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UNITED STATES OF AMERICA
NUCLEAR REGULATORY COMMISSION

OFFICE OF THE SECRETARY
RULEMAKINGS AND
ADJUDICATIONS STAFF

Before the Atomic Safety and Licensing Board

In the Matter of) Docket No. 72-22
PRIVATE FUEL STORAGE) ASLPB No. 97-732-02-ISFSI
L.L.C.) DEPOSITION OF:
)
(Private Fuel Storage) <u>DONALD WAYNE LEWIS</u>
Facility))
) (Utah Contention O)

Thursday, April 19, 2001 - 3:14 p.m.

Location: Parsons, Behle & Latimer
201 S. Main, #1800
Salt Lake City, Utah

Reporter: Vicky McDaniel

Notary Public in and for the State of Utah



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50 South Main, Suite 920
Salt Lake City, Utah 84144

In the Matter of Private Fuel Storage
Donald Wayne Lewis * April 19, 2001

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A P P E A R A N C E S

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P R O C E E D I N G S
DONALD WAYNE LEWIS,
having first been duly sworn to tell the truth,
was examined and testified as follows:
EXAMINATION

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6 BY MR. SEEL:
7 Q. Would you please state your full name for
8 the record.
9 A. Donald Wayne Lewis.
10 Q. Mr. Lewis, my name is Kurt Seel. I'm an
11 assistant attorney general with the State of Utah, and
12 we're here in the matter of Private Fuel Storage license
13 application before the NRC for a spent fuel storage
14 facility located in Skull Valley. This is Contention O.
15 Are you familiar with Contention O?
16 A. Yes, I am.
17 Q. And it is my understanding that you've been
18 named as an expert by PFS in regards to certain aspects
19 of Contention O.
20 A. That is correct.
21 Q. Would you please describe to me those
22 aspects?
23 A. It would be the portions of Contention O
24 where there is a concern of source material
25 contaminating the hydrology.

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4

1 Q. Would that include the retention pond,
2 retention basin? I'm not sure how you refer to it. The
3 overflow surface runoff retention pond?
4 A. It could, depending on specifically what
5 you're questioning.
6 Q. But you would be the person to provide
7 expert testimony on the construction of the pond, the
8 design construction, I guess?
9 A. No, I'm -- it would be the civil people that
10 would actually design the pond. I would be more
11 involved in what kind of -- if any contaminants would
12 get into the pond.
13 Q. When you refer to the civil people, who
14 would those be? Are they people that you supervise?
15 A. No. It would be people that would be my
16 peers, that would be doing the civil design. You're
17 talking about actual design of the pond itself, the way
18 it's laid out?
19 Q. Correct. Whether it's going to use native
20 soils, an artificial liner, those sorts of
21 characteristics of a pond. That wouldn't be something
22 that you could describe to me?
23 A. No, I cannot.
24 MR. GAUKLER: Let's take a break for a
25 second.

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1 (Witness and counsel consult outside the room.)
2 A. I need to clarify my last answer.
3 Q. Go ahead.
4 A. Okay. When you talk about in terms of
5 design, I'm not the one that designs, you know, makes
6 the size of it or determines what type of fill materials
7 need to be in the detention pond, you know, on the edges
8 and stuff. I can talk to you about what type of
9 percolation we have there, I can talk to you about
10 whether it needs a liner or not, those kind of things.
11 But I don't actually lay the detention pond out.
12 Q. Okay. I think I understand the difference,
13 but as we get into this, if we get into an area where
14 you don't have personal knowledge or an area you're not
15 an expert in, I assume that you will -- your attorney
16 will bring that to my attention.
17 A. Yeah.
18 Q. Are you familiar generally -- well, do you
19 know if a design has actually been -- a specific design
20 has actually been generated, or whether there's only
21 what we call engineering specs? Basically, our goal is
22 to have a pond that will satisfy a 100-year flood
23 located in such-and-such an area, but nothing's actually
24 been drawn on a piece of paper yet?
25 A. Yes.

