

STATE OF NEW MEXICO  
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT  
OIL CONSERVATION DIVISION

EXAMINER HEARING

IN THE MATTER OF:

Application of Sunco Trucking Case 9955  
Water Disposal for a permit  
to construct and operate a  
commercial wastewater evaporation  
pond, San Juan County, New Mexico

TRANSCRIPT OF PROCEEDINGS

BEFORE: MICHAEL E. STOGNER, EXAMINER

STATE LAND OFFICE BUILDING

SANTA FE, NEW MEXICO

June 13, 1990

**ORIGINAL**

CUMBRE COURT REPORTING  
(505) 984-2244

## A P P E A R A N C E S

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1 HEARING EXAMINER: Call next case, No.  
2 9955, which is the application of Sunco Trucking Water  
3 Disposal for a permit to construct and operate a  
4 commercial wastewater evaporation pond, San Juan  
5 County, New Mexico. At this time, I'll call for  
6 appearances.

7 MR. DEAN: My name is John A. Dean, Jr.,  
8 for the Applicant.

9 MR. HORNER: I'm Gary Horner representing  
10 a neighboring property owner, Harold Horner, who's  
11 protesting this application.

12 HEARING EXAMINER: Will you have any  
13 witnesses, Mr. Horner?

14 MR. HORNER: I don't anticipate any  
15 witnesses at this time.

16 HEARING EXAMINER: Mr. Dean, how many  
17 witnesses do you have?

18 MR. HORNER: Three.

19 HEARING EXAMINER: Will the witnesses  
20 please stand and be sworn at this time?

21 (Witnesses sworn.)

22 HEARING EXAMINER: Mr. Dean?

23 MR. DEAN: Yes. Are we going to go?

24 HEARING EXAMINER: Yes.

25 MR. DEAN: I'm new at this particular part

1 of it. Is my application and the letter that  
2 supplement part of the record as it stands now that  
3 you've reviewed or looked at?

4 HEARING EXAMINER: You need to present your  
5 exhibits, and let's continue, Mr. Dean.

6 MR. STOVALL: Let me answer that a little  
7 more fully. Your application is part of the file but  
8 it is not part of the record upon which the decision  
9 is based.

10 MR. DEAN: The record is empty right now?

11 MR. STOVALL: Yes. You have to put that  
12 application in on into the record.

13 MR. DEAN: I'm going to call Robert Frank  
14 as a witness at this time.

15 ROBERT C. FRANK,  
16 the witness herein, after having been first duly sworn  
17 upon his oath, was examined and testified as follows:

18 DIRECT EXAMINATION

19 BY MR. DEAN:

20 Q. Would you please state your name.

21 A. Robert C. Frank.

22 Q. How are you employed, Mr. Frank?

23 A. I'm employed as an agent for Sunco Trucking  
24 Water Disposal.

25 Q. Other than in that capacity, what is your

1 employment?

2 A. Self-employed at this time, primarily in  
3 the permitting of well sites, pipelines, land work and  
4 drilling consulting.

5 Q. What is your profession?

6 A. I am also a geologist.

7 Q. Have you testified in front of this  
8 administrative body before?

9 A. Yes, I have.

10 Q. Have you been qualified as an expert?

11 A. Yes, I have.

12 MR. DEAN: I'd like to move that he be  
13 certified as an expert as a geologist at this time.

14 HEARING EXAMINER: Are there any  
15 objections?

16 MR. HORNER: No objections.

17 HEARING EXAMINER: Mr. Frank is so  
18 qualified as a geologist.

19 Q. (BY MR. DEAN) Besides your specialty or  
20 training as a geologist, do you have any others that  
21 you have expertise in that pertain to this  
22 application?

23 A. Yes. I've designed several pits similar to  
24 this previously.

25 Q. How many?

1           A.       I designed two directly -- three directly  
2 and participated in the design of the fourth.

3           Q.       As part of that process, have you gone  
4 through the permit and application process with OCD?

5           A.       Yes, I have.

6           Q.       Do you own and operate or partially own and  
7 operate a commercial disposal facility similar to the  
8 one applied for here?

9           A.       Yes, I do.

10          Q.       What is the name of that operation?

11          A.       Southwest Water Disposal.

12          Q.       Did you design that pond?

13          A.       Yes, I did.

14          Q.       Did you go through the application process  
15 on that pond?

16          A.       Yes, I did.

17          Q.       Where is that pond located?

18          A.       Four miles north of Blanco, New Mexico.

19          Q.       In what county?

20          A.       San Juan.

21          Q.       New Mexico?

22          A.       Yes.

23          Q.       Are you part of the day-to-day operations  
24 of that business at this time?

25          A.       Yes, I am, in the function of sales and

1 managing, that type. I'm not completely in charge of  
2 the day-to-day operations at the facility.

3 Q. Are you aware of how it operates?

4 A. Very much so.

5 Q. How long has that pond been in operation?

6 A. We opened up January 11, 1989.

7 Q. Other than your training as a geologist,  
8 have you had any other education as it pertains to  
9 that application?

10 A. Yes. I took some engineering courses at  
11 Metropolitan State College in Denver, Colorado.

12 Q. Civil engineering courses?

13 A. Civil engineering.

14 Q. Did you receive a degree or certificate?

15 A. No, I did not.

16 Q. How many hours of study did you take?

17 A. Sixteen, I believe.

18 Q. Prior to the time that you began to operate  
19 the pond that you described in Blanco, what did you  
20 do?

21 A. Prior to that, I worked for Union Texas  
22 Petroleum as a regulatory and environmental analyst.

23 Q. Are you familiar with operations in the oil  
24 and gas industry?

25 A. Yes, I am.



1 MR. DEAN: I'm going to hand you what I've  
2 marked as Applicant's Exhibit A.

3 Should I use letters or numbers, or do you  
4 care?

5 HEARING EXAMINER: I prefer numbers.

6 Q. (BY MR. DEAN) -- No. 1 and ask you to  
7 identify that document for me, please.

8 A. This is a request to the New Mexico Oil  
9 Conservation Division for administrative approval,  
10 commercial evaporation ponds.

11 MR. STOVALL: Excuse me, Mr. Dean, do you  
12 have marked copies of exhibits for the --

13 MR. DEAN: No. I can provide those though  
14 as they're marked out of mine.

15 MR. STOVALL: Do you have copies of this,  
16 Mr. Horner?

17 MR. HORNER: Of the application? I may  
18 have one in my file.

19 HEARING EXAMINER: Did you prepare extra  
20 copies of --

21 MR. DEAN: No, I was assuming that he had  
22 them. They've been provided to him, as I understand  
23 it. I apologize for that.

24 MR. STOVALL: Unfortunately, the problem  
25 with this, and I realize you're unfamiliar with our

1 practice here, but every document that is an exhibit  
2 is entered in the record at the time of the hearing.  
3 And the other is preparatory to it. That way we can  
4 assure we have the documents as they are presented.

5 For example, Mr. Horner has probably got  
6 the application, but exactly what are we marking as an  
7 exhibit is my main concern. We also do have a rubber  
8 stamp somewhere which marks the case number and all  
9 that. Let's make sure we're all looking at the same  
10 exhibit during the course of this proceeding.

11 Go ahead. I'll see if I can find it.

12 MR. DEAN: Okay.

13 Q. Would you please describe what's been  
14 marked as Applicant's Exhibit 1. What is it?

15 A. It's a letter request dated May 19, 1989,  
16 from Sunco Trucking Water Disposal to the New Mexico  
17 Oil Conservation Division. The subject is titled  
18 Administrative Approval Commercial Evaporation Ponds,  
19 Northwest Quarter, Section 2, Township 29 North, Range  
20 12 West, San Juan County, New Mexico.

21 Q. How many pages is that document?

22 A. Fourteen.

23 Q. And the last three pages are oversized  
24 pages?

25 A. Correct. They are titled Application to

1 Appropriate Underground Waters In Accordance With  
2 Section 75-11-1, New Mexico Statutes, the State  
3 Engineer Office Well Record.

4 Q. And on there is typing on the front and  
5 back of those pages only?

6 A. Yes, there is in all instances.

7 Q. Did you prepare the document marked as  
8 Applicant's Exhibit 1?

9 A. Yes, I did.

10 Q. What information did you use in preparing  
11 that document?

12 A. It was based upon the revised August 1988  
13 "Guidelines For Permit Application, Design and  
14 Construction of Waste Storage/Disposal Pits."

15 Q. Who publishes those guidelines?

16 A. The New Mexico Oil Conservation Division.

17 Q. And attached to that document marked as  
18 Plaintiff's Exhibit 1, is there a plat and topographic  
19 map showing a location of the proposed pit in relation  
20 to government survey highways, water courses, and  
21 water wells within one mile?

22 A. Yes, there is.

23 Q. Is that the fourth-to-the-last page of that  
24 document?

25 A. It is.

1           Q.       What is the closest water course to that  
2 location?

3           A.       The nearest running water is the Animas  
4 River. I believe it's approximately a mile-and-a-half  
5 north-northwest.

6           Q.       Do you have with you today a description of  
7 the proposed facility?

8           A.       Yes, I do.

9           Q.       Could you put that in front of you? We'll  
10 refer to that as Applicant's Exhibit No. 2. I just  
11 have one copy of this, which I don't mind admitting,  
12 but it is rather large and hard to copy. I think one  
13 was submitted with the application.

14                   What does this diagram show?

15           MR. STOVALL: Would you hang that on the  
16 wall, Mr. Dean? There's some tape here.

17           MR. DEAN: Sure.

18           MR. STOVALL: Mr. Frank, after you hang  
19 that, I'm going to ask you to look at what I've got  
20 here and assure me it's the same thing, same date,  
21 same drawing, no changes whatsoever.

22           THE WITNESS: This page is the same.

23           MR. STOVALL: Take a look at this page.

24           THE WITNESS: Page 2 is exactly the same as  
25 what would be Exhibit 2 except for I did change in

1 writing, my handwriting, 4-inch perforated pipe at 1  
2 percent slope to 2-inch perforated pipe at 1 percent  
3 slope.

4 MR. STOVALL: Or to the extent you have any  
5 copies of any of these things you wish to have  
6 prepared, we will do so.

7 MR. HORNER: All right.

8 Q. (BY MR. DEAN) I direct your attention to  
9 what's marked as 2-A, the first page of Exhibit 2, and  
10 ask you to identify that?

11 A. It's titled Evaporation Ponds for Sunco  
12 Trucking. It is a cover sheet.

13 Q. Was that document prepared based upon the  
14 application that's been submitted to OCD?

15 A. Yes.

16 Q. And the information contained in it?

17 A. Yes.

18 Q. Explain for us what specifically is shown  
19 on Exhibit 2-A.

20 A. Specifically, we have a vicinity map of the  
21 surrounding six sections around the facility, a  
22 blow-up of the section in which the facility is  
23 located, a location comparing for survey purposes of  
24 the ponds and the relation of each pond to each other,  
25 and certifications, construction specifications. That

1 would be the certifications of the surveyor, the  
2 engineer, and Mr. Coleman's oath.

3 Q. Look at 2-B and tell us what that is and  
4 what does it show?

5 A. Exhibit 2-B is entitled, once again,  
6 Evaporation Ponds for Sunco Trucking. It is a site-  
7 specific diagram of the ponds, the topographic  
8 features of the land around the ponds, the  
9 relationship of the ponds to existing pipelines,  
10 roads, power lines, and construction details.

11 Q. Does it show fences and cattle guards and  
12 things like that?

13 A. That are on the site-specific facilities,  
14 yes.

15 Q. Yes, that's 2-B; it shows those things?

16 A. Yes.

17 Q. Does it have information about the pits,  
18 the liners, the dikes, the sprayers, and that type of  
19 information?

20 A. Yes, it does.

21 Q. Briefly tell us what 2-B tells us about  
22 those things and how they pertain to this  
23 application.

24 A. This portion of 2-B shows --

25 Q. That's the lower right-hand corner of 2-B?

1           A.       Yes -- the liner and anchor details. This  
2 portion is the siphon for the skimmer pond, the  
3 blow-up of the leak detection sump, the liner  
4 penetration detail.

