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BEFORE THE STATE ENVIRONMENTAL COMMISSION  
STATE OF NEVADA  
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In Re:  
Jungo Landfill  
Final Solid Waste Permit  
SW495REV00

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TRANSCRIPT OF PROCEEDINGS  
APPEAL HEARING  
MONDAY, MAY 21, 2012  
CARSON CITY, NEVADA

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A P P E A R A N C E S

The Commission:	JIM GANS, Chairman KATHRYN LANDRETH, Member CARY RICHARDSON, Member
For the Commission:	ROSEMARIE REYNOLDS, ESQ. JOHN WALKER, Executive Secretary
For NDEP:	CASSANDRA JOSEPH, ESQ. Deputy Attorney General
For Recology:	DEBBIE A. LEONARD, ESQ. Attorney at Law JOHN FRANKOVICH, ESQ. Attorney at Law
For the Appellants:	ROBERT DOLAN, ESQ. Attorney at Law MASSEY K. MAYO, ESQ. Attorney at Law

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CHAIRMAN GANS: My name is Jim Gans and I'm the chairman of the State Environmental Commission. Joining me today are two members of the Commission, Ms. Kathryn Landreth and Mr. Cary Richardson.

For the record, this appeal hearing is being convened at 9:30 a.m. on Monday, May 21st at the Nevada Department of Conservation and Natural Resources in Carson City, Nevada. This hearing is open to the public and written notice pursuant to NRS 233-B and 241 was provided to the affected parties. And the agenda for today's hearing was also posted and made available to the parties and the public.

Today we will be acting as the appeal panel for appeal filed by Mr. Richard Cook, the Clean Desert Foundation, Incorporated and Mr. Robert Hannum. Mr. Robert Dolan will be representing all three appellants, the Clean Desert Foundation, Mr. Robert Hannum and Mr. Richard Cook.

With that background, I would like the parties to the appeal to introduce themselves.

MR. DOLAN: Good morning. Your Honor, Members of the Committee, the Commission. Excuse me. With me is Massey K. Mayo, an attorney with my office. I'm Robert Dolan. Richard Cook is present and Robert Hannum is present. And with respect to the Clean Desert Foundation, it will be

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1 withdrawing its appeal.

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CHAIRMAN GANS: Thank you.

MS. JOSEPH: Good morning, Mr. Chairman,  
Commissioners. My name is Cassandra Joseph. I'm with the  
Nevada Attorney General's Office. I'm here representing the  
Nevada Division of Environmental Protection. And with me is  
my client in the back. We've got the administrator, Colleen  
Cripps. Deputy administrator, Dave Emme. And we've got  
chief of the Bureau of Waste Management Mr. Eric Noack.

MS. LEONARD: Good morning. My name is Debbie  
Leonard on behalf of the permit holder, Recology, and the  
intervener in this action. And with me is John Frankovich.  
We will be sharing duties. I have Erin Merrill of Recology,  
who is the project manager of the Jungo project, and also Tim  
Daleiden who is with Recology. He's a manager in their  
landfill and composting group.

CHAIRMAN GANS: Before we start, I want to  
outline the format we'll be following for today's hearing.  
First I would advise everyone that today's proceedings are  
being reported by a court reporter. I would also remind you  
that all testimony is given under oath. We will swear in  
each witness. And that I may at my discretion limit  
repetitive testimony and evidence. And I want to emphasize  
that to the parties in front of us that I will stop you if I  
think it's too repetitive or if somebody else has said it.

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1 The only reason I'm emphasizing that is because there seems  
2 to be now two but there were three appellants. We do not

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3 want to repeat.

4 MR. DOLAN: well, we'll certainly understand the  
5 rules of evidence in terms of repetitive testimony.

6 CHAIRMAN GANS: we will begin the appeal hearing  
7 with public comment. However, if a member of the public  
8 wants to speak about the Jungo Landfill generally or this  
9 case specifically, you will have to hold your comments until  
10 after the panel has finished its deliberations and announced  
11 its decision. Please note that no action may be taken on a  
12 matter during public comment until the matter has been  
13 included on agenda as an item for possible action. Also, at  
14 my discretion, I may limit public comment to five minutes per  
15 person.

16 So with that, I'm asking if there's anybody from  
17 the public that wants to make a comment.

18 MR. COOK: I'm Richard Cook. I'm one of the  
19 appellants. If the road to hell is paved with good  
20 intentions, landfills are prominent among the pavers. The  
21 Resource Conservation and Recovery Act (Trash Act) of 1976  
22 was enacted in part to put an end to the health hazards  
23 inherent in thousands of open pit garbage dumps that then  
24 permeated the countryside, spreading disease through vectors,  
25 unsanitary conditions and ground and surface water

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1 contamination.

2 Landfills were mandated to replace --

3 THE COURT REPORTER: I'm sorry, sir. Can you

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4 slow down while you're reading?

5 CHAIRMAN GANS: And stop for a second. Is this  
6 testimony, is this going to be part of your opening argument  
7 or opening response?

8 MR. COOK: No.

9 CHAIRMAN GANS: Mr. Dolan, I want to make sure  
10 that again there's no repetition here. I don't want too many  
11 shots at this game if we can help it.

12 MR. DOLAN: I agree. I do not know what Mr. Cook  
13 is going to say. I haven't prepared it. So I don't have any  
14 idea what he's about to offer.

15 CHAIRMAN GANS: Okay. Well, you better listen  
16 because I'm not going to allow it again. Whatever he says,  
17 I'm not going to allow it to be repeated.

18 MR. DOLAN: What he's saying now is not under  
19 oath and it's not testimony of the record.

20 CHAIRMAN GANS: But as far as I'm concerned, it's  
21 repetitive. If it comes up again, whether it's under oath or  
22 not, I will strike it.

23 MR. DOLAN: You can make your rulings evidentiary  
24 as you see fit. He is just making an opening statement as he  
25 was invited to do. I don't know if this constitutes

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1 testimony because he's not under oath.

2 CHAIRMAN GANS: I don't want to hear about it.

3 MR. COOK: The landfills are mandated to replace  
4 garbage pits. Landfills were designed and engineered to --

5 THE COURT REPORTER: I'm sorry. Can you slow  
6 down? People tend to speed up when they read. Thank you.

7 MR. COOK: -- contain waste and keep it from  
8 contaminating the earth, air and water by a system of  
9 barriers. Typically, a rectangular hole was dug resembling  
10 the excavation for a gigantic swimming pool, complete with a  
11 deep end. The pit was lined first by a barrier substance  
12 such as compacted clay on top of which one or more thick  
13 layers of thick plastic sheeting were laid.

14 A system of plastic pipes was engineered in to  
15 the deep end to pump out leachate so that it could not  
16 accumulate to the point of rupturing the liner system by  
17 hydraulic pressure. The leachate, contaminated by bacteria,  
18 viruses and whatever toxic substances were present in the  
19 waste, was then treated in ponds on site or sent to a  
20 wastewater treatment facility.

21 Each day's accumulated waste is called a cell.  
22 But anyway, they laid out --

23 Central to a landfill success was site selection  
24 requiring an area free from surface flooding or a high  
25 groundwater table. Also important was soil type. To be

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1 avoided were permeable soils that might facilitate escaped  
2 leachate entering into and contaminating groundwater. Areas  
3 of high seismic activity were also to be avoided.

4 There were many knowledgeable critics of  
5 landfills from the start calling them bad science and ticking

6 time bombs. Of particular concern to many critics were the  
7 high density plastic liners which were, at best, a hundred  
8 mil or one-tenth of an inch thick. woefully inadequate, said  
9 the critics, predicting that the liners would eventually  
10 deteriorate and leak the leachate that would work its way  
11 through the clay barrier through the cracks or chemical  
12 reactions and contaminate ground and surface water.

13 There were many other concerns, including seepage  
14 through the barrier liners, ozone-destroying methane gas  
15 emitted from landfills, heavy metals, et cetera. But the  
16 inevitable failure of the barrier system remained the largest  
17 single criticism. And in 1988, the Environmental Protection  
18 Agency acknowledged even the best liner and leachate  
19 collection system will ultimately fail due to natural  
20 deterioration.

21 Concerned about toxic hazards inherent in  
22 landfills, the European Union voted in 1999 to phase them out  
23 throughout Europe, progressively and severely limiting the  
24 amount of waste that could be buried in landfills, thereby  
25 forcing the use for alternative mechanisms such as waste

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1 minimization, incineration, composting and opening markets  
2 for the creation of new waste management technologies such as  
3 plasma arc waste disposal and the steam-driven autoclaves now  
4 being produced by a company in Northern Ireland.

5 Yet landfills continue to proliferate throughout  
6 America. why? Money, of course. As Zero Waste America

7 states on their website, America's treatment of waste is the  
8 free market at its worst, with the focus on making money not  
9 sense. The US has no effective federal laws or  
10 infrastructure in place to maximize recycling, minimize  
11 waste, nor protect the environment and public health. Thank  
12 you.

13 CHAIRMAN GANS: Any other members of the public  
14 like to comment? Okay. Seeing none, we'll close that part  
15 of our agenda and we'll go on with the appeal hearing itself.

16 This is an appeal hearing for the Jungo Landfill  
17 Final Solid Waste Permit SW495REV00. We have a preliminary  
18 matter in front of us. On April 25th 2012, Recology filed a  
19 motion to dismiss. Mr. Cook subsequently filed a response to  
20 Recology's motion to dismiss on April 27th. Regarding the  
21 motion, we will hear first from Jungo who is the intervener  
22 and then from Mr. Dolan. After hearing from these parties,  
23 we will then move to deliberations by the panel members on  
24 the motion to dismiss.

25 Before beginning, I want to remind everyone that

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1 the panel has read the motion and the responses. We got  
2 this. All of us got this. And is familiar with the parties'  
3 positions. Therefore I want to strongly encourage again the  
4 parties be brief in their remarks.

5 So with that, we'll have Mr. -- the intervener.

6 MR. FRANKOVICH: Thank you, Mr. Chairman. John  
7 Frankovich on behalf of Recology, the intervener. I will

8 take your comments to heart. But the standing is a very,  
9 very, very important concept in that it is required by the  
10 statutes that govern this particular proceeding just like the  
11 ones you gave notice of a minute ago, the publishing notice.  
12 If you don't do that, you don't have jurisdiction. If you're  
13 not standing by these appellants, this Commission does not  
14 have jurisdiction. And they must establish it.

15 we did file a motion. The only response we got  
16 was from Mr. Cook. And Mr. Cook's response shows that he has  
17 no property interest in the vicinity, lives in winnemucca and  
18 has no personal nor property interest at stake. And his  
19 concerns are the same as the concerns of the general public.

20 we recognize that this Commission reluctant to  
21 grant these motions want to give everybody the opportunity to  
22 protest and be heard. This is a large part based on fairness  
23 as well as having a judicial controversy. And fairness has  
24 many applications. I think you have to be fair to the  
25 applicant and not allow unlimited appeals by anybody that

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1 doesn't have a legitimate interest in the project. You have  
2 to have fairness to NDEP and its agency and its limited  
3 resources. When you have these appeals by people who don't  
4 have a legitimate interest, it does tax those resources.

5 Now, by law not every citizen has standing. It's  
6 pretty clear the statute says you must in order to appeal  
7 that this be aggrieved. Aggrieved is the magic language and  
8 we discussed it in our brief. And it's well defined in

9 Nevada law and it requires the personal property to be at  
10 stake and it also is clear that it cannot be an injury or  
11 harm that's suffered by the public in general. The general  
12 public does not have the right to appeal. And I would submit  
13 that the appellants meet that definition.

14 As you said, Mr. Cook filed a response. His  
15 response says as a member of the general public, I have the  
16 right to appeal. Exactly why he doesn't have the right to  
17 appeal. His interests are no different than any other member  
18 of the public. The law is clear that that does not give a  
19 right to appeal.

20 Now, we didn't get a direct response from  
21 Mr. Hannum but in his pleadings he did say he owns property  
22 two or three miles away. I'm not sure why he doesn't know  
23 how far it is away. He either doesn't know where the  
24 landfill is or his property, but somewhere two to three  
25 miles. At least he, I would concede, has property in the

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1 same hydrological basin. Mr. Cook does not even have any  
2 property rights in the same hydrological basin of this  
3 proposed landfill.

4 Clean Desert Foundation, I don't have to address  
5 now because I have understood they have withdrawn their  
6 appeal as of today so I'm not going to address their issues.  
7 However, I would say that the issues they raised in the brief  
8 were identical to those raised by the other appellants, at  
9 least by Mr. Cook. Not by Mr. Hannum. Mr. Hannum's was more

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10 limited.

11 Sometimes knowing the definition and applying it  
12 are more difficult. But in this case you don't have to worry  
13 about applying because it's already been applied to these  
14 very appellants on these very situations. We have a federal  
15 court decision which we've submitted to you and held that  
16 Mr. Dolan and Mr. Massey -- Ms. Massey, excuse me -- did not  
17 have standing to appeal the decision very much like this.  
18 This was a decision from the Humboldt County Planning  
19 Commission to the Humboldt County Commission on a request for  
20 extension by Recology. The federal court said they had no  
21 property interest, no personal interest and even though that  
22 they claim that they recreated in the vicinity of the  
23 property claim that they also make sure on behalf of the  
24 Clean Desert Foundation, the Court said your concerns or your  
25 harm is no different than any member of the public and

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1 therefore you don't have standing.

2 We think that is determinative. And as I said, I  
3 understand and appreciate the Commission's reluctance, but in  
4 this case I think it's fairly easy to apply because we have a  
5 determination.

6 I would suggest that Mr. Cook's circumstances are  
7 no different than Mr. Dolan's as he had in the federal court,  
8 has no property, lives in Winnemucca. He doesn't even claim  
9 to have used the property to recreate. So in his case it is  
10 abundantly clear that he should not have standing.

11           As I said, you can argue about Mr. Hannum a  
12 little bit because he does own some property two or three  
13 miles away, which is still a long ways away. But according  
14 to his own statement, he acquired that property in 2008,  
15 which this project was originally approved by the county in  
16 2007. So he either knew or should have known of the  
17 existence of this project when he acquired the property.  
18 Like buying a piece of property in the neighborhood and then  
19 complaining about the neighborhood. So we don't think that  
20 any of the appellants have standing and would request that  
21 the motion to dismiss be granted.

22           CHAIRMAN GANS: Thank you. Any questions?

23           MEMBER LANDRETH: I have just a couple of  
24 questions, Mr. Chairman. The first is, Mr. Frankovich, your  
25 understanding of the law, would the fact that Mr. Hannum may

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1 have bought the property with notice of the impending  
2 landfill deny him standing?

3           MR. FRANKOVICH: I think it's a factor that  
4 relates to it, yes. I don't think it's a determinative  
5 factor. But as I say, if somebody buys with knowledge of a  
6 condition, I think it's disingenuous to say that they can be  
7 heard to complain about that condition.

8           MEMBER LANDRETH: The second question --  
9 Mr. Chairman, you're probably aware that Mr. Dolan submitted  
10 a newspaper clipping about AB 94. would you be willing to  
11 discuss your understanding of that?

12 MR. FRANKOVICH: Yes, I would. First off, I  
13 don't know that a newspaper is an appropriate basis to file  
14 an opposition to a motion. I'm not sure of the  
15 qualifications of the reporter who made it. But he did  
16 reference AB 94, which was an amendment to the Administrative  
17 Procedures Act. It did not amend 445 B which governs this  
18 Commission's proceedings in this case. And what they amended  
19 in there was for a license, not a landfill operating permit,  
20 but for a license and they eliminated a provision that said  
21 in order to be a party to a proceeding, not to appeal, but to  
22 be a party to the proceeding, before it required you have to  
23 have a financial interest that's going be harmed or improved  
24 one way or the other. The amendment eliminated it so that  
25 there doesn't have to be a direct financial interest. The

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1 amendment did not in Subsection 2 did not remove the  
2 requirement that any party who may be aggrieved. This lets  
3 them be a party, but now if they want to appeal, it still  
4 says they have to be aggrieved. So I don't think that  
5 statute, one, I don't think it applies at all in these  
6 proceedings, and two, it did not eliminate the aggrieved  
7 language for a review.

8 CHAIRMAN GANS: Mr. Dolan.

9 MR. DOLAN: Thank you. Where the motion is to  
10 oppose standing of Mr. Hannum and Mr. Cook, yet counsel  
11 refers to Bob Dolan, myself, with respect to a federal court  
12 case that I was not a party to.

13 CHAIRMAN GANS: No. Wait a minute. Didn't you  
14 say during your testimony that since he's no longer, that  
15 that does not apply or do you still feel that applies?

16 MR. FRANKOVICH: No. I think the federal court  
17 case and the reasoning in it does apply. It doesn't apply to  
18 Mr. Dolan and it doesn't apply to Mr. Dolan because he could  
19 have been a party to that proceeding. But like I said, they  
20 ruled and that should be applicable to Mr. Hannum and  
21 Mr. Cook.

22 CHAIRMAN GANS: Go ahead. I apologize.

23 MR. DOLAN: Thank you, sir. So what I'm hearing  
24 is an interesting argument. I'm the boogeyman from  
25 Recology's perspective perhaps because I availed myself of

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1 what procedures are available to a citizen of Nevada and I  
2 did appear with Ms. Mayo about a year, year and a half ago in  
3 connection with the issuance of an air quality permit. I  
4 took part in the administrative record opposing the air  
5 quality permit that was issued. I came before the State  
6 Environmental Commission, appealed it. The same issue of  
7 standing was raised. This agency -- who was the chairman at  
8 that time? I can't recall.

9 CHAIRMAN GANS: Lou Delgen.

10 MR. DOLAN: Thank you, sir. He took the  
11 position, and the record will reflect this, that the history  
12 and practice of the State Environmental Commission was to  
13 broadly construe citizen standing to challenge the actions of

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14 the NDEP and moving forward with the hearing to the merits.

15 Now, what value does that have in terms of  
16 today's hearing? Well, with respect to Mr. Cook, I would  
17 suggest to you that the same facts that supported the finding  
18 that I and Ms. Mayo had standing to challenge the air quality  
19 permit are the same facts that are applicable with Mr. Cook  
20 as a resident in Winnemucca.

21 I can call him to the stand, but I would make a  
22 proffer that he has participated actively in the  
23 administrative process, privately communicating with staff,  
24 publically addressing staff, doing all of the things that a  
25 citizen can do to raise objection to a governmental action.

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1 And with respect to Mr. Hannum, he is a nearby  
2 land owner. He may even be closer than within two or three  
3 miles. Mr. Hannum is a land owner in the very close vicinity  
4 of the landfill site. Counsel for Recology admits that he is  
5 within the same hydraulic basin and that's true. His water  
6 well and use of the property is directly threatened by the  
7 landfill operation. And ultimately the challenges to the  
8 environment that we believe exists are virtue of this  
9 operation of this massive landfill site.

10 I, in connection with opposing the motion, would  
11 be happy to call Mr. Cook to testify and Mr. Hannum to  
12 testify as to facts that will address the question of them  
13 being aggrieved and having participated actively in the  
14 permitting process.

15 I can say also, I neglected to say that  
16 Mr. Hannum also has been objecting to the issuance of the  
17 permit through written form and he brought appropriate  
18 submissions to the agency all throughout, essentially  
19 challenging the location of the landfill site. So in that  
20 connection without hearing any reason not to, I would call --

21 CHAIRMAN GANS: I would prefer not to. We read  
22 it. As I said, we read what -- we know what it says. We  
23 know about the property. I don't think we need to have  
24 witnesses on this.

25 MR. DOLAN: In connection with the motion.

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1 The other point, your Honor, I would ask that  
2 exhibit -- Are all the exhibits -- I'm not sure procedurally,  
3 for example, the article from the Humboldt Sun, the author of  
4 that article is actually present in court. There seems to be  
5 a challenge to the authenticity of this article. Typically  
6 newspaper articles are admissible.

7 CHAIRMAN GANS: Is that on AB 94?

8 MR. DOLAN: It is, your Honor.

9 CHAIRMAN GANS: We've read it.

10 MR. DOLAN: I would like to have that admitted in  
11 to evidence.

12 MR. FRANKOVICH: For the record, we would object  
13 to the admission.

14 MS. REYNOLDS: Right. In the sense that it was  
15 attached to your filing document it's part of the record. I

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16 don't know that it needs to be separately admitted here as an  
17 exhibit.

18 MR. DOLAN: I would like to read in to the record  
19 that I understood to have been the interpretation of the  
20 applicable statute. Ms. Leslie and Mr. Pete Goicoechea --

21 MR. FRANKOVICH: Just so the record is clear,  
22 we're going to object to this as being hearsay and totally  
23 inappropriate to read a newspaper article.

24 CHAIRMAN GANS: I'm going to sustain the  
25 objection. We've read it. We know what it says. It's in

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1 your filings. I don't think it's necessary. It's  
2 reiterations that we don't need to hear.

3 MR. DOLAN: Well, I don't know if the record --  
4 if this argument is in the record or not for purposes of a  
5 review by a Court, your Honor.

6 MS. REYNOLDS: Yes. Every motion and every brief  
7 that was filed, as well as the attached exhibits, will be  
8 part of the record on appeal.

9 MR. DOLAN: Okay. Thank you.

10 So in summation, I believe that the law clearly  
11 establishes that you do not need to have a direct financial  
12 interest in the granting of a license or permit as is the  
13 case in this matter. The specific exception -- deletion from  
14 the previous statute that was applicable. The parties,  
15 Mr. Hannum and Mr. Cook, I respectfully present are aggrieved  
16 persons and would like to contest the issuance of the permit

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17 and I believe they qualify to do so.

18 The issue about the federal court action as a red  
19 herring is not applicable. By the way, the federal court can  
20 make all the rulings they want with respect to state law. A  
21 state law judge is not bound to follow the authority of a  
22 federal judge with respect to a uniquely state statute. And  
23 Mr. Frankovich understands that also.

24 So there's no controlling law on the issue of  
25 what standing applies or not. And I think the past practice

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1 of this administrative agency in light of the representations  
2 that I made in terms of the air quality permit, which is the  
3 other side of the coin on the same issue, was to grant  
4 standing to myself and Ms. Mayo and I believe Mr. Cook has  
5 standing as does Mr. Hannum.

6 CHAIRMAN GANS: Questions by the panel? That  
7 completes the testimony. So the next step is that we will go  
8 in to deliberation on what we've heard. I would like to make  
9 some comments. I too wanted to know about what I felt were  
10 the first -- the really primary issues here, which was the  
11 federal court that you brought up, Mr. Frankovich, and also  
12 AB 94.

13 what my miniscule research told me is that I  
14 agree with Mr. Dolan. I do not think the federal ruling has  
15 applicability here. It's not even in the same issue nor is  
16 it the same statute we're talking about. So I can't agree  
17 with the federal court portion of that.

18 And as for AB 94, I wanted to know more about  
19 that also. And I've asked our counsel to please read  
20 something in to the record on my behalf on AB 94.

21 MS. REYNOLDS: To bring the panel up to speed,  
22 what has happened was in 2005 there was an amendment made to  
23 the Administrative Procedures Act, which required persons who  
24 are filing an action pursuant to the Administrative  
25 Procedures Act -- And that's how you're here today to have a

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1 direct financial interest in order to proceed. That caused  
2 problems.

3 And in 2007 you had AB 94 in which the  
4 legislature repealed that direct financial interest  
5 requirement and went back to the way it was. And what's  
6 telling is some of the comments that were made. Specifically  
7 I'm looking at the Assembly Committee on Government Affairs,  
8 the February 23rd, 2007 session. And we have the comments  
9 from Leo Drozdoff who at the time was the administrator of  
10 NDEP. And he states, "I appreciate the opportunity to  
11 provide testimony on Assembly Bill 94. First let me state  
12 that NDEP supports AB 94 and the striking of Section 4 and  
13 Nevada Revised Statute 233B.127. The existing language has  
14 been problematic for our agency, the regulated community and  
15 the public. Following the changes made to NRS 233-B last  
16 session, our agency contacted the US Environmental Protection  
17 Agency to seek their opinion. The USEPA has expressed  
18 concern that the existing statute could jeopardize our

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19 delegate programs. A remanding of our air and water programs  
20 to USEPA would be a disaster on many levels."

21 There was a great deal of discussion among the  
22 legislators about this particular session. They received  
23 testimony I think that was interesting from Kyle Davis, from  
24 the Nevada Conservation League. And that was also February  
25 23rd 2007 testimony where he specifically was speaking about

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1 mining and wanting public interest groups having to be able  
2 to have that part to protest and make their voices heard.  
3 And he was concerned because of, again, public interest  
4 groups would not have a financial interest.

5 So with that background, for what it's worth, if  
6 you have any other specific questions about AB 94 I would be  
7 happy to answer them.

8 CHAIRMAN GANS: And I did. And that's why I  
9 asked the questions I had asked. It seemed pertinent and I  
10 agree with you. I mean it's hearsay if it's in the  
11 newspaper. And I'm not putting down the newspaper or the  
12 media. But in a court of law, I think that's very tenuous.  
13 But as far as I am concerned, when I heard that and read  
14 that, I do think we have a responsibility to the public to  
15 when it's appropriate to allow the public to appeal decisions  
16 and have their day in a hearing. So that was where I was  
17 coming from with AB 94.

18 And of course my comments on the federal ruling  
19 is just from -- if you want to comment on that also, on my

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20 feeling and it's not been -- I haven't run it by counsel, but  
21 I felt that the federal decision didn't really directly apply  
22 to what we're doing here.

23 MS. REYNOLDS: They were there pursuant to NRS  
24 278. You guys are here pursuant to NRS 444. I mean you  
25 could be persuaded by the federal court, but what they said

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1 is certainly not binding on you.

2 CHAIRMAN GANS: So do you have any comments or  
3 opinions or what do you feel about this motion to dismiss?  
4 We have to vote on a motion to dismiss.

5 MEMBER LANDRETH: Well, Mr. Chairman, if I may, I  
6 regret that AB 94 wasn't briefed for us. That would have  
7 been -- I think it's very significant. And I do think it's  
8 applicable to standing.

9 So I think given the tradition of this body and  
10 also what we've learned about AB 94 from our counsel, it  
11 appears that there's a very broad interpretation of standing.  
12 And I think Mr. Hannum has made a tolerable showing for  
13 standing under even the more stringent, if you apply the more  
14 stringent rule that requires some kind of financial interest.  
15 So those are my feelings.

16 CHAIRMAN GANS: Okay.

17 MEMBER RICHARDSON: I believe the appellant has  
18 standing, Mr. Chairman.

19 CHAIRMAN GANS: So we need a motion.

20 MEMBER LANDRETH: I move to deny the motion to

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21 dismiss.

22 CHAIRMAN GANS: Okay. Is there a second?

23 MEMBER RICHARDSON: I'll second that.

24 CHAIRMAN GANS: Okay. It's been moved and  
25 seconded that we deny the motion to dismiss. Any comments on

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1 the motion? If not, all of those in favor signify by saying  
2 aye.

3 (The vote was unanimously in favor of the motion)

4 CHAIRMAN GANS: Opposed? None. The motion is  
5 denied.

6 That brings us to continuation of the appeal  
7 hearing. And we will start with opening statements. We will  
8 begin the appeal hearing with opening statements from the  
9 appellants' counsel, followed by counsel for the intervener  
10 and then counsel for the Division of Environmental  
11 Protection. Opening statements may be waived by any party as  
12 desired. And then we will then move to matters of the appeal  
13 as generally described in the Commission's notice of appeal  
14 hearing dated May 1st 2012. So with that, we can proceed.

15 MR. DOLAN: Thank you. Good morning again,  
16 Counsel. The appellants believe ultimately that the staff  
17 have made a mistake. It's not the first time staff of an  
18 organization have made a mistake. In this case, the error by  
19 staff is a generation error, multi-generational error because  
20 the threat to the environment, which is at stake in this  
21 case, is difficult to measure. Because once this aquifer is

22 damaged, it will be damaged in the state that is the driest  
23 state of the union, where fresh water is a scarcity and all  
24 of the promises of the applicant about the efficaciousness of  
25 their technology is ultimately based upon a mathematical

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1 formula that is predicated upon human beings being the  
2 implementer of various alleged technologies that are designed  
3 to make something that is inherently unsafe safe.

4 History will be made today by you as decision  
5 makers. It's been clear to me that you've read through the  
6 materials and there's a lot there. As I have read the  
7 materials and done the best I can to become a five-minute  
8 expert on landfills, I must tell you, two or three years ago  
9 when I began my quest I did not know what leachate was, did  
10 not know landfill gas, didn't know about liners and clay and  
11 all of the like. So it's hard for counsel, myself, speaking  
12 for myself to come up to speed and with Ms. Mayo speaking up  
13 to speed about the technology.

14 And yes, it's been a struggle for us to come up  
15 with resources from experts to say that their experts are  
16 full of baloney. We don't have experts here today. I'm  
17 going to challenge the -- I'm going to call staff from NDEP.  
18 Hopefully I can get some questions in through their testimony  
19 about what we believe is lacking in their review.

20 But this is not an appropriate location for this  
21 landfill. I don't -- My research reveals that this is  
22 non-precedented government act in the State of Nevada where a

23 variance -- I'm using the word variance from a rule, the  
24 hundred-foot rule relative to the distance between the base  
25 of the landfill and the upper most portion of the aquifer.

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1 The rule is a hundred feet unless it's otherwise accepted.

2 So what we have here is -- we get down to about  
3 30 feet. There will be 30 feet. Back in 1975 the aquifer  
4 was up higher and it's maybe less -- maybe it's less than 30  
5 feet, maybe it's the 20 feet, during the lifetime of this  
6 95-year old -- 95-year 4,000-ton-a-day landfill site.

7 History is full of stories when the best and the  
8 brightest have built ships that sink in the North Atlantic,  
9 space shuttles that explode in flight, airplanes that crash,  
10 railroads that are derailed, highways that are engineered not  
11 to have a pike amount of accidents, the grade is wrong, the  
12 water flow is improper.

13 There is so much to put one's belief in to that  
14 this project is not going to degrade the aquifer. It is a --  
15 The belief that's required to support the staff's decision is  
16 substantial. You have to believe just as they did to support  
17 every assumption. You have to believe just as they did to  
18 support every promise. You have to believe just as the staff  
19 did that they have a history of self-reporting, of honest  
20 conduct so that the citizens can be protected. And it's  
21 lacking in this case.

22 So ultimately at the end of the day, my argument  
23 is going to be to reject the permit, to differ with the

24 staff, send them back, maybe they can get it right, but they  
25 haven't gotten it right here. The location also I believe is

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1 fundamentally flawed in light of the clear rule made by  
2 thoughtful people at some point in the history of this great  
3 state that we don't want landfills.

4 And by the way, when that rule was drafted, it  
5 was probably difficult to perceive or conceive that someone  
6 was going to put a landfill of 4,000 tons a day for 95 years  
7 at a site that's within a hundred feet of the aquifer that we  
8 would like to protect because those are kind of important.

9 And that's been shoo-shooed aside because the  
10 best and the brightest minds in the waste and disposal  
11 business have said well, we'll come up with a second liner.  
12 The first one may leak, but the second one definitely won't.  
13 Well, if the first one is going to leak, the second one will  
14 also. And that's ultimately where the article of faith comes  
15 in. No, it won't. And if it does, we'll catch it. We have  
16 some monitoring wells and we'll catch it. The bells and  
17 whistles will come along and we'll fix it. Well, we don't  
18 need in the state, this is a monumental decision. It's going  
19 to change the nature of Nevada for the worst. Thank you.