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1 Q. Something has been drawn on a --
2 A. It has been designed.
3 Q. Has the state been given a copy of that, do
4 you know?
5 A. I believe so.
6 MR. GAUKLER: I believe you've gotten what
7 we had as a preliminary design for sure. I don't know
8 if there's been any subsequent design or not, if we need
9 to update or not, but I'll check.
10 Q. Do you know if the pond is going to be using
11 native soils? Is there any synthetic liner that's going
12 to be placed in the pond?
13 A. There will not be any synthetic liners in
14 the pond. I believe it is using native soils, but if
15 they are supplementing those with structural fills, I
16 wouldn't know.
17 Q. Do you know if they're going to be doing
18 anything to the native soils that would change their
19 percolation characteristics?
20 A. I'm not aware of any, no.
21 Q. That's possible that they will be doing
22 something like that?
23 A. That's actually out of my expertise, but
24 most likely they -- you know, there's nothing
25 structurally that they have to support there, so there

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1 is no need why they would have to put in like in the
2 center of the bottom of the pond. There would be no
3 reason to add fills that could inhibit percolation. The
4 dike area around the detention pond, they might have to
5 add something there simply to hold the pond together.
6 Q. So as far as you know, the permeability or
7 percolation characteristics, and if those terms aren't
8 clear to you and you want me to explain more, the
9 permeability or percolation characteristics of the soils
10 in the pond will be essentially the same as the native
11 soils that are located there today?
12 A. At this point I believe that's what the
13 design is, yes.
14 Q. Are you also responsible for the design of
15 the septic system?
16 A. Yes.
17 Q. I understand it's a wastewater disposal
18 system of some kind. Is that what it is?
19 A. That would be its technical name.
20 Q. And there's only one, there's not more than
21 one wastewater disposal system?
22 A. Well, the wastewater disposal system is just
23 the disposal of wastewater at the facility. In actual
24 design, there are two septic systems that are required
25 to do that. Simply because of the proximity of the

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1 site, there is one septic system for the Canister
2 Transfer Building and Security Building, and then
3 there's another septic system for the Admin and O&M
4 Building.
5 Q. They will have two different waste streams
6 going into each of the septic systems?
7 A. They're -- see, the buildings are separated
8 by, you know, more than a quarter of a mile. So it
9 wouldn't be reasonable to lump them together. So there
10 is one waste stream for the O&M and Admin Building that
11 goes to a septic tank that goes to a drain field, and
12 then quarter of a mile or half a mile away up to the
13 north of that, there is a second one that drains waste
14 from the Canister Transfer Building and Security
15 Building.
16 Q. Will they be designed to operate the same?
17 A. In function?
18 Q. Yes.
19 A. Yes.
20 Q. Could you explain how they designed it, just
21 in general terms?
22 A. In general, they're a gravity-based system
23 that carries the sewage from your toilets, your sinks,
24 basically your restroom, any lunchroom facilities, like
25 a kitchen sink, for example. It carries all those by

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1 gravity down to a septic tank, and the septic tank
2 allows for the separation between solids and liquids,
3 and the liquids drain out into several perforated pipes
4 into a drain field that allows leaching into the soil.

5 Q. What are the waste streams -- let's take the
6 first septic system, either one. I don't care which one
7 you choose. Would you please describe the waste stream
8 that PFS intends to put into the septic system?

9 A. The only wastes that are going to be in the
10 septic systems are from restrooms and the break room
11 sink.

12 Q. What would normally be called domestic
13 waste? I mean, I don't want to put words in your mouth,
14 but human excrement type waste?

15 A. Yes.

16 Q. Biological waste?

17 A. Yes, biological.

18 Q. Are there any other waste streams from the
19 lab or from any other source on site that PFS intends to
20 put into the septic systems?