5           MR. STOVALL: Mr. Frank, I must tell you,  
6 it will be awfully hard to read the record and say  
7 what you're pointing to, and I can't even see because  
8 you're standing between me and it. We have to be very  
9 specific here.

10           THE WITNESS: I'm sorry. They are titled.

11           Q.       (BY MR. DEAN) Trade sides and tell us,  
12 starting in the bottom right-hand corner, what is  
13 that?

14           A.       Liner and Anchor Detail.

15           Q.       What and how do those pertain to this  
16 application? Tell us what they do in regard to the  
17 pit.

18           A.       It shows the relationship of the slope, the  
19 liners, being the primary liner; it's on the surface  
20 -- a sand layer, a geotextile membrane, the  
21 cross-section of the leak detection system, and the  
22 secondary liner.

23           Q.       Moving counterclockwise to the middle, what  
24 is shown there in the long oblong rectangle figure?  
25 No, to the left.

1           A.       This is titled Sump Detail.

2           Q.       On 2-B it's titled, Sump Detail; underneath  
3 that diagram, it says that?

4           A.       Yes, it does.

5           Q.       What is that?

6           A.       That is a schematic of the leak detection  
7 sump.

8           Q.       How does the leak detection sump work in a  
9 commercial disposal pond as applied for her?

10          A.       The leak detection system is between the  
11 two liners, and the sump is a monitoring device  
12 located outside the outside dike of the pond.

13          Q.       How does it detect leaks?

14          A.       If there were to be a leak, the leak  
15 detection system would drain to this sump.

16          Q.       And it would detect a leak in what?

17          A.       The primary liner.

18          Q.       Moving counterclockwise to the immediate  
19 left, what is that, and what is it labeled?

20          A.       This is titled Site Department B, and it is  
21 a diagram indicating the topography of the facility,  
22 the relationship of the three ponds, the unloading  
23 facilities, the fence, existing pipelines, and roads.

24          Q.       Will this location be fenced?

25          A.       Yes.



1 Q. Completely?

2 A. Yes, it will.

3 Q. How many entrances will it have?

4 A. One, to the best of my knowledge.

5 Q. What is important about the topography  
6 information that's shown there? How is it relevant to  
7 this?

8 A. That gives you the lay of the land, and  
9 from that you calculate the amount of dirt to be moved  
10 to build the dikes.

11 Q. Did you use that topographic information to  
12 calculate that?

13 A. I did not, but the engineer did.

14 Q. Moving up still counterclockwise to the  
15 middle, what is that, and what is it labeled?

16 A. It is labeled the Leak Detector System,  
17 Plan View.

18 Q. What does it tell us?

19 A. It shows the relationship -- typical  
20 relationship of any one pond the leak detection system  
21 -- the orientation of the pipes in the leak detection  
22 system.

23 Q. Where is the leak detection system located  
24 in this proposed pond?

25 A. Between the secondary and the primary

1 liner.

2 Q. Throughout the pond?

3 A. Throughout the pond.

4 Q. What is it composed of?

5 A. It's a network of PVC pipe. The center  
6 line is a 2-inch perforated PVC pipe. The laterals  
7 are 1-inch perforated PVC pipe.

8 Q. How do those play into the sump?

9 A. They're sloped at 1 percent along the  
10 entire bottom of the pond to the sump.

11 Q. How do they function, and if there's a  
12 leak, tell the examiner what would happen?

13 A. If there's a leak in the primary liner, the  
14 water would penetrate through the liner into the  
15 porous membrane, which would be either a washed sand  
16 or a geotextile material. The laterals are sloped at  
17 2 percent to the center line, which is sloped at 1  
18 percent to the sump; so there is a continuous feed.  
19 If there is any leak, it will be picked up by the  
20 1-inch lateral that's fed to the main line and then  
21 into the sump.

22 Q. How does a person at that facility use that  
23 to detect a leak?

24 A. Visual inspection.

25 Q. At the sump?

1           A.       At the sump.

2           Q.       Still on 2-B, are there any other items  
3 that -- immediately counterclockwise in the top  
4 right-hand corner, what is that, and how is it  
5 labeled?

6           A.       This is entitled Pond Capacity. It is a  
7 graph of water depth versus capacity in acre-feet.

8           Q.       What does it tell us, and what did you use  
9 it for?

10          A.       It is a requirement of the State Engineer's  
11 Office, and it is a volume curve of the pond's maximum  
12 volume.

13          Q.       That you calculate on a pond this size, how  
14 much it will hold?

15          A.       Correct.

16          Q.       Continuing on 2-B, are there any other  
17 diagrams?

18          A.       In a clockwise manner, there is a  
19 certification of the engineer. It is not titled as  
20 such, but is a certification by James P. Lees, the  
21 designer.

22          Q.       In the middle of 2-B, are there several  
23 diagrams? Tell us what those are.

24          A.       The first one would be cross-section, or  
25 actually it's labeled X Section, and the Pond Water

1 Transfer Detail. It is a diagram indicating how the  
2 ponds will flow from one to the next.

3 Q. Elaborate on that and tell us what that  
4 means.

5 A. It's a liner penetration, and when the  
6 first pond gets to its height, it will flow into the  
7 second pond by gravity, and subsequently from the  
8 second to the third pond by gravity.

9 Q. Is it proposed that all three ponds will be  
10 built simultaneously?

11 A. No. The No. 1 Pond and No. 2 Pond, the  
12 dirt work will be done simultaneously. The first pond  
13 will be lined commensurate with that. The second pond  
14 will be lined as market conditions dictate.

15 Q. Or as the first pond fills?

16 A. Right.

17 Q. Continuing on 2-B, what is the next  
18 diagram; what is it labeled?

19 A. The next diagram just below the last  
20 section --

21 Q. The X Section?

22 A. Yes -- is called the Skimmer Pond Detail.  
23 It is a diagram indicating the relationship of the  
24 skimmer pond and the siphon device into the main pond.

25 Q. Since the time that this diagram was

1 proposed, have there been any changes with regard to  
2 the skimmer pond?

3 A. Yes. We decided to eliminate the skimmer  
4 pond and go with multiple open storage tanks and  
5 eliminate the skimmer pond.

6 Q. Was the proposed skimmer pond in addition  
7 to the other ponds?

8 A. Yes.

9 Q. Tell us what the function of the storage  
10 tanks will be and where they will be located in  
11 relation to 2-B.

12 A. The skimmer tanks will be located close to  
13 the entrance to the facility.

14 Q. Please tell us what you're pointing at.

15 A. I'm pointing to the Site Topography  
16 Diagram.

17 Q. On 2-B?

18 A. On 2-B. The trucks will enter the  
19 facility. A sample will be taken and tested. The  
20 trucks will unload into this open tank. The oil will  
21 be separated in these tanks. The oil will be drained  
22 off the top to another tank. The water will be  
23 drained off the bottom to the main pond.

24 HEARING EXAMINER: The tank in which the  
25 trucks will initially unload is the steel unloading

1 tank; it's the long oblong just to the right of the  
2 three tanks?

3 THE WITNESS: Correct.

4 HEARING EXAMINER: Marked 500 Barrels?

5 THE WITNESS: Correct.

6 HEARING EXAMINER: I'm sorry. Go ahead.

7 THE WITNESS: For clarification purposes,  
8 we will have multiple steel unloading tanks.

9 Q. (BY MR. DEAN) Will they be in the vicinity  
10 of the one that's marked Steel Unloading Tanks at this  
11 time?

12 A. Yes.

13 Q. When you say these are open tanks, what  
14 does that mean?

15 A. There's no lid.

16 Q. No top? Okay. Is there any other diagram  
17 on 2-B?

18 A. Yes. The last diagram would be what is  
19 titled the Liner Penetration Detail.

20 Q. What does that tell us?

21 A. That is a detail of the siphon pipe from  
22 large pond to large pond, how the plastic will be  
23 fitted around the pipe to prevent leaks.

24 Q. Elaborate on that particular detail at this  
25 time.

1           A.       There will be -- the pipe will be, I  
2 believe, 6-inch pipe, and it will be steel or iron.  
3 It will be resting on a ballast of concrete on which  
4 the liner will be clamped, folded back over itself,  
5 and then seamed to the liner. The liner penetration  
6 detail indicates that a sleeve will be put over it,  
7 pulled back against itself, and then seamed to the  
8 liner.

9           Q.       Will that be placed in the first pond when  
10 it's constructed?

11          A.       Yes.

12          Q.       Is there information about the sprayers on  
13 Exhibit 2-B?

14          A.       No, there is not.

15          Q.       Would you point on 2-B where the sprayer  
16 locations will be?

17          A.       I will use what is titled the Leak Detector  
18 System. There will be either two or three floating  
19 islands located approximately a third of the way  
20 across the pond.

21          Q.       And you can show that on the sump diagram?

22          A.       No, the leak detector system.

23          Q.       So one will be located a third from the end  
24 and then a third; so there will be two of those?

25          A.       Yes.

1 Q. Are there any other diagrams on 2-A or 2-B  
2 that you have not explained?

3 A. I don't believe there is.

4 Q. Go ahead and take a seat.

5 MR. STOVALL: Mr. Dean, before you do, this  
6 is more on the order of efficiency, if you don't mind,  
7 I'd like to interrupt you on these exhibits and make  
8 sure I understand the detail.

9 Particularly concerned with the leak  
10 detection system, if I look at the Liner and Anchor  
11 Detail, I'm looking at a cross-section of the bottom  
12 of the pond; is that correct?

13 THE WITNESS: Yes.

14 MR. STOVALL: Then if I go up to the leak  
15 detector system, what that's doing, if I flip it over  
16 and lay it down, I'm looking at the end of that 2-inch  
17 pipe as I look at this cross-section in the anchor  
18 detail; right?

19 THE WITNESS: That would be correct.

20 MR. STOVALL: What you've described in the  
21 leak detector system plan view is looking down on top  
22 of what is underlined, kind of the broad, V-shaped  
23 area in the Liner and Anchor Detail area?

24 THE WITNESS: That is correct.

25 MR. STOVALL: So on the side of the tanks,



1 there's a much smaller space between the primary and  
2 secondary liners; so a leak anywhere in the primary  
3 liner will flow down to the bottom?

4 THE WITNESS: Correct.

5 MR. STOVALL: The pipe which is shown on --  
6 I assume this is a pipe -- at the bottom of the V in  
7 the Liner Anchor Detail is the same pipe that's shown  
8 going out on the Sump Detail, the 2-inch PVC pipe goes  
9 into the sump?

10 THE WITNESS: That's correct.

11 MR. STOVALL: There will be one of these  
12 under each of the ponds?

13 THE WITNESS: Correct.

14 HEARING EXAMINER: There will also be one  
15 is this known as the skimmer pond I'm pointing at?  
16 This is on the lower right-hand corner of Pond 1 on  
17 your site topography view?

18 THE WITNESS: We've eliminated that skimmer  
19 pond.

20 HEARING EXAMINER: And so I go up to the  
21 leak detector system plan view, that is eliminated  
22 also?

23 THE WITNESS: Correct, on the skimmer pond.

24 HEARING EXAMINER: I'm going to go to the  
25 Skimmer Pond Detail. Is that eliminated too?

1 THE WITNESS: Yes, it will be.

2 HEARING EXAMINER: So there will be three  
3 sumps altogether, one in each pond?

4 THE WITNESS: Correct.

5 HEARING EXAMINER: And not the four which I  
6 had just alluded to?

7 THE WITNESS: Correct.

8 MR. STOVALL: I've got a couple more  
9 questions. Looking back at your Liner Anchor Detail,  
10 on the right side of that, you refer to a 6- or 8-inch  
11 pipe to anchor liners and backfill trench? Is that  
12 just pipe sitting in the ground and covered with dirt  
13 to hold the liner in?

14 THE WITNESS: Correct.

15 MR. STOVALL: These ponds are open ponds;  
16 is that correct, open top ponds?

17 THE WITNESS: Yes.

18 MR. STOVALL: The flow from Pond 1 to Pond  
19 2, is that just over the slope of a line on the  
20 ground, or is that through some sort of piping?

21 THE WITNESS: It will be through the pipe  
22 as represented by the Liner Penetration Detail.

23 MR. STOVALL: As far as do you have any  
24 plans at this time as far as netting or screening  
25 these tanks, or am I jumping ahead of you on this?