20 MS. LEONARD: Do you want to hear from the  
21 interveners first?

22 Commissioners, I've introduced the client  
23 representatives. This company, Recology, has been in the  
24 solid waste business for approximately a hundred years. They

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1 disposal. This is not the first landfill that they have  
2 built and operated. They have done numerous landfills in a  
3 variety of conditions. This is not something that's new to  
4 them.

5 Likewise, the engineers that worked on this  
6 project from Golder Associates, this is a firm that is in the  
7 business of landfill engineering. This is what they do.  
8 They have years of experience. They have a number of  
9 landfills under their belt. This is not something that is  
10 new to them either.

11 You're going to hear from representatives of, is  
12 at least one representative of Recology. You're going to  
13 hear from a couple of people from Golder Associates. Ken  
14 Haskell, he is the principal engineer who worked on this  
15 project. You're going to hear about his experience doing  
16 these types of landfills. You're also going to hear from  
17 Kris Johnson who is an engineering geologist who worked on  
18 the groundwater protection and monitoring plan that is in  
19 place for this landfill.

20 Not only have Recology and Golder built numerous  
21 landfills, but they've also worked here in Nevada. They've  
22 worked here with NDEP on other facilities.

23 So I think an important place to start is on  
24 something that the appellants and all parties agree on. And  
25 that is the standard of this Commission's review of NDEP's

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1 decision. The Commission reviews NDEP's decision for an  
2 abuse of discretion. That's an extremely deferential  
3 standard. As long as NDEP's decision is supported by  
4 substantial evidence, the Commission must affirm.

5 Now, substantial, the word substantial may sound  
6 like a lot. But under the law, and I'm going to read the  
7 definition that comes from the law, is substantial evidence  
8 is evidence that a reasonable mind might accept as adequate  
9 to support a conclusion. And this is particularly important  
10 in a case like this where much of the review involved  
11 technical information. That's within the expertise of NDEP.

12 And it's not the place of the Commission to  
13 substitute its judgment when NDEP has gone through and used  
14 its technical skills to review the application and approve  
15 it.

16 In this case, NDEP's expertise is particularly  
17 important because this was a very thorough review process.  
18 It was a four-year process. And the evidence in the record  
19 shows that the design and operations features of the  
20 application met and exceeded all of the regulatory standards  
21 in Nevada. Under those conditions, NDEP must approve the  
22 permit and the Commission must affirm it.

23 The abuse of discretion standard is the reason  
24 why Recology objects to much of the evidence that has been  
25 presented by the appellant. They have presented evidence to

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1 the Commission that was never presented to NDEP for NDEP's  
2 review. So how can this Commission say that NDEP abused its  
3 discretion by not reviewing those materials when the  
4 appellants never submitted those materials to NDEP in the  
5 first place. And taking that further, how can the Commission  
6 second guess the decision of NDEP on material that NDEP never  
7 had a chance to look at?

8 The evidence will show -- we believe that  
9 appellants' evidence that was not submitted to NDEP should be  
10 stricken and not considered. But even if it were, the  
11 evidence will show that it doesn't change that NDEP had  
12 substantial evidence to issue this permit.

13 Now, I spoke about the four-year review process.  
14 In this case, NDEP left no stone unturned. Golder had a team  
15 of engineers, geologists. They were looking closely at the  
16 soil properties, at the geotechnical properties of those  
17 soils, of the groundwater properties. There were redesigns  
18 that were requested by NDEP. There were resubmissions.  
19 There were added requirements. And Ken Haskell is going to  
20 testify as to all of the things that NDEP required after the  
21 initial application was submitted, additional protections  
22 that NDEP wanted. The result, again, is a project that meets  
23 or exceeds regulatory requirements.

24 Now, appellants have not identified any evidence  
25 and cannot demonstrate otherwise. It's their burden to do

1 so. And they, as Mr. Dolan concedes, they have no experts,  
2 so they have no one who's qualified to testify or contradict  
3 any of the technical conclusions that were drawn by NDEP and  
4 the fact that this application met or exceeded the regulatory  
5 requirements.

6 Turning to the depth to groundwater issue because  
7 that appears to be something that appellants are focusing on.  
8 The regulations clearly give discretion to NDEP to approve a  
9 landfill at any depth, whether it's closer than a hundred  
10 feet or further than a hundred feet from groundwater, the  
11 hundred foot number is not scientifically based. And in  
12 fact, in California -- And Mr. Haskell will again be able to  
13 testify as to this -- the regulations are that a landfill  
14 must be five feet from groundwater unless an alternative  
15 design is approved. And in fact Golder has designed such  
16 landfills that occur within five feet of groundwater.

17 The design that NDEP has approved with this  
18 permit meets the regulatory requirement by groundwater while  
19 being protected.

20 Now, I have a few slides just to assist with some  
21 demonstratives. The -- And I'm sorry. My eyesight is not  
22 that great, but I just want to make sure that that is --

23 MR. FRANKOVICH: It's not very clear.

24 MS. LEONARD: It's not very focused. Is there a  
25 focus on the -- I don't know where the projector is sitting.

1 MR. FRANKOVICH: It's on the unit there.

2 MS. LEONARD: No. Let me start with -- I'll keep  
3 going just because --

4 CHAIRMAN GANS: Can you read that? Do you know  
5 what it says?

6 MS. LEONARD: I can. But I would prefer that you  
7 can see it. But what I have here, and this is in the record,  
8 is, it's a diagram of the minimum prescriptive requirements  
9 of -- that are required under Nevada's regulations for a  
10 liner. And the top is refuse. You have a permeable leachate  
11 collection removal system is the next layer down and then a  
12 geomembrane and low permeability soil layer underneath that.  
13 And those are the minimum requirements that are used under  
14 the regulation -- that are required under the regulations.

15 when Golder initially submitted the application  
16 on behalf of Recology, the liner design met this minimum  
17 requirement. But NDEP said no, we need more because we want  
18 to be comfortable that the groundwater is protected. So NDEP  
19 added -- asked that Recology add a secondary geomembrane  
20 liner. And this is the design that's going to be used and  
21 that has been approved by NDEP and that you see on top of the  
22 refuse. You have two feet of protective operation soils.  
23 And this is something that Ken Haskell is going to testify as  
24 to the, what each of these features of the liner does and why  
25 it's important. The two feet of protective operations soil

1 to protect the liner. Then a filter layer. And underneath  
2 that you have the high capacity leachate collection and  
3 removal system. There's a pipe for leachate to be collected  
4 and there's also additional landfill gas collection in that  
5 layer. And then you have a cushion above the primary  
6 geomembrane liner again for protection. And below that, two  
7 feet of low permeability soil. And then beneath that and  
8 then you have a secondary collection layer and a secondary  
9 geomembrane liner. This is the first in the state, the first  
10 landfill liner that will have this secondary geomembrane  
11 liner. And this is a requirement that NDEP imposed. It's  
12 different than what the initial application was because NDEP  
13 wanted to make sure this facility was going to be protective  
14 of groundwater.

15 Now, it's not just the layers that's important  
16 but it's the functionality. And this leachate collection  
17 system is important because the regulations allow 12 inches  
18 of leachate to be collected on the liner. This system, the  
19 way it's been designed, is only going to allow a fraction of  
20 leachate to sit on top of the liner. Why is that important?  
21 Because there's less opportunity for leakage when there's not  
22 that much leachate sitting on top of the liner.

23 And again, we're in Nevada. The appellants point  
24 out that this is a dry climate. This is not a climate in  
25 which there's much leachate production at all, and Ken

1 Haskell will be able to testify to that.

2 Now, I also mentioned the landfill gas collection  
3 system. That's going to be done early in the operation and  
4 it's collected and it's flared. And when there's enough --  
5 And that's all part of the air permit. So when there's  
6 enough opportunity and enough production of the landfill gas,  
7 the facility, there could be an opportunity for a  
8 waste-to-energy facility at this landfill. And Tim Daleiden  
9 from Recology will testify as to the other type of  
10 waste-to-energy facilities that Recology already operates.

11 And I have here just a demonstrative. And we'll  
12 hopefully get the focus better before we do -- before the  
13 testimony. But these are just comparing the two, the  
14 subtitle D or the minimum requirements, which is on the  
15 right, and what will exist in the liner here on the left.  
16 And we've also brought for the commissioners' use we've got a  
17 poster board that might be more helpful.

18 And this is the Recology's Ostrom Road Landfill.  
19 This is a picture of their existing waste-to-energy facility.  
20 So these are not theoretical things that we're talking about.  
21 This is a company that already does these types of things.

22 Now, Mr. Dolan seemed to suggest that we don't --  
23 how do we know that -- all liners leak. How do we know that  
24 this is going to work? And the studies show, and this is an  
25 EPA study from 2002 which Mr. Haskell can testify about.

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2 geomembrane plus the soils, that there's a 99.96 percent  
3 effectiveness rate in these liners. And we've added another  
4 layer, the secondary geomembrane layer, so it's anticipated  
5 that this liner be even more effective than 99.96 in  
6 preventing leachate from infiltrating below the liner.

7 Not only do you have the liner itself, but  
8 Recology will be using enhanced CQA, enhanced construction  
9 quality assurance, where Tim Daleiden will testify about  
10 this, where they can take -- they can make pin holes in the  
11 liner during construction to test it and they bring in a  
12 third party contractor to, they cover -- Recology covers up  
13 the hole in the liner, they bring in a third party contractor  
14 to test to find where that hole is using electronic detection  
15 because the membrane will prevent electronic currents from  
16 moving through it, but when you put a hole, the electronic  
17 currents can move through and they can test as to whether  
18 there's a hole in it. And so their third party contractors  
19 go in and are able to find these minute holes that are put in  
20 the liner. These are the kind of things that are done during  
21 construction to ensure the effectiveness of the liner system.

22 Now, we're also going to hear from Kris Johnson.  
23 He's going to testify with regard to groundwater monitoring.  
24 And this is in the record, and again I will refer you to the  
25 individual exhibits when we do the testimony. But this is

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1 the groundwater monitoring networks. And we have perimeter  
2 wells, monitoring wells that are going to be all along these

3 two sides. And we're going -- And they're also going to be  
4 in the center of the facility, interim groundwater wells.

5 MR. DOLAN: Your Honor, isn't this presentation  
6 exceeding an opening statement?

7 CHAIRMAN GANS: You are going in to a little bit  
8 more detail than we need in opening statement.

9 MS. LEONARD: Okay. Fair enough. I will reduce  
10 what I was going to say. But my point is with regard to  
11 groundwater monitoring plan, there is a perimeter well, there  
12 are going to be internal wells within the site and there's  
13 going to be angled wells going underneath the initial two  
14 cells. These were additional requirements imposed by NDEP in  
15 order to test to make sure that the first two cells are  
16 functioning.

17 The construction is going to occur in discrete  
18 cells and this means that the -- you'll have a -- there will  
19 be years of observation of the success and effectiveness of  
20 the cells before closure to know what's actually -- that  
21 the -- that there is actual effectiveness in the protection  
22 of the containment system.

23 Now, in their briefs the appellants also  
24 described the proximity to surface water. And the ponding  
25 that they have taken issue with was anticipated in the

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1 design. This is something that everybody knew about, that's  
2 mentioned in the report of design and the design has taken  
3 that in to account. There will be a perimeter berm. There

4 will be a perimeter channel, interior basins, align storm  
5 water basin and the design is for two 24-hour back-to-back  
6 storm events. That's twice the regulatory standard.

7 Looking at their complaints about the soil,  
8 you're going to hear testimony with regard to the initial  
9 site investigation, site specific testing that occurred to  
10 understand the soil properties. And you will hear about,  
11 from Ken Haskell with regard to the settlement monitoring  
12 plan that NDEP required and the covers, the daily cover,  
13 intermediate cover, final cover, all of these again within  
14 the requirements of the regulations.

15 The appellants take issue with the all-weather  
16 access and you're going to hear that Recology operates  
17 landfills in all types of climates and weather conditions and  
18 this facility like those will be prepared to address those.

19 So you will hear about all of that evidence. And  
20 what you're going to see is that the appellants cannot  
21 demonstrate any abuse of discretion. They have, again, no  
22 expert to dispute the technical findings and that every issue  
23 that's been -- every legitimate issue that's been raised by  
24 appellants has been addressed by a qualified engineer in the  
25 permit and the review. So again, their lack of expert

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1 makes -- they have no basis by which you could overturn  
2 NDEP's decision.

3 Essentially the appellants dispute the  
4 regulations themselves. They think the regulations aren't

5 protective enough. But with that dispute, they need to bring  
6 that to the legislature. They need to bring that to the  
7 environmental commission when it's sitting in its rulemaking  
8 position. Now with regard to an individual permit is not the  
9 time to be challenging the regulations themselves.

10 So the evidence is going to show you that the  
11 permit issuance should be affirmed. Thank you.

12 MS. JOSEPH: Mr. Chairman, Commissioners, you've  
13 heard from counsel and I'm going to piggyback a little bit on  
14 what counsel for Recology just stated. What appellants  
15 essentially argue is that this permit should not have been  
16 issued and essentially the NDEP staff made a mistake.

17 But it's important to understand and listen  
18 carefully as to the reasons that appellants believe that NDEP  
19 staff made a mistake. And I think if you listen carefully,  
20 essentially what they're pointing to is this: The liner  
21 system is going to fail because all liners leak. We've heard  
22 that repeated a few times.

23 And the reason that this is not a sufficient  
24 reason for this Commission, even if it were true, to reverse  
25 the decision of NDEP is simple. The regulations in Nevada

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1 prescribe use of a liner system. If you look at NAC 444.681  
2 which was adopted by the Commission, one of the systems that  
3 must be used unless NDEP staff approves otherwise is a single  
4 liner system. So this Commission has already adopted the  
5 position the liner system is protective of groundwater and

6 should be used. So for appellants to come in and argue that  
7 because the permit is allowing a liner system it's not  
8 protective of groundwater simply fails.

9 And as Recology's counsel stated, if appellants  
10 really want to attack the regulation and the assumption that  
11 a liner system is protective of groundwater, then what they  
12 really need to do is go to the legislature or to this  
13 Commission at a different time. This is not the right forum  
14 for that argument. This is not the beef at the time.

15 So NDEP essentially, once NDEP determines that  
16 the regulations are met, NDEP must issue the permit. And  
17 that's what we're faced with here today. So there is no  
18 mistake by NDEP staff. NDEP staff determined properly that  
19 the regulations were met and the permit was issued.

20 Now, turning to the within a hundred foot of  
21 groundwater, that's been addressed and I don't want to repeat  
22 comments. I'm sensitive to the Commission's time. But  
23 essentially it's true that the regulations allow for an  
24 issuance of a permit within a hundred feet of groundwater.  
25 What has to happen is the NDEP staff needs to determine that

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1 the design is protective of waters of the state, including  
2 groundwater. And that's really the focus of this appeal, in  
3 all honesty. I mean the within a hundred feet of groundwater  
4 is the biggest issue that I believe appellants take with this  
5 permit.

6 But because NDEP staff in its expertise is  
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7 trained to review and look at the science behind the  
8 hydrology and the soils and all of the other elements that go  
9 in to the evaluation, they are most qualified to make that  
10 determination.

11 Now, you'll hear from Mr. John Taylor who is the  
12 engineer who is responsible for reviewing and improving the  
13 design that was proposed over a four-year period. And you'll  
14 also hear from Mr. Eric Noack who signed the permit and  
15 agreed that the conditions for the permit and that the  
16 regulations were met and essentially that the waters of the  
17 state are protected.

18 And I think when you hear from those gentlemen as  
19 well as the other witnesses as to the features of this  
20 design, which is a state of the art design, the most robust  
21 design that's been permitted in Nevada, I think you'll agree  
22 that the design is -- well exceeds -- at least meets and well  
23 exceeds the regulations under which NDEP staff are guided in  
24 the issuance of their permit.

25 And I won't go in to a lot of detail, but I do

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1 want to touch on just a couple of things in terms of the  
2 extra features because these features are important.

3 All right. So the first line of defense is  
4 really the double liner system. So while the regulations  
5 require a single liner, in this particular design, as you  
6 heard from Recology's counsel, Recology was required to do  
7 two liners. All right. So you've got the first liner here.

8 You've got a second liner down here. Now, the liner is just  
9 a thick plastic material. But there are lots of other layers  
10 in addition to those liners.

11 So what's really novel about this design is  
12 essentially this high capacity leachate system that you see  
13 here. So you've got the gravel. The water can, leachate  
14 rather, which is essentially the water that's within the  
15 landfill, runs through here and it's pulled out through  
16 leachate pipes, the large pipe here.

17 What's key about the system is that it only  
18 allows a fracture of an inch of leachate to rest upon the  
19 liner. So you've got liner because of the way the system  
20 works a fraction of an inch of leachate is going to be  
21 resting on that liner. That's how it's designed. The  
22 regulations allow up to a foot. That's a big difference.  
23 And it reduces tremendously the pressure on the liner and the  
24 potential for harm.

25 On top of that system you've got another leachate

1 system down here above the second liner. In addition, you've  
2 got gas, basically a gas control system where gasses are  
3 being sucked out of the landfill and disposed of. Now, the  
4 regulations don't require that at all. The regulations  
5 simply require gas monitoring. So that whole gas control  
6 system is completely different, well above the regulations.

7 You've got a couple other features that aren't  
8 really displayed on here. And that is the settlement

9 monitoring plan. You'll probably hear some testimony today  
10 about the soils and the conditions of the soils. The  
11 settlement monitoring plan was essentially required in order  
12 to monitor a settlement of soils over time so that NDEP staff  
13 and everybody else could tell whether there was some sort of  
14 settlement in the soils that would compromise the integrity  
15 of the liner.

16 So again, everything goes to really protection of  
17 the liner, protection of the waters of the state. And we've  
18 got several additional features here. And I've only listed a  
19 few for you. You'll hear in extreme detail, I think, from  
20 the witnesses as to many of the other programs. You've also  
21 got a monitoring system that you'll hear a lot about, which  
22 is sort of the last line of defense.

23 Finally, I want to say a few words about the  
24 location of the landfill. Now, appellants argue that this is  
25 not the right site for a landfill. And I think you also

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1 hear -- You will hear testimony today about how landfills are  
2 bad and we don't want them. Well, it's important to remember  
3 and it is understandable that some people are going to be  
4 opposed to a landfill, particularly to a landfill like this  
5 one where waste is being imported from another state.

6 But it's important to note that NDEP cannot  
7 refuse to permit a landfill based on the origin of the waste.  
8 They don't have that discretion. It's also important to note  
9 that this site was determined by the county commissioners of

10 Humboldt County to be a landfill. So that was hotly debated  
11 and it was litigated extensively whether or not the  
12 conditional use permit that was issued by the county should  
13 have been issued. That is not the fight for today. That's  
14 not for the commissioners to decide. That's already been  
15 decided. So whether or not that land should be used as a  
16 landfill is irrelevant to your decision.

17 what is relevant is specifically whether or not  
18 the regulations were met by the design that's been proposed  
19 and approved and whether NDEP staff acted arbitrarily and  
20 capriciously in finding that that design was protective of  
21 the waters of the state.

22 And I think after hearing all of the evidence  
23 you'll have no doubt that the decision was correct, that the  
24 regulations were met, that there was no arbitrary, capricious  
25 decision making and therefore the Commission should deny

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1 appellants' request. Thank you.

2 CHAIRMAN GANS: Okay. I want to thank you all  
3 three of you for laying down the foundation for the basis of  
4 what we're here. And I want to now move to the matter of the  
5 appeal itself and I want to start with the presentation of  
6 the appellants' case.

7 MR. DOLAN: Thank you. I'd like to start with  
8 Mr. Cook, please.

9 (Witness was sworn in)

10

11

RICHARD COOK

12

Called as a witness on behalf of the

13

Appellants, having been first duly sworn,

14

was examined and testified as follows:

15

16

DIRECT EXAMINATION

17

By Mr. Dolan:

18

Q. Please state your name and spell it for the

19

record.

20

A. My name is Richard Cook, R-i-c-h-a-r-d C-o-o-k.

21

Q. Where do you live, Mr. Cook?

22

A. I live 20 miles north of Winnemucca, Nevada.

23

Q. That's in Humboldt County?

24

A. Yes.

25

Q. What is your job or occupation?

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1

A. I'm retired. Retired clinical social worker.

2

Q. Are you familiar with the location of what I'm

3

going to refer to as the Jungo Landfill, the proposed Jungo

4

Landfill site?

5

A. Yes, I am.

6

Q. Have you been to that area?

7

A. Yes, I have.

8

Q. Can you describe the area?

9

A. It's a desert location and it's part of the old

10

Lake Lahontan lake bed from centuries gone past. It's low

11

level. It's surrounded by mountains. It's a typical Nevada

12 playa and high desert.

13 Q. Now, have you ever seen the location of the  
14 landfill with water on said location?

15 A. Yes, I have.

16 Q. Okay. Have you taken pictures of that location?

17 A. Yes, I have.

18 MR. DOLAN: I'd like to have this marked. I  
19 think this is in the exhibit book. Exhibit 99, 100. Now,  
20 Mr. Cook --

21 CHAIRMAN GANS: Wait a minute. I want to make  
22 sure that counsel has that exhibit.

23 MS. REYNOLDS: Do you have a copy for --

24 MR. DOLAN: I think we have an exhibit book.

25 MS. JOSEPH: Here's some exhibit binders for the

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1 commissioners. There's only going to be -- Essentially  
2 you're going to have to share. I can also put some up on the  
3 projector. We don't have -- Given the volume, we didn't make  
4 a copy for everybody.

5 MS. REYNOLDS: You're going to have to share it.

6 MS. JOSEPH: We can put it up on the projector.

7 MS. REYNOLDS: Those are the record we'll keep  
8 for the record on appeal, so don't mark on these.

9 MR. DOLAN: Are we set?

10 CHAIRMAN GANS: You're set.

11 MR. DOLAN: Okay. Thank you.

12 CHAIRMAN GANS: Everybody has the exhibit.

13 Q. (By Mr. Dolan) Showing you Exhibit Number 99,  
14 Mr. Cook, do you recognize that picture?

15 A. Yes, I do.

16 Q. And what is that picture?

17 A. That's a picture of the actual site taken from  
18 the north side of the railroad.

19 Q. You're going to have to speak up and probably  
20 face the court reporter a little bit.

21 MS. JOSEPH: Is that --

22 CHAIRMAN GANS: Excuse me.

23 MS. JOSEPH: The exhibit is also up on the  
24 screen.

25 Q. (By Mr. Dolan) Did you see that -- what is

□

1 depicted in that picture?

2 A. Yes, I have.

3 Q. Is that a true and accurate depiction of what you  
4 saw?

5 A. Yes, it is.

6 MR. DOLAN: I move for its admission.

7 MR. FRANKOVICH: No objection.

8 CHAIRMAN GANS: Counsel?

9 MS. JOSEPH: No objection.

10 CHAIRMAN GANS: Okay.

11 Q. (By Mr. Dolan) Okay. Showing you Exhibit 100,  
12 can you describe what is shown in Exhibit 100?

13 A. That's a picture taken about two miles west of  
Page 46

14 the actual site of Desert valley with an eastbound train is  
15 showing extensive flooding in the background.

16 Q. Now, were you there when that picture was taken?

17 A. No, I wasn't.

18 Q. How many times have you been to that location of  
19 the landfill site?

20 A. Probably 12.

21 Q. Probably 12 times, okay.

22 CHAIRMAN GANS: Is there a date on this  
23 particular photo?

24 THE WITNESS: It was taken in March 2006.

25 CHAIRMAN GANS: Six, okay.

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1 MR. DOLAN: How do you know that?

2 THE WITNESS: It was submitted as a result of a  
3 Facebook request of pictures of a site flood.

4 MR. DOLAN: Now, moving on to --

5 MR. FRANKOVICH: Are you offering that, Counsel?  
6 Excuse me.

7 MR. DOLAN: Not yet.

8 MR. FRANKOVICH: Okay.

9 Q. (By Mr. Dolan) Moving on to Exhibit 101, do you  
10 see that picture?

11 A. Yes.

12 Q. Are you familiar with what that picture depicts?

13 A. Yes. The picture depicts just west of the site  
14 with extensive flooding. And it also depicts the railroad

15 berm acting as a dam against the waters there, the straight  
16 line at the bottom.

17 Q. Is that picture a true and accurate depiction of  
18 what you saw?

19 A. Yes, it is.

20 MR. DOLAN: I move its admission.

21 MR. FRANKOVICH: Can I ask a question about that,  
22 Mr. Chairman, as to whether he took this photograph?

23 THE WITNESS: I was there when this paragraph was  
24 taken. I was standing next to the photographer.

25 Q. (By Mr. Dolan) In February of 2010?

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□

1 A. Right.

2 Q. And your testimony this is on the property. It  
3 looks like it says two miles west.

4 A. I said it was two miles west of the property.  
5 Let me tell you what the problem is, it was two miles west of  
6 the property because of extensive flooding there's no where  
7 to get off Jungo Road, which is a very heavily trafficked  
8 road because of Hycroft Mine. So you can't really get off  
9 the road at the property or near the property because you'll  
10 be struck instantly. So this is the nearest place.

11 There's a railroad sighting here and the railroad  
12 is built to spur from Jungo Road to the railroad and it's the  
13 first opportunity within many miles to get off Jungo Road.  
14 You can't just stop at Jungo Road and wade through the mud  
15 and take pictures because it's busy.

16 MR. DOLAN: Okay. I move for the admission of  
17 Exhibit 101.

18 MR. FRANKOVICH: I would object to it being  
19 irrelevant. It's two miles away from the site. I don't know  
20 what the relevance of two miles away from the site is.

21 CHAIRMAN GANS: Excuse me. Is your testimony  
22 that this represents water on top of the site, the Jungo  
23 Landfill site?

24 THE WITNESS: It is what it is. In this  
25 particular picture you can't see the site. But the relative

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1 elevation is very similar and the topography is very similar,  
2 so if it's flooded here, it's certainly flooded at the site.

3 CHAIRMAN GANS: So your testimony is?

4 THE WITNESS: Yes.

5 CHAIRMAN GANS: This water is also covering the  
6 Jungo site?

7 THE WITNESS: Right. If you drive down Jungo  
8 Road, you can see water covering the site but you can't get  
9 off the road. This was in inclement weather. It was a bad  
10 day. The wind was blowing the wrong way and we just weren't  
11 up to walking two miles down the tracks.

12 MR. FRANKOVICH: Further objection is this was  
13 not submitted as his part of the record to NDEP as well as  
14 the irrelevant of being two miles away. He can't testify to  
15 what the site looked like on this day.

16 CHAIRMAN GANS: I'm going to overrule the  
Page 49

17 objection. But I want to caution the panel, we do want to be  
18 careful about information being submitted to us that NDEP had  
19 no knowledge of when they were making their decision.

20 Q. (By Mr. Dolan) Now, with respect to -- I believe  
21 we had admitted Number 101 and Number 99. Now, Mr. Cook, are  
22 you concerned with whether or not the landfill is going to be  
23 exposed, the landfill itself exposed to surface water during  
24 the 95-year lifetime of these proposed landfills?

25 A. I think flooding there is frequent. Yes, there's

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□

1 some concern.

2 Q. And why is that, sir?

3 A. Because the relative elevation. Anytime there's  
4 inclement weather it floods out there. The pictures taken  
5 are not taken after an extreme event. They're taken after a  
6 typical event, a common event. Sometimes it's flooded out  
7 there for days, weeks at a time, possibly months.

8 Q. Now, with respect to the landfill site area,  
9 you've mentioned that you've been there about 12 times?

10 A. Uh-huh.

11 Q. Is that a yes?

12 A. Yes. Sorry.

13 Q. While you were there during these 12 times did  
14 you have the opportunity to explore whether or not life is  
15 sustained on the desert floor? Did you conduct any  
16 experiments?

17 A. Yes, actually we did.

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18 Q. What did you do?

19 A. We took soil samples from just off the site on a  
20 shared playa just to the northeast of the site. We took  
21 several others in the area and we inundated them and --

22 Q. When you say you took samples?

23 A. We just took a little hand shovel and we took  
24 some soil and we put it in a bag and we numbered it and we  
25 took it back to Winnemucca. We put it in containers and we

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1 inundated it with well water. And after ten days, we hatched  
2 out three species of shrimp, crustacean.

3 Q. From area in and around the landfill site?

4 A. Yeah. Within -- One was probably within 30 yards  
5 of the site.

6 Q. Did you have any discussions with any NDEP staff  
7 about your findings?

8 A. Oh, yeah. I sent pictures of the shrimp and  
9 concern about the presence of aquatic life to Mr. Taylor.

10 Q. Did you have conversations with Mr. Taylor on  
11 this topic?

12 A. No. I didn't have any one-on-one conversations  
13 with Mr. Taylor. It was all e-mail.

14 Q. So was the e-mail between you and Mr. Taylor?

15 A. Yes, it was.

16 Q. Do you recall what Mr. Taylor requested to you  
17 about the shrimp being found in and around the landfill site?

18 A. Our concern was that there were aquatic life

19 there and his response was that these aquatic life are  
20 common, therefore they don't count. And that wasn't the  
21 issue. The issue was we had them tested. We had the  
22 department, not the Nevada Department of Wildlife but the US  
23 Fish and Wildlife Service out of Reno sent in to an expert  
24 and --

25 MR. FRANKOVICH: Objection. I'm not going to let

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1 this witness testify about somebody's --

2 MR. DOLAN: Withdraw. Withdraw.

3 CHAIRMAN GANS: Sustained.

4 Q. (By Mr. Cook) So Mr. Cook, so is what you found  
5 significant, the fact of life, not whether or not the life  
6 itself was on an endangered species list, is that what you're  
7 saying?

8 A. Right.

9 Q. So with respect to the fairy -- Is it fairy  
10 shrimp that you found?

11 A. Branchiopods.

12 MR. FRANKOVICH: I'd like to understand that if  
13 this witness is an expert in identifying branchiopods or  
14 fairy shrimp or anything else. If he's an expert on it,  
15 let's put some qualifications on it.

16 CHAIRMAN GANS: I think he's right. We need to  
17 know.

18 Q. (By Mr. Dolan) Well, with respect to what you  
19 found, you brought some dirt back to Winnemucca, is that what

20 you said?

21 A. Right.

22 Q. And you put water in the dirt?

23 A. Right.

24 Q. And after a period of ten days you observed  
25 something?

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□

1 A. Right.

2 Q. And was it in a bucket what you observed?

3 A. Yeah. Well, it was swimming around in a  
4 container, yes.

5 Q. Something was swimming around in a container?

6 A. Yeah.

7 Q. During the ten days of the soil being placed in  
8 winnemucca did you put any animals or fish in to the bucket?

9 A. Oh, no.

10 Q. Okay. And did you take a picture of what was  
11 swimming in the bucket?

12 A. I didn't take it, but that's a picture of them  
13 swimming in the bucket. I was there. I was present.

14 Q. Exhibit Number 104, your Honor. I'm showing you,  
15 sir, Exhibit Number 4(sic). Can you tell the Commission what  
16 that picture depicts?

17 A. Well --

18 Q. Is that a picture?

19 A. That's a picture I know now because we had them  
20 tested by an expert.

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21 Q. Is that a picture of what was in the bucket?