21 A. No.

22 Q. You mentioned that the waste waters would go
23 into a perforated pipe in a drain field.

24 A. Uh-huh.

25 Q. And then the waste waters would -- I forget

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1 the term you used, but I thought it was leach or --

2 A. Yeah, leach or percolate into the soil.

3 Q. Have you done any tests to determine whether
4 the soils are porous enough or permeable enough to
5 accept the volume of wastewater that you intend to run
6 through the system?

7 A. We haven't done any tests, but that's what
8 your perc test determines. And typically any soil,
9 practically, can provide that. It just depends -- it
10 just -- that would in turn determine how large your
11 drain field has to be. So if it has poor percolation,
12 then you have to have a larger drain field, you know,
13 more pipe to distribute.

14 Q. What would be the ultimate destination of
15 the wastewater that's put into the leach field? I can
16 explain further if you want. But the groundwater will
17 end up on the surface of the ground or some other
18 location.

19 A. The drain field is actually below the
20 surface of the ground, so it's not going to attribute to
21 any surface water. And --

22 Q. Let me stop you there for just a second. So
23 none of the water from -- that's in the leach field is
24 going to be brought back up to the surface somehow?

25 A. Not unless it's pumped up, no.

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1 Q. I'm just trying to -- I just want to, you
2 know, as we're going through make clear.

3 A. Yeah.

4 Q. I'm trying to find where the wastewater will
5 ultimately end up.

6 A. Okay.

7 Q. So it's not going to be coming back up to
8 the surface, assuming it operates properly?

9 A. Correct.

10 Q. What are the other options for this water to
11 end up?

12 A. Well, as it percolates into the ground, as
13 we -- there is a certain minimum amount of soil that is
14 required between that and the groundwater in order to
15 provide self-water treatment, if you will, natural
16 treatment of the --

17 Q. Filtration of the waters as they migrate
18 downward?

19 A. Uh-huh. But it -- you know, it's -- because
20 of the groundwater elevation, it's not going to get
21 that. It's only going to percolate just a few inches
22 into the soil.

23 Q. How long is this wastewater system planning
24 to be operational?

25 A. For the life of the facility.

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1 Q. Would that be 40 years, then?

2 A. Yeah.

3 Q. You plan to discharge wastewater into the
4 system for a period of 40 years; the water isn't going
5 to come back up to the surface, and it's only going to
6 migrate a couple inches into the soil around the site,
7 around the leach field?

8 A. Well, it will be absorbed into the soil.

9 Q. Won't it keep absorbing into the soil and
10 migrating further and further from the leach field over
11 the forty-year period?

12 A. You mean down into the soil?

13 Q. Well, it's not coming to the surface, so it
14 needs to have to go somewhere, I assume. You've got 40
15 years of discharge going to the subsurface. Eventually
16 you're going to fill up the pore space. Or have you
17 done a --

18 A. Just like rain, if it could over -- you
19 know, that molecule of water could eventually find its
20 way, finally, several feet down to groundwater, or it
21 could -- you know, oftentimes the water underneath the
22 ground travels with the slope of the terrain.

23 Q. And there's only so much pore space under
24 the ground that you can put water into, and once you
25 fill up that pore space it has to expand into more pore

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1 space; is that correct? I'm just trying to --

2 A. You mean until the ground becomes saturated?

3 Q. Saturated, in which case the water has to
4 migrate further out as you continue to put more water
5 into the system?

6 A. Yeah, but there are other forces that take
7 place. You have evaporation that dries the soil above
8 the ground, you know, so...

9 Q. Okay, I guess we're getting back to the
10 ultimate destination. So some of that water will come
11 back up to the surface in some form, be it evaporation
12 or something else?