1           THE WITNESS: To the best of my knowledge,  
2 there will be no netting required pursuant to the OCD  
3 rules at this time.

4           MR. DEAN: I think the application states  
5 that if it's required, it will be put on.

6           THE WITNESS: That was in relation to the  
7 skimmer pond.

8           MR. STOVALL: Ponds 1, 2 and 3, you're  
9 saying will not require netting under OCD rules?

10          THE WITNESS: That's correct.

11          HEARING EXAMINER: I've got one quick  
12 question. Steel unloading tanks, as the truck comes  
13 up, you show that that fluid is then taken off and put  
14 on the sump pond, but since that's eliminated, do they  
15 go directly into the three 500-barrel tanks?

16          THE WITNESS: The oil will go directly into  
17 the three 500-barrel tanks. The water will go  
18 directly into Pond 1. There will be no liner  
19 penetration from this point to this point. This pipe  
20 will be laid on the surface of the pond.

21          HEARING EXAMINER: You're talking about  
22 from the steel unloading tank to Pond 1, there will be  
23 no liner penetration?

24          THE WITNESS: No.

25          HEARING EXAMINER: And that, as you just

1 said, will be, what, steel pipe, piece of PVC pipe or  
2 a rubber hose?

3 THE WITNESS: More than likely, steel.

4 HEARING EXAMINER: Mr. Dean?

5 Q. (BY MR. DEAN) Since we've jumped around,  
6 before you sit down, let's use the diagram in the  
7 bottom right-hand corner of 2-B that shows the V  
8 cross-section of the bottom of the pond. First of  
9 all, will all these ponds be constructed identically?

10 A. Yes.

11 Q. As far as you know at this time?

12 A. Yes.

13 Q. If there were some changes between the  
14 market conditions between 1, 2 and 3, you would make  
15 those changes then? Take us through the construction  
16 process, using that diagram, of all the things that  
17 will be done to construct this first pond and the  
18 other ponds.

19 A. The construction process will consist of  
20 removing the sagebrush and topsoil, removing it off  
21 location, and then transporting of the dirt, soil,  
22 rocks, and compacted. The compaction will be  
23 monitored by an independent party. They will be  
24 compacted to 95 percent of proctor.

25 Q. What does that mean?

1           A.       Proctor is a term that engineers like to  
2 use where they take a specific soil type, compact it  
3 to 100 percent in the laboratory, take a density  
4 reading, and then come back into the field and measure  
5 the density of the material in situ, and we will be at  
6 95 percent of proctor.

7           Q.       How does that help in this construction  
8 process?

9           A.       That insures that the pond is compacted  
10 properly and will stay stood up.

11          Q.       Will keep its form in design? Does it have  
12 any usefulness if there's penetration from the pond  
13 through the liner system into that? Does it have any  
14 usefulness there?

15          A.       Most definitely. The subsoil will be  
16 compacted to 95 percent of proctor. The permeability  
17 of that soil and/or dirt has not been measured or  
18 quantified; however, there will be some inherent  
19 impermeability.

20          Q.       Because of its compaction?

21          A.       Correct.

22          Q.       You say an independent party will watch  
23 that. Who will that be?

24          A.       In this instance, Western Technologies.

25          Q.       The next step will be?

1           A.       The next step will be the installation of  
2 the secondary liner, which is a PVC liner.

3           Q.       It's a sheet of liner?

4           A.       Sheet of plastic. It will be multiple  
5 sheets of plastic, which will be laid in the pond and  
6 seamed to the manufacturer's specifications.

7           Q.       What is that strength?

8           A.       I don't recall. I'd have to refer to the  
9 documents.

10          Q.       Once that's in place, what's the next step?

11          A.       The next step will be the installation of  
12 the leak detection system, the 2-inch PVC, the 1-inch  
13 PVC. Subsequent to that will be the filling of the  
14 trenches with a porous medium. In some instances,  
15 it's sand and pea gravel.

16          Q.       What trenches are we talking about?

17          A.       The trenches in which the leak detection  
18 systems will lie.

19          Q.       They lie on top of the first liner?

20          A.       Yes.

21          Q.       Then what's next?

22          A.       Next will be a geotextile, which is a  
23 permeable, man-made cloth is what it really looks  
24 like, that will not compress under the weight of  
25 water. It will have a very high hydraulic

1 conductivity. If there is a leak, it will show up  
2 quickly. That will be located on the sides of the  
3 pond. The bottom of the pond is where the sand and  
4 pea gravel is located.

5 After that, we install the primary liner,  
6 which is a chlorinated polyethylene liner.

7 Q. Why is it that kind of liner?

8 A. It's resistant not only to oil and  
9 hydrocarbons of various sorts, but, as well,  
10 ultraviolet lights.

11 Q. Then what?

12 A. Then the ponds are done.

13 Q. Is there any other system put in at that  
14 time?

15 A. At that time the pond will be fitted with  
16 the plumbing for the spray system; however, the spray  
17 system will not be operational until such time as the  
18 pond is full enough to operate it.

19 Q. Tell us what plumbing will go on top of the  
20 second liner.

21 A. What we'll have, it will be the suction  
22 side for the sprayer system. It will be located in  
23 the bottom of the pond, and it will be located so that  
24 there are two different points of suction. They will  
25 suck simultaneously, but they will suck from the

1 bottom of the pond.

2 Q. Will they be able to pick up liquid from  
3 the bottom of the pond, and where will it go?

4 A. It will come through the bottom of the pond  
5 to the pump, out the discharge line, which will be a  
6 floating line, to the sprayer islands, and then  
7 sprayed into the air.

8 Q. If you would on Exhibit 2-B, tell us where  
9 the pump will be, and where the sprayer islands will  
10 be in each pond.

11 A. At this point in time, we anticipate the  
12 pump will be located on what would be near the east  
13 corner of the first pond.

14 Q. And you're using what to show that?

15 A. That's based upon the Site Topography  
16 Detail of Exhibit 2-B.

17 Q. When the water or the fluid gets to the  
18 sprayer islands, what happens to it?

19 A. It will go through a series of nozzles and  
20 be sprayed in the air, fall back to the pit to be  
21 recycled.

22 Q. They're at the middle of each pond?

23 A. Towards the middle. I believe I described  
24 it as a third of the way.

25 Q. What else will be placed on top of the



1 second liner prior to any fluids being --

2 A. There will be two aeration systems.

3 Q. Describe the first of those for us.

4 A. The first aeration system will be purchased  
5 from Aquatic Ecosystems out of Florida. It is a rock  
6 diffuser that utilizes a small rotary vein compressor  
7 blower, and it will be anchored to the second aeration  
8 system.

9 The second aeration system consists of a  
10 network of PVC pipe. Once again, there will be two  
11 sides of it. Each side will consist of a central line  
12 of 2-inch PVC and 1-inch laterals. The 1-inch  
13 laterals will be perforated with 1/32-inch holes every  
14 20 foot on center, and the aeration system laterals  
15 will be located 40 feet equidistant between them.

16 Q. Will the two halves of the system be placed  
17 in the halves of the pond?

18 A. Roughly.

19 Q. Do you know how much in terms of feet, how  
20 many feet of PVC pipe in each pond, approximately?

21 A. I can sit and figure it out, but it will be  
22 close to -- I'm taking a quick guess at roughly 1400  
23 foot of pipe.

24 Q. The first of these aeration systems with  
25 the three rock diffusers, what's the purpose of having

1 that system?

2 A. The purpose is to keep the pond aerobic.  
3 It will roll the pond. It's on the bottom of the  
4 pond. The air in both instances in both systems is  
5 compressed, and as it comes out of the diffusers or  
6 PVC pipe, it is a small size. As it comes up through  
7 the water, the hydrostatic pressure is lesser;  
8 therefore, the air expands, creating a meniscus as it  
9 reaches the surface. In essence, it forms a  
10 convection type of current which will continually roll  
11 the pond.

12 Q. By roll the pond, what do you mean?

13 A. I mean bringing the bottom to the top.

14 Q. What do you mean by aerobic?

15 A. Aerobic, by definition, oxygen is present.

16 Q. What would an aerobic state of the pond be?

17 A. A residual oxygen supply in the pond.

18 Q. Are the two aeration systems dependent on  
19 each other or are they separate?

20 A. They are separate.

21 Q. Do they operate independently?

22 A. They operate independently.

23 Q. The purpose of the second system, what does  
24 it do different than the first aeration system?

25 A. The second system has the ability to

1 transport not only gaseous mediums. It also has the  
2 ability to transport liquid mediums.

3 Q. What purpose would it serve in operation of  
4 a pond like this?

5 A. If need be, chemicals could be injected  
6 into the bottom of the pond and circulated throughout  
7 the pond.

8 Q. Using 2-B, the topographic section, would  
9 you show us where those chemicals will be loaded into  
10 that system? How will they be loaded into that  
11 system?

12 A. They will be loaded into the system at the  
13 source of the second aeration system, which would be  
14 located, once again, close to the northeast corner of  
15 Pond 1.

16 MR. DEAN: If you don't have any more  
17 questions about that, I'll let him sit down.

18 MR. STOVALL: Keeping with our tradition  
19 now of answering the pieces as we get through it, and  
20 possibly I missed this, but what is the need to keep  
21 the pond aerobic?

22 THE WITNESS: The need to keep the pond  
23 aerobic would be to eliminate the potential for an  
24 anaerobic bacteria.

25 MR. STOVALL: What does an anaerobic

1 bacteria do? You're talking to a lawyer.

2 THE WITNESS: An anaerobic bacteria is a  
3 bacteria that cannot live in the presence of oxygen.  
4 It feeds upon sulfides. As it processes the sulfides,  
5 it gives off a byproduct known as H<sub>2</sub>S.

6 MR. STOVALL: That I know. So by keeping  
7 it aerobic, you avoid the creation of H<sub>2</sub>S?

8 THE WITNESS: It forms an environment in  
9 which the anaerobic bacteria cannot live.

10 MR. STOVALL: If the anaerobic bacteria  
11 can't live, then you can't have H<sub>2</sub>S; is that correct?

12 THE WITNESS: That's correct.

13 MR. STOVALL: That's it.

14 Q. (BY MR. DEAN) If you you want to sit down  
15 for a minute. Does the leak detection system you've  
16 described, using Exhibit 2-B, meet the specifications  
17 of the OCD guidelines?

18 A. It was based upon the specifications of the  
19 OCD guidelines.

20 Q. Are there guidelines that cover the  
21 aeration systems that you've described?

22 A. No.

23 Q. Have you used these aeration systems in  
24 another pond?

25 A. Yes, I have.

1 Q. What pond is that?

2 A. A pond operated by Southwest Water  
3 Disposal.

4 Q. Have they been successful in that?

5 A. To this point, very much so.

6 Q. You've also described as part of those  
7 aeration systems perhaps another sprayer system that  
8 would be added later. Could you elaborate on that for  
9 us?

10 A. Yes. The sprayer system that we anticipate  
11 at this time will be a centrifugal pump. I talked  
12 about the suction side being on the bottom of the pond  
13 and the sprayers being floating islands out in the  
14 middle of the pond.

15 In addition, we believe we will have PVC  
16 pipe around the exterior of the pond as backups. Due  
17 to fluctuations in wind velocity, as well as  
18 direction, this will enable us to keep the spray in  
19 the pond.

20 Q. Those sprayers are separate from the three  
21 islands that you've described out in the middle?

22 A. Yes.

23 Q. Will those two sprayer systems operate  
24 independently of each other?

25 A. Actually, they will be two legs of the same

1 system.

2 Q. Will they operate independently? The ones  
3 around side of the pond and the ones in the middle?

4 A. They will operate independently by virtue  
5 of the manifold system.

6 Q. What's the advantage of having the sprayers  
7 in the middle of the pond?

8 A. The basic advantage is that the spray is  
9 evaporated in almost all instances prior to reaching  
10 the edge of the pond.

11 Q. So as opposed to the ones along the edge,  
12 if the wind is blowing, there wouldn't be any drift  
13 outside the pond confines, the dimensions of the pond?