22 A. Absolutely.

23 MR. DOLAN: I move its admission.

24 MR. FRANKOVICH: I object on the grounds it's  
25 irrelevant what they might have found out there unless it has

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1 anything to do with the design or operation of the landfill.  
2 If there's a regulation that says you can't put a landfill  
3 where whatever this creature is may exist then it's relevant.  
4 But otherwise it has no relevance.

5 CHAIRMAN GANS: State, counsel.

6 MR. DOLAN: Yes, your Honor. We would --

7 CHAIRMAN GANS: No. I want to know if there's an  
8 objection from the State to this Exhibit.

9 MS. JOSEPH: I don't object.

10 CHAIRMAN GANS: I'll overrule the objection and  
11 allow it. Is there going to be more testimony on this?

12 MR. DOLAN: Briefly maybe.

13 Q. (By Mr. Dolan) So in connection with this  
14 experiment did you conduct this experiment with anyone else?

15 A. Yes, I did.

16 Q. Who was that?

17 A. Chuck Schlarb.

18 Q. Chuck Schlarb. And he was out there with you  
19 when you dug the ground?

20 A. Yes, sir.

21 Q. And put it in to the bucket?

22 A. Uh-huh.

23 Q. Now, did you find any other life from -- on the  
24 site from your experiment?

25 A. There were actually three species of aquatic

□

1 life. There were two fairy shrimp and one of a tadpole  
2 shrimp.

3 Q. Okay. Anything else?

4 A. Not that I recall.

5 Q. Okay. Now, other than your e-mail communication  
6 with Mr. Taylor of the NDEP, did you communicate with any  
7 other member of NDEP with respect to this fairy shrimp  
8 finding?

9 A. No.

10 Q. The soil at the location is expected to be used  
11 to be part of the berming, building of berms to protect the  
12 landfill site from --

13 MR. FRANKOVICH: Objection. There's no evidence  
14 from --

15 MR. DOLAN: Excuse me. From groundwater to  
16 surface water.

17 MR. FRANKOVICH: Is counsel testifying that's  
18 what's going to be used? I haven't heard any evidence of  
19 what's going to be used.

20 CHAIRMAN GANS: And I agree.

21 Q. (By Mr. Dolan) I'll rephrase. Have you  
22 familiarized yourself with the submissions made by Recology

23 and Jungo to NDEP?

24 A. Yes, I have.

25 Q. Have you during the past couple of years

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1 regularly familiarized yourself?

2 A. Yes, I have.

3 Q. Would you describe whether or not you've  
4 familiarized yourself with all the public records that have  
5 been submitted in connection with this landfill application?

6 A. I have at least seen them.

7 Q. Have you read them mostly?

8 A. Mostly, yes.

9 Q. Now, the soil that you dug up to find this fairy  
10 shrimp, describe it.

11 A. When we dug the, took the samples, it was dry, so  
12 it was hard compact playa.

13 Q. Okay. Anything significant about that to you?

14 A. That it was a lake bed that frequently there was  
15 water there.

16 Q. Okay. Now, the surface water that you -- that  
17 was depicted in the pictures, can you tell the Commission if  
18 you had been out there on day one and then returned on some  
19 subsequent date to see this similar depiction of ponding on  
20 the same location?

21 A. Yes, I have.

22 Q. Okay. And tell the Commission how many days  
23 passed between the first sighting and the subsequent

24 sighting?

25 A. It would be actually in terms of years. The

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1 first sighting would have been in February of 2010 and the  
2 last sighting would have been in March of 2012.

3 Q. Well, what I'm really asking is how many days or  
4 weeks or how much time passed before the water that was  
5 depicted in picture 99 and/or 101 existed?

6 A. Okay. Yeah, I don't know about the frequency in  
7 addition. I don't know how long the water that I saw was  
8 there.

9 Q. Okay. So can you tell the Commission how long  
10 the water was there before it evaporates or disappears?

11 A. No, I can't.

12 Q. Did you discuss with Mr. Taylor or anyone else at  
13 NDEP the surface water pictures that we're talking about  
14 here?

15 A. Yes, I have.

16 Q. Can you tell the Commission what you recall of  
17 that communication?

18 A. Well, I believe that Mr. Schlarb and I sent a  
19 photograph of the site inundated picture that was taken on  
20 February 19th 2010 by Mr. Schlarb.

21 Q. And what do you recall of the communication that  
22 you had with Mr. Taylor?

23 A. Yeah. Well, the letter was look, this is,  
24 frequently floods and it's an inappropriate site for the

25 activity.

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□

1 Q. Do you recall a response?

2 A. There was no response.

3 Q. Now, leachate, do you know what leachate is?

4 A. It's garbage juice.

5 Q. In connection with your appeal did you have  
6 concerns with respect to this permit and how this garbage  
7 juice will possibly affect the aquifer?

8 A. Absolutely.

9 Q. What do you know about the location of the  
10 aquifer vis-à-vis the landfill site?

11 A. I know that the water table is low-lying desert  
12 and I know the water table is very high. I think there's  
13 about 59 or 60 feet between the surface and the water table.  
14 Where I live about 30 miles away, there's 80 feet difference  
15 there. So I know for relatively speaking it's a very high  
16 water table.

17 Q. And are you aware of how deep the landfill basin  
18 is from the public records?

19 A. From the public records and from the Berger  
20 study, Berger estimates that that part of the Desert Valley  
21 the fill is probably up to 7,000 feet before you hit bedrock.

22 Q. You lost me.

23 A. Okay. There's a mile and a half of silt, sand,  
24 clay and gravel between the surface and the solid rock. It's  
25 all fill. It all came from the lake. It all came from

□

1 blowing in there. It all came from somewhere else.

2 Q. I'm talking about the aquifer.

3 A. Right. Oh, the aquifer? Can you please say the  
4 question again.

5 Q. Well, it's the aquifer that at least you have  
6 concerns with respect to your appeal about it being damaged  
7 by the landfill; right?

8 A. Right.

9 Q. And the aquifer is within 60 feet --

10 A. Of the surface.

11 Q. -- of the surface? Are you familiar with how  
12 deep the landfill is under this design? Is it 40 feet, 30  
13 feet?

14 A. It's changed, but I'm thinking 30 feet is about  
15 right.

16 Q. And so upon looking at the records have you come  
17 to understand that the distance between the aquifer and the  
18 bottom of the landfill site is approximately 30 feet?

19 A. Yes.

20 Q. Now, during the opening statement Ms. Leonard  
21 showed and counsel for NDEP showed the double liner system.

22 A. Yes.

23 Q. Can you tell the commissioners why you believe  
24 that the health, safety, welfare of yourself and the citizens  
25 of Nevada are still threatened by this double liner system

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1 with all the various bells and whistles attending thereto?

2 MR. FRANKOVICH: Okay. well, I'm going to object  
3 to the question unless we can establish some expertise or  
4 qualifications for this witness to discuss landfill liner.

5 CHAIRMAN GANS: Does he have any expertise? I  
6 can read it too, but I'm not an expert.

7 MR. DOLAN: I don't believe a person has to be an  
8 expert in order to have an opinion about why they believe  
9 that a grant of a variance threatens the health, safety --

10 CHAIRMAN GANS: So you're asking for his opinion?

11 MR. DOLAN: I am, sir.

12 CHAIRMAN GANS: Overruled.

13 MR. FRANKOVICH: So the record is clear, we'll  
14 also object to the opinion of unqualified people as  
15 irrelevant.

16 CHAIRMAN GANS: Okay. Noted.

17 THE WITNESS: The very best HDPE liners are 100  
18 mil or a tenth of an inch. The liners that are proposed for  
19 this project are 60 mil. 60 one-thousandths of an inch,  
20 three business cards stacked together to replace 70 feet of  
21 earth barrier is insufficient. And if you put another liner  
22 in there, then you have 120-thousandths of an inch, you've  
23 got six business cards to replace 70 feet of natural earth  
24 barrier. It's not a fair trade.

25 MR. FRANKOVICH: I would move to strike his

□

1 testimony. He tried to give expert opinion and not his own  
2 personal opinion. He tried to provide expert testimony.

3 CHAIRMAN GANS: I agree with Mr. Frankovich.  
4 We've got to base our decision today on deliberations on cold  
5 facts, good, good facts. And this is meaningless to me.

6 Q. (By Mr. Dolan) You mentioned that the  
7 measurement of the liner in the public records is how thick?

8 A. 60 mils.

9 Q. Okay. And you read that from the public records?

10 A. Yeah.

11 Q. 60 mils is millimeters?

12 A. Yes. It's 60 one-thousandths of an inch, mils.

13 MR. HANNUM: It's mils.

14 Q. (By Mr. Dolan) So you found that measurements in  
15 the public record, Mr. Cook?

16 A. Yes.

17 Q. Now, and the double liner system from the public  
18 record consists of two of these liners?

19 A. Yes.

20 Q. Of the same measurement?

21 A. Yes.

22 Q. And did you testify that you believe that the  
23 staff traded the 70 feet that otherwise may be required under  
24 the NAC to protect the aquifer for this measurement of these  
25 two liners?

1 MR. FRANKOVICH: Objection. Clearly leading. He  
2 doesn't have any basis to say what he did, what staff did.

3 CHAIRMAN GANS: Sustained.

4 Q. (By Mr. Dolan) Okay. So but the -- Can you  
5 conclude, Mr. Cook, from reading the public record that in  
6 lieu of there being a hundred feet barrier between the base  
7 of the landfill and the upper most aquifer can you read that  
8 there is not a hundred feet distance?

9 A. Yes.

10 Q. Okay. Now, why does that concern you?

11 A. Originally, the regulation was 300 feet from  
12 ground -- from the bottom of the garbage to the top of the  
13 groundwater. I believe it was changed in the '70s by this  
14 Commission here to a hundred foot. And to somebody that's  
15 within five or ten feet or something, you might give them a  
16 break. But when they make a 70 percent exception, that's  
17 excessive.

18 MS. JOSEPH: I'm going to object to his responses  
19 being lack of foundation in terms of where the statutory  
20 requirement came from.

21 CHAIRMAN GANS: Sustained. It's very fuzzy.

22 THE WITNESS: Yeah, sorry.

23 MR. DOLAN: There are certain rules of evidence  
24 and we need to try to comply with those as best as you know  
25 how. You're doing really good.

1 THE WITNESS: Thanks.

2 Q. (By Mr. Dolan) Have there been other  
3 communications between you and NDEP, either Mr. Taylor or  
4 other staff persons, that I have not yet asked you about?

5 A. Yes. I believe over the course of the public  
6 comment period and prior, I believe I've communicated with  
7 NDEP.

8 Q. About what?

9 A. About the inadequacy of the site, the high  
10 ground, the low elevation and high groundwater table maybe  
11 seven times.

12 Q. Now, for example, on December 10th 2011 -- I'm  
13 speaking about Exhibit 108 that would be in the record, I see  
14 a letter from you and Chuck Schlarb to John Taylor.

15 CHAIRMAN GANS: wait. Let us find this first,  
16 please.

17 MR. DOLAN: I believe it would be -- Excuse me.  
18 107. I apologize. Thank you, Mr. Chairman.

19 Q. (By Mr. Dolan) Now, do you see on page two where  
20 you discuss the Jungo site would be impossibly subject to  
21 ponding or storm water containment issues?

22 A. Yes.

23 Q. Okay. Now, I see some pictures also. Is that  
24 picture on the second page depicted in Number 10 -- Is that  
25 the same picture that's in 101? No. Or 99? Does that

1 appear to be the same --

2 A. Yes.

3 Q. -- picture that's depicted in Exhibit 99? Okay.

4 Now, you took issue with the berming. If you look towards  
5 the bottom of that second page --

6 A. Yes.

7 Q. -- of the last line. Do you see reference to  
8 talking about the berm?

9 A. Yes.

10 Q. Okay. And turn the page. And questioning the  
11 soil. Do you see that?

12 A. Yes.

13 Q. Okay. Now, do you recall receiving a response  
14 from Mr. Taylor in that connection?

15 A. Yeah.

16 Q. why were you concerned about the berming?

17 A. well, for several reasons. One is that the soil  
18 is silt, sand, clay and gravel. It's not an appropriate  
19 material. If you look at the railroad berm, they imported --  
20 in fact if you look at the picture there, that's me standing  
21 next to the railroad berm and I'm five-foot-ten and the  
22 railroad berm is over my head. And that's directly on the  
23 north side of the site, so that the railroad berm in that  
24 whole section there is five to six foot tall and it consists  
25 of imported six inch salt rock, millions of tons of it. The

1 railroad built that berm to keep the train out of the water.

2 MR. FRANKOVICH: Again, I'm going to object and  
3 move to strike the answer unless he can say he's qualified.

4 MR. DOLAN: I would say it's common knowledge.  
5 That is the kind of thing that seventh grade students know  
6 that railroad tracks lift -- are supported by railroad ties  
7 and rocks. You don't need expert opinion.

8 CHAIRMAN GANS: Just in general, he's not an  
9 expert in this area. What was there, what was imported, how  
10 much was imported, there's a berm there and it's higher than  
11 he is.

12 MR. DOLAN: Correct.

13 THE WITNESS: Right.

14 MR. DOLAN: Yes, your Honor.

15 Q. (By Mr. Dolan) Okay. Because you're not an  
16 expert in railroad engineering. Now, so is it your testimony  
17 that -- well, from reading the public records have you come  
18 to learn that the refuse is to be transported to the location  
19 via railroad?

20 A. Yes.

21 Q. And can you describe as best you can just what  
22 you've seen at the landfill site relative to the railroad and  
23 the size of the berm and the like that's nearby or adjacent  
24 to the landfill site?

25 A. Okay. The railroad berm is fairly high

1 throughout Desert Valley. But at this point it's probably

2 five or six feet is probably the highest, highest point that  
3 I have witnessed. As you go further west, the railroad berm  
4 is not --

5 Q. Just at the location of the landfill site?

6 A. The location of the landfill site is a pretty  
7 consistent five or six feet for the entire mile.

8 Q. Now, other than the questions that I've asked you  
9 concerning the ponding and the finding of fairy shrimp.

10 A. Yes.

11 Q. Okay. What are the other concerns that you  
12 specifically want to tell the Commission that you believe  
13 was -- that you have about this permit?

14 A. Well, to me it has to do with water. It has to  
15 do with surface water and groundwater. My concerns I believe  
16 I expressed were that had this project been placed several  
17 miles east or west of this particular site that I wouldn't  
18 have liked it but I wouldn't have appealed. This is just a  
19 bad place for this because it's too close. It's too close to  
20 the water. It's too much surface water. It's going to be  
21 really difficult for heavy equipment and machinery to  
22 operate. It's really difficult to get in there. Like I  
23 said, sometimes the closest we could park is two miles down  
24 the track. And they're going to build a three-mile road on  
25 the railroad right of way on the south side of the track, 25

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1 foot, two-foot all-weather gravel road. And if you walk  
2 along the south side of the berm you can see flow some three

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3 or four feet up on the berm. So frequently that road is  
4 going to be impassable for all three miles or a good portion.  
5 There's going to be no way to get equipment in or out.

6 Q. Now, is the -- There's a -- You're familiar with  
7 NAC 444.678 that reads, "Location of a class one site must,  
8 one, be easily accessible in all kinds of weather to avoid  
9 vehicles expected to use it."

10 A. Yes.

11 Q. Now, was your testimony that you just gave about  
12 what you observed or the existence of proposed road on the  
13 southern part of the railroad, was that related to your  
14 concerns relative to that NAC?

15 A. Yes, it was. Because some of the earlier  
16 pictures that were taken west of the site show that that's  
17 where the road would be going and it clearly shows that the  
18 road would be inundated.

19 Q. Last question. The pictures of 99 and 101 that  
20 were admitted, can you tell the Commission the depth of that  
21 water in picture 99?

22 A. I can't really because the only way that I can  
23 gauge the depth is by the size of the stuff that's sticking  
24 out. That's greasewood mostly. And some of the greasewood  
25 is four or five foot tall. So the water is not four or five

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□

1 feet deep. But I could not tell you the minimum depth.

2 MR. DOLAN: Okay. Thank you. No further  
3 questions.

4  
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CHAIRMAN GANS: No.

THE WITNESS: Oh, they've got to ask questions?

CHAIRMAN GANS: Okay. The State cross first?

MS. JOSEPH: Sure.

CROSS-EXAMINATION

By Ms. Joseph:

Q. Good morning, Mr. Cook.

A. Good morning.

Q. I want to start off by asking you are you an expert in landfill design?

A. Nope.

Q. Are you an expert in hydrogeology?

A. Nope.

Q. Are you an expert in geological studies?

A. Nope.

Q. Are you an expert in any of the sciences that relate to the issuance of a landfill?

A. Nope.

Q. Okay. Directing your attention to Exhibit 99, which you testified to earlier, and I believe you testified that you were present when this picture was taken; is that right? And it's up on the screen for you in case you need to

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1  
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3  
4

know.

A. No, I wasn't present when that picture was taken. That picture was taken February 19th 2010.

Q. Okay. So how do you know -- Do you know who took

5                   reporters\_record\_day\_one052112.txt  
6                   this picture?  
7                   A.    Yes, I do.  
8                   Q.    Okay.  But you weren't present when it was taken?  
9                   A.    No.  
10                  Q.    And you said, I believe, that you can't tell the  
11                  depth of that water; is that right?  
12                  A.    Nope.  
13                  Q.    Okay.  So you don't know whether that water is  
14                  two feet deep or an inch deep; is that right?  
15                  A.    well, I do know that it's more than an inch deep  
16                  because of the relative elevations.  It's not a pool table  
17                  there.  So for the water to be ponded like that it would have  
18                  to be more than an inch deep.  
19                  Q.    And what is that based on?  
20                  A.    On being familiar with the site and realizing  
21                  that it's not, it's not a table top.  
22                  Q.    And your familiarity with the site consists of  
23                  having been there 12 times; is that right?  
24                  A.    About 12 times.  
25                  Q.    All right.  So you have no other basis other than  
                  that for your opinion as to how deep this may or may not be?

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1                   A.    How deep the water may be?  
2                   Q.    Right.  
3                   A.    No, I have no idea.  
4                   Q.    Directing your attention to Exhibit 101, which I  
5                   believe you testified, were you present when this picture was

6 reporters\_record\_day\_one052112.txt  
6 taken?  
7 A. Yes, I was.  
8 Q. Okay. And I believe you stated that this was a  
9 pretty ugly day, it was pretty windy and blowing?  
10 A. Yes.  
11 Q. And I believe you also testified that you don't  
12 know how long it takes for or how long it took for this water  
13 to evaporate?  
14 A. Nope.  
15 Q. Next I would like to direct your attention to  
16 Exhibit 104.  
17 A. Yes.  
18 Q. Now, is this a picture of the fairy shrimp that  
19 you hatched at your house?  
20 A. It wasn't my house. But yes, it was a picture of  
21 the fairy shrimp that were hatched.  
22 Q. Okay. But that was not hatched out at the site;  
23 correct?  
24 A. No.  
25 Q. So the way I understand it is you took soil, you

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1 brought it home, you put it under water and approximately ten  
2 days later this was hatched?  
3 A. Right.  
4 Q. But it wasn't hatched out at the site?  
5 A. No.  
6 MS. JOSEPH: I have no further questions.

7 CHAIRMAN GANS: Okay. Cross.

8 CROSS-EXAMINATION

9 By Mr. Frankovich:

10 Q. Counsel asked you about your qualifications. Are  
11 you aware that licensed professionals in each of the  
12 departments that she referenced had input in to the design of  
13 the Jungo Landfill?

14 A. Yes, I am.

15 Q. Is it your position that all of these  
16 professionals are incompetent?

17 A. I don't think incompetent is the term. But there  
18 was Humboldt County had their own expert evaluate the site  
19 and that expert's credentials --

20 MR. FRANKOVICH: I will object to him testifying  
21 about somebody else's expert. I asked him a simple question.

22 CHAIRMAN GANS: Ask him the question.

23 Q. (By Mr. Frankovich) If they're incompetent?

24 A. I don't think they're incompetent. I think  
25 everybody could make a mistake.

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1 Q. So you think Golder and Associates made a  
2 mistake?

3 A. I don't know if Golder made a mistake. I think  
4 that Golder was in it for the money. I think that they --

5 Q. So they sold out their integrity for the money,  
6 is that what you're saying?

7 A. well, I don't know if they sold out -- Yeah, I

8 guess I would be forced to say that they began their project  
9 from an engineering from a -- at a point of weakness. They  
10 didn't start like the Humboldt County Landfill, Lockwood  
11 Landfill, both high in mountain sides, hundreds of feet above  
12 the water table, good places for a landfill. Desert Valley,  
13 no. Bad place for a landfill.

14 MR. FRANKOVICH: Move that the answer be stricken  
15 other than his answer that --

16 CHAIRMAN GANS: I understand.

17 Q. (By Mr. Frankovich: Are you aware of the  
18 qualifications of the NDEP personnel who reviewed this?

19 A. Yes. I realize none of them have the  
20 qualifications of the expert questioned their findings.

21 Q. So you believe NDEP is incompetent?

22 A. No. I believe that they are not as expert as the  
23 person who evaluated the project as a second opinion for the  
24 county.

25 Q. Who is not here?

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1 A. Whose report is here. Whose 55-page report is  
2 here.

3 Q. You don't know whether his report is right or  
4 not? You're not qualified to comment on that either, are  
5 you?

6 A. I'm qualified to comment to say that he's the  
7 only Ph.D. in the room.

8 Q. He's not in the room today here, is he?

9 A. Well, he's the only Ph.D. who's evaluated the  
10 project.

11 Q. Are you relying on that?

12 A. Yes.

13 Q. We're going to have discussion about, apparently  
14 he's dealing with a report from G. Fred Lee?

15 A. G. Fred Lee.

16 Q. Did you talk to G. Fred Lee about using his  
17 report today?

18 A. I did. I have his permission. Do you want to  
19 see it?

20 Q. I do. I'm not marking this as an exhibit or  
21 submitting it. I just wanted to see, he said he had  
22 permission and I wanted to verify. There's a lot of other  
23 things in here. It does say that from Mr. Lee in March he  
24 said, "You can use my report as you feel appropriate."

25 Did you get permission from the county to use

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1 that report?

2 A. I don't need permission from the county.

3 Q. So the answer is no?

4 A. No.

5 Q. That's who the report was prepared for, wasn't  
6 it, the county; is that right?

7 A. The county paid for it, yes.

8 Q. Do you believe, and I think you said in your  
9 brief, that the NDEP was deceitful in reviewing it?

10 A. Yes. Excuse me. Let me ask. With me? Was  
11 that -- I didn't -- The last of that sentence, NDEP was  
12 deceitful.

13 Q. Right.

14 A. Was that a period then?

15 Q. Yes.

16 A. Okay, yes.

17 Q. Did you review all of the applications that were  
18 submitted by Golder together with all of the amendments?

19 A. Yes, I did.

20 Q. Did you review the comments of NDEP?

21 A. Yes, I did.

22 Q. And have you reviewed the final design of the  
23 project?

24 A. Yes, I did.

25 Q. Have you reviewed the operating plan for the

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1 facility?

2 A. Yes, I have.

3 Q. Would you agree that Golder provided information  
4 to NDEP relating to a ponding issue?

5 A. Yes, I do.

6 Q. Do you agree that Golder gave information to NDEP  
7 relating to how to protect the groundwater aquifer?

8 A. Yes, I do.

9 Q. Did Golder also provide information to NDEP on  
10 how to deal with the runoff and drainage at the site?

11

A. Yes, they did.

12

Q. And do you know in reaching their final  
13 conclusion whether NDEP relied on that information?

14

A. I believe they did.

15

16

Q. I wanted to call your attention to Exhibit 99,  
17 which is the photograph. I was confused when you first  
18 offered this, I thought you said were you present when this  
19 picture was taken?

20

21

22

23

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A. Okay. There's two different very similar  
20 photographs and they're so similar that it's hard for me to  
21 distinguish whose is whose. But I took a picture that's  
22 pretty much from this same angle the same thing as this  
23 picture. Only looking at this picture, I realize that this  
24 is Mr. Schlarb's picture from February 19th 2010 and my  
25 picture was from March of 2012. And they're hard to tell

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apart because they both show the area inundated.

2

MR. DOLAN: Counsel, Mr. Schlarb will be here.

3

He can verify it.

4

5

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MR. FRANKOVICH: Well, at this point in time it's  
my understanding that he testified he took this picture and I  
didn't object. Now, I understand he didn't take this picture  
and his picture was two years later. So I want to make sure  
I pose an objection to this since he apparently wasn't there  
and didn't take it. Were you there in 2010?

10

THE WITNESS: Nope, nope.

11

Q. (By Mr. Frankovich) So you can't testify that

12 this truly and accurately represents what was depicted that  
13 day; isn't that right?

14 A. Right.

15 Q. And you can't say that this was even on the site,  
16 can you?

17 A. Yes, I can.

18 Q. How can you tell it's on the site?

19 A. Because I took a picture that's so similar to  
20 that that I can't tell it apart, the background and the  
21 mountains.

22 Q. You took a picture that is Exhibit 96 that for  
23 some reason your counsel didn't want to go over.

24 A. I don't know.

25 Q. Take a look at 96.

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1 MR. DOLAN: Here we go.

2 THE WITNESS: Okay.

3 Q. (By Mr. Frankovich) Now you're saying that's the  
4 same location as Exhibit 99?

5 A. I'm saying it's very close.

6 Q. I notice a big telephone pole in the middle of 96  
7 and I don't see any telephone poles anywhere --

8 A. There's a big telephone pole every 40 feet, every  
9 40 yards.

10 Q. So you missed it on this picture?

11 A. Yeah.

12 Q. So you weren't in the same location that he was

13 reporters\_record\_day\_one052112.txt  
when you took your picture?

14 A. The same location as in the exact spot? No. I  
15 mean it would be hard to be in the same location unless it  
16 was marked.

17 Q. Especially when you weren't there when he took  
18 it?

19 MR. DOLAN: Objection. He's badgering the  
20 witness.

21 CHAIRMAN GANS: Okay. He's getting  
22 argumentative. But the point is you took one picture,  
23 Schultz(sic) took another picture?

24 THE WITNESS: Right.

25 CHAIRMAN GANS: You weren't at the location when

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1 he took his picture?

2 THE WITNESS: Right.

3 CHAIRMAN GANS: We got it.

4 Q. (By Mr. Frankovich) On the day that you took the  
5 picture why did you go out to the site?

6 A. To take a picture. It had been raining a couple  
7 of days and then the weather had been inclement, so we  
8 figured it would be respondent.

9 Q. How did you get there when you went out?

10 A. Okay. what we did is we went out to the site in  
11 Mr. Schlarb's truck and somebody had to stay in the vehicle  
12 because of the heavy traffic on the road and I waded through  
13 the muck and the mud to take this picture while he made sure

reporters\_record\_day\_one052112.txt  
14 that the road was passable.

15 Q. So you drove out on Jungo Road to get to the  
16 site?

17 A. Yes.

18 Q. How did you know you were at the site?

19 A. Because I have been there 12 times. I know where  
20 the site is.

21 Q. Did you check the corner markers?

22 A. Yeah. I know -- Yeah. Yes.

23 Q. You did check them when you took this picture?

24 And I'm looking at 96.

25 A. No. This picture -- what was done here, this was

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1 taken from a GPS location that we know.

2 Q. So you didn't get out there by GPS. My question  
3 was how did you get out there the day you took this picture?

4 A. A truck.

5 Q. Jungo Road?

6 A. Yes.

7 Q. And it was passable?

8 A. Jungo Road, yes.

9 Q. You referred to GPS coordinates. Is that what  
10 you referred to on Exhibit 97?

11 A. I'm not quite sure what Exhibit 97 is. Yeah,  
12 right. This is actually Mr. Schlarb's.

13 Q. Oh, this is not where you took your picture?

14 A. Yes, it is. This is where he took his picture

reporters\_record\_day\_one052112.txt  
15 and this is where I took mine.  
16 Q. And who plotted the GPS?  
17 A. Mr. Schlarb.  
18 Q. Did he take the GPS sighting at the location?  
19 A. He took it where it says photo point, yes.  
20 Q. Well, who pointed it on this map?  
21 A. He did.  
22 Q. How?  
23 A. He'll be testifying. You can ask him.  
24 Q. And it appears to me that this photograph would  
25 have been taken on the northeast corner of the property. Am

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1 I accurate? Right across the railroad tracks from the  
2 northeast corner?  
3 A. Right.  
4 Q. And that would have been a picture that is  
5 referenced as Exhibit 96, right, that you took?  
6 A. I'm waiting to see Exhibit 96 again. Yeah, yes.  
7 Q. On Exhibit 96 the question was asked to whether  
8 you can tell how deep it is. I see that there are it looks  
9 like fence lines in the water. Do you see those fence posts?  
10 It's hard to see on the picture, but if you look at the  
11 picture in the book you can see them.  
12 A. Fence posts?  
13 Q. Yes.  
14 A. On the north side of the track?  
15 Q. Yes.

16 A. No, sir.  
17 Q. South side of the track, I mean. Where the water  
18 is.  
19 A. Yeah, there are fence posts.  
20 Q. And they're clearly visible?  
21 A. Yes.  
22 Q. Now, it appears that from your pictures that the  
23 railroad is acting as a berm and the water is collecting  
24 against it and is flooding out backwards to the south. Is  
25 that a fair characterization?

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1 A. Yes.  
2 Q. If that berm for the railroad were moved a  
3 thousand feet to the south what would happen to the water?  
4 A. It would be backed up a thousand feet.  
5 MR. DOLAN: I just wanted to comment that I'm not  
6 objecting to my witness' testimony in that regard as being an  
7 expert in water flow.  
8 CHAIRMAN GANS: I understand.  
9 Q. (By Mr. Frankovich) when did you locate the  
10 corner section on the Jungo site?  
11 A. I don't know. I didn't. Mr. Schlarb did. Oh,  
12 the corner sections?  
13 Q. The corner post to identify the property.  
14 A. Oh, I did that in, let me think, some time during  
15 the summer of 2010.  
16 Q. As a matter of fact, on one of your photos which

17 is Exhibit 103, I think you referenced a post. Can we look  
18 at 103?

19 A. Yes.

20 Q. This is when you were taking the soil sample that  
21 you referenced?

22 A. Yes.

23 Q. Is that a picture of you?

24 A. No. That's Mr. Schlarb.

25 Q. And you indicate that the fence post visible and

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1 the middle background is the northeast corner of the marker  
2 of the proposed site?

3 A. Yes.

4 Q. I don't see in here the railroad track. Where is  
5 the railroad track?

6 A. The railroad tracks are behind the photographer.

7 Q. So the northeast corner of the property is quite  
8 a distance from the railroad track?

9 A. No. It's not far at all.

10 Q. Well, this picture makes it look far if they're  
11 behind the photographer. So you were on the south side of  
12 the track?

13 A. I'm on the south side of the track.

14 Q. I thought you said you didn't go on the Jungo  
15 property?

16 A. I didn't go on Jungo property.

17 Q. But you went to the south side of the tracks?

18

A. Right.

19

Q. And in your other pictures did you have any time when you could have observed this corner post?

21

MR. DOLAN: Counsel, what corner post and what exhibit are you looking at?

23

MR. FRANKOVICH: I'm looking at Exhibit 103 where he says there's a fence post is the northeast corner marker of the proposed site.

24

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MR. DOLAN: Is that admitted in to evidence?

2

CHAIRMAN GANS: No, none of this has yet.