13 A. Well, the water -- most likely it's going to
14 travel along the slope of the ground. But what you're
15 implying is that the ground is going to saturate around
16 these pipes, and eventually it's going to be basically
17 flooded around all these pipes. And that won't happen,
18 because there are other effects that go on in the soil
19 that would evaporate the water away. Or not necessarily
20 evaporate the water away. I mean, it's going to absorb
21 the water.

22 Q. I guess I'm trying to figure out the
23 ultimate location for this water, be it the groundwater
24 table, back to the surface, or put into what's sometimes
25 called storage in the pore space of the soil. If

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1 there's another option where this water can go, let me
2 know if there's a fourth or fifth option for where this
3 40 years of wastewater can ultimately end up. Are those
4 the three options: groundwater, storage in the pore
5 spaces of the soil, and back to the surface?

6 MR. GAUKLER: In back to the surface, are
7 you including evaporation?

8 Q. Evaporation, transpiration. Somehow it's
9 leaving the system back to the surface. Are there any
10 other options than those three?

11 A. Water -- it typically is going to follow the
12 slope of the ground, and it's going to flow in layers
13 along a path that goes down. And that might reach, you
14 know, I don't know. You know, it's going to follow the
15 same path as all the rainwater that travels through
16 there and gets absorbed into the ground.

17 Q. Will it end up in the groundwater?

18 A. I don't know. You know, the groundwater is
19 very deep, so I don't know if it's going to end up in
20 the groundwater eventually or not. I don't know what
21 types of -- I don't even know if the soil allows
22 rainwater to eventually percolate into the groundwater.
23 I guess I can't quite answer. You know, I do not know.
24 My expertise does not cover soil conditions enough to
25 where I can answer your specific question.

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1 Q. But the septic system needs to be designed
2 so that it disposes of the water in some manner,
3 otherwise it's going to back up. Is that correct?

4 A. Uh-huh.

5 Q. So as part of the proper design for a septic
6 system, don't you need to determine where this water's
7 going to go and how rapidly?

8 A. Well, that's why you have a minimum distance
9 between the top of the groundwater and where the
10 perforated pipes can be. Ultimately what goes anywhere
11 is just the water. And through filtration, the water
12 that would end up going wherever is going to be purified
13 through natural sources, or through the natural
14 purification process.

15 Q. That's a different issue, and we can get
16 into that in a minute. I still want to get back to, in
17 order for the system to work properly, don't you have to
18 know where this water's going to end up?

19 MR. GAUKLER: Objection. I think he's
20 answered that.

21 If you can add more to what you've already
22 said, go ahead.

23 MR. SEEL: Are you instructing him not to
24 answer?

25 MR. GAUKLER: No. I said I think he's

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1 answered it. If he can add more to what he's already
2 said, he's free to go ahead and do that.

3 A. What I am required to do by the permit
4 requirements is to ensure that I meet certain criteria.
5 None of those criteria deal in determining where the
6 water ultimately goes.

7 Q. If it comes back up to the surface, wouldn't
8 that be a problem?

9 A. If the water came back up to the surface?

10 Q. And it is untreated?

11 MR. GAUKLER: Objection. I think before we
12 were talking about surface including evaporation,
13 transpiration and evaporation. I think you're probably
14 talking about something different here now. So your
15 question is confusing.

16 Q. That is correct. I'm talking about the
17 correct operation of a septic system.

18 A. Uh-huh.

19 Q. Can you just simply say, we're going to put
20 water in the subsurface and not worry about where it
21 goes, and we know that the system will operate properly?