14 A. Correct.

15 Q. What would govern the operation of the  
16 outside sprayer system around the outside dimensions  
17 of the pond?

18 A. To increase evaporation by additional  
19 surface area.

20 Q. If the wind is blowing, would you use  
21 those?

22 A. We would use the side that was on the  
23 windward side of the pond.

24 Q. What is the purpose of these ponds now that  
25 we've gone through the construction? What are they

1 used for?

2 A. The purpose of this facility is for  
3 disposal by evaporation of produced water from the San  
4 Juan Basin.

5 Q. This is produced water from oil and gas  
6 wells?

7 A. Yes.

8 Q. These tanks that you've described for the  
9 storage of oil, how does that fit into this purpose?

10 A. Conventional oil and gas wells in the  
11 Farmington area, the production -- the local on-site  
12 production facilities sometimes have oil carryover,  
13 and it's incident to the production. It's waste oil,  
14 and it's just a recovery in which we will separate it  
15 from the produced water and market it thereafter.

16 Q. It's disposed of separately?

17 A. Yes.

18 Q. And this oil is not stored inside these  
19 larger ponds?

20 A. No. It is stored in the tanks.

21 Q. It's separated before it's put in there?

22 HEARING EXAMINER: I'm sorry. I didn't  
23 hear the answer.

24 THE WITNESS: It's stored in the tanks.

25 Q. (BY MR. DEAN) Calling your attention back

1 to Applicant's Exhibit 1, did you undertake a search  
2 or cause a search to be made for all landowners within  
3 one-half mile of the proposed facility?

4 A. Actually, that was conducted by Sunco  
5 proper through an abstract company in Farmington.

6 Q. Did you cause to be placed in the United  
7 States Postal Service notice of this hearing to those  
8 people within one-half mile?

9 A. Yes, I did cause that to take place.

10 Q. As part of the application process, did you  
11 undertake a study of the geologic and hydrologic  
12 information as it affects the pond?

13 A. Yes, I did.

14 Q. Would you tell us the results of that  
15 study?

16 A. I conducted it simultaneously with Western  
17 Technologies' investigation as to the soil mechanics.  
18 Western Technologies drilled a total of nine wells to  
19 various depths around the perimeter of each of the  
20 three ponds.

21 Q. Is that information contained on page 8 and  
22 9 of Applicant's Exhibit 1?

23 A. I believe it would be maybe 7, 8 and 9.

24 Q. What did those results tell you?

25 A. It gave me a background as to the geology



1 underneath the ponds.

2 Q. What is the geology underneath the ponds?

3 A. It's variable. It's paleoerosional surface  
4 as evidenced by the various types of dirt and rocks  
5 and boulders encountered during the drilling.

6 Q. Does that cause any particular problems or  
7 concerns for the construction of this pond?

8 A. Not to my knowledge.

9 Q. Is it favorable to the construction of the  
10 pond?

11 A. It's not disfavorable.

12 Q. What about the hydrologic features of the  
13 site location?

14 A. To the best of my knowledge, I researched  
15 the records of the State Engineer's Office, and I  
16 found a well recorded; however, subsequent field  
17 inspections, I was unable to find the well as recorded  
18 at this specific site.

19 The well that was recorded indicated that  
20 water was at, I believe, 25 feet, and it was in a dark  
21 blue water sand, but my investigation did not  
22 encounter this well; so I can't tell you exactly where  
23 water depth would be. My assumption would be that it  
24 would be close to the same level as the high water  
25 level of the Animas River.

1 Q. So were you able to take any water samples  
2 or anything in the area within a mile?

3 A. No.

4 Q. What would be the flow direction of  
5 groundwater to be affected by a leak in the pond?

6 A. Northwesterly.

7 Q. As a part of the application, have you  
8 prepared a letter dated August 18, 1989, to the OCD  
9 regarding this application?

10 A. Yes, I did.

11 MR. DEAN: I'd like to mark it as  
12 Applicant's Exhibit 3.

13 Q. How many pages is that document?

14 A. Six.

15 MR. STOVALL: Mr. Horner, are you familiar  
16 with it? Do you have a copy of this letter?

17 MR. HORNER: I do have a copy of it.

18 Q. (BY MR. DEAN) Are the contents of that  
19 letter intended to supplement your application that's  
20 represented by Exhibit No. 1 of the applicant?

21 A. Yes.

22 Q. That Exhibit No. 3 goes into more detail  
23 about the liner. Could you tell us the process you  
24 went through to determine what type of liner would be  
25 sufficient for this project?

1           A.       I knew what type of liner we needed in the  
2 generic sense. I submitted bids to several liner  
3 companies.

4           Q.       What did you use as guidelines for those  
5 bids?

6           A.       Actually, the bids were details of the  
7 liner and projected costs of the liner. I just used  
8 the diagrams.

9           Q.       Are there OCD guidelines with regard to the  
10 liner?

11          A.       No, not specifically guidelines as to what  
12 type of liner, just that they be resistant to various  
13 different constituents.

14          Q.       Did you submit that in determining which  
15 liner to use?

16          A.       Yes, I did.

17          Q.       You were able to come up with a liner as  
18 described in that letter that would meet those  
19 guidelines?

20          A.       Yes, I did.

21          Q.       Is that the liner you propose to use in the  
22 construction of these ponds?

23          A.       Yes, it is.

24          Q.       Will there be any waste solids or liquids  
25 that need to be disposed from the site other than

1 naturally through the pond through evaporation, solid  
2 waste or anything?

3 A. No. Everything will be incident to the  
4 facility and its operations.

5 Q. At this time there's not a proposal to take  
6 any other substances other than those that are put in  
7 the disposal pond?

8 A. That's right.

9 Q. What is the closure plan for this pond?

10 A. At the time of abandonment, it is our  
11 procedure to leave the salts that have precipitated  
12 and/or sludges in the pond, cover them with plastic  
13 and/or an impermeable clay-packed liner to prevent  
14 leaching upwards of any salts or precipitants.  
15 Everything will be buried in situ.

16 If for some reason at that time the rules  
17 and regulations have changed as to where various  
18 concentrations of metals, heavy metals or certain  
19 constituents are not able to be disposed of in that  
20 pond buried on site, they will be subsequently removed  
21 from the pond with a procedure to be determined at  
22 that time and hauled away to a proper disposal  
23 facility.

24 Q. Will those substances be tested at the time  
25 of closure?

1           A.       Yes, they will.

2           Q.       What will happen to the pond site at that  
3 time?

4           A.       The pond will be, as I stated earlier,  
5 either covered with plastic folded back on itself,  
6 and/or covered with clay and compacted and returned to  
7 its natural contours as close as practical.

8           Q.       Have you described that process in the  
9 application, in Applicant's Exhibit No. 1?

10          A.       Not in that detail, but it was in  
11 subsequent letters.

12          Q.       On April the 17th, 1990, did you submit  
13 another letter to the OCD with regard to supplementing  
14 this application?

15          A.       Yes, I did.

16          Q.       How many pages is that document?

17               HEARING EXAMINER: The letter which you're  
18 referring to dated April 17, is it to Mr. Anderson,  
19 and it starts: "Pursuant to your letter of July 20"?

20               MR. DEAN: Yes.

21               HEARING EXAMINER: I have a copy of that,  
22 and I'll mark it Exhibit 4; is that correct?

23               MR. DEAN: That's right.

24               MR. STOVALL: How many pages is it again,  
25 Mr. Frank, to make sure we've got it?

1 THE WITNESS: I'll have to start again.

2 HEARING EXAMINER: I'm sorry.

3 THE WITNESS: Eighteen.

4 Q. (BY MR. DEAN) What is the last page?

5 A. The last page is the last page of a  
6 certification by Richard Cheney of the aeration  
7 system.

8 Q. It contains his stamp here on the bottom  
9 right-hand corner?

10 A. Yes, it does.

11 Q. What was the purpose of that letter?

12 MR. STOVALL: Excuse me, Mr. Dean. Mr.  
13 Horner, do you have this one?

14 MR. HORNER: Yes, I do.

15 Q. (BY MR. DEAN) What was the thrust of that  
16 letter?

17 A. The purpose of the letter was to answer Mr.  
18 Anderson's questions. Actually, I referenced July 20,  
19 but it was Mr. Anderson's letter of November 3rd.  
20 That's a typo on my behalf.

21 Q. Are you referring to the first sentence of  
22 your letter of April the 17th?

23 A. Correct. And it is a step-by-step answer  
24 to Mr. Anderson's questions.

25 Q. The information attached to your response,

1 particularly the treatment plan, could you briefly go  
2 through what you propose as a treatment plan?

3       A.       If, for some reason, we have levels of H<sub>2</sub>S  
4 which would not be permitted, our treatment plan would  
5 include, number one, to determine the chlorine demand  
6 for the sulfides, H<sub>2</sub>S, and organics. Number two would  
7 be to initiate treatment with 12 to 16 percent active  
8 bleach that would be on hand and at the CDI yard. CDI  
9 stands for Chemical Distributors, Inc.

10               Number three, deliver and treat (ponds)  
11 with sufficient bleach to reduce dissolved sulfides  
12 and to prohibit the emission of H<sub>2</sub>S. The rate of  
13 treatment will be a maximum of 5,000 gallons of 12 to  
14 16 percent active bleach daily.

15               And then in following with Mr. Anderson's  
16 letter, subtitle b, "If area concentrations of H<sub>2</sub>S  
17 reach 10 ppm at the fence line as TWD, Sunco Trucking  
18 Water Disposal will notify the county fire marshall  
19 county sheriff's department, New Mexico State Police,  
20 and the OCD."

21               And then we have a specific plan that is  
22 once again labeled, pursuant to Mr. Anderson's letter,  
23 Treatment Plan. Number one would be notify parties as  
24 shown above.

25               Number two, evacuate those persons residing

1 within one-quarter mile of the fence line. Provide  
2 temporary housing at the Motel 6, Farmington, New  
3 Mexico, or at another motel as approved by STWD. Each  
4 person requiring temporary housing will be provided a  
5 per diem for meals not to exceed \$20. Temporary  
6 housing and the meal per diem to be provided as long  
7 as the H2S levels remain above 10 ppm at the fence  
8 line.

9           Number three, implement treatment plan as  
10 outlined in (a) above. Any other actions or  
11 requirements imposed by the OCD after review of H2S  
12 emissions will be implemented after review of all  
13 alternatives and acceptance by STWD. STWD believes  
14 that protection of the general public is paramount and  
15 will take prudent action to ensure the safety of the  
16 general public.

17           Q.     What effect does chlorine have if there is  
18 an H2S problem in the pond?

19           A.     The active chlorine would combine with the  
20 H2S that would be present in the pond, as well as the  
21 water that is present in the pond. The end result of  
22 that chemical reaction would be the formation of H2SO4  
23 which is sulfuric acid and hydrochloric acid, HCl.

24           Q.     How would that chlorine be put into the  
25 pond?



1           A.       The chlorine would be injected through the  
2 second aeration system.

3           Q.       That you described on 2-B?

4           A.       On Exhibit 2-B, correct.

5           Q.       Have you had occasion to treat the pond  
6 that you operate in this manner?

7           A.       Yes, I have.

8           Q.       It has the same system as the pond proposed  
9 here?

10          A.       Yes, it is the same system.

11          Q.       Was the treatment plan successful?

12          A.       The treatment of that pond was just a  
13 matter of prudence, and, yes, it was.

14          Q.       You were able to get the chlorine into the  
15 pond?

16          A.       Yes.

17          Q.       You talked about the plan for H<sub>2</sub>S. What  
18 about just a spill or release of fluid from the pond  
19 if it happened to leak?

20          A.       The only -- this would be what is known as  
21 our contingency plan. I'll read it as --

22          Q.       Why don't you just tell us briefly what it  
23 is?

24          A.       We would immediately cease receiving fluids  
25 for disposal in the affected pond. We would drain the

1 affected pond into the unaffected pond, if it's  
2 available. If none of the ponds are available, we  
3 would go ahead and commence with evaporation of the  
4 pond and transportation of fluids to other commercial  
5 facilities within the general vicinity in the San Juan  
6 Basin.

7 Q. Did you cause to be delivered to the OCD a  
8 letter dated May 18, 1990, that pertains to a leak in  
9 the system?