3

Q. (By Mr. Frankovich) And how did you get to the west side -- I mean the south side of the tracks?

5

A. I walked over the tracks.

6

Q. From Jungo Road?

7

A. From Jungo Road.

8

Q. When you did your experiment, when you dug up the soil and took it to town, did you put any controlled conditions on it?

10

11

A. Put it in a one-gallon plastic freezer bag and labeled it.

12

13

Q. Put it in the garage? Indoors? Outdoors?

14

A. It was in a garage.

15

Q. So the temperature would have been different than at the site?

16

17

A. The temperature would have been different.

18

Q. What about the lighting?

19 A. The lighting would have been different.

20 Q. Did you test the water that you put in before you  
21 put it in to see if it was pure water?

22 A. No. But I notice pure water is my well water.  
23 I've had it tested.

24 Q. So it was your well even though you were at  
25 somebody else's house?

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1 A. Right.

2 Q. So you pumped it from your well and brought it  
3 over to Mr. Schlarb's house?

4 A. I brought it over in five-gallon jugs. It wasn't  
5 Mr. Schlarb's house?

6 Q. Well, whose house was it?

7 A. It was Tom and Marlene Brissendon's house.

8 Q. Do you know where the low point in the basin out  
9 there is?

10 A. The lowest point?

11 Q. Yes.

12 A. Is on the north side of the tracks.

13 Q. Where is the lowest point on the south side, if  
14 you know?

15 A. I don't know.

16 Q. You mentioned a proposed road on the south side  
17 of Jungo to be the railroad tracks to be constructed by Jungo  
18 on this project.

19 A. That's what their plan shows.

20 Q. And that plan shows it to be an all-weather road,  
21 doesn't it?

22 A. Yes, it does.

23 Q. And all-weather means all-weather, doesn't it?

24 A. Yes, it does. And it also says two-foot raised.

25 Q. And if two-foot raised is not adequate for

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1 all-weather, they can make it three foot?

2 A. Well, the railroad made it six foot so they could  
3 probably do that too.

4 Q. Do you think that Jungo has any incentive to make  
5 their roads out there impassable so that nobody can get to  
6 their site?

7 A. To make the roads impassable?

8 Q. Right.

9 A. I don't think they're aware of the degree of  
10 flooding out there. I think they've been out there three  
11 times in fair weather.

12 Q. Do you know what the height of the proposed berm  
13 around the site is as compared to the height of the railroad  
14 track?

15 A. The railroad tracks are five to six feet and the  
16 proposed berm is four feet.

17 Q. Are you sure about that in the final design?

18 A. That's what I read in the report and design.

19 Q. What about elevations, the elevation of the top  
20 of the berm versus the elevation of the railroad track?

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21

A. I don't know.

22

23 Q. You indicated that because of this all-weather  
24 road they couldn't get equipment out there. Are you aware  
25 that under the plan of operation the equipment stays on the  
site, it doesn't come back and forth every day?

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1 A. Yeah. But the people that run the equipment have  
2 to come back and forth.

3 Q. But they have a road for the employees?

4 A. Excuse me.

5 Q. A road for the employees, not for the equipment?

6 A. Well, the equipment has to be repaired. It has  
7 to be brought in and taken out. It has to be serviced. The  
8 equipment is not just, you know -- It's going to break down.  
9 It's going to have to be replaced. The equipment is going to  
10 be going up and down that road.

11 Q. You're sure of that?

12 A. No.

13 MR. FRANKOVICH: I don't have any further  
14 questions.

15 CHAIRMAN GANS: The panel can ask questions.

16 MR. DOLAN: Redirect?

17 CHAIRMAN GANS: Pardon.

18 MR. DOLAN: May I redirect in light of some of  
19 the questions? Thank you. I move the admission of 96 and  
20 103.

21 MR. FRANKOVICH: We object to 96, even though I

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22 asked him questions about it, on the grounds that it was not  
23 submitted to NDEP. It shows it was taken in March of 2012  
24 after the NDEP had completed its review.

25 CHAIRMAN GANS: That was going to be one of my

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1 questions, Mr. Cook. I'm confused now of which photo was  
2 submitted to NDEP, yours or Mr. Schultz's(sic) and what year?  
3 I'm not sure now.

4 THE WITNESS: The February 19th 2010 picture was  
5 submitted to NDEP.

6 CHAIRMAN GANS: And that was taken by?

7 THE WITNESS: That was taken by Charles Schlarb.

8 CHAIRMAN GANS: That was the one submitted to  
9 NDEP?

10 THE WITNESS: Right.

11 CHAIRMAN GANS: And yours was taken in '06?

12 THE WITNESS: No.

13 CHAIRMAN GANS: '12?

14 THE WITNESS: Mine was taken in March of this  
15 year.

16 CHAIRMAN GANS: And that was not submitted?

17 THE WITNESS: That was not submitted because it  
18 was after the closure of the public comment period.

19 CHAIRMAN GANS: Okay. Now, back to your  
20 objection, Mr. Frankovich.

21 MR. FRANKOVICH: I objected to 96 because that  
22 was the one that was not noticed -- 96. We have an objection

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23 pending on 103 because -- We didn't object initially because  
24 I thought Mr. Cook took the picture. Now I find out he  
25 didn't take the picture, so I didn't get it substantiated.

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1 MR. DOLAN: I think you're talking about Number  
2 101. Excuse me. 99, Counsel.

3 MS. JOSEPH: Yes.

4 MR. FRANKOVICH: You're right. 99. 99 I object  
5 to. This was taken in 2010 by somebody else and this witness  
6 wasn't there, so I object to both of those.

7 CHAIRMAN GANS: Okay. We're going to hold the  
8 one that was not taken by him. I'm going to sustain the  
9 objection on that one. And you can bring Mr. Schultz up here  
10 and he can testify on his own photo.

11 MR. DOLAN: Your Honor, it's Mr. Schlarb,  
12 s-c-h-l-a-r-b.

13 CHAIRMAN GANS: Mr. Schlarb. You'll have him up  
14 here and he can testify on that then?

15 MR. DOLAN: Correct.

16 CHAIRMAN GANS: I will sustain the motion on that  
17 one. The other one is the one you took and it was submitted  
18 to NDEP?

19 THE WITNESS: No.

20 CHAIRMAN GANS: So we're saying no pictures?

21 MR. FRANKOVICH: 96 and 99, yes, no pictures, I  
22 guess. We object.

23 MR. DOLAN: Also 103 was discussed. I believe I

reporters\_record\_day\_one052112.txt  
24 heard the testimony this is a picture taken by Mr. Cook of  
25 Mr. Schlarb.

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1 CHAIRMAN GANS: That was not entered either and  
2 that is not part of this objection at this point. It's not  
3 in there.

4 MR. DOLAN: So with respect to the previous  
5 admissions, your Honor, just for my records, your Honor, we  
6 have number -- are any of the photos admitted at this point?

7 MS. REYNOLDS: You had offered and admitted 99  
8 and 101 and that was it. But I understood that one of those  
9 two he didn't take, which you're going to have to submit.

10 MR. DOLAN: With Mr. Schlarb.

11 MS. REYNOLDS: And which photo was that?

12 MS. MAYO: 99.

13 MS. JOSEPH: 99.

14 MR. DOLAN: That's 99.

15 MS. JOSEPH: So the only one now is 101 that has  
16 been admitted.

17 MS. REYNOLDS: You've referred to several other  
18 exhibits but you haven't moved for their admission.

19 CHAIRMAN GANS: So we have 101 in evidence right  
20 now?

21 MS. REYNOLDS: Right.

22 CHAIRMAN GANS: Accepted.

23 MR. DOLAN: Just for purposes of my -- 102, this  
24 is Exhibit 102 -- this is -- that's 101 is not in.

MS. MAYO: Yes, it's in.

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1 MR. DOLAN: 101 is in?

2 MS. MAYO: Yes, that's the only one we have in.

3 CHAIRMAN GANS: It's the only one we have in  
4 that's been accepted.

5 MR. DOLAN: You were asked, I believe, to respond  
6 to a question about the competency or incompetency of the  
7 NDEP staff and/or --

8 CHAIRMAN GANS: well, wait a minute. We haven't  
9 gotten these photos ironed out yet. Before we go on, I want  
10 to make sure have we answered you yet?

11 MR. FRANKOVICH: well, it's my understanding that  
12 96 has been objected to and sustained because that was not  
13 presented to NDEP?

14 CHAIRMAN GANS: Correct.

15 MR. FRANKOVICH: 99 we're waiting to hear from  
16 Mr. Schlarb on that?

17 CHAIRMAN GANS: Correct.

18 MR. FRANKOVICH: And 101 went in?

19 CHAIRMAN GANS: That's correct. Okay. So I just  
20 want to make sure we're straight with you.

21 Okay, Mr. Dolan, go ahead.

22 MR. DOLAN: we'll stay on the photos for a second  
23 The photo number 103 I would ask that it be admitted in to  
24 evidence. My understanding of the colloquy between counsel  
25 and Mr. Cook is that this was a picture taken by Mr. Cook of

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1 Mr. Schlarb at the location. The only foundational question  
2 that was not asked is that a true and accurate depiction.

3 MR. FRANKOVICH: I have no objection to that.

4 CHAIRMAN GANS: State?

5 MS. JOSEPH: No objection.

6 REDIRECT EXAMINATION

7 By Mr. Dolan:

8 Q. Okay. Thank you. So is it fair to say that you  
9 and Mr. Schlarb conducted your own personal inspection of the  
10 proposed landfill site?

11 A. That's right.

12 Q. And your credentials or lack thereof has been  
13 explored by counsel for the other side; right?

14 A. Yes, yes.

15 Q. So you went out there as sort of a regular  
16 person, a citizen; right?

17 A. Yes.

18 Q. And you were able to make observations of the  
19 proposed site using your own senses?

20 A. Yes.

21 Q. Your own eyes, you put your hands in to the soil;  
22 right?

23 A. Yes.

24 Q. Okay. Now, you were also asked if you  
25 familiarized yourself with the reported design and the plan

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1 of operation that was submitted by the permittee; right?

2 A. Yes.

3 Q. And I believe you were asked to comment on the  
4 competence or lack thereof of the NDEP staff. Do you recall  
5 that line of questioning?

6 A. Yes.

7 Q. Okay. Where do you believe the staff erred?

8 A. It's not what I believe. It's what G. Fred Lee  
9 believes. I'm admittedly not an expert on landfills but he  
10 is. And he -- His report is scathing condemnation of the  
11 whole project.

12 MR. FRANKOVICH: I'm going to raise objections to  
13 G. Fred Lee's report.

14 MS. JOSEPH: And I'm also going to object to this  
15 witness' testimony of G. Fred Lee's report, notwithstanding  
16 that G. Fred Lee has agreed to allow him to use it. This  
17 witness is not an expert and isn't qualified to give an  
18 opinion about what's contained in that report. And we can  
19 all read it for ourselves.

20 CHAIRMAN GANS: Sustained. He can have an  
21 opinion. But you're certainly not an expert.

22 THE WITNESS: I'm not an expert.

23 MR. DOLAN: I have no further questions.

24 CHAIRMAN GANS: Back to the panel again. Any  
25 questions from the panel of the witness? I have a couple --

1 well, at least one question. Mr. Cook, you need to tell me  
2 what is the significance of the fairy shrimp. I missed it.

3 THE WITNESS: The significance of the fairy  
4 shrimp is it took ten days to hatch these out under  
5 controlled conditions. They have at least a 14-day life  
6 cycle. For the fairy shrimp to reproduce and for there to be  
7 fairy shrimp prevalent in that area, which there is, would  
8 take inundation for a period of two weeks for them to hatch  
9 out and lay eggs and live for four days and die. So it's a  
10 continuing cycle.

11 CHAIRMAN GANS: So what you're saying is you know  
12 the water was there for a couple weeks?

13 THE WITNESS: Yes.

14 CHAIRMAN GANS: Okay. I got that. That's the  
15 only question I have.

16 THE WITNESS: Okay.

17 CHAIRMAN GANS: The witness is dismissed.

18 I want to comment on a couple things. I want to  
19 comment. I would like to take a quick bladder break and then  
20 come right back.

21 But I wanted to say to counsel, I want Mr. Cook  
22 and Mr. Hannum to be able to testify. It's their appeal.  
23 And so I'm going to be a lot more patient with them than I will  
24 with some of the other witnesses. We're taking way too long.  
25 We're going to be here for two weeks. We're not going to be

1 here for two days. So I'm going to admonish counsel and say,  
2 look, if you've got witnesses, great, but get on with it.  
3 Let's keep this thing rolling. We're moving awful slowly  
4 right now.

5 So when we come back we'll take your next witness  
6 and we want to keep going. And again, I will be a little  
7 more lenient with your two. But after that, no. Okay. I  
8 appreciate it.

9 Let's take a ten minute bladder break and come  
10 back and take the next witness and then we'll break after  
11 that for lunch.

12 (Recess was taken)

13 MR. DOLAN: Chuck Schlarb.

14 (Witness was sworn in)

15

16 CHARLES SCHLARB

17 Called as a witness on behalf of the  
18 Appellants, having been first duly sworn,  
19 was examined and testified as follows:

20

21 DIRECT EXAMINATION

22 By Mr. Dolan:

23 Q. Please state your name and spell the first and  
24 last name for the record.

25 A. Charles Schlarb, S-c-h-l-a-r-b is my last name.

1 Charles is my first.

2 Q. And where do you reside?

3 A. In Winnemucca.

4 Q. What is your job or occupation?

5 A. I'm retired.

6 Q. And you're retired from what?

7 A. The federal government.

8 Q. Which agencies of the federal government were you  
9 employed with?

10 A. Forest Service for 24 years and the BLM for six.

11 Q. Okay. Let's get some of these photos out of the  
12 way. 96, Exhibit 96 has not yet been admitted. Do you see  
13 that?

14 A. Yes.

15 Q. Did you take that photo? Were you there when it  
16 was taken?

17 A. I was there when it was taken.

18 Q. And when was that photo taken?

19 A. March -- Oh, it says right there. March 19th  
20 2012.

21 Q. Is that a true and accurate depiction --

22 A. Yes.

23 MS. LEONARD: I'm going to object because he  
24 hadn't finished asking the question as to what it was a true  
25 and accurate depiction of.

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CHAIRMAN GANS: Sustained.

Q. (By Mr. Dolan) Showing you Exhibit 99, are you familiar with that photo?

A. Yes.

Q. How so?

A. I took that photo.

Q. And when did you take that photo?

A. I believe it was February of 2010.

Q. And is that a true and accurate depiction of what you saw on February of 2010?

A. Yes.

Q. And what is that a picture of?

A. That is a picture of the landfill site from just beyond the railroad.

MR. DOLAN: Move its admission.

MS. LEONARD: We would object. Are you just talking about Exhibit 99 right now?

MR. DOLAN: Yes, ma'am.

MS. LEONARD: He hasn't identified how he knew it was the landfill site.

Q. (By Mr. Dolan) You -- Let me ask you this question. Do you know where the landfill site is?

A. Yes.

Q. Okay. Now, let me show you Exhibit 97. Let me show you Exhibit 97. Do you see that document, Exhibit 97?

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2 A. Yes.

3 Q. Now, is the landfill site marked on document 97?

4 A. It's indicated by the pale red color.

5 Q. So is that the pale -- were you speaking about  
6 this?

7 A. Yes.

8 Q. Okay. So relatively speaking, it's in the center  
9 of Exhibit Number 97, the landfill site?

10 A. It's the site that says section seven there. I  
11 think the pink, this site right here.

12 Q. Where does it say section seven?

13 A. It says seven right there.

14 Q. Right in the middle?

15 A. Yeah.

16 Q. Okay. It doesn't clearly --

17 A. That's not very clear there but it's clear here.

18 Q. Okay. Now, relative to the photo that we were  
19 just talking about, Exhibit 99, can you point -- we don't  
20 have it. Can you stand up and point, it's indicated --

21 A. Where I took the photo from?

22 Q. Where you took the photo from.

23 A. Right there where it says photo point, the green  
24 dot.

25 Q. So the green dot that is reflected in Exhibit 97

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1 is the photo point for the photo that was taken in Exhibit  
2 96?

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3 A. Not that one.

4 MS. MAYO: 99.

5 Q. (By Mr. Dolan) Number 99, is that what you're  
6 saying?

7 A. Yes.

8 Q. So is Exhibit 99 photo that's reflected, that was  
9 taken from the green point that's reflected in Exhibit 96?  
10 97, Excuse me. Is that what your testimony is?

11 A. The photo that's on the screen right now was  
12 taken from that green point, that photo point that's  
13 indicated on there.

14 CHAIRMAN GANS: By you?

15 THE WITNESS: Yes.

16 MR. DOLAN: Move its admission.

17 MS. LEONARD: I would still object that he hasn't  
18 established how he knew where he was. I mean you go out  
19 there. There's no landmarks. He hasn't established that he  
20 knows he's at the site.

21 THE WITNESS: Shall I reply?

22 MR. DOLAN: No. Do we need to go through that?  
23 I would be happy to.

24 CHAIRMAN GANS: Yes.

25 Q. (By Mr. Dolan) Okay. Now, what is the GPS, this

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1 global positioning satellite?

2 A. It's a system that was first developed by the  
3 military for communication. Now, it's used extensively by

4 recreational people and people that even have GPS in their  
5 cars telling where they are.

6 Q. Did you utilize the GPS system in connection with  
7 locating the landfill site?

8 A. Yes.

9 Q. Describe for the Commission your knowledge of the  
10 location of the section of land where the landfill site  
11 exists.

12 A. I'm sorry. The location of the section you want?

13 Q. Right.

14 A. Well, I know where the corners are.

15 Q. Well, tell them about that.

16 A. Okay. I know where the corners are because I've  
17 been -- I plotted them on GIS and then gathered the  
18 coordinates and used the GPS unit out there to find them.

19 Q. Did you notice anything unusual about one of the  
20 section's corners like where it exists relative to the  
21 railroad?

22 A. Are you talking about the northwest corner? The  
23 actual corner position for section seven falls in the  
24 railroad tracks, and so that position is marked by reference  
25 monuments. And the property corners when it was subdivided

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1 are to the south of the railroad tracks. So there's two  
2 northeast corners or northwest corners for their property.  
3 Instead of having four corners in a section, you've got five.

4 Q. Now, is the landfill site on the north side of  
Page 98

5 the railroad tracks or the south side of the railroad tracks?

6 A. The south side.

7 Q. How many times have you been out to this location  
8 that you consider to be the landfill site?

9 A. You mean specifically going there or going by on  
10 the road or --

11 Q. How many times have you been out to the landfill  
12 site in your lifetime?

13 A. In my lifetime? Dozens I would say.

14 Q. How many times have you been to this landfill  
15 site with specific reference to the issue about the landfill  
16 itself?

17 A. 20 maybe.

18 Q. Okay.

19 A. 20.

20 CHAIRMAN GANS: I'm convinced he knows where it  
21 is. I'm going to allow the exhibit.

22 MR. DOLAN: Thank you.

23 CHAIRMAN GANS: And by the way, we've been  
24 referring to this other exhibit, Mr. Dolan, many times. Is  
25 this something you are going to let in? There's one right

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1 there in front of you right now. 97, both counsels have  
2 referred to this.

3 MR. DOLAN: Yes. It's going to -- I'll move 97  
4 be admitted in to evidence as a document created by  
5 Mr. Schlarb who assisted with testimony.

6 CHAIRMAN GANS: Counsel?

7 MS. LEONARD: No objection.

8 MS. JOSEPH: No objection.

9 CHAIRMAN GANS: Okay. It's admitted.

10 Q. (By Mr. Dolan) Now, we have a power point  
11 presentation that I think will be very brief to assist with  
12 the testimony. Can we go to Exhibit 1, Ms. Mayo.

13 In connection with your testimony today, Mr.  
14 Schlarb, have you created a power point presentation?

15 A. Have I created the power point presentation?

16 Q. Have you participated in the creation of a power  
17 point presentation, Mr. Schlarb?

18 A. Yes, yes.

19 Q. Now, in connection with -- Mr. Schlarb, in  
20 connection with the power point presentation have you  
21 familiarized yourself with the documents created by Recology  
22 and/or Golder and Associates in connection with their  
23 application for the landfill permit?

24 A. Yes.

25 Q. Now, Exhibit 1, can you tell -- can you see that?

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1 MS. MAYO: Slide one.

2 MR. DOLAN: Slide one, can you tell the  
3 Commission what slide one is, Mr. Schlarb?

4 MS. LEONARD: Mr. Chair, can I just lodge an  
5 objection? This is the first time that we've seen this. So  
6 if Mr. Dolan can refer to the actual exhibits in the record.

7 MS. MAYO: Sure. This particular diagram is in  
8 Exhibit 51.

9 CHAIRMAN GANS: Yeah. I've seen it before.

10 MS. JOSEPH: I just wanted the numbers.

11 MR. DOLAN: Mr. Schlarb, can you tell the  
12 Commission what slide one is?

13 THE WITNESS: It's the cross-section of landfill  
14 detailing the depth to groundwater and the soil.

15 MR. DOLAN: Are you okay?

16 THE WITNESS: Yeah.

17 CHAIRMAN GANS: Hold on just a second. we don't  
18 have it. Off the record.

19 (Discussion was held off the record)

20 CHAIRMAN GANS: Okay. we have it.

21 Q. (By Mr. Dolan) Okay. So with respect to slide  
22 one, Mr. Schlarb, can you tell the Commission what that  
23 reflects again please?

24 A. It's the cross-section of the landfill site or  
25 proposed landfill site.

□

1 Q. Now, why did you consider that to be significant  
2 to you, Mr. Schlarb?

3 A. Primarily because I had trouble reading it at  
4 first.

5 Q. And any other reason?

6 A. well, it did detail the depth to groundwater.

7 Q. Now, did you -- Let's go to slide two. what is  
Page 101

8 slide two, Mr. Schlarb?

9 A. Well, there I did my best to correct the drawing  
10 so that it would reflect the actual -- so the labels would  
11 reflect the true positions of the different items listed  
12 there.

13 Q. Okay. Do we have slide two?

14 MS. MAYO: Yes. That's Exhibit 111.

15 MS. LEONARD: Mr. Chair, I would just object to  
16 his testimony on the basis that he's not qualified to say  
17 what the true position of the groundwater is and his  
18 interlineations in to this diagram that he just described.

19 CHAIRMAN GANS: Have you established Mr. Schlarb  
20 as an expert to be able to do this or is this just another  
21 opinion? I agree with counsel.

22 MR. DOLAN: I'll try to establish some  
23 foundation.

24 CHAIRMAN GANS: Okay.

25 Q. (By Mr. Dolan) Okay. Now, Mr. Schlarb, we're

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1 looking at slide two. How did slide two, the interlineations  
2 on slide two, what was the bases for the interlineations on  
3 slide two?

4 A. Well, I tried to correct the drawing so that --

5 Q. What was the bases for your thought that slide  
6 one needed correction?

7 A. Oh, because I've done drawings like that myself.

8 Q. Tell --

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9 A. I used to be a civil engineering technician and  
10 so I've made drawings like this.

11 Q. And what type of drawing is this that you're  
12 referring to?

13 A. They're technical drawings, civil engineering  
14 technical drawings.

15 Q. And you've done this in the past as a civil  
16 engineer in connection with what type of projects?

17 A. Road projects, trail projects, pipeline projects,  
18 campground projects. I'm familiar with this type of drawing.

19 Q. Is that from your work experience with the  
20 federal government?

21 A. Yes.

22 Q. Which agency?

23 A. Both the Forest Service the BLM.

24 Q. And in connection with your service with those  
25 agencies you became familiar with these types of drawings?

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1 A. Yes.

2 Q. And with respect to slide one, is it fair to say  
3 that you supplemented slide one to create slide two?

4 A. Yes.

5 Q. Okay. What information did you use to create the  
6 new information found on slide one? Excuse me. Found on  
7 slide two? Where did you get that information from?

8 A. Well, the information was there. It just wasn't  
9 delineated properly. In other words, there was no -- the

10 arrows weren't pointing to where they were supposed to be  
11 pointing. Everything on the screen is right. It's just that  
12 if you read the top drawing you wouldn't know what was going  
13 on, but the bottom drawing I've corrected so that the arrow  
14 would point to where they're supposed to be pointing.

15 Q. So the net effect of slide one and slide two is  
16 to tell the Commission what?

17 A. That the top drawing was wrong.

18 Q. Okay. And the second slide tells the --

19 MS. LEONARD: I'd just like to interject an  
20 objection that I still don't think he has established any  
21 expertise to know whether the top drawing is incorrect just  
22 simply by having done technical drawings. And also I believe  
23 he testified he was a civil engineering technician. He  
24 hasn't established that he is an engineer or hasn't  
25 established any type of certification and he hasn't

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1 established how he would know that the top drawing was not  
2 correct.

3 CHAIRMAN GANS: Mr. Dolan, I would agree with  
4 that point.

5 MR. DOLAN: He's not a civil engineer.

6 CHAIRMAN GANS: He's not a civil engineer?

7 MR. DOLAN: No, your Honor.

8 CHAIRMAN GANS: Okay.

9 Q. (By Mr. Dolan) Mr. Schlarb, does slide two and  
10 slide one both reflect the location of the aquifer relative

11 to the surface of the land?

12 A. Yes, sir.

13 Q. And what does -- what is the number of feet  
14 distance between the surface and the aquifer?

15 A. I think it's 29 feet. It is 29 feet.

16 Q. Is that 29 feet from the base of the landfill to  
17 the highest point of the aquifer?

18 A. It's 29 feet from the bottom of the landfill to  
19 the top.

20 MS. LEONARD: Mr. Chair, we don't -- there's no  
21 dispute as to that number. If all of this testimony is  
22 trying to establish is that 29 feet, then there's no  
23 objection with regard to that and maybe we can cut off some  
24 of this testimony. But I still have the same objection that  
25 he's not qualified to interpret these drawings for the

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1 commissioners.

2 CHAIRMAN GANS: I understand. And I agree with  
3 that also. Was that your point, Mr. Dolan, 29 feet?

4 MR. DOLAN: Yes.

5 CHAIRMAN GANS: Okay. Well, that's been  
6 accepted.

7 MR. DOLAN: Okay. Thank you. Number three,  
8 please.

9 MS. MAYO: Number three is Exhibit 67.

10 MR. DOLAN: Slide three is Exhibit 67 in the  
11 joint?

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12 MS. MAYO: Correct.

13 Q. (By Mr. Dolan) Now, what is the Berger plate 1B  
14 aquifer depth? Is that from -- what is that document from,  
15 Mr. Schlarb?

16 A. It's from the 1995 David L. Berger study, Desert  
17 Valley.

18 Q. Was that referenced in the documents submitted by  
19 Jungo Recology to the NDEP staff? Was that report  
20 referenced?

21 A. The Berger report was referenced, yes.

22 Q. Now, what does slide three reflect?

23 A. It reflects the depth of the aquifer in Desert  
24 Valley.

25 Q. And how so? What does it show?

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□

1 A. It shows that the aquifer in the southern portion  
2 of the valley is some 7,000 feet thick.

3 Q. Thick?

4 A. Yeah. Or deep.

5 MS. LEONARD: Excuse me. I would object to again  
6 he hasn't established any expertise to interpret something on  
7 behalf of the commissioners and also as to the relevance of  
8 this testimony.

9 CHAIRMAN GANS: Maybe if we can, Mr. Dolan, we  
10 can get right to the relevance. Maybe the relevance will be  
11 accepted like it was the last time. Otherwise, they're still  
12 correct about his expertise.

13 MR. DOLAN: Right. Moving on to -- we'll go  
14 through this as briefly as we can. In total -- Let me move  
15 to the Exhibit Number 9, Counsel.

16 MS. MAYO: Slide nine.

17 MR. DOLAN: Excuse me.

18 MS. MAYO: The slope.

19 MS. JOSEPH: Is that Exhibit 59?

20 MS. MAYO: I think so.

21 CHAIRMAN GANS: What is it?

22 MS. JOSEPH: She's checking.

23 MS. MAYO: Let me see. Is it 79?

24 CHAIRMAN GANS: 79?

25 MS. MAYO: I think.

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1 MR. DOLAN: No, it's not.

2 In any event, with respect to slide nine, did you  
3 become concerned with the slope of the Desert valley? And  
4 what is the slope of Desert valley?

5 MS. LEONARD: Objection. Relevance. Same thing.  
6 He's not qualified to testify.

7 Q. (By Mr. Dolan) Pondering. With respect to the  
8 measurement -- I'll rephrase. With respect to the slope of  
9 Desert valley, as I talk to you about the slope of Desert  
10 valley, does that relate to the level -- what does it relate  
11 to, the slope of Desert Valley?

12 A. Well, it's all fairly flat.

13 MS. LEONARD: I would object.

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14 Q. (By Mr. Dolan) The desert is fairly flat, is  
15 that your testimony?

16 A. Yeah.

17 Q. And you observed this personally?

18 A. Yes.

19 Q. Did you perform any studies to determine the  
20 slope of Desert Valley in and around the landfill site?

21 A. Yes, I did a slope analysis.

22 Q. Okay. And what did you find?

23 A. I found that --

24 MS. LEONARD: I just would like to lodge a  
25 continuing objection to his lack of expertise. It hasn't

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1 been established and also the relevance of this testimony.

2 CHAIRMAN GANS: Okay. we'll acknowledge that.  
3 we'll let the gentleman go ahead and testify. But I think  
4 the panel has to take that in to consideration, the expertise  
5 of this gentleman, witness has not been clarified to us at  
6 all.

7 Q. (By Mr. Dolan) Now, you said you measured the  
8 slope; right?

9 A. Yes.

10 Q. What did you do to measure the slope?

11 A. I used a digital elevation model from the USGS.

12 Q. Why did you use that model?

13 A. It was the one that was most accurate and readily  
14 available.

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15 Q. And when did you do this measurement?

16 A. I'm trying to think. Last year.

17 Q. And what did you find?

18 A. That the valley itself, the valley floor itself  
19 is between zero and one percent for most of the valley.

20 Q. And does that mean in simple terms that it's a  
21 flat valley?

22 A. Yeah. One percent can either drop or raise one  
23 foot and a hundred foot. So that's pretty flat.

24 Q. Okay. Now, this Berger report that you talk  
25 about that was referenced in the Recology submission to NDEP,

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1 are you sure about that?

2 A. The Berger report was referenced by Recology,  
3 yes.

4 Q. That's the question. Are you sure about that?

5 A. Yes.

6 Q. Okay. Did you find errors in the way the Berger  
7 report -- Did the Berger report take issue with some of the  
8 factual representations made by Recology to NDEP?

9 A. Yes.

10 MS. LEONARD: I would object. The Berger report  
11 pre-dated the submission to NDEP so it couldn't take -- it  
12 couldn't have contradicted what was submitted to NDEP.

13 MR. DOLAN: Okay. I'll rephrase.

14 CHAIRMAN GANS: Sustained.

15 Q. (By Mr. Dolan) Did you find that the Recology  
Page 109

16 documents contradicted some of the factual statements made in  
17 the Berger report?

18 A. Yes.

19 Q. Okay. Now, showing slide six.

20 MS. LEONARD: And I just would lodge a continuing  
21 objection as to not only his competency but now he is  
22 testifying as to the content of a document that the  
23 commissioners can read themselves. It's not for him to  
24 interpret it for them.

25 CHAIRMAN GANS: So noted.

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1 MR. DOLAN: So what's the significance of the  
2 underlying in slide six, Mr. Schlarb?