22 A. We're going to put water into the system,
23 and we will meet the criteria that for septic tank or
24 septic drain field design which ensures that you have a
25 minimum amount of soil over your perforated pipes and

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1 above the groundwater.
2 Q. And does that design, does that design
3 presume that the water will migrate downward into the
4 subsurface? Is that how septic systems are designed to
5 operate properly?
6 A. They are designed so that the amount of soil
7 that occurs between the drain field and, say,
8 groundwater is sufficient enough to purify that water
9 through filtration before it gets to the groundwater.
10 Q. Let's get to the purification issue. How
11 does a septic system purify -- let's start with the
12 first waste stream, the one you described, these what
13 I'm going to call domestic wastes. But if you have
14 better --
15 A. That's fine.
16 Q. You're more familiar with how to describe
17 the waste stream as anticipated at this site. How does
18 the septic system treat or filter or somehow reduce any
19 hazardous characteristics associated with that risk?
20 A. What the septic drain field does is it
21 provides a large distribution area to distribute the
22 wastewater out into the soil. The system itself does
23 not purify the water, but it allows the -- you know, as
24 it percolates into the ground, then you get natural
25 filtration that purifies the water. And by distributing

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1 that over a large area, we can ensure that no portion of
2 the soil is overloaded.
3 Q. Does purification -- so the purification
4 treatment is a filtration treatment?
5 A. Yeah, it's a natural filtration.
6 Q. Is there any other form of treatment that
7 the system is designed to handle? For example, if
8 things were dissolved in the water, would filtration
9 filter out dissolved constituents in the groundwater, or
10 in the wastewater?
11 A. Things?
12 Q. If diesel fuel accidentally got in -- this
13 is theoretical. If diesel fuel accidentally got into
14 the wastewater system, is the septic tank system
15 designed to filter out diesel fuel?
16 MR. GAUKLER: Objection. There's been no
17 testimony that diesel would get into the septic system.
18 You can go ahead and answer to the extent
19 you can.
20 Q. And that's a good point. I'll let you
21 answer.
22 A. My first line would have been the same. You
23 know, we are designing it so that diesel fuel cannot
24 enter it. But the system is designed for biological
25 wastes.

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1 Q. So it's not designed to treat anything other
2 than biological waste?
3 A. That is correct.
4 Q. Is it designed to treat anything that would
5 be dissolved in the wastewater at a molecular level?
6 A. That was non biological?
7 Q. Well, even biological. If you had metals
8 dissolved in the water, if you had solvents dissolved in
9 the water, if you had any chemical dissolved in the
10 water, would the septic tank filtration system filter
11 out those molecules?
12 MR. GAUKLER: Objection, lack of any
13 testimonies of the presence of those things. But you
14 may answer.
15 A. Again, the facility design is set up to
16 where no solvents or chemicals would be allowed into
17 those, and it -- because it would not treat those
18 particular items. It's not designed to treat those.
19 It's solely designed to treat biological waste.
20 MR. SEEL: That answers the question.
21 Do you need a break? I might take a minute
22 to collect my stuff here. Five minutes.
23 (Recess from 3:40 to 3:48 p.m.)
24 Q. (BY MR. SEEL) I'd like to step back to the
25 retention pond, and I understand that you have some

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1 expert opinions on that but not necessarily know
2 everything about the pond. Is that correct?
3 A. That's correct.
4 Q. I'd like to show you a page, page 4.2-7a
5 from the Environmental Report Revision 7, and I would
6 like you to take a look at this page as much as you need
7 to. Take a look at it. Specifically I'm looking at
8 reference to a percolation rate, but please read as much
9 as you need to put it in context.
10 A. Okay. "The time for the water that has
11 collected in the basin" --
12 Q. Oh, I'm sorry. You don't need to read it
13 out loud. I just want you to make sure you've read --
14 A. Yes.
15 Q. -- enough of whatever page is there to be
16 familiar with it. There's a sentence that begins "in
17 the unlikely event." Do you see that part?
18 A. Uh-huh.
19 Q. Could you read that sentence for me?
20 A. "In the unlikely event of a 100-year flood,
21 the time for the water that has collected in the basin
22 to be removed by evaporation and ground percolation is
23 approximately 140 days." Keep going?
24 Q. Please.
25 A. "Assuming an evaporation rate of 0.32 inches

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1 per day," reference cited, "and percolation rate of 0.09
2 inches per day," reference cited.

