want to abandon that concept.
3 MR. CARR: I agree and I apologize. Our goal
4 is to work on the cell builder and our goal is to get
5 it in there and what is the current proposal and there
6 is a whole other effort of recycle that would not give
7 us that material to put in the cell.
8 MS. DUNN: Did you really -- D&D, those
9 millrolls and stuff --
10 MR. CARR: I'm not the right guy to ask that
11 too. There is some way to asset washing that -- how
12 much would it cost to do it, to release it and I would
13 have to agree that you've got a lot of uranium and
14 rust on these things --
15 MS. DUNN: You've got a lot of --
16 MR. CARR: After being neutralized and
17 precipitated --
18 MS. CAMPBELL: There has been a major
19 concern of pre-releasing and being capable of being
20 pre-released and there is an issue house of safety --
21 MR. CARR: There is a whole rule book that
22 goes along with pre-release. You've got to be able to
23 prove that every surface has to be able to be pre-
24 surveyed for pre-release.
25 MS. CAMPBELL: You know, we don't want

1 uranium 15 years from now.

2 MR. CARR: 15 years ago I was looking for a
3 table leg and trying to find out where the metal was
4 coming from, Mexico and got into a production of steel
5 legs for tables for cafes and restaurants so it was a
6 nationwide survey of looking for these table legs all
7 across the country. That would happen here.

8 MR. ONTKO: But you get a lot of bang for
9 your buck. You've got a 40,000 pound millroll, you've
10 got only a finite number of crevices and cracks.

11 MR. CARR: That's correct. You are right.
12 That millroll is probably about the best, as far as,
13 you know, cleaning it up and you know the impregnation
14 and the rust is a problem but it doesn't have a bunch
15 of hard surfaces to resurface. That's always the
16 issue in these things. You have to cut them up into
17 such small pieces and be able t survey and to prove
18 that they're clean and it becomes economically
19 nonviable where like the millroll are just metal
20 cylinders and they might be viable, I don't know. I
21 think we're going to be going forward and pressing
22 forward on the impact material placement plan and
23 finalizing that and again our proposal will go forward
24 on millstands and millrolls and machine stands and
25 again the plan we will describe the placement

methodology for the structural steel beam and if there is commenting on that document any comments we would like to receive them and I think that is the proposal that we go forward with it. Anything else anybody wants to add? Turn it back to Gary here.

MR. STEGNER: Well, the evaluations, if you don't mind, and like I said, we'll be around to answer any questions that you might have.

- - -

Meeting concluded at 8:45 p.m.