3 CHAIRMAN GANS: And this is exhibit?

4 MS. MAYO: This is Exhibit 62, the Berger report,  
5 page 75, I believe. Page eight.

6 MR. DOLAN: Exhibit what?

7 MS. MAYO: 62.

8 MEMBER RICHARDSON: which page number was that  
9 again?

10 MS. MAYO: I believe it's page eight.

11 Q. (By Mr. Dolan) Mr. Schlarb, did you create slide  
12 six? Did you put the lines underneath the language in slide  
13 six, Mr. Schlarb?

14 A. I don't think I did. I think -- It's --

15 Q. Can you read that, Mr. Schlarb?

16 A. It says 7,000 feet thick in the south central  
Page 110

17 part of the valley.

18 MS. LEONARD: Objection. Relevance.

19 CHAIRMAN GANS: Sustained.

20 MR. DOLAN: Okay. Now, did you compare and  
21 contrast -- well, let me ask you this. How did Recology  
22 and/or its expert, Golder and Associates, describe the soil  
23 from a lithographical standpoint?

24 MS. LEONARD: Objection. Vague and ambiguous.

25 CHAIRMAN GANS: Sustained.

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1 MR. DOLAN: Did they describe the soil at all?

2 MS. LEONARD: Object. Same objection. And he's  
3 not qualified to testify as to what Golder did.

4 MR. DOLAN: Well, let's --

5 CHAIRMAN GANS: Continue.

6 Q. (By Mr. Dolan) We're talking about the Golder  
7 design. Did they describe the soil?

8 A. As layered, yes.

9 Q. And did the description differ from the Berger  
10 description? And if so, how?

11 A. It differed in that Berger describes it as  
12 heterogeneous and Golder describes it in their drawings as  
13 homogenous, in other words layered.

14 Q. And what's the significance of that?

15 A. Well, heterogeneous means that it's like a marble  
16 cake. It's all mixed up instead of being layered like a  
17 layer cake.

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18 Q. And was the soil from what you were able to  
19 gather was that a factor in the design of the landfill?

20 A. Yes.

21 MS. LEONARD: Objection. Vague and ambiguous.

22 CHAIRMAN GANS: Sustained.

23 MR. DOLAN: Now, let's see Exhibit, slide four or  
24 five?

25 MS. MAYO: Four. Exhibit 59.

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1 Q. (By Mr. Dolan) Slide four is Exhibit 59.  
2 Mr. Schlarb, would you take a look at slide four. Is that --  
3 what is that slide, Mr. Schlarb?

4 A. That's a cross-section of Golder's showing the  
5 layered soil.

6 Q. Okay. And the layered soil there, is that what  
7 you're using -- Do you use the word heterogeneous to describe  
8 that soil as depicted in that exhibit?

9 A. No. That's homogenous there.

10 Q. So that's homogenous at different layers; right?  
11 Homogenous; correct?

12 A. Right.

13 Q. All right. Next slide. What is slide five? Is  
14 that from the Golder design?

15 A. Yeah. It's a section AA. It shows the --

16 Q. AA as in apple apple?

17 A. Right.

18 Q. And what exhibit would that be?

19

MS. MAYO: Exhibit 38.

20

21

MR. DOLAN: Exhibit 38. Now, Exhibit 38 -- Now, Exhibit 38 -- Ms. Mayo, Exhibit 38 is not --

22

23

MS. MAYO: It's part of 38. It's the drawings in 38. It's the sixth one in.

24

MEMBER RICHARDSON: what figure number is that?

25

CHAIRMAN GANS: AA.

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1

MEMBER LANDRETH: There it is.

2

MS. MAYO: 35 AA.

3

4

MR. DOLAN: So we're all on the same page, it appears. This exhibit, this slide rather, slide five, Mr. Schlarb, what do you see in slide five?

6

7

THE WITNESS: A depiction of the lithography of the site.

8

9

MS. LEONARD: I just want to make sure my continuing objection is noted as to his competency.

10

CHAIRMAN GANS: So noted.

11

12

Q. (By Mr. Dolan) Have you seen a similar -- well, strike that. So what is the significance of this slide relative to the Berger study, relative to the Recology submission, relative to the soil under the landfill site?

15

16

17

A. This drawing shows an extrapolation of layering across the whole section. And it is in conflict in my opinion of what Berger had to say about the landfill site.

18

19

Q. And the Berger report was referenced in the supporting documentation to NDEP by the applicant?

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20 A. That's correct.

21 Q. Now, slide seven. More pictures of -- Are you --  
22 Did you take this picture?

23 A. Yes. It's mislabeled.

24 Q. What should it --

25 MS. LEONARD: What exhibit is this?

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1 THE WITNESS: That's Jungo Flat looking  
2 northeast.

3 Q. (By Mr. Dolan) The photo, was this photo  
4 provided to NDEP in your submissions to NDEP, Mr. Schlarb?

5 A. I think so, yes.

6 Q. Did you write letters to the NDEP staff?

7 A. Yes, I did.

8 Q. Did you send them photos?

9 A. Yes, I did.

10 Q. Are the photos that you sent to NDEP staff  
11 consistent with this imagery in this photo?

12 A. Yes, it is.

13 Q. Now, are you familiar with -- what is this a  
14 picture of, slide seven?

15 A. It's a photo looking northeast taken from Jungo  
16 Road approximately, oh, I would say, 500 feet from the  
17 intersection of Bottle Creek Road.

18 Q. Okay. So you would agree with me that if this is  
19 looking north from Jungo Road that the landfill site would be  
20 south of the photographer?

21 A. Yes.

22 Q. That's not an actual picture of the actual  
23 landfill site though, is it?

24 A. No.

25 Q. Can you tell the Commission, if you know, how

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1 long the water that is reflected in that picture remained at  
2 that site?

3 A. I really don't know.

4 Q. Okay. Now, slide eight. What is slide eight?  
5 Are you -- Did you take those photos, Mr. Schlarb?

6 A. Yes, I did.

7 Q. What do they depict? It looks like two photos  
8 there.

9 A. Yeah. It's a comparison from the exact same spot  
10 or very close to the exact same spot. And one photo shows it  
11 flooding on the bottom. And the top one shows when it's dry.

12 Q. And that's not the landfill site itself?

13 A. No, it is the landfill site.

14 Q. Oh, it is the landfill site? So this photo that  
15 is depicted in slide eight is not the same location from  
16 slide seven?

17 A. No.

18 Q. Okay. So this is a different -- So this is the  
19 actual landfill site?

20 A. Yes.

21 Q. How do you know that that's the actual landfill  
Page 115

22 site? Did you use the GPS finding?

23 A. Yeah. I've been out there many times and I know  
24 the spot. I know where the northwest corner is. I know  
25 where the northeast corner is. And I can gauge where I am on

□

1 the road to stop by just checking landmarks. And then when I  
2 get close I can actually see the corners from the railroad.

3 Q. Now, what's the significance of the bottom photo,  
4 Mr. Schlarb?

5 A. The bottom photo was taken a little bit north  
6 because I couldn't get to the railroad because I didn't have  
7 hip boots. It shows extensive flooding at the site.

8 Q. What was the depth of the water?

9 A. I would have to guess. But at that point I'd say  
10 at least a foot.

11 Q. Do you know how long the water depicted in the  
12 bottom of slide eight remained at the site of the landfill?

13 A. No, I do not.

14 Q. With respect to the information you provided to  
15 NDEP by Recology, do you recall there being some discussion  
16 about their engineering to control surface water to being  
17 adequate for substantial precipitation and/or unusual  
18 precipitation?

19 A. Yeah, I remember that section.

20 Q. Now, let me see slide ten. Have you gone --

21 MS. MAYO: It's 112, I believe, Exhibit 112.

22 MS. LEONARD: We would object to these for the  
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23 previous reasons stated and also because these were not  
24 submitted to NDEP.

25 MR. DOLAN: Let me answer that question,

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1 Mr. Chairman. slide, that's slide ten, I believe this is  
2 slide ten.

3 MS. MAYO: It is.

4 Q. (By Mr. Dolan) Has this information to your  
5 knowledge been provided to NDEP staff?

6 A. Yes, it has.

7 Q. Did you prepare -- submit it yourself?

8 A. Yes, I did.

9 Q. Okay. And what does slide ten show, Mr. Schlarb?

10 A. It's a precipitation map with contours and also a  
11 raster image.

12 Q. And what does it tell us?

13 A. In regards to Jungo in that area it says that the  
14 rain fall amounts are about 7.3 inches.

15 Q. Per year? Per month?

16 A. Per year.

17 Q. Is that a lot of rain?

18 A. It's not a lot of rain.

19 Q. Okay. How does that fact affect the permit  
20 issuance and the design?

21 A. well, it's --

22 MS. LEONARD: Objection. Vague and ambiguous.

23 MR. DOLAN: Okay. Now, let me see slide 11 and I  
Page 117

24 think slide 12 also was a similar --

25 MS. LEONARD: what exhibit numbers are these?

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1 MS. MAYO: slide 11 is Exhibit 71.

2 MR. DOLAN: slide 11 is Exhibit 1?

3 MS. MAYO: 71.

4 Q. (By Mr. Dolan) Okay. Can you see slide 11,  
5 Mr. Schlarb?

6 A. Yes.

7 Q. Relative to rainfall what does this slide depict?

8 A. It shows in both monthly and maximum daily that a  
9 lot of the rainfall out there even though it's minimal comes  
10 in big bursts. So in other words you can get a fifth of your  
11 rain in one storm.

12 Q. And did the records reflect that?

13 A. Yes.

14 Q. Now, in slide 11, was this information provided  
15 to NDEP?

16 A. Yes, it was.

17 Q. By you?

18 A. Yes.

19 Q. Did you have any discussions with NDEP about any  
20 of the information that you provided to them?

21 A. No. Just my letters.

22 Q. Did you get responses directly to you in letter  
23 form?

24 A. No.

25 Q. Did you attempt to have telephone contact with

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1 staff?

2 A. No.

3 Q. Was your contact through written form?

4 A. Yes.

5 Q. How many letters would you estimate that you sent  
6 to NDEP in connection with this matter?

7 A. Five.

8 Q. Okay. Now, were you part of the whole fairy  
9 shrimp testing episode?

10 A. Yes.

11 Q. What was your involvement?

12 A. I went out with Richard Cook to see if we could  
13 establish if there was any kind of invertebrate animal out  
14 there in order to bolster our case of frequent flooding.

15 Q. Did you do this on your own?

16 A. Just Richard and I, yes.

17 Q. Okay. Were you -- As a volunteer?

18 A. I was kind of the instigator.

19 Q. You were kind of the instigator?

20 A. Yeah.

21 Q. Okay. So what did you do?

22 A. Well --

23 CHAIRMAN GANS is this going to be repetitive to  
24 what Mr. Cook told us?

25 MR. DOLAN: Well, unless there's an argument  
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1 about it being doctored or something. I don't know if  
2 they're going make that argument.

3 CHAIRMAN GANS: Do you have an objection to this  
4 being doctored or are you concerned about this?

5 MS. LEONARD: What's being doctored?

6 MR. DOLAN: About the authenticity of the finding  
7 of fairy shrimp.

8 MS. LEONARD: I don't know what the finding of  
9 the fairy shrimp is. Do you mean finding that there were  
10 fairy shrimp?

11 CHAIRMAN GANS: As far as the panel is concerned,  
12 we know there were shrimp found and we know that they had a  
13 cycle of almost two weeks, which gave some indication of how  
14 long the water has lasted. Now, that's what we got out of  
15 it.

16 MS. LEONARD: Well, I would just object because I  
17 don't think anybody who is qualified to actual identify them  
18 as fairy shrimp has said that. So whatever they found from  
19 whatever their activities were may have lasted two weeks, but  
20 no one has ever established what that was. And also no one  
21 has established that it couldn't have come from elsewhere  
22 like the well water. So I'm just lodging that objection for  
23 the record.

24 CHAIRMAN GANS: So go ahead then. Proceed.

25 MS. LEONARD: I would like to add an objection

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1 that the testimony was that there were fairy shrimp that were  
2 hatched at somebody's home as opposed to actually found out  
3 at the site. That's what the picture was and I think that's  
4 what the testimony was.

5 CHAIRMAN GANS: Okay.

6 Q. (By Mr. Dolan) Okay. Now, with respect to this  
7 fairy shrimp episode, did you notify NDEP about what you  
8 found?

9 A. Yes. We sent a letter.

10 Q. Did you -- Directing your attention to Exhibit  
11 106. Now, can you take a look at Exhibit 106 for a second.  
12 Is that a four-page letter from you?

13 A. Yes.

14 Q. Is it from you to NDEP?

15 A. Yes.

16 Q. Okay. Now, what was that letter designed to  
17 accomplish?

18 A. Primarily to accomplish the fact that it does  
19 flood out there at the site and it floods for long enough to  
20 hatch and maintain a life cycle of invertebrates.

21 Q. Okay. Now, did you receive a written response  
22 from NDEP in connection with that submission?

23 A. No.

24 Q. Okay. On page three of that submission it  
25 appears to have a picture on the top. What is that a picture

□

1 of?  
2 A. It's a picture of fairy shrimp.  
3 Q. Now, where -- after you -- we're going to go  
4 through this is a little bit. Did you and Richard Cook go  
5 out to the location near the landfill site?  
6 A. Yes.  
7 Q. How close to the landfill site were you?  
8 A. Easily within a quarter mile. Closer than that.  
9 Q. Did you dig up some dirt?  
10 A. Yes.  
11 Q. And did you put the dirt in something?  
12 A. Yeah. We put it in plastic baggies.  
13 Q. How many plastic baggies did you fill?  
14 A. I think it was five.  
15 Q. What did you do with these plastic baggies?  
16 A. We took them back to Winnemucca.  
17 Q. And did you do anything with those plastic  
18 baggies?  
19 A. We emptied the soil out in to containers.  
20 Q. Okay. When you say we, you mean you and Richard  
21 Cook?  
22 A. Yes.  
23 Q. Okay. And where did this occur? At his home?  
24 A. At the Brissendons' garage.  
25 Q. So you emptied the dirt in to containers. What

1 type of containers were they?  
2 A. They were plastic containers.  
3 Q. And then what happened next?  
4 A. We poured Richard's well water --  
5 Q. In to the --  
6 A. -- in to the dirt, the soil samples.  
7 Q. And the next day -- what was the next significant  
8 event that you recall?  
9 A. Well, ten days later we could see the hatchlings.  
10 Q. And pictures of those hatchlings were taken?  
11 A. Yes.  
12 Q. And were you there when the hatchlings were --  
13 Did you actually see them swimming?  
14 A. Yes.  
15 Q. Is what's depicted in that picture the same as  
16 what you saw in the bucket?  
17 A. Exactly.  
18 Q. Did you take any of those things that were  
19 swimming in the bucket with you to a third place or anywhere  
20 else?  
21 A. We took them to NDOW to try to get them  
22 identified by endangered species.  
23 Q. Did you hear back from NDOW?  
24 A. Yeah. They didn't have the equipment at their  
25 lab to do so.

1 Q. Do you have any doubt that what is depicted in  
2 that photo came from the digging by you and --

3 A. No doubt whatsoever.

4 Q. Have you doctored -- Did you put shrimp in the  
5 bucket?

6 A. No, no.

7 Q. All right. Now, would you have taken the time to  
8 present this evidence through your submission to NDEP if that  
9 was not a true and accurate depiction of what you and Richard  
10 Cook did?

11 A. Absolutely not.

12 Q. Now, why wouldn't you -- You feel strongly about  
13 this issue?

14 A. Yes, I do.

15 Q. Did you have reason to try to mislead NDEP staff  
16 or this Commission?

17 A. No. I thought I was mainly trying to relate  
18 facts to them.

19 Q. With respect to the power point, I've heard you  
20 talk in the past about liquification, soil liquification?

21 A. Liquefaction.

22 Q. Liquefaction. Slide 18.

23 MS. MAYO: Actually 19.

24 MR. DOLAN: Is it slide 19?

25 MS. MAYO: Yes.

1 MR. DOLAN: What's soil liquefaction?

2 MS. LEONARD: Can we figure out what exhibit  
3 we're going to first?

4 MR. DOLAN: Before we go -- while we're looking  
5 for that I'll ask you a question.

6 MS. LEONARD: Well --

7 CHAIRMAN GANS: No.

8 MR. DOLAN: I don't have the exhibit.

9 MS. LEONARD: I would like to lodge an objection  
10 that he hasn't established that he's qualified to testify to  
11 liquefaction.

12 MS. JOSEPH: I'm going to join in that objection.

13 CHAIRMAN GANS: Sustained.

14 Q. (By Mr. Dolan) Now, you yourself are a resident  
15 of Humboldt County; right, Mr. Schlarb?

16 A. Yes.

17 Q. With respect to the issues before the Commission,  
18 are there any other concerns that I have not specifically  
19 asked you about this permit?

20 A. You haven't asked me about the aquifer.

21 Q. Now, the aquifer is 60 feet -- well, where do you  
22 understand the aquifer to be relative to this location of the  
23 landfill site?

24 A. It's approximately 60 feet underneath it.

25 Q. And the base of the landfill there was some

1 digging that the landfill engages in, goes down about how  
2 much?

3 MR. FRANKOVICH: We don't dispute that it's 60  
4 feet and the closest location is 29 feet.

5 MR. DOLAN: Okay. Are we reiterating again? We  
6 have nothing further.

7 CHAIRMAN GANS: So now we have cross.

8 CROSS-EXAMINATION

9 By Ms. Joseph:

10 Q. Mr. Schlarb, hello. I want to start with a  
11 couple of basics. I think you said that you are not a civil  
12 engineer; is that correct?

13 A. That's correct.

14 Q. Are you an expert in landfill design?

15 A. No.

16 Q. Are you an expert in hydrogeology?

17 A. No.

18 Q. Are you an expert in any geological studies?

19 A. No.

20 Q. Are you an expert in any of the sciences that  
21 you've testified about this morning or this afternoon?

22 A. No.

23 Q. Now, you said you were a civil engineer  
24 technician?

25 A. Yes.

1 Q. Okay. And in that capacity what did you do for I

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2 think it was the federal government; is that right?  
3 A. Uh-huh.  
4 Q. And what did you do?  
5 A. Road design, road location, campground design,  
6 campground location, Cadastral surveys.  
7 Q. Now, in your experience doing those things did  
8 you have experience dealing with soils?  
9 A. Yes.  
10 Q. And have you studied homogenous versus  
11 heterogenous soil?  
12 A. Yes.  
13 Q. Okay. And your testimony today was that, I  
14 believe, was that the soil reports or some of the soil  
15 reports from Recology contradicted what was in the Berger  
16 report?  
17 A. Yes.  
18 Q. With respect to soil; is that correct?  
19 A. Yes.  
20 Q. All right. What was that contradiction in your  
21 opinion?  
22 A. In my opinion, the extrapolation of the soil  
23 layers from the borings over a mile. And I don't think that  
24 that's the case out there. And I think that Berger backs me  
25 up.

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1 Q. Say that again. I didn't understand. The  
2 extrapolation?

3 A. Yeah. They have bore holes out there and it's  
4 defined. We had an exhibit there. Every one or two feet you  
5 see the change in what type of soil it is.

6 Q. Okay.

7 A. Like it will be clay, silty clay and so forth all  
8 the way down for the whole depth of the boring.

9 Now, Golder maintains that they can extrapolate  
10 those layers across a mile of land. And I don't think that's  
11 the case. I think that Berger backs me up.

12 Q. Okay. What in Berger tells you or the rest of us  
13 that Golder's extrapolation or your allegation of Golder's  
14 extrapolation is not accurate?

15 A. By his saying that the soil out there was  
16 heterogeneous and it wasn't homogenous like it's depicted on  
17 the soil cross-sections.

18 Q. All right. And in your -- in your lay opinion;  
19 correct?

20 A. Yes.

21 Q. What does that mean?

22 A. It means it's a mixture and not layered.

23 Q. Okay. Is there any other meaning in your lay  
24 opinion as to the relevance of that?

25 A. In this case, no.

1 Q. Okay. I think you also testified regarding a  
2 contradiction between Golder, your perceived contradiction  
3 between Golder and Berger report with respect to sloping. Is

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4 that different from what we were just discussing?  
5 A. You mean the slope of the area out there?  
6 Q. Yes. Did you testify as to sloping and a  
7 contradiction between Golder and Berger with respect to  
8 sloping?  
9 A. I don't think so.  
10 Q. Okay. Now, you said you conducted a sloping  
11 study; is that right?  
12 A. Yes.  
13 Q. Okay. And have you ever done one of those  
14 before?  
15 A. Yes.  
16 Q. All right. And did you submit those results to  
17 NDEP?  
18 A. Yes.  
19 Q. Okay. When did you do that?  
20 A. I can't remember the exact date.  
21 Q. Did you do it in a letter to NDEP?  
22 A. Yes.  
23 Q. So those results were accepted by NDEP; correct?  
24 A. Yes.  
25 Q. And by accepted I mean they were received?

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1 A. They were received, yes.  
2 Q. And what is the relevance of what your results  
3 said?  
4 A. It just shows that it's a flat area out there.

5 Q. Okay. Any other relevance to that?

6 A. No.

7 Q. Now, do you know whether the design that was  
8 approved as part of the issuance of this permit, whether or  
9 not it took in to consideration the flatness that's out at  
10 the site?

11 A. I'm sure it did.

12 Q. Okay. And do you know whether or not the design  
13 took in to consideration the soil type that's out at the  
14 site?

15 A. Yes.

16 Q. And you are not qualified, you agree, to  
17 determine whether that design is sufficient to compensate for  
18 any alleged negativeness of the slope or the soil; is that  
19 correct?

20 A. In my own opinion?

21 Q. You agree, don't you, that you're not qualified  
22 as an expert to give an opinion about whether that design  
23 would compensate for any negative aspects of the soil or the  
24 slope?

25 A. That's correct.

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1 Q. Now, just to confirm, the fairy shrimp  
2 experiment --

3 A. Yeah.

4 Q. -- you didn't find any fairy shrimp out at the  
5 site; correct?

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- 6 A. Very close, so yeah.
- 7 Q. But you didn't find any fairy shrimp on the site?
- 8 A. On the property? On the property itself?
- 9 Q. At the site, that's right.
- 10 A. No. But right next to it.
- 11 Q. Okay. What did you find right next to it?
- 12 A. Fairy shrimp.
- 13 Q. Okay. Why don't you have any pictures of those
- 14 fairy shrimp?
- 15 A. I do.
- 16 Q. Where are those?
- 17 A. They've been submitted.
- 18 Q. Now, the picture that we saw in exhibit number --
- 19 A. Whatever it was.
- 20 Q. Now, that picture that's depicted up there, this
- 21 is Exhibit 104, that was the one that was hatched at the
- 22 home; correct?
- 23 A. All of them were hatched at home.
- 24 Q. Okay. So that's my question. There were no
- 25 fairy shrimp found hatched at the site; correct?

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- 1 A. It was dry. You don't have fairy shrimp swimming
- 2 around when it's dry.
- 3 Q. Right. It only hatched after you had it covered
- 4 with water for ten days; correct?
- 5 A. Yes.
- 6 MS. JOSEPH: I have no further questions.

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By Ms. Leonard:

Q. Mr. Schlarb, I believe you testified with regard to your opinion that the Golder's finding as to the soil characteristics in your opinion contradicted Berger; is that correct?

A. Yes.

Q. But you'll agree with me that Berger's study is the study of the regional characteristics of the entire Desert Valley Basin; correct?

A. Yes.

Q. And Berger didn't do any site specific analysis as to the soils on the exact location of the Jungo Landfill?

A. Yeah, he did.

Q. He actually took some samples?

A. He took samples and he did field work throughout the valley.

Q. Throughout the Desert Valley?

A. Yeah.

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1 Q. All right. But I'm asking you were there actual,  
2 analysis of the actual soil samples taken from the Jungo  
3 Landfill site in the Berger report?  
4 A. I have no idea.  
5 Q. Okay. So it's a regional study?  
6 A. Yes.  
7 Q. And you yourself never did any soil borings on

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8 the site; right?

9 A. No.

10 Q. And you never analyzed any of the soil  
11 characteristics?

12 A. No.

13 Q. So you really have no idea what the  
14 characteristics are?

15 A. Just by the reports.

16 Q. Now, you testified as to your opinion that the  
17 Desert Valley area is relatively flat. Is that your  
18 testimony? Is that a yes?

19 A. Yes. I'm sorry.

20 Q. And can you tell us what the elevation of the low  
21 point south of the railroad tracks is?

22 A. I believe it's 1269 meters.

23 Q. And do you know what that is in feet?

24 A. 3.280839 feet per meter.

25 Q. So do you know what it is in feet?

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1 A. Off the top of my head, no, I can't.

2 Q. Okay. But you don't know the elevation  
3 difference between the topographic low point and the upper  
4 most part of the berm for the landfill?

5 A. It's four feet, isn't it?

6 Q. From -- Is that your testimony that from the  
7 topographic low point of the --

8 A. Oh, the topographic low point to the top of the

9 reporters\_record\_day\_one052112.txt  
berm or the proposed berm?

10 Q. Yeah.

11 A. I don't know. I think it's three meters, three  
12 and a half meters.

13 Q. Can you tell me how you developed that  
14 understanding?

15 A. Just by the USGS digital elevation model. So the  
16 low point on the south side of the railroad tracks I think is  
17 about 1269. And I think that 1273 is about approximately  
18 what the elevation of section seven is, in the center of the  
19 section.

20 Q. And it's your understanding then that the berms  
21 will be four to five feet above the current elevation?

22 A. Yes.

23 Q. Okay. So your concerns with regard to flooding  
24 are based on the understanding that you just described?

25 A. Yes.

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1 Q. And if there were more distance between the  
2 topographic low point and the top of the berms than what you  
3 just described, your elevations would be at least lessened;  
4 correct?

5 A. Yeah.

6 Q. Now, you read the materials that were submitted  
7 to -- you read the application materials of NDEP; correct?

8 A. Yes.

9 Q. You looked at the design plan?

10 A. Uh-huh.  
11 Q. You looked at the operation plan?  
12 A. Yes.  
13 Q. You looked at the report of design?  
14 A. Yes.  
15 Q. And so you'll agree with me that the design  
16 accommodates two back-to-back 25-year 24-hour storm events?  
17 A. I have no idea how they arrived at that.  
18 Q. You'll agree with me that it accommodates that?  
19 A. I don't know. I don't know if it does or not.  
20 Q. So you don't know one way or the other?  
21 A. I don't know how they got those figures.  
22 Q. So you have nothing to contradict that the  
23 representation in the report of design that the design will  
24 withstand those flood events?  
25 A. No.

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1 Q. Now, you'll agree with me that water does not in  
2 nature flow uphill; right?  
3 A. Usually not.  
4 Q. Okay. So if the -- You'll agree with me then  
5 that the -- if the topography slopes away from the landfill  
6 site then the water can't move uphill towards the landfill  
7 site; is that correct?  
8 A. That's true.  
9 Q. Turning to the fairy shrimp issue, you testified  
10 that the fairy shrimp, alleged fairy shrimp, you never

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11 actually had them identified by any expert?

12 A. Yes, we did.

13 Q. I believe you testified that in fact you couldn't  
14 identify them?

15 A. NDOW couldn't, but we sent them to Federal  
16 wildlife Service and they did.

17 Q. And you'll -- But you will agree with me that you  
18 used well water, is that correct, to hatch them out?

19 A. Yes.

20 Q. And you did not use sterilized conditions; right?

21 A. No.

22 Q. You didn't use sterile water?

23 A. No.

24 Q. So you can't be sure that whatever invertebrates  
25 you found in the water weren't actually in after you hatched

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1 the samples didn't come from the water?

2 A. We are pretty sure of that, yes. Because you're  
3 not going to find branchiopods in well water that's down 70  
4 or 80 feet.

5 Q. You have no qualifications to say that?

6 A. Obviously not. Just my opinion.

7 Q. Just give me a minute to check my notes here.

8 A. Certainly.

9 MS. LEONARD: I have nothing further. Thank you.

10 CHAIRMAN GANS: Okay. Does the panel have any  
11 questions?

12 MEMBER RICHARDSON: I have a question.

13 CHAIRMAN GANS: Sure.

14 MEMBER RICHARDSON: You've been out to the site  
15 when it's been flooded. Have you ever witnessed any fairy  
16 shrimp in the standing water out at the site?

17 THE WITNESS: No.

18 MEMBER RICHARDSON: Okay.

19 MR. DOLAN: One brief question. You mentioned  
20 that a federal department identified the fairy shrimp for  
21 you.

22 THE WITNESS: Yes.

23 MR. DOLAN: What agency or government was that?

24 THE WITNESS: Federal wildlife service. And they  
25 sent the sample off to some -- I forget the guy's name.

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1 MR. DOLAN: Okay. Just hold. And the Federal  
2 wildlife service identified the species of the invertebrate  
3 that you sent to them, is that what you're testifying?

4 THE WITNESS: Yes.

5 MS. LEONARD: We would object on the basis of  
6 hearsay.

7 CHAIRMAN GANS: Sustained. Okay. If there's  
8 nothing else from this witness, we will dismiss the witness.  
9 And I think it's time for us to break for lunch. I'd like to  
10 come back and reconvene at 2:00 o'clock.

11 (Lunch recess was taken)

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MONDAY, MAY 21, 2012, 2:07 P.M.

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CHAIRMAN GANS: We will reconvene the hearing.  
Back to Mr. Dolan, your next witness.

MR. DOLAN: Rob Hannum.

(Witness was sworn in)

ROBERT HANNUM

Called as a witness on behalf of the  
Appellants, having been first duly sworn,  
was examined and testified as follows:

DIRECT EXAMINATION

14 By Mr. Dolan:

15 Q. Please state your name and spell it for the  
16 record.

17 A. My name is Robert Hannum, H-a-n-n-u-m.

18 Q. First name is Robert?

19 A. Yes.

20 Q. Okay. Mr. Hannum, what is your job or  
21 occupation?

22 A. I'm a mechanical engineer and I have an MBA and  
23 I've been working as a mechanical engineer for over 19,  
24 almost 20 years.

25 Q. Do you own land near the landfill site?

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1 A. Yes. I'm just across the street. The  
2 approximate distance is less than 2,000 feet or -- feet,  
3 yeah.

4 Q. Now, in the brief that was submitted on your  
5 behalf, reference is made to your land being within two to  
6 three miles of the landfill site. Was that statement  
7 accurate in your brief?

8 A. Well, it's not more than that. If you take  
9 corner to corner, my furthest corner is --

10 Q. I'm talking about your closest corner.

11 A. Yeah. Closest corner is within half a mile, I  
12 would say.

13 Q. Isn't it more like 1800?

14 A. 1800.

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15 Q. 1834 feet?

16 A. I don't know if it's the exact feet within plus  
17 or minus a hundred, but I would say it's no more than a  
18 quarter mile. And that I know because I have checked my  
19 property barriers, I've checked their property barriers. So  
20 I know where the location is. I have been up there at least  
21 seven times. Each time I've been up there for about four or  
22 five days.

23 Q. Now, when did you -- you said you are a  
24 mechanical engineer. What does that mean? How did you  
25 obtain the title mechanical engineer?

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1 A. Well, I went to college. I went to Penn State  
2 for four years and graduated with my Bachelor's. And then I  
3 went to night school and got my MBA. And I graduated in '93  
4 with my mechanical engineering degree. And I graduated in  
5 2000 for my MBA.