3 Q. Do you know, did you assist or supervise in
4 the preparation of this portion of the environmental
5 report?

6 A. I assisted on it, yes.

7 Q. Do you know why the percolation rate of 0.09
8 inches per day was selected?

9 A. Because the information for that particular
10 locale based on this reference cited that.

11 Q. This reference is specific to the proposed
12 PFS site?

13 A. I don't know if it's -- I did not determine
14 what the .09 inches per day is, but based on the
15 information in this book, there are equations that you
16 put in your particular soil characteristics and then you
17 can determine what your percolation rate is.

18 Q. You didn't go out and do, or a person under
19 you did not go out and perform a test to determine a
20 percolation rate that would be applicable for the site?

21 A. No, this is based on a book approximation of
22 that percolation rate.

23 Q. Is this percolation rate consistent with
24 other measurements of the percolation or permeability of
25 soils at the site or in the area that you're aware of?

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1 A. As far as I'm aware of, yes.

2 Q. Is this percolation rate consistent with
3 measurements in the test well at the site as far as
4 permeability of the soils at the site?

5 A. I wouldn't know that.

6 Q. Do you know whether it's consistent with
7 statements regarding the permeability of surface soils
8 in the area around the site that are elsewhere in the
9 environmental report?

10 A. I wouldn't know for sure. I didn't
11 determine the numbering.

12 Q. If there was site-specific information,
13 would that -- regarding the percolation rate of the
14 soils at the site, would you use that in place of a
15 standard reference out of Lambe & Whitman Soil
16 Mechanics, 1969?

17 A. Yes, we would.

18 Q. Do you have any plans to do any future tests
19 regarding permeability of soils at the site?

20 A. Yes, we do.

21 Q. In regard to the retention pond to specific
22 aspects, or just across the site, sort of in general?

23 A. I'm not sure. I think it's across the site.

24 Q. So you wouldn't be going out doing a test to
25 look at the surface soils specifically with the

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23

1 retention pond in mind or the septic system in mind or
2 anything else in mind, it would just be a study of the
3 soils at the site?

4 A. Well, typically those tests are performed in
5 locations where you would -- like the detention pond or
6 the drain field, yes.

7 Q. But you wouldn't be using a measurement in
8 one location, an assumption in one location and then
9 using a different measurement or different assumption in
10 another location with a different purpose? That was a
11 very poorly worded question and very complex, and why
12 don't we just eliminate that.

13 MR. GAUKLER: Start over.

14 Q. (BY MR. SEEL) What I'm trying to get to is,
15 in its documents PFS has referenced different materials,
16 sources for different soil percolation or permeabilities
17 at the site. And they seem to be using different
18 permeability rates depending on whether it's for their
19 aquifer test, whether it's for percolation at the
20 retention pond, whether it's to argue that surface of
21 soils at the site are impermeable enough to prevent
22 downward migrations of spills and releases. What I'm
23 trying to get a handle on is if there is a reason why
24 they seem to be using different permeabilities of these
25 surface soils for different aspects of the facility.

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1 A. It would determine, or it would be -- it
2 depends on what you're trying to determine. For
3 example, ground surface is going to be different than
4 subsurface depending on the types of soil. What I might
5 have at ground surface at point A could be entirely
6 different than what I have at point B. And so when you
7 determine your percolation, it is based on the types of
8 soil that we have sampled in those areas.

9 Q. You've collected samples in different areas
10 and performed permeability tests on them?

11 A. No. What we have done is we've done soil
12 borings of -- all around the site. So we know what
13 types of soils that are there. And so from that you can
14 apply some empirical formulas to get a reasonable
15 estimate of what kind of percolation one could assume at
16 that location.

17 Q. Is that what was done to come up with this
18 percolation rate of 0.09 inches per day on page 4.2-7a
19 of the Environmental Report Revision 7?