10 A. Yes, I did.

11 Q. Was that intended to be a supplement to  
12 your application?

13 A. Yes, it is.

14 MR. DEAN: It's a one-page letter.

15 MR. STOVALL: Once again, Mr. Horner, you  
16 have a copy, I assume?

17 MR. HORNER: What are we talking about  
18 now?

19 MR. DEAN: A letter dated May 18, 1990,  
20 from Sunco to Roger Anderson.

21 MR. HORNER: I believe I have it. Go ahead  
22 and describe it.

23 Q. (BY MR. DEAN) How does that change your  
24 treatment plan in case there's a leak?

25 A. In essence, it amended our application or

1 the subsequent letter to our application to where we  
2 would commence to haul immediately upon discovering of  
3 a leak.

4 Q. What routine inspection and maintenance is  
5 necessary for doing the operation of a pond such as  
6 these?

7 A. Dissolved sulfides in the ponds will be  
8 analyzed monthly, and the results will be kept at the  
9 office.

10 Q. What's the purpose of doing that?

11 A. It was a requirement of the OCD. I would  
12 assume it to be availability of food source possibly  
13 for the anaerobic bacteria, of which we shouldn't have  
14 any.

15 Q. Does that play into the formation of H<sub>2</sub>S  
16 that you've described?

17 A. Yes.

18 Q. What else?

19 A. Air concentrations of H<sub>2</sub>S will be measured  
20 in tenths of a part per million and the pH of the pond  
21 will be measured twice daily around the perimeter of  
22 the ponds.

23 Q. How does measuring the pH help in the  
24 operation of the ponds?

25 A. The pH will give you an indication as to

1 chemical imbalances in the pond.

2 Q. Does that play into a potential H2S problem  
3 again?

4 A. Yes. The bacteria -- I don't recall  
5 exactly which pH, but it is more prone to grow,  
6 proliferate in certain pH pond, and I can't recall  
7 what that is.

8 Q. How often will the leak detection sump be  
9 checked?

10 A. The leak detection sump will be checked  
11 weekly.

12 Q. And on location, what will be kept to treat  
13 the loads as they come in?

14 A. As I recall, we will have 1,000 gallons of  
15 liquid bleach on hand to enter into the unloading tank  
16 as water is brought to us that may contain H2S.

17 Q. Let's go back to the groundwater and clear  
18 up what you think the effect of any leak would be on  
19 the groundwater, what you've analyzed in proposing  
20 this application?

21 A. I don't believe there will be any effect on  
22 groundwater as we have a double-lined pond, and the  
23 leak detection system will pick it up almost  
24 instantaneously. And if there were multiple breaches  
25 of each liner, once the pond is lowered below that

1 level of the leak, the capillary action inherent to  
2 the compacted subgrade will keep that water bounded by  
3 capillary action in situ; so I don't believe there is  
4 any problem with contamination of groundwater from  
5 this facility.

6 Q. Is the pond that you operate now lined in  
7 this fashion?

8 A. No.

9 Q. How is it lined?

10 A. The pond that Southwest Water Disposal  
11 operates is a clay-lined pond, compacted natural clay.

12 Q. Has it filled up?

13 A. Yes, it is.

14 Q. Have you had any problems with leaks in it?

15 A. No.

16 MR. DEAN: I'd like to put in the three  
17 letters that these are in response to. The first one  
18 is dated July 20, 1989. I'd like to mark it as 6.

19 MR. STOVALL: These are letters from Mr.  
20 Anderson to Sunco Trucking Water Disposal?

21 MR. DEAN: Yes, that the other letters are  
22 in response to.

23 The second one I'll mark No. 7 is dated  
24 11-3 of 89, and the third one 5-2 of 90. I'd like to  
25 mark it as No. 8.

1           Q.       I hand you what's marked as Applicant's  
2 Exhibits 6, 7 and 8 and ask you if you can identify  
3 those?

4           A.       Exhibit No. 6 is a letter from the OCD to  
5 Mr. George Coleman, Sunco.

6           Q.       Who is George Coleman?

7           A.       George Coleman is, to the best of my  
8 knowledge, the owner of Sunco Trucking. The subject  
9 matter is Commercial Disposal Facility, Northwest  
10 Quarter, Section 29 North.

11          Q.       Is that the letter you wrote a letter in  
12 response to, what's previously been marked in this  
13 case as Exhibit 3?

14          A.       Yes, if you say so.

15          Q.       Okay. What's No. 7?

16          A.       No. 7 is a letter from the OCD, once again  
17 to Mr. Coleman. It's dated November 3, 1989, once  
18 again in regards to the commercial disposal facility.

19          Q.       Is that the letter that you wrote  
20 Applicant's Exhibit No. 4 in response to?

21          A.       I believe so.

22          Q.       And No. 8?

23                 MR. STOVALL: Mr. Dean, could you slow  
24 down? We're digging through the file finding these  
25 things.

1 MR. DEAN: You can have these.

2 MR. STOVALL: Once again, Mr. Horner, do  
3 you have copies?

4 MR. HORNER: I have copies.

5 Q. (BY MR. DEAN) No. 8 is?

6 A. Once again, a letter from Mr. Anderson to I  
7 believe it was Mr. Coleman. It might have been  
8 myself.

9 Q. Did you write Applicant's letter No. 5  
10 dated 5-18 of 90 in response thereto?

11 A. Yes, I did.

12 Q. Is it your representation today that these  
13 letters all supplement your original application to  
14 the OCD for this commercial wastewater disposal site?

15 A. They do.

16 Q. They have become an integral part of those  
17 to be followed by the applicant, if granted?

18 A. That's correct.

19 Q. Is the information contained in those true  
20 and correct to the best of your knowledge?

21 A. It is.

22 MR. DEAN: I don't have any other  
23 questions.

24 MR. STOVALL: Mr. Horner, do you have some  
25 questions, if the examioner is ready for--

1 HEARING EXAMINER: No, that's the reason I  
2 didn't pass the witness just yet.

3 MR. DEAN: I'm sorry. I would like to move  
4 for the admission of my Exhibits 1, 2-A, 2-B, 3, 4, 5,  
5 6, 7 and 8.

6 HEARING EXAMINER: Are there any  
7 objections?

8 MR. HORNER: No objections.

9 HEARING EXAMINER: Exhibits 1 through 8  
10 will be admitted into evidence.

11 MR. DEAN: Pass the witness.

12 CROSS-EXAMINATION

13 BY MR. HORNER:

14 Q. Mr. Frank, I believe you testified that you  
15 have designed other disposal pits here previously, one  
16 of which is the Southwest Disposal Pit that you own.  
17 Did you also design one known as or owned by Basin  
18 Disposal?

19 A. No.

20 Q. You did not design that? Are you familiar  
21 with that project?

22 A. Vaguely, from newspaper clippings,  
23 articles.

24 Q. Do you know where the San Juan River lies  
25 with respect to this project?



1           A.     It would be to the south.

2           Q.     Do you know how far south?

3           A.     No.

4           Q.     Is a mile-and-a-half reasonable?

5           A.     It's reasonable.

6           Q.     So, in fact, this disposal pit actually  
7 lies between the Animas and San Juan Rivers; is that  
8 correct?

9           A.     Yes, it does.

10          Q.     And the Animas and San Juan Rivers come  
11 together just a few miles down river; is that correct?

12          A.     Down river, yes. I don't know how far.

13          Q.     Do you know how far this project is from  
14 the City of Farmington?

15          A.     Approximately four miles, I believe.

16          Q.     And how about from the City of Aztec?

17          A.     Approximately four, likewise.

18          Q.     How about from the City of Bloomfield?

19          A.     Six, possibly.

20          Q.     How about from Flora Vista?

21          A.     South of Flora Vista by approximately  
22 two-and-a-half miles.

23          Q.     Are there any roads located near this  
24 facility?

25          A.     Yes.

1 Q. What road would that be?

2 A. It's County Road 3500.

3 Q. Where does this road go?

4 A. It runs for the most part north-south  
5 through or adjacent to this proposed facility.

6 Q. How close does it come to this facility?

7 A. Three hundred, 400 yards.

8 Q. What is the condition of this road?

9 A. Recently paved.

10 Q. Is it paved as continuous lane?

11 A. I haven't traveled it as continuous lane;  
12 so I don't know, but I would assume it's continuous  
13 lane.

14 Q. You've indicated that on your drawings here  
15 there's three evaporation ponds; is that correct?

16 A. Yes.

17 Q. Could you explain when Evaporation Pond  
18 Nos. 2 and No. 3 are going to be installed?

19 A. Pond No. 1 and No. 2, the earthen  
20 structures will be built pending application  
21 approval. Pond No. 1 will be lined immediately after  
22 completion of the dirt work of Pond 1. Pond No. 2  
23 will be lined as market conditions indicate. Pond No.  
24 3 will be built subsequent to No. 2 and once again as  
25 market conditions indicate.

1           Q.       What is purpose of building Pond No. 2  
2 without a liner?

3           A.       Capital costs up front.

4           Q.       Why build it at all?

5           A.       The pond would be built because the  
6 majority of the work to build one of these ponds is  
7 the construction of the subgrade.

8           Q.       I still don't understand why you wouldn't  
9 put that cost off until you actually intend to use  
10 that pond and put in liners?

11          A.       It was a decision of Mr. Coleman's. I  
12 can't answer you as to why he decided not to put the  
13 liner in, but it's as market conditions would  
14 indicate.

15          Q.       Is it being constructed so it can be used  
16 even though it has no liner?

17          A.       No.

18          Q.       Can you guarantee the OCD and the public  
19 that it will not be used until it has the liner?

20          A.       I can't personally, but due to the  
21 operations of the pond, it will be manned during all  
22 open hours, and therefore with a degree of certainty,  
23 yes, I believe we can guarantee that the pond will not  
24 be used.

25          Q.       Well, it appears to be a relatively easy

1 matter to either guarantee that it will or will not be  
2 used until it has a liner.

3 MR. DEAN: He's arguing with the witness.  
4 I object. He's answered the question. I don't know  
5 what a guaranty is under this situation. He says  
6 they're not going to use it.

7 MR. STOVALL: Mr. Horner, would you explain  
8 where you're going? Maybe you want to rephrase that  
9 question.

10 MR. HORNER: Let me go on a little bit, and  
11 talk about this.

12 MR. STOVALL: You're withdrawing that  
13 question?

14 MR. HORNER: I'll withdraw that question  
15 for the minute.

16 Q. If a leak is detected in your first pond  
17 that you have constructed with a liner, what do you  
18 intend to do?

19 A. Subject to our letters, we will cease  
20 accepting fluids, commence evaporation, commence  
21 hauling, lower the pond to the level at which the leak  
22 is, repair the liner, put the pond back into  
23 operation.

24 Q. In fact, in one of your letters did you not  
25 state if a leak was detected, you would wait about 100

1 days, trying to let the pond evaporate itself down  
2 below the leak?

3 A. I believe we clarified this in my previous  
4 testimony in a letter dated May 18, that we amended  
5 that particular concern of yours to where it fluids  
6 are found in the leak detection sump, artificial  
7 evaporation and the transportation of fluids to other  
8 facilities will begin immediately. So there is no  
9 100-day delay.

10 Q. Right, and did the OCD not write you back  
11 and said that you had to drop the water level in that  
12 pond below the leak within seven days?

13 A. That's not the way I interpreted it, and  
14 that is not our response either.

15 MR. HORNER: I would refer the Examiner to  
16 -- I don't have the exhibit number, but it's the  
17 November 3rd letter, OCD to Mr. George Coleman. That  
18 would be --

19 HEARING EXAMINER: I believe that's Exhibit  
20 No. 7; is that correct, Mr. Dean?

21 MR. DEAN: Yes, it is, the second OCD  
22 letter is seven.

23 Q. (BY MR. HORNER) That would be item No. 4B  
24 talking -- Item 4 starts out talking about, "If there  
25 is only one pond at the time the leak is detected." B

1 talks about, "Immediately begin removing fluids from  
2 the affected pond to an approved location. The  
3 removal of the fluids will continue uninterrupted  
4 until the pond is empty or until the fluid level is  
5 below the leak. A period not to exceed seven days  
6 will be allowed to accomplish the removal of the  
7 fluids."