6 And all that time since '93 I've been working for  
7 several different companies ranging in a lot of different  
8 industries. I have designed and built wastewater treatment  
9 plant equipment, processing equipment. I've worked on large  
10 volume production of sensors, optical and inductive and  
11 composite sensors. I retrofitted jetter bands which are  
12 the ones that are used for storm drains or what not to clean  
13 those out and the design of the hydropressure systems on them  
14 ranging around 5,000 PSI. I've worked for Pratt and Whitney  
15 and then they were called UTC on the program. I worked for a

16 semi-conductor industry, Automated Systems Company. I worked  
17 for a structural health monitoring systems company. One of  
18 our jobs that we were looking in to monitoring was liners for  
19 landfills. And then I worked for a sheet metal, an advanced  
20 sheet metal company. I started two companies. I still am  
21 running them now and I'm working for EVI. It's Electrical  
22 Vehicles International.

23 Q. When did you first acquire the land near the  
24 landfill site?

25 A. 9-2-08, 2008.

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1 Q. In 2008. Okay. Can you -- what --

2 A. So me and a friend of mine have been searching  
3 the area. I'm living right now in the bay area. But we were  
4 researching the areas around for places that were affordable  
5 and had options in the future, now and in the future. And we  
6 came across this property on line and it had everything we  
7 were looking for. It was reasonably priced, which I'm sure  
8 Recology also figured out at the time.

9 when I bought it, there was no signs or  
10 indications that they were interested to build a landfill at  
11 the time. I came across it just because after my third visit  
12 up to Winnemucca I saw one of the Yucca Mucca bumper stickers  
13 and I started looking in to it and then I started looking at  
14 the public records and NDEP's website and getting familiar  
15 with the system and what was going on.

16 Q. Now, have you taken steps to put a well or

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17 develop, or otherwise develop your property?

18 A. I started to. What I did was the old-fashioned  
19 manual way, dig it by hand. And as I went along -- I  
20 actually brought some samples of the soil that's underneath  
21 there that verifies pretty much I got down to about  
22 three-quarters of the way to water until I basically reached  
23 the maximum capacity of my time and funds to continue up  
24 there and justifying going up there until this was settled.

25 And in doing so, I basically confirmed any of the

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1 information that was gathered in any of the reports that NDEP  
2 had on their website as far as what the consistency of the  
3 soil was in that area.

4 Q. So you said you were drilling a well or you were  
5 trying to produce a well manually?

6 A. Uh-huh.

7 Q. Is that a yes?

8 A. Yes.

9 Q. Tell the Commission what you did.

10 A. More detailed? It's the old-fashioned way. So  
11 what you do is you have a pick, the vice that you make, it's  
12 like a large heavy tube, and you have a scooper, which is a  
13 heavy tube with a flap on the bottom. And so you pick down  
14 and you basically chop it up and then you pour water on it  
15 and you scoop it up. And then you repeat and do that over  
16 and over and over again.

17 And what I noticed is when I was doing that you

18 get through what they call the playa dust, which is about  
19 five to eight feet of that white powder. When it's wet, it's  
20 like gum and when it's dry it's like concrete. Once you get  
21 through that, I experienced nothing but mud and sand. And  
22 the sand was really difficult to scoop out, was difficult to  
23 scoop out. Because every time you put water in after you  
24 chisel it a little bit, the water would go in to the sand  
25 layer and disappear. So you need it to liquefy to scoop it.

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1 So that was the slow part. The fast parts were the mud. It  
2 would come together in clumps and it was easy to scoop out.

3 But the layers of sand that are in there, the  
4 water you could literally just watch it disappear. And  
5 that's why just in case I was allowed to show you guys at any  
6 given time brought that material to show you how fast it can  
7 go through that material.

8 Q. Is the word permeability? Permeable, is that  
9 what the soil that you observed?

10 A. It's a fine and rough sand. So what happens is  
11 if water is in it, it goes right through it. First it gets  
12 saturated and then it goes through the other side once it's  
13 fully saturated.

14 MS. LEONARD: I don't object to him testifying as  
15 to his own experience, but I object to his characterization  
16 of the soils to the extent he's trying to convey a certain  
17 soil type that he's not qualified to identify.

18 THE WITNESS: I think I'm qualified enough to

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19 tell what sand and mud is, okay.

20 MS. LEONARD: I think that that's simplistic and  
21 I would say that you're not qualified.

22 CHAIRMAN GANS: It is an opinion. He's not an  
23 expert in this area. I'll allow it. You're trying to tell  
24 us what you saw?

25 THE WITNESS: I'm just trying to tell you what I

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1 saw in terms that I understand and you guys would understand.  
2 I don't know like the -- I didn't have it lab tested, so I  
3 don't know what type of sand it was. And I didn't have the  
4 mud analyzed, so I don't know what kind of mud it was.

5 Q. (By Mr. Dolan) Now, Mr. Hannum, part of the  
6 appeal before the Commission here that you brought concerns  
7 your possible use of the same aquifer that is below the  
8 landfill site below your land. Can you explain your concerns  
9 to the Commission?

10 A. So the process is not one where I was foretold in  
11 any way that this was going in. All the research material  
12 and information that I had to gather, I had to gather on my  
13 own. And in comparison, as an example, the Ruby pipeline was  
14 going miles away from my home and I received a full detailed  
15 CD. The CD not only described what was happening, where it  
16 was happening, who was doing what and why, it also gave me  
17 plenty of time and numbers and contacts, details on who to  
18 see and who to contact as far as if I had a problem with what  
19 they were doing. As opposed to this situation where I

20 basically could only find out through public means of really,  
21 you know, researching it myself, directly calling the NDEP's  
22 representatives and also the EPA.

23 Q. The question relates to the aquifer, sir.

24 A. So getting to the aquifer, from the information  
25 that was gathered from the website as well as all around and

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1 on their property and it's all consistent that that whole  
2 area would be construed as enough -- that the water that's  
3 under my property is the water underneath their property is  
4 the summary of that, right. But from indications of the  
5 reports on the NDEP's website, it looks like it goes from one  
6 hillside to the other, but I won't make that association.

7 Q. Okay. And you're concerned for your health,  
8 safety, welfare? What? What concerns you?

9 A. So what concerned me was the -- My main concern  
10 was and constant throughout this was what does this mean to  
11 my ability to use the water that we searched very hard to  
12 find land on. This is 60 feet that's in relative terms to  
13 the aquifer from the top soil layer. That's pretty shallow,  
14 meaning that it's pretty easy to get to and there's a lot of  
15 it and I know there's a lot of it and it's a good climate  
16 because down that same road there are several people who put  
17 in big rye circles. They've got like three or four seasons a  
18 year and all they have to do is pump out the water. So the  
19 climate is nice.

20 So what I was concerned with was that if all the

21 information that I could find in every means that I could  
22 imagine using, which was calling NDEP and EPA and e-mailing  
23 them and researching on my own was that this, the current  
24 design of landfills will eventually leak. Now, they have  
25 indicated that there are regulations wrapped around it but

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1 neither the 1988 report that I mentioned, USGS report that  
2 says all liners leak and then what was talked about this  
3 morning about the 2002 report, that was a little bit  
4 misleading in my mind.

5 Q. Well, let me just stop you right here.

6 MS. LEONARD: Before you go on, can I just object  
7 to the extent that he's talking about a 1988 report? He  
8 can't testify as to what that said. That's hearsay.

9 MR. DOLAN: The next question is going to address  
10 counsel's opening argument in which she opened the door with  
11 respect to this testimony.

12 Q. (By Mr. Dolan) Now, Mr. Hannum, were you here  
13 this morning to listen to the opening statements by  
14 Recology's counsel?

15 A. Yes.

16 Q. Paraphrasing, do you recall indicating that the  
17 single liner system has an effectiveness ratio of above 99  
18 percent or words to that effect?

19 A. Yes. She said in that report that there was up  
20 to 99.9 percent efficiency indicated in that report. But I  
21 think it's misleading.

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22 Q. Why do you think it's misleading?

23 A. Because it's a thousand-page document and it  
24 starts out by saying that this is a small sampling of a large  
25 group. It also says that a lot of the information in there

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1 is laboratory tests and ideal situations. And also they ran  
2 their real life experiment, a lot of it was done  
3 experimentally. So they had a hillside. They put down a  
4 bunch of different liners that they were testing in ideal  
5 solutions. I mean ideal conditions. So I just wanted to say  
6 it's a little misleading and it still doesn't say that the  
7 liner system whether it's single or double is fool proof.

8 MS. LEONARD: I would just object to this  
9 testimony. He hasn't established that he has qualifications  
10 to interpret the liner, the research, the study, anything  
11 like that.

12 CHAIRMAN GANS: Mr. Dolan, your witness is giving  
13 an opinion. That's what he's doing.

14 THE WITNESS: No. It's written in -- It's  
15 written in the document. Read it for yourself.

16 MS. LEONARD: He's opining as to -- He's trying  
17 to interpret a technical document and he's not qualified to  
18 do that.

19 THE WITNESS: I'm trying to -- I'm trying to  
20 quote the document.

21 MR. FRANKOVICH: Let counsel argue, will you?

22 MR. DOLAN: Now, Mr. Hannum, now, what document

reporters\_record\_day\_one052112.txt  
23 do you believe is relevant to addressing the comments that  
24 were made by counsel in opening argument and that you're now  
25 talking about in front of the Commission?

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1 THE WITNESS: I'm claiming that this document was  
2 the document that she was referring to.

3 MR. DOLAN: And is that right in front of you,  
4 that document?

5 MS. LEONARD: I'm sorry. I would also lodge an  
6 objection that this appellant has a very limited scope of his  
7 appeal. Form three delineates what the scope of his appeal  
8 is and it does not include this and he's now exceeded the  
9 scope of that appeal.

10 MR. DOLAN: Your Honor, the appellants' appeal is  
11 based upon the threat of toxicity to the aquifer. And the  
12 fundamental concern that he has for his health and safety is  
13 that his aquifer will be damaged by the landfill and the  
14 location of the aquifer relative to his land. And the  
15 assumptions that have been offered to the Commission here  
16 relative to the effectiveness of one liner system, they're  
17 asking you to infer that the second liner system would be a  
18 whole lot better than the numbers that are reflected in the  
19 first liner.

20 CHAIRMAN GANS: Let me go back to what counsel  
21 said. Are you referring to what he put on his form three?

22 MS. LEONARD: Yes, Mr. Chair.

23 CHAIRMAN GANS: So what you're saying is he's now

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24 testifying to things not even included in his form three?

25 MS. LEONARD: Yes.

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1 CHAIRMAN GANS: Is that true, Mr. Dolan?

2 MR. DOLAN: No.

3 MS. REYNOLDS: You have to remember that these  
4 appeals have been combined. So he's not strictly limited to  
5 what he appealed. If you've got something -- His appeal has  
6 been joined with Mr. Cook's appeal.

7 MR. DOLAN: With Mr. Cook's appeal.

8 MS. REYNOLDS: So he's not limited to what's on  
9 form three. It's both of their form threes.

10 MS. LEONARD: Mr. Chair, I would object to that  
11 characterization. The fact that Mr. Dolan is now  
12 representing all of the appellants does not change or broaden  
13 the scope of this appellant's form three. And I think that  
14 you can't go back and alter what's in the form three by joint  
15 representation. When Mr. Hannum filed his form three, he was  
16 not represented by Mr. Dolan. And the fact that Mr. Dolan is  
17 now representing him doesn't change the scope.

18 CHAIRMAN GANS: I understand your objection. And  
19 I said earlier today that on the two witnesses that you call,  
20 the two appellants, I'm going to be lenient with, but please  
21 don't push it too far. So please proceed.

22 MR. DOLAN: Thank you. We're still just  
23 addressing the opening -- I don't believe that what this  
24 witness is testifying to now was previously discussed by the

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25 other witnesses. I'm trying to just put a point with this.

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1 Q. (By Mr. Dolan) Mr. Hannum, what is that document  
2 that you're looking at?

3 A. This is the document that --

4 Q. Does it have a title?

5 A. Yes.

6 MS. LEONARD: I'm going to object. Again, this  
7 is hearsay. I think I have an objection that hasn't been  
8 ruled on with regard to this that he's not qualified to  
9 discuss or opine as to the contents of the document that he's  
10 about to read from.

11 MS. JOSEPH: I'm going to second the motion and  
12 just state that it's a document that's written by somebody  
13 else. It doesn't appear that the witness has any personal  
14 knowledge about the facts contained therein and that the  
15 Commission and we can all read it for ourselves.

16 THE WITNESS: well, that's what I did. I'm  
17 just --

18 CHAIRMAN GANS: Yes, I know you did. I  
19 understand what you're saying and I'm going to sustain those  
20 objections.

21 MR. DOLAN: I don't know the answer.

22 CHAIRMAN GANS: You want to be very careful with  
23 this because he is doing what they just said.

24 MR. DOLAN: Yes. Is that a document that --

25 MS. LEONARD: wait. That's what our objection

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1 was just sustained.

2 MR. DOLAN: I just want to know if it was  
3 presented to the NDEP. I don't know if this has previously  
4 been presented to the NDEP.

5 Q. (By Mr. Dolan) Is that a document from the EPA?

6 A. Yes.

7 Q. Okay. In connection with this landfill, were you  
8 ever in communication with NDEP in written form or  
9 conversation form?

10 A. Yes.

11 Q. Okay. Did you send letters to NDEP?

12 A. No. E-mails and telephone calls.

13 Q. E-mails and telephone calls. Okay. Were any of  
14 those e-mails or telephone calls related to the document that  
15 you're talking about and I'm talking with you about?

16 A. We did not mention this between the NDEP and  
17 myself.

18 Q. Did you provide a copy of that document to the  
19 NDEP staff in connection with this landfill application?

20 A. No.

21 Q. Moving on. Now, Mr. Hannum, did you -- those  
22 telephone calls and e-mails, was that part of the, your  
23 commenting to the NDEP? Why did you send those e-mails and  
24 who did you send them to, if you know?

25 A. The -- A lot of -- The conversation that I had

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1 was first with the EPA in San Francisco. They directed me to  
2 John Taylor. John Taylor told me generally, basically I told  
3 him what my problem was and my problem was my concerns over  
4 leakage and changing the quality of my groundwater. And I  
5 thought that people were not allowed to do that under the  
6 Clean Water Act.

7 I also said that there was -- the plans as I saw  
8 them were going to be within the hundred feet statute and I  
9 was wondering how you get around that in a design. Do you  
10 add another 40 feet to the land and then start building on  
11 top of that or if you are going to be that close what changes  
12 in the design and what proof in that design change shows that  
13 it's a proper design change.

14 Just summarizing, his comments were such that  
15 well, we have to look at it now. In this phase, this was two  
16 years ago, this phase of it is our phase where we analyze and  
17 look at it and look at what -- it's back and forth with  
18 Recology.

19 He said that my chance to properly in the methods  
20 of how landfills go in and this process of allowing it or not  
21 with the permit process was that I would have to wait until  
22 the public comment. Now, the public comment as I understand  
23 it was such that you ask questions and they give you answers  
24 to answer your concerns and questions. And that's why I'm  
25 here now is because I feel that I haven't been -- that my

1 main question has not been answered.

2 Q. And that main question is what?

3 A. How do you, A, say to me that my groundwater  
4 won't be -- what proof do you have that my groundwater is not  
5 going to be affected. And B -- And I list that as leakage  
6 through the liner. And then B, once it does leak and it's  
7 detected, what is the steps to clean it so that my -- so that  
8 it will be clean again.

9 Q. Now, are you familiar with NDEP's response to  
10 specific comments 53?

11 A. I didn't memorize them. But I read through it  
12 several times. So I didn't memorize it. Comment 53. It's  
13 pretty hard to memorize.

14 CHAIRMAN GANS: will you tell us where you are so  
15 we up here know what you're talking about?

16 THE WITNESS: He just handed me a copy of the  
17 response that was posted, the questions and the responses of  
18 the -- I don't know exhibit --

19 CHAIRMAN GANS: where is that so we can look at  
20 it also?

21 THE WITNESS: I'm sure it's in one of those  
22 binders.

23 MS. JOSEPH: Is there a --

24 CHAIRMAN GANS: Exhibit Number 5 in these gray  
25 books?

1 MS. JOSEPH: That's correct. And I'll also put  
2 it up on the screen. Which comment were you looking at?

3 MS. MAYO: 53.

4 MR. DOLAN: Now, question 53 and the response to  
5 it. You've had an opportunity to look at this before,  
6 Mr. Hannum; right?

7 THE WITNESS: Absolutely.

8 MR. DOLAN: So when the staff specifically  
9 responded to comment 53, do you recall the staff's response  
10 to the concern about groundwater pollution being that the  
11 landfill is not permitted for release and any release is  
12 permitted in accordance with NAC 444.6887?

13 MS. LEONARD: Can we get some clarification  
14 whether this was a response to your comments?

15 MR. DOLAN: You can cross-examine him, Counsel.  
16 Mr. Hannum -- This is a public record. It's proper  
17 questioning.

18 MR. FRANKOVICH: The answer was it was not his  
19 comment?

20 MR. DOLAN: The answer was not -- The question  
21 was not responded to.

22 MR. FRANKOVICH: Then I would object to it. If  
23 it's not his comment, it's clearly hearsay from somebody  
24 else.

25 MR. DOLAN: Well, then make the objection.

1 MR. FRANKOVICH: I did.

2 CHAIRMAN GANS: Sustained. What is it? Is this  
3 his comment? It's a simple question.

4 MR. DOLAN: I don't know, Judge.

5 CHAIRMAN GANS: I'm not a judge, but. Is he  
6 going to tell us?

7 THE WITNESS: I'm looking at the comment now.  
8 That is not my comment. But they didn't answer all of my  
9 comments.

10 Q. (By Mr. Dolan) Okay. Now, the fact that this  
11 NDEP indicates that the landfill is not permitted for  
12 release, does that adequately address your concerns about  
13 your aquifer underneath your land?

14 A. Absolutely.

15 Q. It does?

16 A. If what they're saying is true that they are not  
17 permitted to put toxins in adjacent properties then that's  
18 true. That was my concern. But it doesn't say anything  
19 about the details, the proof.

20 Q. So you're concerned about there's no proof that  
21 there's not going to be toxins put in to your groundwater?  
22 Is that what you're saying?

23 A. Yes. I haven't received or found any reference  
24 material that says that that will be true.

25 Q. What about this 99.6 percent protection ratio

1 that was mentioned?

2 A. Well, I can't talk about that apparently because  
3 it's in this report on my computer that was earlier  
4 referenced.

5 Q. Surface water, have you been out to the land and  
6 seen -- You've seen some of the photos that we've introduced  
7 in to evidence?

8 A. Yes.

9 Q. About the ponding in the area?

10 A. Uh-huh.

11 Q. Is that consistent with your observations at the  
12 scene?

13 A. I've witnessed that on one, one trip. Like I  
14 said, I go up there several times and I go there for several  
15 days. And from my experience, depending on how deep it is  
16 determines how long it will stay there. So when I saw it, it  
17 was at least three inches deep even on my side of the train  
18 tracks and Recology's side of the train tracks. And it was  
19 there as long as I was there. So that was four days. And it  
20 wasn't raining.

21 MS. LEONARD: I just want to lodge a continuing  
22 objection as to this exceeds the scope of his form three.

23 CHAIRMAN GANS: Noted.

24 MR. DOLAN: Mr. Hannum, is there any other  
25 comment that you would like to make to the Commission in

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1 connection with your --

2 THE WITNESS: I thought it was pretty  
3 straightforward. I just -- what I am saying that the NDEP  
4 did not do and that's why I'm here is that I don't think they  
5 properly answered the questions that I proposed to them,  
6 which was what's the guarantee and proof of not leaking that  
7 they said won't happen. And they said if it does happen even  
8 though we say it won't happen, what is the policy procedures  
9 exactly that will fix the aquifer.

10 Now, as far as I saw in the comments and the  
11 details, statements were just made by them that says that it  
12 will not happen. And to me as the property owner, that's  
13 like -- that has no bearing on anything. It's a useless  
14 comment.

15 MR. DOLAN: Mr. Chairman, nothing further.

16 CHAIRMAN GANS: Okay. Cross, the State.

17 CROSS-EXAMINATION

18 By Ms. Joseph:

19 Q. Good afternoon, Mr. Hannum. I just have a couple  
20 of questions for you. It sounds like you wanted some answers  
21 to some questions. And my question is did you ask those  
22 questions of NDEP?

23 A. Yes.

24 Q. Okay. And in what form did you do that?

25 A. E-mail.

1 Q. Okay. And so is it your testimony that your  
2 e-mails were not responded to --

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3 A. Directly.

4 Q. -- specifically?

5 A. Yes. And adequately.

6 Q. Okay. Did you -- Did you attend the hearing  
7 where there was public comment?

8 A. Attend the hearing? No, I was not able to be  
9 there because I live in Mount View.

10 Q. Okay. Did you review what's up on the screen as  
11 Exhibit 5, which is NDEP's specific response to comments?  
12 Did you read through that document?

13 A. Absolutely.

14 Q. But you don't feel like -- you don't feel as  
15 though your comment was responded to appropriately in that  
16 document?

17 A. Right, uh-huh.

18 Q. Okay. And if I can direct your attention to  
19 Exhibit Number 4, which is also on the screen. I know it's  
20 difficult to read. And if you would like, there's a binder  
21 there. But I will represent to you that this is NDEP's  
22 response to general comments.

23 CHAIRMAN GANS: which one?

24 MS. JOSEPH: That's Exhibit Number 4. So Exhibit  
25 Number 4 is NDEP's response to general comments. And Exhibit

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1 5 is NDEP's response to specific comments.

2 THE WITNESS: Okay.

3 Q. (By Ms. Joseph) Did you read through those  
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4 comments?

5 A. Yes, I did.

6 Q. Okay. And did you not find that your specific  
7 comment was addressed in those responses either?

8 A. No.

9 Q. Okay. It sounds like one of the questions that  
10 you testified you had was what proof do you have that my  
11 groundwater is not going to be affected?

12 A. I was summarizing, but yes.

13 Q. Okay. And what kind of response were you looking  
14 for from NDEP for that?

15 A. Well, I figured if I could find landfills that  
16 leaked and you're saying this landfill will not leak, you can  
17 give me that proof.

18 Q. Okay. And did you look through the report of  
19 design and all of the tables and appendicis that made up the  
20 approved design for this permit?

21 A. I sure did. But I'm sure you would cancel out my  
22 testimony on that since I'm not an expert.

23 Q. Well, I'm just asking at this point if you did  
24 read through that material?

25 A. Yes.

□

1 Q. Okay. And was that not sufficient response to  
2 the question about why the landfill wouldn't leak?

3 A. Assuming that I would be able to understand what  
4 was written in those documents? Yes, because they didn't say

5 anything about guaranteeing no leakage.

6 Q. Okay. So is what you were really asking for was  
7 a statement by NDEP that essentially said NDEP guarantees  
8 that this landfill will not leak?

9 A. No. They said they're not allowed to leak. They  
10 didn't say -- And I was not looking for a statement from  
11 them. I wanted proof. I have documented proof out there  
12 that there are landfills that are lined and they leak. I  
13 haven't seen a double liner landfill that has proven not to  
14 leak.

15 Q. Okay.

16 A. Okay. So I was looking for proof.

17 Q. Okay. And again, the report of design with all  
18 of the tables and other information regarding this specific  
19 design was not sufficient to alleviate your concerns about  
20 leakage?

21 A. No. It says it minimizes it; correct?

22 Q. Unfortunately I'm not the one on the hot seat so  
23 I don't have to answer the questions. But my follow-up  
24 question to that is do you feel that you could appropriately  
25 understand all of the features of the approved design to make

1 that determination?

2 A. I could do it in two ways. One is that I could  
3 find a report that summarized the analysis of that design  
4 that showed that it would not leak, and I could not find  
5 that. And secondly, I've been an engineer, a mechanical

6 engineer for 20 years and I've designed a lot of different  
7 items. I'm very familiar with high density polyethylene and  
8 what they're made of and I know that they break down. It's  
9 inherent in the material.

10 Q. If I may go back to my question though, which was  
11 do you feel that you understood all of the features of the  
12 approved design sufficiently to make the determination that  
13 this landfill will leak?

14 A. Yes.

15 Q. And that's based on your understanding of what?

16 A. My understanding of physics, plastic, the physics  
17 behind the landfill and the lack of information I was able to  
18 obtain either by your department or the government or the  
19 internet on information that said otherwise.

20 Q. You said the lack of information?

21 A. Right, right. There wasn't -- That information  
22 was not available to me and I asked for it and it was not  
23 given to me.

24 Q. Okay. Is your background as a mechanical  
25 engineer, does that in your opinion make you qualified in

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1 landfill design?

2 A. I would probably be able to design one.

3 Q. But does it make you an expert in landfill  
4 design?

5 A. What's an expert?

6 Q. An expert would be somebody who could actually  
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7 design a landfill that was sufficient to pass regulations.  
8 A. Then I think I could.  
9 Q. Okay. Have you ever done it?  
10 A. No.  
11 Q. Okay. So you believe you could but you've never  
12 actually exhibited that; is that correct?  
13 A. Yes.  
14 Q. Do you have expertise in hydrogeology?  
15 A. No.  
16 Q. All right. Do you have expertise in any  
17 geological studies?  
18 A. No.  
19 Q. Do you have expertise in any other sciences  
20 related to the design of landfills?  
21 A. Yes.  
22 Q. What is that?  
23 A. Being a mechanical engineer, I could tell you  
24 what the stresses were in the materials that were going in to  
25 the landfill. I can look them up. They're in tables. I can

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1 calculate pretty much a probability of the chances of several  
2 ton bulldozer pushing around several thousand tons of odds  
3 and ends in to and on to 60 mil thick plastic, right. That's  
4 depending on the thickness. That's 60 mil. That's 60 over a  
5 thousands of an inch, right.

6 Q. Have you ever done any of these things that  
7 you've just talked about?

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8 A. Not to date. But I also designed a car chassis  
9 the first time and it passed all of the tests exceedingly  
10 well, the best chassis they ever had and that was my first  
11 shot, so.

12 Q. Okay. So your -- the expertise that you're  
13 claiming with respect to designing landfills is really  
14 theoretical at this point; isn't that right?

15 A. It's physics. So physics is theoretical. That  
16 is based on law. Law of physics.

17 Q. Okay. But just to reiterate, to date you've  
18 never designed a landfill; is that right?

19 A. That's right.

20 Q. Okay. Are you aware that the Nevada regulations  
21 prescribe use of a liner system?

22 A. Yes.

23 Q. All right. And does that provide you any comfort  
24 in believing that the liner system is adequate to protect  
25 waters of the state?

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1 A. Not in reference -- Not when they don't take in  
2 to consideration the locality of the landfill.

3 Q. And do you believe that the approved design does  
4 not take in to consideration the locality of the landfill?

5 A. Yes.

6 Q. why?

7 A. why I think it doesn't take in to consideration?  
8 well, from the information out there and the reports on the

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9 website, from all indications that sand and mud layering goes  
10 down several hundred feet. And when you put thousands of  
11 tons of material on that type of land mass it will move.

12 Q. But are you aware of the portion of the design  
13 that specifically addressed the soil conditions out at the  
14 site?

15 A. You are referring to which particular part?

16 Q. Well, it's -- There's -- You tell me. Have you  
17 read any portion of the application or the approved design --

18 A. Yes.

19 Q. -- that addresses the conditions of the soil?

20 A. Yes.

21 Q. Okay. What parts have you reviewed?

22 A. The whole thing.

23 Q. So is it based on your review of that design?  
24 Did you not see anything in the design that took in to  
25 consideration the condition of the soil out at the site?

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1 A. I saw that they mentioned that this was a bad  
2 spot for a landfill. And I saw that they recommended the  
3 clay layer, the two layers of clay underneath and some other  
4 verbiage. I didn't memorize it. But that still was not to  
5 me adequate in putting thousands of tons on two feet of clay  
6 and 60 mil plastic. Not to mention that the leachate  
7 collection system is piped where you're talking about a mile  
8 by a mile on a plastic layer that can be at varied heights  
9 throughout as you move along in the process, thus there is no

10 guarantee that those piping systems are going to collect the  
11 leachate that is indicated or is created.

12 Q. Okay. So with respect to the design, it sounds  
13 like you have actually reviewed portions of the design that  
14 take in to consideration the condition of the soil at the  
15 site then; is that correct?

16 A. Yes. I didn't memorize it.

17 MS. JOSEPH: I have no further questions.

18 CROSS-EXAMINATION

19 By Ms. Leonard:

20 Q. Mr. Hannum, you've testified, I believe, that  
21 you're not a hydrogeologist; is that correct?

22 A. I said no to her question about being a  
23 hydrologist expert.

24 Q. You're not a hydrogeologist either; right?

25 A. No.

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1 Q. But you'll agree with me that, like I asked  
2 Mr. Schlarb that water does not flow uphill?

3 A. Yes, I would agree with you.

4 Q. I think that you testified that your property is  
5 2,000 feet from the Jungo site?

6 A. Uh-huh.

7 Q. Is that a yes?

8 A. Yes.

9 Q. And that's to the northeast; correct?

10 A. Yes. But I would also add to that, water runs  
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11 downhill but it doesn't necessarily run north to south.

12 Q. Okay. But you're going to agree with me that  
13 water does not flow uphill; right?

14 A. Right. But not in any particular compass  
15 direction.

16 Q. So if you have a higher elevation it's going to  
17 flow from, water will flow from a higher elevation to a lower  
18 elevation; correct?

19 A. Yes.

20 Q. Okay. I want you to turn to Exhibit 127, please.  
21 Are you there?

22 A. Uh-huh.

23 Q. And is Exhibit 127 the form three that you  
24 submitted to bring this appeal?

25 A. Yes.

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1 Q. Is that your signature?

2 A. It sure is.

3 Q. Under paragraph five it says, "By issuing the  
4 permit, the NDEP is in violation of the Clean Water Act  
5 Section 402, national pollution discharge elimination system  
6 for issuance of a permit allowing for toxic contamination in  
7 well water." Did I read that correctly?

8 A. I believe so.

9 Q. And I believe you testified earlier that now you  
10 understand that the permit does not allow the discharge of  
11 toxins; is that correct?

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12 A. Yes.

13 Q. All right. So it seems like the first part of,  
14 that first sentence of your appeal that I just read you now  
15 feel like that's been addressed and your --

16 A. Absolutely not.

17 Q. Well, you just testified that the permit does not  
18 allow the discharge of toxins?

19 A. I said it states, it states that it's not  
20 permitted.

21 Q. Okay. Thank you.

22 A. But it doesn't provide any proof that it will not  
23 happen. That's my problem.

24 Q. Okay. I think you testified with regard to some  
25 digging that you did on your property; is that correct?

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1 A. Uh-huh, yes.

2 Q. And you did that by hand?

3 A. Yes.

4 Q. And you didn't have a well permit to -- you  
5 didn't have a permit to drill a well; right?

6 A. No.

7 Q. And you said that you dug three-quarters of the  
8 way to water but since you didn't reach water you wouldn't  
9 really know how far away from water you really were; right?

10 A. I wasn't trying to determine that.

11 Q. So you didn't know how far from groundwater you  
12 were?

- 13 A. I was guesstimating from what the well casings  
14 were on the Recology property and how deep my hole was.  
15 Q. How deep what?  
16 A. How deep the hole that I dug was.  
17 Q. And how deep was that?  
18 A. It was three-quarters of the way there, so about  
19 30, 40 feet.  
20 Q. You did 30, 40 feet by hand?  
21 A. Uh-huh.  
22 Q. Okay. So you don't know whether the groundwater  
23 was 33 feet or 41 feet on your site; is that correct?  
24 A. That is correct. I'm not saying that. I didn't  
25 hit water.