20 A. Yes, it was.

21 Q. This number is from a --

22 A. The percolation rate was determined for the
23 types of soils that would be in the detention pond. So
24 we took soil -- we took soil boring information from the
25 detention pond area and we applied that into the

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1 formulas to determine -- to estimate what kind of
2 percolation you could get, reasonably expect in that
3 area.
4 Q. And what would those formulas be?
5 A. I did not do the calculation, but the
6 calculation is based on the formula that was in the
7 Lambe & Whitman soil mechanics book.
8 Q. And the variability of the soils across the
9 site based on PFS's boring information --
10 A. Uh-huh.
11 Q. -- is such that the permeability would vary?
12 A. It can. I'm not familiar with the soils,
13 all the soil properties across there, but it can vary
14 widely, yeah.
15 Q. There was future work that you -- stepping
16 back to a prior question. There was work to be proposed
17 in the future or planned to be done in the future
18 regarding soil permeabilities and the like. Is that --
19 did I understand your -- I can ask the question again, I
20 guess.
21 Does PFS planned to perform further work at
22 the site regarding soil characteristics, including
23 permeability?
24 A. PFS is in the process to determine what the
25 permeability is of water from groundwater sources. At

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1 this time there are no percolation tests being
2 performed, but eventually we will perform percolation
3 tests.
4 Q. Do you know if the percolation rate that is
5 described on page 4.2-7a of Revision 7 of the
6 environmental report, chapter 4, would be sufficient for
7 you to build a properly operating septic system?
8 A. As I mentioned before, a septic system, the
9 drain field size area that it would take is determined
10 based on the amount of percolation that you get. .09
11 inches per day is a fairly low percolation. So the
12 drain field size would be large enough so that you could
13 get the amount of percolation that is required to not
14 back up your septic system.
15 Q. Have you done that analysis yet, how large a
16 drain field that you would need at the site?
17 A. We've only done a preliminary analysis based
18 on the Uniform Plumbing Code to determine an approximate
19 size. Typically on any type of construction site, that
20 information would be determined by a subcontractor who
21 installs your drain field. They would do a percolation
22 test, and then they would size it to the exact
23 requirements and county criteria at that time.
24 Q. Part of that rough estimate -- I assume it's
25 a rough estimate, rough calculation?

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1 A. It's an approximation based on the
2 information we have, yes.
3 Q. What percolation rate did you use? Do you
4 recall?
5 A. It does not have a percolation rate. What
6 it does, it determines an approximate amount of land,
7 approximate size of the drain field based on the number
8 of people that would be employed at the site.
9 Q. I'm not sure what -- okay.
10 A. Explain?
11 Q. No, that's okay. Is there any other work
12 that's proposed to be done on soil characterization at
13 the site other than this -- I believe you characterized
14 it as more of an aquifer test or a groundwater test?
15 A. Okay, say that again.
16 Q. We were talking about future work that's
17 planned to be performed at the site, and we were talking
18 about work that would involve soil characterizations.
19 And I interpreted your answer as that there was some
20 proposed work to be done regarding characterizing a
21 groundwater source or an aquifer source or something
22 like that. Is that correct?
23 A. We have determined --
24 Q. Just trying to figure out what future work
25 is planned --

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1 A. What future work?
2 Q. What future work is planned to be relevant
3 to --
4 A. Percolation.
5 Q. Percolation in regards to the septic system
6 and the storm water retention plant.
7 A. You'd have to do a perc test, physical perc
8 test out there, which we would do.
9 Q. But it's nothing that's been specifically
10 scheduled; it's just, we will do this sometime in the
11 future? Have you retained a contractor to do that work
12 yet?
13 A. No.
14 Q. Oh, thanks.
15 A. Okay.
16 MR. SEEL: That's all.
17 I don't think I have any more questions.
18 EXAMINATION
19 BY MR. WEISMAN:
20 Q. I do have a couple. I just wanted to -- you
21 were talking about a septic system being solely for
22 biological waste.
23 A. Yes.
24 Q. Something that was bothering me just a
25 little bit is, you're going to have a housekeeping staff