8 A. You read from Mr. Anderson's letter.  
9 However, our response did not indicate we would comply  
10 with this. Our response is as we indicate here.

11 Q. And that is that you will begin immediately  
12 to remove fluids?

13 A. Correct.

14 Q. It does not say you will remove fluids  
15 below the leak within seven days?

16 A. That is correct.

17 Q. Now then, is it possible that you  
18 anticipate removing fluids from Pond 1 by pumping them  
19 into an unlined Pond 2?

20 A. No, that is not our intention.

21 Q. What do you intend to do with fluids from  
22 Pond 1 if a leak is detected?

23 A. As indicated in our letters, we will  
24 commence evaporation and commence hauling to one of  
25 the three other commercial disposal facilities in the

1 San Juan Basin.

2 Q. How long do you anticipate will be the  
3 maximum length of time before that pond level drops  
4 below the leak?

5 A. I would have to know where the leak is.  
6 Does that answer your question?

7 Q. Does that mean you intend to make no  
8 efforts whatsoever to comply with the seven-day  
9 requirement they were talking about?

10 A. There are some physical constraints as to  
11 the actual lowering of the pond in that period. So we  
12 intend to comply with it as best we can with the  
13 available manpower and available facilities.

14 Q. So you may run the system with a leak in  
15 your primary liner indefinitely?

16 A. That is not correct.

17 Q. How do you anticipate testing for leaks in  
18 your primary liner?

19 A. As I explained in testimony previous, the  
20 leak would hit either the geotextile or the permeable  
21 median, which would be the sand and pea gravel. At  
22 that time it would drain by gravity to the leak  
23 detection sump.

24 Q. How do you intend to check for leaks in the  
25 secondary liner?

1           A.       We don't. We can't.

2           Q.       So you may be running indefinitely with a  
3 leak in your primary liner and possibly a leak in your  
4 secondary liner, and you wouldn't even know it?

5           MR. DEAN: I'm going to object. It's  
6 mischaracterizing the evidence. Nobody said they were  
7 going to run indefinitely, and it's not the  
8 testimony. I object to the question as not the  
9 evidence.

10          MR. HORNER: We have a direct question, and  
11 we have no testimony regarding how long it would take  
12 to drop the level below the leak.

13          MR. DEAN: If you want me to respond -- I  
14 don't know if you want me to.

15          MR. STOVALL: Mr. Examiner, I will simply  
16 advise the Examiner, and for the record, gentlemen,  
17 just so you are aware the nature of this process, the  
18 Examiner is an engineer and qualified technically, and  
19 my role is to advise him as to the legal procedural/  
20 evidentiary matters. I believe that the question  
21 asked previously with regard to the time to remove,  
22 the response to that question was it depends on the  
23 location of the leak. So I think it was responded to,  
24 and, quite frankly, I've now confused myself and  
25 forgotten Mr. Horner's last question. Would you like



1 to repeat it, or we can have it read from the record?

2 MR. HORNER: If you're confused to that  
3 extent, let me go back.

4 Q. If the leak is on the bottom of the pond,  
5 how long will it take to remove the fluids?

6 A. Once again, dependent upon available  
7 manpower and the time of year in which it happens.  
8 It's a --

9 Q. Six months?

10 A. No, it shouldn't take that long.

11 Q. It shouldn't take that long, but could it  
12 take that long?

13 A. It could.

14 Q. A year?

15 A. No.

16 Q. Why do you say no?

17 A. Because the pond can be evaporated in less  
18 than nine months and/or trucked.

19 Q. For the six to nine months or to the year,  
20 whatever it's going to take to drop the fluid level of  
21 this first pond when you've got a leak in your primary  
22 liner, how do you know that there is no leak in the  
23 secondary liner?

24 A. We do not.

25 Q. And so if in fact there is a leak in the

1 secondary liner, you could be leaking to the  
2 surrounding ground for six to nine months to a year?

3 A. That's incorrect because Mr. Coleman, in  
4 conveying to me, and that is the purpose for building  
5 the second pond, the shell whereby we shouldn't have a  
6 six to nine months' delay. Where we would have the  
7 delay would be a maximum of three to four months,  
8 depending on weather conditions to a point in time in  
9 which we can install new liners in the second pond,  
10 those months being the winter months in which the  
11 liners can't be installed due to the inflexibility due  
12 to cold.

13 Your question to me, really, the pond would  
14 be emptied just by evaporation or trucking in no more  
15 than four months.

16 Q. So it could be -- the surrounding ground  
17 could be exposed to the water in the pond for a period  
18 of four months while you wait to line the second pond?

19 A. Correct.

20 Q. Although the OCD has asked that it be  
21 dropped below the leak level within seven days?

22 MR. DEAN: I'm going to object to that  
23 because it's clearly not the case. It's a  
24 misrepresentation. The letter of May the 2nd, No. 7,  
25 clearly states what their response was to our letter

1 before that, and we adopted what they said. There's  
2 nothing about seven days in there.

3 MR. STOVALL: Come back with us, Mr. Dean.

4 MR. DEAN: If you read Exhibit 7, 4B, in  
5 the middle of that letter, it says --

6 MR. HORNER: It might be a little easier if  
7 he does this on some sort of Redirect.

8 MR. STOVALL: We're reading from an item  
9 that's an exhibit procedure. We don't adhere.

10 MR. DEAN: Number seven, "And in the  
11 transportation of fluids to other facilities will  
12 begin immediately waiting 100 days before commencing  
13 hauling is not acceptable." What he did in Exhibit A  
14 is adopt that completely, and I take that as an  
15 amendment to what Mr. Anderson had said before before  
16 we adopted it if.

17 HEARING EXAMINER: You're reading from  
18 Exhibit No. 8; is that correct, and not Exhibit No. 7?

19 MR. DEAN: I'm sorry. You're right. It's  
20 our 5 and 8 that are related our 5. His 8 comes first  
21 and own our 5.

22 MR. STOVALL: Let me go back and ask Mr.  
23 Frank some questions with respect to this exhibit to  
24 make sure we have this correctly.

25 You received the November 3 letter, Exhibit

1 No. 7, from Mr. Anderson in response to your initial  
2 application, if you will, be that one or two parts, in  
3 which your initial application proposed you begin  
4 evaporation and transportation and wait 100 days  
5 before starting transportation; is that correct? Your  
6 initial proposal was to begin evaporation, and if it  
7 wasn't done within 100 days, begin transportation from  
8 that time forward?

9 THE WITNESS: Correct.

10 MR. STOVALL: In response to that, Mr.  
11 Anderson sent you the letter of November 3, Exhibit  
12 No. 7, paragraph 4B of which says, in effect, We don't  
13 accept that. What you will do is begin removal --  
14 evaporation and removal immediately and empty the pond  
15 within seven days or get below the leak within seven  
16 days?

17 THE WITNESS: That's what Mr. Anderson's  
18 letter indicates.

19 MR. STOVALL: That's the next step. The  
20 next piece of correspondence then was -- that I have  
21 in this sequence of the three pieces of paper I'm  
22 looking at is a May 2 letter, Exhibit No. 8, in which  
23 Mr. Anderson provides that if fluids are found in the  
24 leak detection sump, evaporation will begin and  
25 transportation will begin immediately. The waiting

1 100 days is not acceptable?

2 THE WITNESS: There's an intermediate  
3 step. Our letter --

4 MR. STOVALL: That's what I thought. Your  
5 letter, which exhibit or which date?

6 THE WITNESS: It's dated April 17, 1990. I  
7 don't remember which exhibit number it would be right  
8 now.

9 MR. STOVALL: Probably No. 3, I believe; is  
10 that correct? No. 4. What specific part of that  
11 letter are you referring to?

12 THE WITNESS: No. 4, consisting of the last  
13 paragraph of the first page, all of page 2, and the  
14 top portion of page 3.

15 MR. STOVALL: This is where the 100 days  
16 came in; is that correct? In my sequence of events,  
17 this is where we came up with 100-day hauling  
18 proposal?

19 THE WITNESS: The 100-day hauling proposal  
20 was prior to this. Mr. Anderson didn't like the 100  
21 day proposal. Told us to do it in seven days. This  
22 is my response to the seven-day proposal. And then  
23 comes the other letters from Mr. Anderson saying we  
24 will start hauling immediately.

25 MR. STOVALL: To which you responded yes,

1 we agree to start hauling immediately?

2 MR. DEAN: Yes.

3 MR. STOVALL: Let me again make this clear  
4 because you're new, and to a large extent, we're new  
5 at this process. What you have going on here is a  
6 process of correspondence and interplay between the  
7 OCD technical staff, the environmental bureau, and the  
8 applicant regarding the requirements for approval.  
9 Now, there is within the rules, and as you started  
10 out, an administrative approval process by which such  
11 a facility could be approved without necessity for a  
12 hearing such as this. As a result of the Horner  
13 protest, this matter has now moved to a hearing  
14 phase. What the OCD has specified as requirements are  
15 not necessarily what will come out in the order, nor  
16 with what Sunco has stated will come out in the  
17 order.

18 The order will be based upon the evidence  
19 taken at this hearing today and will put in some  
20 specific requirements. It will tell you, "You will do  
21 these things, and you will have this fluid removed  
22 within a period of time," or "You will commence fluid  
23 removal within a period of time."

24 I don't think it's necessary to engage in  
25 further debate as to philosophically what's

1 necessary. There's some evidence to show what time  
2 period is appropriate.

3 Mr. Horner, particularly, it appears that  
4 you're questioning the time, and I understand that. I  
5 think it may be that as your turn approaches, if you  
6 will, you need to demonstrate a time, help us focus in  
7 so we can set that requirement. It's not cast in  
8 stone yet. We are taking evidence on that issue.

9 MR. HORNER: May I ask a question?

10 MR. STOVALL: Yes.

11 MR. HORNER: And that is if the OCD staff  
12 is still recommending a seven-day time frame, will  
13 that be incorporated in this order?

14 MR. STOVALL: If it is admitted as evidence  
15 in this hearing.

16 MR. HORNER: But if it is not admitted as  
17 evidence in this hearing, the staff of the OCD, their  
18 recommendations will be ignored? Isn't it the  
19 function of the OCD to in fact require compliance with  
20 OCD regulations and OCD requirements?

21 MR. STOVALL: Mr. Horner, I'm not going to  
22 engage in debate with you about the function of the  
23 OCD. The OCD is operating under a specific set of  
24 rules. I described to you the process, and we've got  
25 a somewhat integrated process between an

1 administrative approval give and take  
2 and now a hearing process. So it's based upon the  
3 record with a court reporter and exhibits admitted  
4 into evidence.

5 As I pointed out to Mr. Dean, he is being  
6 required to admit his correspondence between the OCD  
7 and the applicant and yourself as a part of that  
8 record. If there is a requirement by OCD staff that  
9 this be drained within seven days, please make that  
10 part of the record.

11 MR. HORNER: This is one of my concerns  
12 with this hearing, why the OCD is not a party to this  
13 hearing to be able to stand up and say that they are  
14 going to require, if they want to, that this pond be  
15 drained below the leak within seven days. That really  
16 is not my function. I am not a representative of the  
17 OCD. I am representing a landowner who's concerned  
18 about contamination to his property and not in a  
19 position to try to enforce OCD regulations.

20 MR. STOVALL: I understand that. We have  
21 in the record as of this time the exchange of  
22 correspondence, and this is why I spent some time  
23 going through this exchange of correspondence, to  
24 determine what has happened. We have now I think it's  
25 four exhibits that we've just discussed here in the



1 last few minutes relating to the time requirements for  
2 evacuating the pond, getting the fluid below the leak  
3 level, and doing repair work. That in effect  
4 constitutes part of this requirement. That gets the  
5 OCD position into it.

6 We are not a party before the hearing. We  
7 do not have a bifurcation in our organization of staff  
8 and hearing officers. We don't have that formal  
9 relationship. We do have the evidence in the record.  
10 If there is an additional requirement, if you feel  
11 that something is missing from this record, I'd be  
12 glad to let you look at our official file, and if  
13 there is additional correspondence in here you would  
14 like to get into the regard regarding this issue, if  
15 we've left something out, let's do it because that's  
16 where the OCD position is going to come from.