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- 1 Q. So you don't know what the water height is?  
2 A. It could have been 300 feet.  
3 Q. Or it could have been at 40?  
4 A. It could have been. I didn't hit water.  
5 Q. So it's safe to say you didn't know the depth to  
6 water on your site?  
7 A. Right. I was guessing.  
8 Q. But your concern is that the water from the,  
9 groundwater from the Jungo site is going to flow to the  
10 groundwater under your land; is that correct?  
11 A. That's correct.  
12 Q. Okay. Will you turn to Exhibit 57, please. And  
13 57 has a number figure so I'm looking at figure two.

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- 14 A. Figure two. Go ahead.
- 15 Q. Okay. You testified that you reviewed the  
16 design, report of design and the other submissions with the  
17 application; is that correct?
- 18 A. Yes.
- 19 Q. Did you review figure two to Exhibit 57?
- 20 A. Yes.
- 21 Q. Okay. So if you look on there do you see the  
22 lines that are going diagonally across the page that have  
23 numbers in there, 4116.0, 4115.5?
- 24 A. Yes.
- 25 Q. Do you know what those are?

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- 1 A. Altitude.
- 2 Q. Are those contour elevations?
- 3 A. As a different name, yes. I would assume so.  
4 Elevations.
- 5 Q. Okay. And do you see that the numbers get lower  
6 as you move towards the west?
- 7 A. Uh-huh.
- 8 Q. Is that a yes?
- 9 A. Yes.
- 10 Q. And so you would agree with me then that the  
11 Jungo site is sloped down, downward towards the southwest; is  
12 that correct?
- 13 A. That the surface --
- 14 Q. The ground -- we're looking at groundwater

15 elevation here. You would agree with me that the groundwater  
16 elevations are shown as sloped towards the southwest;  
17 correct?

18 A. By this figure, yes, I would agree with you.

19 Q. And do you see the arrow there that's pointing to  
20 the left and that's showing the groundwater flow towards the  
21 southwest?

22 A. That's .0003 feet -- what is the rate on that?

23 Q. Do you see the arrow on there?

24 A. Yes.

25 Q. And you would agree that this document shows the

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1 groundwater flow towards the southwest?

2 A. Well, I don't know what the flow rate is.

3 Q. But you would agree with me that the flow  
4 direction is towards the southwest?

5 A. Sure.

6 Q. And you don't have any information to dispute  
7 this document?

8 A. Or support it.

9 Q. But that's a yes, you have no information to  
10 dispute it; right?

11 A. Right.

12 Q. Okay. So if the groundwater is moving to the  
13 southwest you have no information to dispute that then, you  
14 have nothing to indicate that the groundwater from the Jungo  
15 site would end up on the -- go towards the northeast on to

16 your property; correct?

17 A. Well, that's not the point. The point is the  
18 toxins getting on to my property, not the water. So the  
19 toxins, right, you spill some poison in the corner of a pool  
20 and it's going to affect the whole pool; correct?

21 Q. I'm asking the questions here. But is your -- is  
22 that your --

23 A. So my concern isn't the water. It's the toxins.  
24 And when you pour toxins in to a clean water base, it will  
25 dissipate in all directions.

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1 Q. So that's the basis of your concern?

2 A. Yes, absolutely.

3 Q. But you're not a trained hydrogeologist?

4 A. I know what --

5 Q. This is a yes or no question. You're not a  
6 trained hydrogeologist?

7 A. You don't have to be to understand.

8 MS. LEONARD: I would move to strike as  
9 nonresponsive.

10 MR. DOLAN: I think diffusion is known by third  
11 graders, your Honor.

12 MS. LEONARD: I would also object to counsel  
13 testifying.

14 MR. DOLAN: Counsel, I don't want to be  
15 interrupted.

16 CHAIRMAN GANS: It's her floor right now. She  
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17 objected. Wait.

18 You can finish.

19 MS. LEONARD: I would object to counsel  
20 testifying, for one. And I didn't get a responsive answer  
21 and I don't want counsel to testify on behalf of this  
22 witness.

23 CHAIRMAN GANS: I understand. So you do need to  
24 answer the question.

25 THE WITNESS: I would say, no, I'm not an expert.

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1 Q. (By Ms. Leonard) Right. You have no current  
2 wells on your property?

3 A. No.

4 Q. You have no water rights?

5 A. I have the rights that come with the property,  
6 the 2,000-something gallons a day I believe goes with the  
7 property without a permit. And you need a permit to go more  
8 than that if you're going to use agricultural.

9 Q. You don't currently have a permitted water right  
10 on the property; correct?

11 MR. DOLAN: I'm going to object to a legal  
12 conclusion.

13 THE WITNESS: I'm saying that --

14 Q. (By Ms. Leonard) This is a factual question.  
15 You do not hold a water right permit on the property;  
16 correct?

17 A. I have a right to the water under the property up  
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18 to a certain level per day. I don't know what particular  
19 statute you're referring to.

20 Q. But you have no permit in your name with the  
21 Nevada Division of Water Resources; correct?

22 A. Other than what comes with the property.

23 Q. You testified with regard to your concern that  
24 liners leak. You don't have any evidence that the liner  
25 design that is being used with the Jungo site is going to

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1 leak; correct?

2 A. I don't have any evidence that shows that it  
3 won't leak or it will leak.

4 Q. Now, the professional engineer designed the --  
5 excuse me, a professional landfill engineer designed the  
6 liner and your disagreement is with that engineer; is that  
7 correct?

8 A. I have no disagreements with that engineer.

9 Q. I believe that you said that you purchased the  
10 property in September 2008; is that right?

11 A. 9-2 2008, I believe. I might be off by a couple  
12 days.

13 Q. And at the time the property was already zoned  
14 for a landfill; right?

15 A. I don't know.

16 Q. So you didn't do any due diligence before you  
17 purchased the property?

18 A. I would have thought somebody would have  
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19 indicated that there was going to be a landfill across the  
20 street from my property that was going to bring in 4,000 tons  
21 a day for 95 years.

22 Q. Did you -- But you yourself didn't look at the  
23 zoning?

24 A. I didn't receive any information or find out  
25 until a couple weeks --

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1 Q. I would move to strike as nonresponsive. You  
2 yourself never looked at the zoning of the property?

3 A. I looked at the zoning after I found out about  
4 the landfill.

5 Q. And at the time that you purchased the property,  
6 Humboldt County had already issued a conditional use permit  
7 for the landfill; correct?

8 A. Correct. With Norcal Waste Systems.

9 Q. And at the time that you purchased the property  
10 the permit application had already been submitted to NDEP;  
11 correct?

12 A. I don't remember.

13 MS. LEONARD: I have nothing further.

14 CHAIRMAN GANS: Panel, questions of the witness?  
15 Okay. This witness is dismissed.

16 THE WITNESS: Thank you. Thank you for your  
17 time.

18 MR. DOLAN: One second please. The appellants  
19 rest.

20 CHAIRMAN GANS: Okay. It's the State's turn.

21 MS. JOSEPH: All right. Thank you. Before we  
22 begin to present our case I would actually like to make an  
23 oral motion to dismiss on the basis that the appellants have  
24 failed to meet their burden of showing that NDEP acted  
25 arbitrarily and capriciously in issuing this permit.

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1 Appellants have that burden and none of the testimony or  
2 other evidence that's been presented shows that.

3 If you look at the testimony and the evidence, we  
4 heard from Mr. Cook who admits he's not an expert or  
5 qualified to testify regarding the sciences related to a  
6 landfill. He testified that there is and he's seen water at  
7 the site. And he also testified that he didn't know how long  
8 it took for that water to evaporate. He also testified that  
9 he didn't know or wasn't qualified to determine whether or  
10 not the design that was approved for the permit took that in  
11 to consideration and appropriately accounted for it.

12 He also testified that he was unsure whether or  
13 not the soil at the site was sufficient for berming, which  
14 was also incorporated in to the design.

15 In all of that testimony, nothing points to NDEP  
16 making a mistake or acting arbitrarily or capricious in  
17 issuing the permit under the regulations.

18 Mr. Schlarb, who also admitted that he was not an  
19 expert in the sciences related to design of landfill or  
20 geology or any of the other sciences related to a landfill,

21 he did testify, he agreed that the soil conditions that from  
22 his lay opinion as well as the slope of the site in his lay  
23 opinion may have been accounted for in the design. He just  
24 didn't know. He wasn't qualified to determine whether or not  
25 that design took those things in to consideration.

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1 He and Mr. Cook both testified that they hatched  
2 a fairy shrimp at somebody's house. None of this evidence  
3 goes to show that NDEP acted arbitrarily and capriciously in  
4 issuing this permit or that NDEP made any mistake or that  
5 they were in violation of any of the regulations which govern  
6 when NDEP is to issue a solid waste landfill permit.

7 Finally, we have Mr. Hannum. Mr. Hannum  
8 testified that he was a mechanical engineer. He agreed that  
9 he had never designed a solid waste landfill. Although he  
10 thinks he would be able to do it, that is yet to be tested.  
11 It's theoretical at this point.

12 We heard Mr. Hannum testify that he -- his main  
13 concern was not addressed directly by NDEP. And that was  
14 essentially a guarantee by NDEP that the landfill would not  
15 leak. But Mr. Hannum, although he testified that he looked  
16 at the report of design and everything contained therein, in  
17 his lay opinion was not persuaded that this was going to be  
18 sufficient. However, he did testify that he didn't know  
19 whether or not this design would leak. He's simply not  
20 qualified to give that -- to give that opinion. He said he  
21 didn't have any evidence one way or the other.

22           So that does not rise to the level of finding  
23           that NDEP acted arbitrarily and capriciously in approving  
24           this design for a solid waste landfill. We have no other  
25           evidence before us.

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1           Appellants, again, have the burden. They have  
2           failed to show that this design is not sufficient to protect  
3           the waters of the state or that this design is in violation  
4           of any other regulation and the issuance of a permit.  
5           Therefore the State would move to dismiss appellants' appeals  
6           at this time.

7           MR. FRANKOVICH: Mr. Chairman, if I may on behalf  
8           of Recology would like to join in the motion and have a few  
9           additional comments. I want to make sure that the NDEP  
10          record that was the basis of the granting of the permit is  
11          part of the information that's in the record and before you.  
12          I think it is. I think everybody has agreed to that. That  
13          is an extensive record that was developed over four years.

14          We started this by recognizing that the standard  
15          for you is whether there's an abuse of discretion. The  
16          question is whether Mr. Dolan or his client has shown  
17          anything or NDEP abused their discretion.

18          What we've heard is a lot of people or several  
19          people, and I'm sure they have sincere and strong beliefs,  
20          but they're not qualified to disagree with some aspect of the  
21          design plan. That does not, especially from somebody that's  
22          not qualified establish that there is an abuse of discretion

23 by NDEP. Not one qualified individual. As a matter of fact,  
24 nobody said here's a regulation that they were required to  
25 follow that they did not.

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1 The best that we had was the testimony of  
2 Mr. Hannum who said he thinks the liner is going to leak.  
3 But when quizzed about that, his last comment that he made,  
4 he said, I have no evidence that it will or will not. Well,  
5 that's not sufficient to establish as a matter of law that  
6 the NDEP abused their discretion when they issued this  
7 permit.

8 As I said, I think some of the testimony was a  
9 little bit disingenuous. There is qualified engineers'  
10 reports, soil engineers, landfill engineer, geotechnical  
11 engineers that are in that record. Mr. Cook testified that  
12 they sold their integrity for the money and the NDEP was  
13 deceitful. I think those comments are not only inappropriate  
14 but they're disingenuous and don't reflect any of the  
15 evidence that we heard today.

16 No one said that there was not evidence to  
17 support the NDEP, substantial qualified evidence. They may  
18 disagree with that. But that's not the standard. The  
19 standard is, is there evidence to support the decision of the  
20 NDEP. I believe that there's more than that. And counsel  
21 and the appellants have not established otherwise. So we  
22 join in the motion and request that the Commission dismiss.

23 CHAIRMAN GANS: Mr. Dolan.  
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24 MR. DOLAN: Thank you. In the State's brief,  
25 their opening brief, your Honor, on page two, the NDEP

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1 through counsel told this Commission indeed NDEP was  
2 obligated to issue the permit at the point it determined that  
3 the design was sufficient to meet the regulatory  
4 requirements. I interpreted that understanding of NDEP's  
5 role in this at least from the perspective of their counsel  
6 was that there came a time when the discretion was no longer  
7 a part of their review process, that in the opinion of  
8 certain staff people when that staff either individually or  
9 collectively, I'm not sure because we haven't gotten to that  
10 and I want to get to when this collective understanding  
11 occurred within NDEP because it is at that point when I can  
12 attack the abuse of their discretion in reaching that point.  
13 I need to know a lot more so that I can have in the record  
14 when it was at a certain point that the permit must have been  
15 granted.

16 And I find passingly important the discretion  
17 that you all have as a reviewing agency or a reviewing body,  
18 excuse me, of a decision. The standard is not rubber  
19 stamped. That's not what your standard -- it's not rubber  
20 stamped.

21 I recognize that we don't have Ph.D.s here.  
22 we're fighting a battle with arrow -- with rocks from the  
23 hill throwing at a larger enemy. There's a lot of stuff here  
24 which has been brought to your attention in good faith by

25 honest people who are passionate about their position. And

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1 discretion and the abuse of saying is in the eye, often  
2 times, of the beholder. There are concerns about the aquifer  
3 being too close to the base of the landfill. Counsel for  
4 Recology have stipulated up to 29 feet separation between the  
5 two.

6 There is nothing about the grant of the variance  
7 that is consistent with the stated public policy in Nevada,  
8 which I've put it in my brief, in my response brief. There  
9 is nothing.

10 So when the staff chooses to allow a landfill  
11 this size to exist when it's within the hundred feet and  
12 indeed it's within 29 feet of the aquifer, there's a -- the  
13 burden of proof, let us say, is on those that want to create  
14 the exception.

15 Now, they've pointed to the fact that well the  
16 initial design had one liner and now we're going to have a  
17 second liner. Gee, we even have some piping. And at some  
18 point it looks like if we just put another bell and another  
19 whistle on a location where the landfill shouldn't be, we'll  
20 somehow get to the point where it's okay and the waters of  
21 the state will be protected. That's their hope. That's  
22 their hope. But it's not our expectation.

23 So the idea that this matter would be dismissed  
24 before the appellants had a chance to question the NDEP staff  
25 about when they chose to exercise their discretion, what was

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1 it about the design that caused them to say, gee, right now  
2 they've met the standard. Because there's nothing in the  
3 record to this date to point to say, you know what, we were  
4 really sitting on the fence until this piece of evidence came  
5 up and as soon as we got this then we're going to grant the  
6 permit. I do not know when that occurred nor do you if you  
7 grant the motion to dismiss at this point of the hearing.  
8 And I think a full record will be important to know that.

9 So what did the three witnesses for the  
10 appellants present? well, pictures of ponding on the  
11 landfill site. There is suggestion in the report of design  
12 and point of operation that they're going to address the  
13 water. The water won't interfere with the cells because we  
14 have berms and the soil even though it's not the best soil  
15 we'll put some stuff there and it will work, trust us.

16 well, there was also a prohibition of water being  
17 within a thousand feet on the surface. But yet there's water  
18 right there on top of the landfill effectively. I don't know  
19 how more an expert could say to you or anyone else, gee,  
20 those pictures, that water really is -- it's not there. It  
21 is there.

22 Water events in the desert are different from  
23 water events in other non-desert areas. Sometimes it's  
24 violent. It's coupled with high winds. And adjoining land  
25 owners could be damaged by surface water moving above, over

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1 berms and the aquifer being damaged by leachate and with the  
2 soil, the weight of the soil and the weight of the garbage  
3 interfering with this alleged impermeability of these double  
4 liners is just guesswork.

5           So the abuse and discretion standard, yeah, I  
6 believe that there was abuse and discretion in granting the  
7 variance. I believe that certainly the citizens of Humboldt  
8 County when they had the opportunity to speak out to this,  
9 previously there's reference made that the county commission  
10 has approved the CUP. By the way, the county commissioners  
11 of Humboldt County did not approve the CUP. It was a  
12 planning commission and it was done long before I was  
13 involved and others were involved. And it was done while --  
14 It was legal under Humboldt County law for there to be a  
15 second landfill. Explain that to me how you get a CUP when  
16 it's not legal under the local zoning for a second landfill  
17 site. But that's what happened in this case. But when the  
18 citizens of Humboldt County had a chance to speak out,  
19 resoundingly they voted to not allow for a second landfill  
20 site of any degree of likeness.

21           So the voice of the citizens means something at  
22 some level. We all don't have to be Ph.D.s and masters to  
23 know that this is not a good site. You all ultimately are a  
24 very important body. I'm asking you to deny the motion and  
25 allow for the record to continue. Let's hear from the

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1 Recology experts. This is a decision that is going to be --  
2 This is multi-generational decision, 95 years, 30 year post.  
3 120 years and if another day or so of testimony is not a bad  
4 thing so the record is clear. So I would ask you to deny the  
5 motion.

6 MS. JOSEPH: May I?

7 CHAIRMAN GANS: Uh-huh.

8 MS. JOSEPH: Mr. Chairman, Commissioners, again,  
9 the burden is on appellants to show that NDEP acted  
10 arbitrarily and capriciously. Now, as part of their case,  
11 they very well could have called any of the witnesses  
12 including the experts that are here today and they chose not  
13 to do that.

14 So with respect to the argument that, you know,  
15 we should get to that point where, you know, some decision  
16 was made, that was part of or it could have been part of  
17 appellant's case. They chose not to do that.

18 And the evidence that they did present just  
19 simply doesn't meet their burden. And with all due respect,  
20 I think that the evidence that will be presented by the State  
21 and Recology with respect to the design will be supportive of  
22 the design and will be redundant in terms of what's in the  
23 record. The record consists of Exhibits 36 to 61, which is a  
24 comprehensive design engineering plans for this landfill.  
25 And so far we have nothing to dispute that anything in there

1 is not sufficient or is even wrong. There's no testimony to  
2 that. There's nothing to dispute that. So the record as it  
3 stands is really undisputed in terms of the efficacy of the  
4 design. And that was the very burden that appellants needed  
5 to meet and what the commissioners would need to find in  
6 order to reverse the issuance of this permit.

7 with respect to the ponding, just a quick  
8 response, nobody is saying that that water isn't out there  
9 for any number of days. Nobody is disputing that. What the  
10 State is saying is that that's been taken in to consideration  
11 in the design and that hasn't been disputed either.  
12 Therefore, at this time I think it is appropriate for the  
13 commissioners to grant the motion to dismiss. Thank you.

14 CHAIRMAN GANS: Counsel.

15 MS. REYNOLDS: I just want to clarify, when you  
16 are referring to exhibits there's only been four exhibits  
17 that have been offered and admitted in to evidence here and  
18 that's Exhibits 99, 101, 97 and 103. So if you're expecting  
19 the Commission to make a decision based on some other  
20 exhibits in this binder, they need to be separately admitted  
21 in to evidence.

22 MR. FRANKOVICH: I would so move.

23 MS. REYNOLDS: Are you moving -- Do you want the  
24 entire binders?

25 MS. JOSEPH: Exhibits 36 to 61, which is the

1 design.

2 MR. FRANKOVICH: which is the records before the  
3 NDEP when they made their ruling. And I had thought that the  
4 parties had agreed that those would be in evidence and that's  
5 why I wanted to confirm that. I think your comment is  
6 appropriate to make sure we have confirmed that.

7 CHAIRMAN GANS: Just a second. I want to make  
8 sure he's done.

9 MR. FRANKOVICH: Yes.

10 MR. DOLAN: I'm not familiar with what agreement  
11 Mr. Frankovich just referenced with counsel. with all due  
12 respect to Mr. Frankovich, I have not spoken with him with  
13 respect to evidentiary evidence. I just confirmed with  
14 Ms. Mayo that there was no such agreement. So I'm not sure  
15 what he's referencing.

16 I agree with counsel that the only evidence that  
17 has been admitted at this hearing are those limited exhibits  
18 that counsel has discussed. I do recall objections being  
19 made to my exhibits when I was having my witnesses. And had  
20 all of that been before the Commission at the time, my  
21 questions would have been broader and more expansive. So I  
22 would object to the motion to admit what is clearly hearsay  
23 documents. If they intend to get that in, they need to bring  
24 witnesses up so I can cross-examine them on it.

25 CHAIRMAN GANS: On those exhibits?

1 MR. DOLAN: Yes, your Honor. Yes, sir.

2 MS. JOSEPH: So you are objecting -- Just so  
3 we're clear, you're objecting to admittance of the design  
4 that was approved as part of the permit as being hearsay?

5 MR. DOLAN: I'm just raising the same objection  
6 that your co-counsel raised during the witnesses' testimony,  
7 Counsel.

8 MR. FRANKOVICH: That's not correct, Mr. Dolan.  
9 The exhibits that we objected to were exhibits not presented  
10 to NDEP. Nobody other than -- I don't think anybody here has  
11 objected to evidence and documents that have been submitted  
12 to NDEP. And I believe it's appropriate the entire -- I  
13 thought it should have been as part of the record before you  
14 from the beginning when NDEP considered in making this is  
15 what you have to evaluate to see if they abused their  
16 discretion. Clearly that's part of the record. And it  
17 hadn't been stipulated to, that's why I moved. I think you  
18 have to have those in the record.

19 And Mr. Dolan's attempt to object at this point  
20 in time means we don't even have a proceeding going because  
21 there's nothing before you. There's no design to even take a  
22 look at.

23 So I think that those should be admitted. And it  
24 was the ones that were before NDEP and I accept counsel's  
25 representation that those are the Exhibits 36 through 61.

1 MS. JOSEPH: 36 through 61 is the design, the  
2 approved design.

3 MR. DOLAN: I just move to admit all of the -- I  
4 know my staff worked with the attorney general's office to  
5 create this joint binder. Why don't we admit the whole  
6 thing?

7 MR. FRANKOVICH: Okay.

8 MS. LEONARD: No, no.

9 MR. FRANKOVICH: Other than those that have  
10 already been ruled upon. Sorry. Other than those that have  
11 already been ruled on one way or the other.

12 MR. DOLAN: Other than the exhibits that have  
13 previously been rejected or ruled upon?

14 MR. FRANKOVICH: Yeah.

15 MR. DOLAN: Sure. I would go along with that  
16 stipulation.

17 MS. REYNOLDS: So an agreement with the state?

18 MS. JOSEPH: It's fine with me. Yes. No  
19 disagreement.

20 MS. REYNOLDS: So that would have everything  
21 that's in the exhibits admitted except for 96, is that what  
22 you're --

23 MS. JOSEPH: I think there was one other one that  
24 had already been ruled on.

25 MR. FRANKOVICH: There was Dr. Lee's report was

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1 not admitted, which was 63.

2 MS. JOSEPH: I believe -- Was 99 admitted after  
3 Mr. Schlarb?

4 MS. REYNOLDS: Yes, that was admitted.

5 MS. JOSEPH: I think that's right.

6 MS. MAYO: I would agree.

7 MS. REYNOLDS: So to restate, we're going to  
8 admit all of the exhibits except for 96?

9 MR. FRANKOVICH: And 63.

10 MS. MAYO: That's my understanding.

11 MR. FRANKOVICH: 63.

12 MS. REYNOLDS: I don't have any reference to  
13 anybody discussing 63.

14 MR. FRANKOVICH: We had reference that one of the  
15 witnesses making to G. Fred Lee's report. We objected to it.  
16 That objection was sustained. His exhibit wasn't marked at  
17 the time.

18 MS. REYNOLDS: It wasn't marked and wasn't  
19 offered. So I understand that that goes to the question, not  
20 to the exhibit's admission itself.

21 MR. FRANKOVICH: Well, that's why I won't  
22 stipulate.

23 MS. REYNOLDS: That one you will not stipulate  
24 to?

25 MR. FRANKOVICH: That's correct. We thought it

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1 was objected to and already left out.

2 MS. REYNOLDS: Okay.

3 MR. DOLAN: We're going to ask that the G. Fred  
4 Lee report be admitted and our objections with respect to the  
5 Fred Lee report. He's an expert. We would have to just echo  
6 the same objection to any of the other portions of the -- The  
7 G. Fred Lee report based upon my understanding and belief is  
8 that it was part of the NDEP's consideration in the issuance  
9 of the permit. And he's not here to testify. He was the  
10 expert and I believe was retained by Humboldt County and sent  
11 the results to NDEP and it was part of their deliberative  
12 process. But I would ask that it be admitted in to evidence.

13 CHAIRMAN GANS: Is that not your understanding,  
14 Mr. Frankovich? It was not something that NDEP looked at?

15 MR. FRANKOVICH: I didn't hear your question.  
16 But it was submitted to NDEP. There's no doubt about that.  
17 By the county. But our objection was based on the fact that  
18 the county didn't appeal and Dr. Lee is not here to testify,  
19 so it's clearly hearsay. We can't question him or ask him  
20 any questions about it. And it's irrelevant to what somebody  
21 else who's not here today thought about it. If they wanted  
22 to have an appeal, they should be here to answer questions  
23 about their concerns and opinions. That's why we objected to  
24 that particular one.

25 CHAIRMAN GANS: So we have partial agreement? We

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1 have a disagreement on 63 is what I understand?

2 MR. FRANKOVICH: That sounds like the case.

3 CHAIRMAN GANS: Any comments or discussions from

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4 the panel on this motion?

5 MS. REYNOLDS: We have to deal with the exhibits  
6 first.

7 MEMBER LANDRETH: My own belief is if it was part  
8 of the record that was before NDEP, it ought to be included  
9 with everything else that's being admitted.

10 MEMBER RICHARDSON: I agree with that.

11 CHAIRMAN GANS: So then I am going to overrule  
12 the objection on 63. It will also be included in the  
13 exhibits.

14 Now back to the motion.

15 MR. FRANKOVICH: Mr. Chairman, I would like to be  
16 able to respond to Mr. Dolan's comment. Now that we know  
17 what is in the record, no doubt about it that these are  
18 highly complicated questions. But Mr. Dolan has basically  
19 acknowledged that he didn't prove his case. He said there  
20 must have been a time when staff reached this conclusion that  
21 yes, this met the regulations, but he wanted to have the  
22 opportunity to test that to show an abuse of discretion.  
23 That's his burden. He's got to put it in his case, just like  
24 the attorney general said. He actually named Mr. Taylor as a  
25 witness. We anticipated that he would call him and try to do

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1 that. It's basically an acknowledgment that his case is  
2 deficient because he has never been able to establish when or  
3 if an abuse of discretion occurred.

4 Again, even after his comments he still hasn't

5 pointed out to a regulation that established was, or even  
6 arguably established that it has been by out there. The  
7 permit does require no degradation of groundwater. Nobody  
8 has come in here that's qualified and said it will degrade  
9 groundwater or there's even a chance. Nobody has said that.

10 The ponding issue, yes, there are ponds. There  
11 has been ponding in this vicinity. Whether it's on this  
12 property or not, we can argue. Let's assume it is. It  
13 doesn't make any difference. We asked the witnesses, didn't  
14 Golder submit to NDEP information addressing the issue on  
15 ponding, addressing the issue on the groundwater separation  
16 and the soils and the answer was yes, we know, we saw them in  
17 the report, they were submitted. Nobody has ever said that  
18 those qualified and expert reports are incorrect, at least  
19 nobody that is qualified to do that.

20 So I do think the motion to dismiss is  
21 appropriate rather than spending two more days here going  
22 through every one of the exhibits.

23 CHAIRMAN GANS: Any other comments?

24 MR. DOLAN: Just, your Honor, the statute that I  
25 believe has been violated by the staff has, as stated in the

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1 reply brief, is NRS 444.440. And it's the policy of the  
2 State of Nevada under which the staff needs to operate about  
3 which they didn't operate, which was, one, to protect the  
4 health and welfare of the state. Two, to prevent water or  
5 air pollution. Three, prevent the spread of disease and the

6 creation of nuisances. Four, conserve national resources.  
7 Five, enhance the beauty and quality of the environment.  
8 That was the stated policy and is the stated policy. And the  
9 staff decision is inconsistent with that.

10 Their decision to approve the variance was an  
11 abuse of their discretion when it's measured against the  
12 statute under which the rules are promulgated. And as I  
13 stated in the reply brief, the only matter that is advanced  
14 by the staff's variance of the hundred foot distance  
15 requirement was to advance the proposition of making Nevada a  
16 garbage dump for California waste, not to enhance the beauty  
17 or the safety or the welfare of the citizens of Nevada, which  
18 is the stated policy.

19 And therein lies a judgment that you can make.  
20 And I was expecting this to be later with respect to the  
21 final decision. But certainly reasonable minds, which you  
22 all have, could find grounds to believe that in light of the  
23 policy it's a law, a statute, that the overt variance  
24 granted, overt variance granting by the staff was an abuse of  
25 their discretion. And I think you owe it to yourselves and

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1 to the people that you're responsible for to hear from the  
2 other side so you can make a balanced judgment. But standing  
3 on its own, I suspect that you have enough information now to  
4 reasonably conclude that the burden has been met and that the  
5 staff abused their discretion.

6 Look at all of these designs all day long.

7 They're paid experts by the paid permittee to justify an  
8 economic event. That's what you'll see. That's what you'll  
9 read. You'll read nothing in there that's consistent with  
10 the -- And the staff missed it. They missed it. They missed  
11 it. They missed it. I don't need to be a ship builder to  
12 know if a boat sunk. Gee, there's a hole in the boat. I  
13 don't need to know about airplanes, but when one falls out of  
14 the sky, gee, something wrong happened. People can make  
15 judgments. But I guess it's only experts who can come in to  
16 places and say things. But that's not true.

17 We know that the policy in the State of Nevada  
18 was violated by the staff. They abused their discretion with  
19 respect to giving a variance, with respect to the aquifer.  
20 It's as clear as day and we've met our burden.

21 MR. FRANKOVICH: I have nothing further.

22 CHAIRMAN GANS: So it's time for us to deliberate  
23 on the motion to dismiss. Comments. I'll start.

24 Mr. Dolan, I'm very persuaded by the State's  
25 motion and I'm disappointed in the appellants' arguments.

1 Because I see our responsibilities, we're not going to change  
2 the law here. We're not going to change what the regulations  
3 say. And it appears to me from what I know of the design,  
4 and I've read those exhibits, that the State made every  
5 effort to do something about exactly what you're saying under  
6 444. And I was hoping that you would show us through your  
7 presentation where they didn't. I was disappointed that

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8 there's no experts. I really wanted something from the  
9 appellants that was more expert.

10 MR. DOLAN: We don't have the money, your Honor.

11 CHAIRMAN GANS: Pardon me. I understand that.

12 But we still then -- Then what you're doing then is you're  
13 asking us to make a decision and determination without  
14 another expert opinion. That's what you're doing. This is a  
15 very, very weak position. I'm not saying your question about  
16 when did this happen or was there a variance isn't  
17 interesting to me. It is. But your case, your presentation  
18 didn't give me the ammunition that I was really looking for  
19 when we first started. So I'm not saying I'm in favor of the  
20 motion. I'm just saying I'm disappointed and I am persuaded.