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1 that will clean up the restrooms, for instance.
 2 A. Correct.
 3 Q. And they will use some sort of cleaners.
 4 A. Uh-huh.
 5 Q. Where will those cleaners go? Will they
 6 also go into the septic system?
 7 A. They could. But cleaners, your typical
 8 household cleaners, if you want to call it, janitorial
 9 cleaning agents --
 10 Q. Yes.
 11 A. -- are -- what do they call it? Sur --
 12 MR. SEEL: Surfactants.
 13 A. Surfactants.
 14 MR. SEEL: I'm sorry.
 15 A. Surfactants that are -- usually they are --
 16 most often today they're biodegradable. They're not
 17 considered hazard waste or hazard materials, and so...
 18 Q. So the septic system is designed to handle
 19 those products also?
 20 A. Right.
 21 Q. Okay. I guess my other question is, you
 22 mentioned that PFS took some soil borings on the site to
 23 determine what kind of -- what the soils were. How deep
 24 did those soil borings go?
 25 A. They range. They're all listed in chapter 2

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1 of the Safety Analysis Report. Some of them were
 2 shallow for just determining what kind of soil
 3 conditions we had. Some of them are deeper so that we
 4 could determine what the groundwater level was at
 5 various points around the site. I do not know exactly
 6 how deep. You know, some of them were in excess of a
 7 hundred feet, some of them were less.
 8 MR. WEISMAN: All right. I don't think I
 9 have anything else.
 10 MR. GAUKLER: Let's take a break.
 11 (Recess from 4:05 to 4:08 p.m.)
 12 MR. GAUKLER: Nothing.
 13 (Deposition was concluded at 4:08 p.m.)
 14 * * *
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1 CERTIFICATE
 2 State of Utah)
 3) ss.
 4)
 5 I, Vicky McDaniel, a Registered Merit
 6 Reporter and Notary Public in and for the State of Utah,
 7 do hereby certify:
 8 That the deposition of Donald Wayne Lewis,
 9 the witness in the foregoing deposition named, was taken
 10 on April 19, 2001, and that said witness was by me,
 11 before examination, duly sworn to testify the truth, the
 12 whole truth, and nothing but the truth in said cause;
 13 That the testimony of said witness was
 14 reported by me in stenotype and thereafter transcribed
 15 into typewriting and that a full, true, and correct
 16 transcription of said testimony so taken and transcribed
 17 is set forth in the preceding pages.
 18 I further certify that I am not of kin or
 19 otherwise associated with any of the parties of said
 20 cause of action and that I am not interested in the
 21 event thereof.
 22
 23 WITNESS MY HAND and OFFICIAL SEAL at Saratoga
 24 Springs, Utah, this 23rd day of April, 2001.
 25
 Vicky McDaniel, RMR
 Utah License No. 87-108580

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1 Case: In the Matter of Private Fuel Storage
 2 Case No.: ASLPB No. 97-732-02-ISFSI
 3 Reporter: Vicky McDaniel
 4 Date taken: April 19, 2001
 5
 6 WITNESS CERTIFICATE
 7
 8 I, Donald Wayne Lewis, HEREBY DECLARE:
 9
 10 That I am the witness referred to in the
 11 foregoing testimony; that I have read the transcript and
 12 know the contents thereof; that with these corrections I
 13 have noted, this transcript truly and accurately
 14 reflects my testimony.
 15
 16
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 22
 23
 24
 25

PAGE-LINE	CHANGE/CORRECTION	REASON
<p style="text-align: center;">_____ No corrections were made.</p>		
SUBSCRIBED and SWORN to at	Donald Wayne Lewis	
2001.	, this day of	
	Notary Public	

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