17 It's in the record, as far as I know,  
18 unless we're missing something, and I would ask you at  
19 this point with respect to your client's interest to  
20 help us with that process.

21 MR. HORNER: I will do what I can, but if I  
22 were not here today, and my client was not a  
23 participant in this hearing, it looks to me like Sunco  
24 or STWD would be required to comply with OCD  
25 regulations in dealing, as with this correspondence

1 back and forth, and as between STWD and OCD, there  
2 would be some sort of order come down that, You will  
3 do this and this and this and this, and that will  
4 effectively comply with our regulations, or if you  
5 refuse to do this and this and this and this, we will  
6 refuse to grant you a permit without me ever having  
7 shown up.

8 MR. STOVALL: Exactly right, and that's  
9 what this exchange of correspondence is. That is how  
10 this exchange of correspondence initially came about.  
11 OCD would not approve administratively the 100 days to  
12 begin trucking or 100 days for evaporation. That's  
13 been demonstrated by the evidence.

14 MR. HORNER: I see nothing in the  
15 correspondence here that indicates that OCD will  
16 accept -- I mean they have indicated that they must  
17 begin moving immediately, and it's got to be done  
18 within seven days in order to get it below the leak,  
19 and now it appears that STWD's position is they will  
20 begin moving immediately, but it may take them four to  
21 six months to get below the leak, and I don't see OCD  
22 standing there saying they have agreed to this  
23 anywhere in any of this correspondence. I don't  
24 understand how that gets factored into this process if  
25 in fact I am required at this point to bring forward

1 the OCD position.

2 MR. STOVALL: You understand, of course,  
3 the limited jurisdiction of the OCD for the protection  
4 of fresh water resources here in this disposal permit;  
5 is that correct?

6 MR. HORNER: That's another set of concerns  
7 of mine.

8 MR. STOVALL: And again in the  
9 administrative process, our technical staff has made  
10 that review. And I will grant you that it does --  
11 when this moves into the hearing process, and it only  
12 moves into the hearing process when there is an  
13 opponent, and it is at that point that the opponent  
14 takes on some responsibility and some burden. At this  
15 point what I am telling you is that I'm not prejudging  
16 this case, and the examiner is not prejudging this  
17 case.

18 What we don't want to engage in for the  
19 procedural purposes here is a debate between you and  
20 the applicant's technical witness philosophically as  
21 to what you think is right. If you feel there is  
22 something missing in terms of what should be  
23 established, it is at this point incumbent upon you to  
24 supplement the record.

25 MR. HORNER: It looks to me like it Mr.

1 Dean had not submitted these letters into evidence,  
2 although this correspondence was in the file, it may  
3 not have been considered by this hearing examiner with  
4 regard to the order that's going to come from this  
5 hearing even though there may have been agreements.  
6 So I don't think that the OCD, their recommendations  
7 and their position can be totally ignored with regard  
8 to the order that comes from this hearing other than  
9 what is introduced by Mr. Dean or myself today.

10 MR. STOVALL: And in fact it has been  
11 introduced; so that issue is moot at this point. This  
12 information is in the record at this hearing.

13 MR. HORNER: I think it's probably time to  
14 go on.

15 MR. STOVALL: I agree.

16 MR. DEAN: My concern is if we're going to  
17 ask questions, we ask them on the facts that are in  
18 evidence. I just want to make that clear. That was  
19 my concern about the question that was asked.

20 Q. (BY MR. HORNER) Regarding Ponds 2 and 3,  
21 you have stated previously that Ponds 2 and 3 will be  
22 completed as constructed as market conditions  
23 dictate. You have just stated that it is the  
24 completion of Pond 2 as a part of your contingency  
25 plan if a leak is found, detected?

1           A.       It is not part of our contingency plan as  
2 submitted, but it is an option to the contingency  
3 plan.

4           Q.       So it is an option to your contingency  
5 plan. It is not a part of your contingency plan?

6           A.       No. Our contingency plan is outlined in  
7 these documents as submitted.

8           Q.       I understood you to say that the maximum  
9 length of time that the local ground could be  
10 submitted to a leak in the secondary liner would be  
11 four months because that is the length of time it  
12 takes to complete Pond 2; correct?

13          A.       That is correct.

14          Q.       So if in fact now the completion of Pond 2  
15 is only an option to be considered and may not in fact  
16 be undertaken if a leak is detected in Pond 1, then in  
17 fact the length of time that the local ground may be  
18 submitted to a leak in the secondary liner may be  
19 longer than four months; is that correct?

20          A.       Would you repeat that question, please.

21          Q.       If in fact Pond 2 is not going to be lined,  
22 if a leak is detected in Pond 1, then it may be longer  
23 than four months before Pond 1 is drained below the  
24 level of the leak; correct?

25          A.       Yes.

1 Q. And you say that the pond should be able to  
2 be totally evaporated within nine months; correct?

3 A. Correct.

4 Q. So, therefore, it may be nine months before  
5 Pond 1, the level is reduced below the leak, possibly?

6 A. Dealing in possibilities, yes, I believe  
7 that's true.

8 Q. What is the maximum depth of the pond, all  
9 three ponds?

10 A. The maximum depth to be 13.5 feet of water.

11 Q. What basically is the purpose of these  
12 three ponds?

13 A. The purpose is stated in the initial  
14 application. It's for disposal by evaporation of  
15 produced water from the San Juan Basin.

16 Q. By evaporation?

17 A. Um-hm.

18 Q. It would appear to me that an evaporation  
19 pond would require a maximum surface area at a minimum  
20 depth. Would that be reasonable?

21 A. For evaporation, that's the purpose is to  
22 increase your surface area.

23 Q. And isn't 13.5 feet a bit excessive?

24 A. Not in my opinion.

25 Q. I believe you stated that when a load is

1 brought into the facility, it is put into some, what  
2 did you call them, what kind of tanks were they?

3 A. I believe it was titled unloading tanks,  
4 unloading steel tanks.

5 Q. And those from the drawings seem to be  
6 tanks that are considerably longer than they are high?

7 A. That's correct.

8 Q. And they are totally open on the top?

9 A. That's correct.

10 Q. What is the purpose of them being open?

11 A. The purpose of them being open is so we can  
12 visually inspect the water that we receive.

13 Q. You've also talked about trying to aerate  
14 this pond to eliminate anaerobic bacteria; correct?

15 A. I testified to where the pond would be  
16 equipped with an aeration system, and it would keep  
17 the pond aerobic.

18 Q. The purpose of keeping the pond aerobic is  
19 to eliminate anaerobic bacteria and therefore hydrogen  
20 sulfide; correct?

21 A. Correct.

22 Q. Is there any other way you can get hydrogen  
23 sulfide into this facility?

24 A. Hydrogen sulfide can be transported into  
25 the facility from waters already contaminated with the

1 bacteria, and therefore the H2S could be inherent in  
2 the water brought to us.

3 Q. If there is H2S in the water brought in,  
4 and it's dumped in an open tank, that H2S can escape  
5 to the ambient air; is that correct?

6 A. The H2S would be sampled from the truck  
7 prior to being dumped in the tank. It would be tested  
8 for H2S. If there is H2S, the operator would be  
9 called and said, "We would request you to either  
10 remove this load from our facility or we will treat it  
11 prior to accepting it."

12 Q. Is an operator going to be on hand for  
13 every load that's brought into the facility?

14 A. Yes.

15 Q. So if in fact there is H2S in the load,  
16 what do you do with the water?

17 A. The water, once again, we've determined  
18 there is H2S by testing. The chlorine would be dumped  
19 into the open air tank, the load dumped into it.  
20 Sufficient chlorine would be added to it such that  
21 there will be residual chlorine in the water after the  
22 H2S has been converted to hydrochloric acid and  
23 sulfuric acid prior to being dumped into the large  
24 pond.

25 Q. Sufficient quantities of chlorine to reduce



1 the emission of H2S?

2 A. To have a chemical reaction to remove the  
3 H2S.

4 Q. I am not sure that you answered my  
5 question. Would all the H2S be gone then when they  
6 put it in the unloading tank?

7 A. It would be -- at the same time that it is  
8 put into the unloading tank, it would be treated; so  
9 simultaneously. So, no, not before but  
10 simultaneously.

11 Q. So there still could be H2S in that  
12 unloading tank escaping to the atmosphere?

13 A. Yes, minor quantities, yes, because it's  
14 all dissolved.

15 Q. So in fact the plan is not to isolate the  
16 H2S load?

17 A. It will be isolated in the unloading tank.

18 Q. Okay, but it's not enclosed?

19 A. No.

20 Q. On your drawings up here, there is no  
21 reference made to the spray system, although you  
22 described the spray system. Do you intend to submit  
23 diagrams of the spray system?

24 A. If required, I will submit diagrams.

25 Q. Also there are no diagrams submitted of the

1 aeration system. Do you intend to submit diagrams of  
2 the aeration system?

3 A. I can submit diagrams. The narrative  
4 explained it rather well, but a diagram can be  
5 submitted.

6 Q. How far above the bottom of the pond will  
7 the suctions be located for the spray system?

8 A. The suction for the pond will be a riser  
9 which will extend eight feet up. It will be a slotted  
10 riser; so it will pull from all levels of the pond.

11 Q. Do you anticipate a sludge buildup in this  
12 pond?

13 A. Yes.

14 Q. Do you anticipate interference with your  
15 riser system on your spray system with the sludge?

16 A. No.

17 Q. Why is that?

18 A. The interference that you would discuss  
19 would be in essence only applicable or would only  
20 affect the riser such a point out to where the suction  
21 no longer drags the material to the riser. So I don't  
22 expect any interference because it will be over a long  
23 period of time, and the pump that we have will be able  
24 to pump those solids, and it will blow it back out the  
25 sprayer system into the bottom of the pump.

1           Q.     The solids will be pumped through the  
2 system and out the spray nozzles?

3           A.     Yes.

4           Q.     Do you anticipate clogging of your spray  
5 nozzles?

6           A.     It's a possibility.

7           Q.     Do you anticipate the need for cleaning the  
8 sludge out of the bottom of your pond to make the  
9 system work?

10          A.     No.

11          Q.     Does the sludge in the bottom of the pond  
12 increase the likelihood of anaerobic conditions that  
13 cause H<sub>2</sub>S?

14          A.     No.

15          Q.     In the design of your aeration system,  
16 apparently you had two systems. The first was a rock  
17 diffuser. What was the purpose of the rock diffuser  
18 aeration system?

19          A.     It's an aeration system that is very  
20 economical to operate. The purpose of it is to roll  
21 the pond.

22          Q.     What is rolling the pond, and why are we  
23 rolling the pond?

24          A.     Rolling the pond, in essence, turns the  
25 pond over. It brings the waters that are on the

1 bottom to the surface, and the surface waters that  
2 were once on the top are then recirculated to the  
3 bottom.

4 Q. Why are we doing that?

5 A. To keep the pond aerobic.

6 Q. How does that keep the pond aerobic?

7 A. It brings the pond to the surface where the  
8 oxygen transfer between the air and the water is  
9 completed.

10 Q. So the oxygen transfer is actually going on  
11 on the surface rather than with bubbles of air coming  
12 up?

13 A. No. There is oxygen transfer with the  
14 bubbles of air coming up, but it is not nearly as much  
15 of an oxygen transfer as what occurs at the surface.

16 Q. Can you give me a feel for what the  
17 relationship is, how much oxygen is gained on the  
18 surface versus through the bubbles?

19 A. We're getting out of my expertise. That  
20 will be covered by someone else.

21 Q. If oil gets into the evaporation pond, oil  
22 will be on the surface of the pond; is that correct?

23 A. Due to the emissability of water and oil,  
24 yes, it would be.

25 Q. Oil on the surface of the water will

1 prevent oxygen transfer at the surface of the water,  
2 will it not?

3 A. If there was oil on the pond, it does  
4 prohibit the oxygen transfer.

5 Q. And it will also prohibit evaporation, will  
6 it not?

7 A. Yes, it would.

8 Q. Do you have a plan for getting oil off your  
9 evaporation pond, if it gets in there?

10 A. Yes. It will be picked up by a vacuum  
11 truck.

12 Q. What is a sufficient oxygen level in the  
13 pond to keep an aerobic condition?

14 A. I'd have to have that asked of someone  
15 else. I don't have that answer.

16 Q. Your aeration system that you've got under  
17 the surface of the water, will there be any decrease  
18 in efficiency over time of those systems?

19 A. Over time, what I perceive to happen to the  
20 rock diffuser, there would be no decrease in  
21 efficiency. The other second aeration system, due to  
22 the nature of air being continuously blown through a  
23 PVC pipe, the only thing that would happen would be  
24 that the holes would become larger, and that would be  
25 the only deterioration or inefficiency, and then all

1 you need is a larger compressor to move more air.

2 Q. If the holes are getting larger, you need a  
3 larger compressor to move more air?

4 A. Correct, because what would happen is, as  
5 the holes become larger, they would let out more air  
6 per hole. And if you have limited capacity on your  
7 air pump, you have to increase the capacity of that  
8 pump.

9 Q. In fact, over time isn't the salinity of  
10 this pond going to increase enormously?

11 A. It will increase to a certain point in  
12 time, at which time, depending on the various salts,  
13 those salts will precipitate and fall to the bottom of  
14 the pond. My training indicates to me the pond will  
15 reach a certain salinity, at which point it will not  
16 get any higher than that because the salts will  
17 precipitate out.

18 Q. When this air is blowing through this  
19 aeration system and coming out these little bitty  
20 holes, won't salt precipitate out of the water and  
21 form around these holes and clog the holes?

22 A. No, because, once again, it will be a  
23 continuous operation to where the air coming out of  
24 the pipes will clean the surrounding area around it.

25 Q. Did you submit a recommended compressor to

1 go with this system?

2 A. Yes, I did.

3 Q. What was the size of that compressor?

4 A. Let me first ask which system are you  
5 talking about?

6 Q. I'm talking about, I guess it's in your  
7 August 18, 1989, letter to the OCD. And again I'm not  
8 clear on which exhibit number that is.

9 MR. DEAN: Three.

10 MR. STOVALL: Three.

11 THE WITNESS: Once again, I need to know  
12 which system you're in reference to.

13 Q. (BY MR. HORNER) I'm just asking, did you  
14 submit a spec sheet on a compressor to go with your  
15 aeration system?

16 A. I submitted a spec sheet for a compressor  
17 to go with the Aquatic Ecosystems aeration system.

18 Q. Is there a distinction here?

19 A. Yes. We have two separate systems. This  
20 would be what I've commonly called No. 1.

21 Q. What is the size of this compressor?

22 A. The compressor is a rotary vein compressor,  
23 and by size what do you mean?

24 Q. Horsepower rating.

25 A. Horsepower rating is a third horsepower.

1 Q. Do you know what the horsepower rating of  
2 the compressor that was recommended by Mr. Cheney was?

3 A. I can refer to it.

4 Q. Okay. Let's refer to it. For the record,  
5 which exhibit are you referring to?

6 A. Mr. Cheney's letter here indicates that the  
7 rate of horsepower required would be 32 horsepower.

8 Q. That's a significant discrepancy between  
9 the one-third horsepower unit that you recommended;  
10 right?

11 A. Yes, but we're talking three different  
12 systems here, and Mr. Cheney's is in reference to one  
13 of the other systems.

14 Q. I thought we had two different systems?

15 A. Two systems. The third system is what I  
16 call our spray system, which is 150-horsepower motor.

17 Q. But the 32-horsepower motor that he's  
18 recommending goes with which system?

19 A. I'd have to ask Mr. Cheney that, to bring  
20 that up. I'm not sure right now.

21 Q. In fact in the design of these aeration  
22 systems, we're getting way out of your scope of  
23 expertise, aren't we?

24 A. Not in the design, but the oxygen transfer  
25 requirements are way out of my --



1           Q.       Plus the horsepower rating, the air flow,  
2 the fact that it's going to plug the holes in the  
3 system with salts, that the sludge is going to  
4 contaminate the inlets? I mean we're way out of your  
5 area of expertise, aren't we?

6           A.       Not on mechanical things, no, you're not.

7           Q.       Is the horsepower an electrical thing then  
8 that's out of your area of expertise?

9           A.       It's an engineering thing -- let's put it  
10 that way -- of which we were required to have it  
11 certified by a registered engineer.

12          Q.       How about air flows, is that within your  
13 expertise as a geologist?

14          A.       No. That is Mr. Cheney's expertise. Once  
15 again, I must indicate that I did the mechanical  
16 design. Mr. Cheney certified the adequacy of those  
17 designs.

18          Q.       Who submitted this one-third horsepower  
19 compressor?

20          A.       I submitted the documentation submitted to  
21 me from Aquatic Ecosystems. I did not generate this  
22 information.

23          Q.       You testified about a search of local  
24 landowners. Apparently, you signed an affidavit here  
25 that a search was made. Do you know what area was

1 searched?

2 A. I believe it was a half-mile radius from  
3 our facility.

4 Q. Would I be correct in assuming that the OCD  
5 requires clay pits or lined pits to prevent what's in  
6 these ponds from getting to the soil?

7 MR. DEAN: I'm going to object. It's a  
8 legal question. He doesn't know what the OCD  
9 requires.

10 MR. HORNER: He's a geologist.

11 HEARING EXAMINER: Do you want to repeat  
12 the question because I was looking for some other  
13 information?

14 Q. (BY MR. HORNER) Would it be fair to assume  
15 that the reason for the lining of the pits or the clay  
16 pits is for the purpose of preventing whatever is in  
17 that pond from getting to the surrounding soil?

18 A. I would assume that that's the OCD's  
19 intention is to put an impermeable barrier between the  
20 pond bottom and the sides to the aquifers or waters.

21 Q. So that whatever is in there could  
22 contaminate the soils and the groundwaters?

23 A. That would be my assumption.

24 Q. But yet it's your intention with the  
25 closure plan to simply cover this up with a piece of

1 plastic and leave it there forever?

2 A. That is my intention or Sunco's intention.

3 HEARING EXAMINER: How much more  
4 cross-examination do you have, Mr. Horner?

5 MR. HORNER: This witness? It may be a  
6 little while yet.

7 HEARING EXAMINER: I'm going to again ask,  
8 how much longer?

9 MR. HORNER: Forty-five minutes.

10 HEARING EXAMINER: How many more witnesses  
11 do you have, Mr. Dean?

12 MR. DEAN: Two.

13 HEARING EXAMINER: We're going to take a  
14 recess, and we're going to reconvene at 8:15 tomorrow  
15 morning.

16 MR. DEAN: May I speak to that?

17 MR. HORNER: Mr. Examiner, I've got three  
18 hearings in Farmington tomorrow.

19 HEARING EXAMINER: We're going to reconvene  
20 at 8:15 in the morning.

21 MR. HORNER: I was notified of the hearing  
22 today. I showed up.

23 HEARING EXAMINER: It is seven o'clock, Mr.  
24 Horner.

25 MR. STOVALL: The hearing didn't start

1 until 5:00.

2 HEARING EXAMINER: Mr. Horner, the hearing  
3 started at 8:15.

4 MR. HORNER: I've got three hearings  
5 tomorrow in Farmington. Can we reconvene this to a  
6 later date or come back in a few minutes and keep  
7 going this evening?

8 HEARING EXAMINER: I'm not going to  
9 continue with this this afternoon, no.

10 MR. STOVALL: Mr. Dean, would you approach,  
11 please.

12 MR. DEAN: I'm sorry.

13 MR. STOVALL: Have you two a suggestion in  
14 the alternative?

15 MR. DEAN: I, quite frankly, don't care  
16 that it's another date, as long as the time we might  
17 get a decision doesn't change. I realize that's in  
18 his prerogative. I have a problem with Richard  
19 Cheney. His report is in, which is good enough. I  
20 only have this one complication to clear up, and he's  
21 going to Clovis at ten o'clock in the morning.

22 MR. STOVALL: Mr. Cheney?

23 HEARING EXAMINER: It appears that both of  
24 you have a problem.

25 MR. STOVALL: Let's look at this for a

1 second. Mr. Cheney is obviously a necessary witness,  
2 and I agree with the examiner that to continue this  
3 tonight would be very counterproductive. How do each  
4 of you look for Friday?

5 MR. HORNER: I'll be available Friday.

6 MR. DEAN: I'm sure I'm fine Friday.

7 MR. STOVALL: In consideration of the hour  
8 of this night's hearing, I fully agree and 100 percent  
9 recommend we not continue with this hearing this  
10 evening.

11 MR. DEAN: I have no objection to that.

12 MR. STOVALL: In consideration of the fact  
13 that it is seven o'clock at night, it would be very  
14 difficult to make alternate arrangements, I would  
15 recommend, Mr. Examiner, that we convene Friday  
16 morning at 8:15. How does that suit your schedule?

17 We'll take just a couple of minutes.

18 (Thereupon, a discussion was held  
19 off the record.)

20 HEARING EXAMINER: Let's go back on the  
21 record.

22 MR. STOVALL: Mr. Examiner, before we  
23 adjourn this hearing, I do want to make one thing  
24 clear. I hope you'll both take advantage of this 24-  
25 hour, 36-hour break that we've got to go through the

1 record again.

2 Mr. Horner, particularly I want to make it  
3 very clear to you, we want to get all of the  
4 information you think is important in the record, but  
5 in protesting this case, you take on a certain amount  
6 of responsibility for that yourself.

7 Just in case I did not make it clear  
8 before, what is in the file and what is part of the  
9 OCD communication between Sunco and the OCD is an  
10 integral part of the evidence. Where it might be the  
11 standard for approval in an administrative process, it  
12 is evidentiary of the standard which our staff would  
13 require in the hearing process, but please take this  
14 opportunity that if you feel there is something  
15 missing in the record, to adequately protect your  
16 client's interest. Please take this opportunity to  
17 develop that information and have it available when we  
18 reconvene this case on Friday.

19 MR. DEAN: I also apologize for my  
20 haphazard start. I dropped the ball in not having  
21 those exhibits ready.

22 MR. STOVALL: Gentlemen, neither of you has  
23 appeared before us before. You are not familiar with  
24 the process. We understand that. This is an  
25 important case, and there are some important interests

1 represented here. We want to make sure it's done  
2 properly. We probably should not have started today  
3 in the first place. That mistake having been made,  
4 let's make sure we take advantage of what we're doing  
5 now to get a proper and adequate record built so in  
6 fact there is a full and adequate hearing on the  
7 issues to be presented.

8 MR. DEAN: I also understand this is the  
9 first hearing on a --

10 MR. STOVALL: That's correct, so we are  
11 learning as well from the process.

12 MR. DEAN: We'll do better Friday.

13 MR. STOVALL: Perhaps it was advantageous  
14 that we did take this little start into it so we have  
15 a chance to come back.

16 HEARING EXAMINER: With this, I'll  
17 retract. This particular case will reconvene at 8:15  
18 Friday morning. In that case, we'll call it a night.  
19 Thank you.

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## 1 CERTIFICATE OF REPORTER

2  
3 STATE OF NEW MEXICO )  
4 ) ss.  
5 COUNTY OF SANTA FE )

6 I, Deborah O'Bine, Certified Shorthand  
7 Reporter and Notary Public, HEREBY CERTIFY that the  
8 foregoing transcript of proceedings before the Oil  
9 Conservation Division was reported by me; that I  
10 caused my notes to be transcribed under my personal  
11 supervision; and that the foregoing is a true and  
12 accurate record of the proceedings.

13 I FURTHER CERTIFY that I am not a relative  
14 or employee of any of the parties or attorneys  
15 involved in this matter and that I have no personal  
16 interest in the final disposition of this matter.

17 WITNESS MY HAND AND SEAL June 25, 1989.

18   
19 DEBORAH O'BINE  
20 CSR No. 127

21 My commission expires: August 10, 1990

22  
23 I do hereby certify that the foregoing is  
24 a complete record of the proceedings in  
25 the Examiner hearing of Case No. 9955,  
heard by me on June 13, 15, and 22 19 90.

, Examiner  
Oil Conservation Division