21 MEMBER RICHARDSON: There's volumes of  
22 information here that definitely raise some intriguing  
23 questions. The burden of proof is on the appellant and I'm  
24 not confident that they've satisfied that.

25 CHAIRMAN GANS: Is there any particular concern

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1 on behalf of the panel members that what Mr. Dolan said about  
2 this was a variance given by the State and that variance  
3 somehow went beyond their discretion or was in violation of  
4 444?

5 MEMBER LANDRETH: That personally is a problem  
6 for me. Now, whether or not that issue is sufficient to say  
7 that appellants having raised that and apparently it's not  
8 disputed by the state or by the intervener that there is

9 something resembling a presumption. It may not be a  
10 presumption, but there's something resembling a basic  
11 standard in our Nevada law that says that a hundred feet is  
12 the minimum. And yet both sides apparently agree that in  
13 this particular case the landfill could have come as close as  
14 29 feet as I understand it to the upper most groundwater.  
15 That troubles me.

16 Because maybe buried somewhere in here is a  
17 justification for why we -- why it is not an abuse of  
18 discretion for the state to have decided the 29 feet is not  
19 problematic given the schematic that we have over here.

20 The only evidence, which is not evidence, that we  
21 heard was in the opening statement I think of the state  
22 indicating that the original regulation in which the hundred  
23 feet is mentioned was not based on any kind of scientific  
24 process.

25 But it is troubling. If that's our basic

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1 standard that we say the general rule is, we don't want this  
2 substance to get closer than a hundred feet from our  
3 groundwater, which we all know is very precious and once  
4 polluted is probably impossible to repair.

5 I'm troubled by the fact that right now we are  
6 relying largely on the evidence that this was a four-year  
7 proceeding and that there were a number of modifications made  
8 to the original plan in order to address that. 29 feet  
9 versus a hundred feet is troubling.

10 MEMBER RICHARDSON: I agree there's a lot of  
11 engineering involved that I was looking for some more  
12 ammunition, as you put it, with some specifics for the abuse.

13 CHAIRMAN GANS: Mr. Dolan, I don't think you've  
14 made your case. But I don't want this hearing to end from my  
15 perspective until this question that you've raised has been  
16 clarified.

17 while I agree with the motion to dismiss, I would  
18 like to know the answer to that question. And I don't know  
19 how to get that answer unless we continue with this hearing  
20 and you present your case so we understand. Why was this --  
21 I think I know. But that's not a basis for me as a  
22 Commission member to make my decision on this. I see what  
23 has happened over there in the opening statements and it's  
24 admirable.

25 So from my perspective, while I favor the motion

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1 to dismiss, I'm willing to go forward with the hearing  
2 another day, today and another day if that's what the panel  
3 members want to do. We're going to need a motion on the  
4 floor of which way we're going.

5 MEMBER RICHARDSON: I would agree to continue on.  
6 There's some interesting questions that should be addressed.  
7 If we're going to err, we should err on the side of more  
8 investigating.

9 MS. REYNOLDS: A motion to deny.

10 CHAIRMAN GANS: That's a motion to deny?

11 MEMBER RICHARDSON: I would make a motion to deny  
12 the dismissal of the charges.

13 CHAIRMAN GANS: Is there a second?

14 MEMBER LANDRETH: I'll second.

15 CHAIRMAN GANS: All in favor, signify by aye.  
16 (The vote was unanimously in favor of the motion)

17 CHAIRMAN GANS: The motion is denied.

18 The State can present their case.

19 MS. JOSEPH: Thank you. The State would call  
20 Mr. John Taylor, please.

21 (witness was sworn in)

22 ///

23 ///

24 ///

25 ///

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1 JOHN TAYLOR

2 Called as a witness on behalf of the  
3 State, having been first duly sworn,  
4 was examined and testified as follows:

5

6 DIRECT EXAMINATION

7 By Ms. Joseph:

8 Q. Good afternoon, Mr. Taylor. Could you please  
9 tell the Commission where you work.

10 A. Nevada Division of Environmental Protection  
11 Bureau of Waste Management.

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12 Q. And how long have you worked at NDEP?

13 A. About 17 years.

14 Q. How long have you worked with the Bureau of Waste  
15 Management in particular?

16 A. About 12 years.

17 Q. And what is -- what is your title?

18 A. Staff engineer three.

19 Q. What are your primary duties as staff engineer  
20 three?

21 A. I review permit applications for landfills,  
22 material recovery facilities, compost plans, I do all the  
23 permitting for that stuff.

24 Q. And how many permits have you written for solid  
25 waste landfills in Nevada approximately?

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1 A. Three to five, five-ish. New ones.

2 Q. And have you also written modifications to  
3 permits?

4 A. I have.

5 Q. And approximately how many of those have you  
6 written?

7 A. Ten to 15.

8 Q. And what qualifications do you have for your  
9 position as a staff engineer three?

10 A. I'm a registered professional engineer in the  
11 State of California, State of Nevada and a certified  
12 environmental manager in the State of Nevada.

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13 Q. All right. Do you have a degree?

14 A. I do.

15 Q. What is that in?

16 A. I've got a Bachelor of Science through  
17 environmental science and a Master's in civil engineering  
18 through the civil engineering department at UNR.

19 Q. Prior to your work with Waste Management, where  
20 did you work?

21 A. I worked for federal facilities, which is also in  
22 NDEP.

23 Q. And what did you do there?

24 A. I managed the Nevada test site, RCRA permit.

25 Q. And what do you mean by RCRA permit?

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1 A. Resource Conservation and Recovery Act.

2 Q. And is that essentially hazardous waste?

3 A. It covers hazardous waste and solid waste as  
4 well.

5 Q. Now, are liners used in hazardous waste  
6 landfills?

7 A. In many cases, yes.

8 Q. The -- Are you familiar with the permit that was  
9 issued to Jungo for a solid waste landfill?

10 A. I am.

11 Q. Okay. I'd like to direct your attention to  
12 Exhibit 1, which is the -- well, I will ask you. What is  
13 that?

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14 A. This is the issued permit to the Jungo facility.

15 Q. All right. And at the top of that Exhibit 1 it  
16 says solid waste disposal site permit class one. Do you see  
17 that?

18 A. Yes.

19 Q. What is a class one permit?

20 A. Class one generally is a facility that takes  
21 greater than 20 tons per day of solid waste.

22 Q. All right. And approximately how much waste is  
23 permitted for the Jungo permit?

24 A. They've got it estimated at the rate of about  
25 4,000 tons per day.

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1 Q. How does that compare to other landfills in  
2 Nevada?

3 A. For the larger landfills it's kind of near the  
4 bottom of the list. Lockwood takes considerably more than  
5 that. Apex takes very large amounts. Those are the two  
6 bigger ones.

7 CHAIRMAN GANS: Excuse me. I didn't understand.  
8 You say Apex and Lockwood are larger?

9 THE WITNESS: Larger landfills and they take more  
10 waste. Apex is the one down in Las Vegas. Lockwood is the  
11 one just outside of Reno.

12 Q. (By Ms. Joseph) Do you know where does the  
13 Jungo, the proposed landfill of Jungo fall within size of all  
14 of the landfills in Nevada?

15 A. It's number four, five. It would be number five.  
16 The fifth largest. There's about a hundred million cubic  
17 yards.

18 Q. And what types of waste are accepted or will be  
19 accepted at the Jungo Landfill under this permit?

20 A. Just solid waste, tires. No hazardous wastes.  
21 No conditional exempts. No asbestos. That sort of thing.  
22 No nasties.

23 Q. Now, can this permit be modified by NDEP?

24 A. Yes.

25 Q. And if I can direct your attention to section 2.2

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1 of that permit under permit actions. Do you recognize that  
2 section?

3 A. I do.

4 Q. All right. And is that the portion of the permit  
5 that allows NDEP to modify the permit?

6 A. For cause, yes.

7 Q. Okay. What might be cause to modify the permit?

8 A. It could be a number of things. Drifting from  
9 the design report, any approved plan, any enforcement action  
10 under an inspection as a result of a report submitted, the  
11 biennium reports, any of the two design review reports, a  
12 number of reasons.

13 Q. Okay. And who at NDEP will be monitoring to make  
14 sure that Recology conforms to the design that's been  
15 approved?

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16 A. We will be conducting quarterly biennial  
17 inspections. So either the inspector or the permit writer  
18 who is receiving probably the bulk of the required reports.

19 Q. Directing your attention to section nine of that  
20 permit, which is all the way at the bottom, in paragraph  
21 9.1.1.1, you see in there about four lines down there refers  
22 to an assessor's parcel number. Do you see that?

23 A. Yes.

24 Q. All right. And are you aware of whether or not  
25 that parcel number is correct?

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1 A. Yes. I was notified of it during the public  
2 comment period.

3 Q. And is that parcel number correct?

4 A. No.

5 Q. Okay. What should be the correct parcel number?

6 A. The first two letters should just be 05 instead  
7 of 06.

8 Q. Okay. Thank you. Going down further at the  
9 bottom of the permit, do you see a signature at the bottom of  
10 that permit?

11 A. Yes, I do.

12 Q. Okay. And do you know whose signature that is?

13 A. That's Mr. Novack's.

14 Q. Okay. And who is Mr. Noack?

15 A. He's our bureau chief.

16 Q. And is he responsible for reviewing and approving

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17 this permit?

18 A. Yes.

19 Q. All right. And did you have regular briefings  
20 with Mr. Noack regarding this permit?

21 A. Yes.

22 Q. All right. And did you recommend to Mr. Noack  
23 that he sign this permit for issuance?

24 A. Eventually I did, yes.

25 Q. And why did you provide that recommendation to

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1 Mr. Noack?

2 A. At the time we assessed the evaluated the fact  
3 that it was protected waters of the state and met all the  
4 regulatory criteria, at which point we would have to issue.

5 Q. And do you still believe that all of the  
6 regulatory requirements were met when this permit was issued?

7 A. I do.

8 Q. And did Mr. Noack agree with you?

9 A. He did.

10 Q. Before issuing this permit, did you review public  
11 comment related to this permit?

12 A. Yes, I did.

13 Q. And did you respond to that public comment?

14 A. Yes.

15 Q. If I could turn your attention to Exhibit 4 in  
16 the binder, which is titled NDEP response to general  
17 comments. Do you recognize that document?

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18

A. Sure do.

19

Q. Did you prepare those responses?

20

A. I sure did.

21

Q. All right. And if I can direct your attention to Exhibit 5, which is titled NDEP response to specific comments. Do you recognize that document?

22

23

24

A. Yes, I do.

25

Q. And did you prepare that document?

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1

A. Yes, I did.

2

Q. All right. Tell me a little bit about how the time and the manner in which you responded to the public comments?

3

4

5

A. Well, there were a lot of comments. So first we had to -- we took the comment during the period, took the auto, audio transcripts so we can transcribe it in to a written, they were wide-ranging. We took all the e-mails, all the letters and everything that I got during pretty much the entire process, we tried to break that out in to categories. Some of them became repetitive. They were general in nature, like many people wanted just an outright denial so that just became one category. In many cases there were very specific questions, you know, like how big is the landfill. We tried to answer those specifically. So we spent a lot of time sort of parsing these guys out to break apart from sort of a general category to a specific category and then answered them appropriately. That's the short

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version.

20 Q. Thank you. Now, did you make any changes to the  
21 permit following public comment before it was issued?

22 A. I did.

23 Q. If I could direct your attention to Exhibit 1  
24 again, that is the final permit that was issued. Is there a  
25 portion in there that contains the changes that were made to

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1 the permit in response to public comment?

2 A. Yeah. I added three more items to the compliance  
3 schedule: Line of degradation evaluation program,  
4 establishment of meteorological station and include more  
5 detailed engineering calculation and certifications for the  
6 berms. Those seem to be the primary areas of concern and  
7 that we meet those.

8 MR. DOLAN: It's hard for me to hear this  
9 gentleman. He's sitting right next to me.

10 CHAIRMAN GANS: Okay. Why don't you just move  
11 your chair back a little bit and maybe your voice will get  
12 over there.

13 MS. JOSEPH: So Mr. Taylor, did you feel that the  
14 other comments that you received were responded to through  
15 your other -- through your response to comments in Exhibits 3  
16 and 4 or was it, excuse me, Exhibits 5 and 6?

17 THE WITNESS: Yes.

18 MR. DOLAN: It was Exhibits 4 and 5, Counsel.

19 MS. JOSEPH: Thank you. 4 and 5.

20 THE WITNESS: Yes. This in conjunction with the  
21 addition of the compliance items, yes, to answer your  
22 question.

23 Q. (By Ms. Joseph) And I'd like to direct your  
24 attention to Exhibit 6. Can you identify that document for  
25 me, please?

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1 A. This is a slide show of the public hearing.

2 Q. All right. Did you prepare this slide show?

3 A. Yes.

4 Q. Okay. And was this presented as part of the -- I  
5 believe you just testified -- was this presented as part of  
6 the public hearing on December 1st 2011?

7 A. Yes.

8 Q. Okay. And what was the point of this slide, of  
9 this presentation?

10 A. We were trying -- we knew that there was a lot of  
11 concern so we were trying to give everybody a good overview  
12 of the entire project, kind of from beginning to end, all the  
13 added features that were included as part of the permit  
14 review process, the protective measures and some of the  
15 history of the entire process as a whole.

16 Q. Okay. And just turning your attention to slide  
17 number ten of that presentation where it talks about design  
18 standards, do you see that?

19 A. I'm working on it. Design standards, yes.

20 Q. Okay. And what was your goal in including this

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21 slide as part of the presentation?

22 A. It was to try to demonstrate that we were not  
23 going to take just a nationally accepted standard, which is  
24 your standard liner system, your 60 mil over two feet of  
25 clay. That we were going to bump the bar up to the extent --

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1 to the maximum extent possible. And we wanted to demonstrate  
2 that, that it wasn't just -- that this process was going to  
3 have a lot of review associated with it.

4 Q. And by the time of this hearing had there in fact  
5 been a lot of review associated with the permitting process?

6 A. Yes. We conducted the hearing pretty much at the  
7 time the regulatory criteria were met and it went out for  
8 public comment. In other words, my process was more or less  
9 concluded.

10 Q. And that process from start to finish took  
11 approximately how long?

12 A. Forever. Four years.

13 Q. Now, what is the typical length of time for a  
14 municipal solid waste landfill permitting process?

15 A. Year, year and a half.

16 Q. All right. And you just testified that this one  
17 took approximately four years?

18 A. Yes.

19 Q. Why did this one take longer?

20 A. There was a lot of review and a lot of thinking  
21 about how to be protective, how to meet the regulations, to

22 exceed them to some extent to a reasonable degree, how to  
23 build in not just protected measures but predictive measures.

24 Q. Okay. Now, did the fact that the landfill was  
25 going to be located within a hundred feet of groundwater

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1 contribute to the length of time in the permitting process?

2 A. No doubt about it.

3 Q. And why did that contribute to the time?

4 A. If you look at the -- I kept bringing sort of  
5 concerns to the floor. In other words, either soils,  
6 seismic, leachate management, service water management. And  
7 in the process of getting answers back and working back and  
8 forth I was trying to figure out how to structure the permit  
9 to get the maximum protection necessary.

10 Q. Do you feel that you did that?

11 A. I do.

12 Q. And how did you do that? Through which features  
13 of the design did you get maximum protection?

14 A. In any landfill there's basically three  
15 components. There's a design component, an operational  
16 component and a monitoring component. Design components are  
17 fairly -- the national standards, you've seen those as the  
18 single liner of the two feet of clay. That's the nationally  
19 accepted standard. So they wanted to raise the bar on that  
20 one. That's your primary line of defense.

21 There's also a monitoring standard which is  
22 comprised of a couple of categories. Monitoring for

23 different gasses that the landfill will generate or you're  
24 monitoring the groundwater. And there was other monitoring  
25 that was incorporated as well.

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1 And then your operational component has to do  
2 with site contingency plans, training, experience, education,  
3 operating the site to be consistent with the submitted design  
4 and ensuring that the monitoring is reflective of the  
5 conditions so that you can have a sense that the landfill is  
6 performing as designed. Does that make sense?

7 Q. Okay. So Mr. Taylor, let's go through -- Let's  
8 back up just a little bit and go through. When you first  
9 received the Jungo application what did you do?

10 A. The regs require a completeness review. It takes  
11 about 30 days. So I have to quickly go through the  
12 application and make sure it contains everything that the  
13 regs require and then send a completeness or incompleteness  
14 letter back and tell them what type of information I need.

15 Q. Okay. And did Recology meet the completeness  
16 review at some point?

17 A. Yes.

18 Q. Okay. And then what did you do after that?

19 A. Make a completeness determination and then I move  
20 to a technical review.

21 Q. And what is the first thing you did as part of  
22 the technical review?

23 A. I try to identify, you know, initially try to

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24 identify primary areas of concern. Obviously the 100 foot of  
25 groundwater was going to be a big one. Site soils always

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1 come in to play right away. I question the unstable areas,  
2 which is part of location restrictions and then the area  
3 located in a seismic impact zone which is the earthquake,  
4 seismic analysis.

5 Q. Okay. So let's start with the concern regarding  
6 the seismic. You initially had a concern regarding the  
7 seismic area; is that right?

8 A. Well, all the landfills have to be able to  
9 operate in a way that doesn't compromise the design. Because  
10 you're in a seismic impact zone, you can only have so much  
11 displacement in a landfill before you can compromise the  
12 containment system. So I needed a fairly detailed seismic  
13 analysis to make sure that the landfill wasn't moving around  
14 like Jell-o so to speak.

15 Q. And did you receive that?

16 A. Yes.

17 Q. And at the time that you issued the permit were  
18 you persuaded by that data that the design was sufficient to  
19 accommodate for any seismic activity?

20 A. Yes. The additional detail had displacement in  
21 the one to two, three, inches range.

22 Q. All right. The other topic that you mentioned  
23 that you initially had concern about in your technical review  
24 is the condition of the soils; is that right?

25 A. Yes. The soils -- Down a little ways there's a

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1 fat clay which is a somewhat compressible clay, so I wanted  
2 to make sure that we didn't get excessive sediments or  
3 differential displacement in the landfill because of that  
4 compressible layer and that you weren't going to get dramatic  
5 changes in the base of the landfill due to that. So I wanted  
6 to make sure that the soils was going to be able to withstand  
7 the waste mass. It's about seven and a half tons per square  
8 foot out there and they were all submitted satisfactorily.

9 Q. So at the time that the permit was issued, were  
10 you persuaded that the soils would be able to withstand the  
11 weight as you put it?

12 A. Yes.

13 Q. And that was based on what, calculations  
14 submitted by?

15 A. The soil reports in the application, the  
16 consolidation reports.

17 Q. All right. And then I think the third concern  
18 that you discussed was the proximity to groundwater; correct?

19 A. Yeah.

20 Q. Okay. Now, let's start with the -- your review  
21 of an application when it's within 100 feet of groundwater.  
22 what is it you're required to do in order to approve such a  
23 permit?

24 A. There's only two. Protect the waters of the  
25 state and meet or exceed all the regulatory criteria.

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1 Q. Okay. So are there other permits, permits for  
2 solid waste landfills in Nevada that are within a hundred  
3 feet of groundwater?

4 A. Yes. The westerly facility down in Lincoln  
5 County.

6 Q. And so under the regulation is NDEP allowed to  
7 issue a permit that's within a hundred feet of groundwater?

8 A. Yes, if it meets their design criteria, sure.

9 Q. Okay. Now, did you determine that this design  
10 met that design criteria?

11 A. Yes.

12 Q. And let's talk a little bit about how you  
13 determined that this design met that criteria. What about  
14 the design was sufficient to meet the design criteria for  
15 being within a hundred feet of groundwater?

16 A. Well, like I alluded to before, we not only have  
17 protective, we have a design that's protective of the waters  
18 of the state and we have done under controls. We have  
19 several monitoring programs, secondary leachate. So each one  
20 of these are being used as early warning systems, right.  
21 Should the first sort of element begin to fail, we would have  
22 the ability to replicate that. That's part of the line of  
23 degradation.

24 Q. Okay. So let's start with the first, the first  
25 line of defense. When you first received the application for

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1 this permit from Recology did it include a double liner?

2 A. No. It was a single.

3 Q. And what did you do in responses to the initial  
4 application that included a design with a single liner?

5 A. I began the review and then informed Recology  
6 that I would not be able to take that to public comment.

7 Q. Okay. So did you require -- did you tell  
8 Recology that you were going to require a double liner  
9 system?

10 A. I told Recology that we would have to do more  
11 than the descriptive standard.

12 Q. Okay. But ultimately did you tell them that they  
13 needed to do a double liner?

14 A. Yes.

15 Q. Okay. And did they submit or modify their  
16 application to include a double liner?

17 A. Yes.

18 Q. All right. If I could turn your attention to  
19 Exhibit 19. Do you recognize that letter?

20 A. I'm working on it. 19. Right.

21 Q. Do you recognize that letter?

22 A. Yep. That's a resubmission for the double liner.

23 Q. Okay. So is this the letter in which Recology is  
24 agreeing to modify their application to include double liner?

25 A. This is the modification to modify to a double

1 liner.

2 Q. Okay. Now, can you explain for the Commission  
3 what the double liner system is? And feel free to use the  
4 demonstrative, if you would.

5 A. Sure. You have two feet of protective operation  
6 soil on top. That's to help protect everything below it so  
7 that it's not -- you're not compromising the integrity of the  
8 liners for operation, bulldozers, et cetera. Right below  
9 that you'll have typically geotextile. And right below that  
10 is the high capacity leachate collection system. It's the  
11 little rocky stuff. Protective soil, geotextile.

12 CHAIRMAN GANS: Excuse me. What does that mean?

13 THE WITNESS: It's like a fabric. It just  
14 keeps -- It allows liquid to pass, so it acts like a filter  
15 so that you don't end up loading up your collection system.  
16 It carries a lot of dirt and material in it. You've got two  
17 things. You've got a leachate collection pipe, which is  
18 basically at the bottom of the divide, and then you've got a  
19 gas collection system which is sort of adjacent to the lower  
20 layers. This allows you to collect methane, any gas that's  
21 generated by the landfill actively and monitor the amounts.  
22 And then you'll have another HDPE liner. And then you'll  
23 have two feet of low perm soil. And then you'll have a  
24 secondary liner system and the geotextile and geomembrane or  
25 geotextile and then another HDPE liner. So you have HDPE

1 liner, dirt, HDPE liner and subsoil subgrade. So you've got  
2 two, three, five, five and a half some odd feet of  
3 insulation.

4 Q. Now, Mr. Taylor, if I may, the operation soil  
5 layer, now, that is in part to help protect the liner itself;  
6 is that correct?

7 A. Yes. This is so that you won't be piercing or  
8 compromising any of the lower layers.

9 Q. And the layer below that, the gravel layer?

10 A. The leachate collection.

11 Q. The leachate collection system, is that required  
12 in a prescriptive design?

13 A. In the normal subtlety design, no. Normally  
14 you'll just see a liner with kind of a valley with some  
15 leachate, with a leachate, like a French drain. So the  
16 leachate collection is passed in to the pipe and then out to  
17 the sumps. So this is not required. This is required. The  
18 double liner is not required along with the geotextile.

19 Q. Okay. Let me just interrupt you. Let's take it  
20 one at a time. So with respect to the high capacity leachate  
21 system, what do the regulations require in terms of the  
22 amount of leachate that is allowed to be resting upon the  
23 liner at a given time?

24 A. At any time you can't have more than 12 inches of  
25 leachate on the upper liner.

1 Q. Okay. And what is this design designed to allow  
2 in terms of leachate upon the liner?

3 A. We've got estimated depths of fractions of an  
4 inch.

5 Q. And what does that mean in terms of protection  
6 for groundwater?

7 A. The more liquid you have, the greater the head,  
8 the more opportunity to find weaknesses in the liner. If you  
9 can reduce that to the extent practicable, even if the liner  
10 integrity was compromised, you don't have any liquid passing  
11 through it. There's no liquid available to pass through the  
12 liner.

13 Q. Okay. If you can describe just a little bit how  
14 the leachate system works, how the liquid falls in to the  
15 pipe and then what happens to it after that?

16 A. Can I get a picture?

17 Q. What picture do you want?

18 A. Just the one that shows the basic gradient plan,  
19 kind of like the ones that you had before.

20 Q. I'm not sure what you're thinking of.

21 A. It was the one where you were showing the  
22 groundwater flow. That was actually the base gradient. The  
23 short version is the thing is built in sort of linear modules  
24 that are sort of valled out, right, over which you'll have  
25 the two feet or the one foot of gravel. And at the bottom,

1 the valley bottom, you'll have all of that leachate that's  
2 contributed in that area.

3 Q. All right. This is Exhibit 57, figure two.

4 A. So these are the individual modules, these guys  
5 here. And these are sloped down and then out and the sump is  
6 out here, so you'll have all of your leachate that's  
7 generated in this module find its way down the middle out to  
8 that large leachate pipe through the gravel and then out to  
9 the sumps where they perforate the landfill. That's the  
10 short version.

11 Q. Okay. And the other -- so that's the high  
12 capacity leachate system. What is the smaller pipe that's  
13 within that system? What is that for?

14 A. Say that again.

15 Q. What is the smaller pipe that's within the high  
16 capacity leachate system?

17 A. This is an active landfill gas collection system.  
18 Typically the regulations will only require methane  
19 monitoring out at the perforated landfill because they  
20 require that you keep explosive gasses below the LEL from  
21 migrating off site. This will allow collection of gasses  
22 adjacent to the groundwater up against the liner, however you  
23 want to think about it.

24 Q. All right. So in a prescriptive design there is  
25 no system for collecting and disposing of gasses; is that

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- 2 A. Not initially, no.
- 3 Q. Okay. But in this design what was approved?
- 4 A. Right from the get-go.
- 5 Q. Was it a system that starts doing that from the  
6 start?
- 7 A. Yes. You have the capacity to do it right away.
- 8 Q. Okay. And then below that I think you testified  
9 that that's the first liner; correct?
- 10 A. Right here, yes.
- 11 Q. And then below that is two feet of low  
12 permeability soil?
- 13 A. Two feet, yes.
- 14 Q. And is that part of the prescriptive standard?
- 15 A. The prescriptive standard basically is from here  
16 to here.
- 17 Q. Okay.
- 18 A. That's really all it is.
- 19 Q. Okay. All right. And then below the two feet of  
20 soil there's the secondary collection system?
- 21 A. You'll see another geotextile, a geogrid and then  
22 a secondary HDPE liner. Was that too fast?
- 23 Q. Well, if you can just explain a little bit about  
24 how that system is going to work should leachate leak through  
25 the first liner.

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- 1 A. Well, even if leachate leaked through the first  
2 liner, this layer would have to become saturated before it

3 would release. Okay. So this is built to actually act as  
4 a -- in your typical design, this is built to actually act as  
5 a sponge. That's why they have the two feet of low perm  
6 soil. So it's not just a resistant layer, but it's an  
7 absorbent layer as well. In that case, once this begins to  
8 saturate, then there's another geotextile here which would  
9 again keep the geograde from loading up, just getting dirty  
10 and then pass through the HDPE liner. And then that layer is  
11 also passed out to the sumps to be a perforated landfill. So  
12 these are both active leachate collective systems. But this  
13 guy is just a backup for this guy.

14 Q. All right. Thank you.

15 A. This is your primary collection system right  
16 here.

17 Q. Okay. Thank you, Mr. Taylor. Now, based on that  
18 design, is there any one aspect of that design that persuaded  
19 you that the design was protective of the waters of the  
20 state?

21 A. Well, there's multiple barriers that are inherent  
22 in this design. So I mean this guy here is designed to be a  
23 containment system. The fact that there's a double liner  
24 with redundant leachate controls and a secondary ability to  
25 tell if a first layer has failed, then yes.

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1 Q. Is this design, this approved design, the only  
2 design in Nevada with a double liner system?

3 A. Yes.

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4 Q. For a municipal landfill waste?

5 A. Yes.

6 Q. So the only other landfills in Nevada with a  
7 double liner are hazardous waste landfills?

8 A. Yes.

9 Q. Would you equate this design to be closer to a  
10 hazardous waste design rather than a municipal waste design?

11 A. Yes.

12 Q. All right. Now, in addition to these design  
13 features, what about features related to the settlement of  
14 soils?

15 A. Well, that was an additional component because of  
16 the early-on kind of question these soils and even though we  
17 had engineer analysis to show that they were robust enough, I  
18 actually wanted empirical data as well, which a lot of this  
19 was backed up by empirical data. So we weren't just relying  
20 on the calculation alone.

21 The settlement system -- Can you bring that up?  
22 Do you know where that is? For settlement monitoring because  
23 of the long reaches in the modules, about 1600 feet or so, we  
24 wanted to kind of make sure because one of the primary things  
25 it's not going to do us any good to build a fancy leachate

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1 collection system unless all the leachate is being  
2 preferentially pulled off to the sumps.

3 Q. I'm not sure -- Is it a diagram that you're  
4 looking for?

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5 A. It is actually. It's in the operations binder,  
6 Exhibit 4. It might be in the operations binder. Well, I'll  
7 let them find it later. But in any event, what we're doing  
8 is actually measuring settlement along the modules to make  
9 sure that we actually are pulling drainage so the drainage is  
10 not compromised so we don't end up with a flat grade and then  
11 eventually leachate would pool, right, flat pooling. So we  
12 always want to make sure that there's a grade out to the  
13 sumps. As long as that's happening, we have leachate moving  
14 out to the sumps and the liner is dry. But I wanted that  
15 empirical. I wanted that data empirical, not just calculated  
16 out. We can do a settlement analysis but we actually wanted  
17 real data.

18 Q. All right. And that was incorporated as a  
19 requirement in the permit; correct?

20 A. Yeah.

21 Q. Okay. All right. What additional -- Are there  
22 additional -- Now, that settlement monitoring plan, is that  
23 required in most permits?

24 A. No.

25 Q. Okay. So that was something that is not required

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1 by regulation; correct?

2 A. Oh, no.

3 Q. Okay. What about additional monitoring systems?

4 Is there a groundwater monitoring system that was

5 incorporated in to the permit?

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6 A. Yes. There's -- Bring up any picture. No? You  
7 don't need to bring up pictures? That's all right. I can do  
8 the talking. It's a big square, right, so we have interim  
9 monitoring. We've got two angled points and the first two  
10 installed sumps, okay. And then we also have four interim  
11 monitoring wells which are slightly down gradient and in line  
12 with the groundwater flow. And then as usual we'll also have  
13 peripheral groundwater monitoring wells that are installed.  
14 Those are the regulations. Typically you don't install a  
15 groundwater monitoring system anywhere else other than the  
16 outside. We have six other monitoring points.

17 CHAIRMAN GANS: Let's take a ten-minute break.

18 (Recess was taken)

19 CHAIRMAN GANS: We'll go back in session with  
20 your witness.

21 Q. (By Ms. Joseph) Thank you. Okay. Mr. Taylor,  
22 where we left off I think you were discussing the groundwater  
23 monitoring program. And if you could please describe for the  
24 Commission what aspects of that groundwater monitoring  
25 program are above and beyond what the requirements, the

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1 regulations require?

2 A. Does that help you? It doesn't really show them  
3 but it doesn't matter. These are all the periphery  
4 monitoring wells. Those are pretty typical. That's standard  
5 regulatory approach. These little black dots, these guys  
6 here.

7 CHAIRMAN GANS: How many?

8 THE WITNESS: Oh, no. I'm sorry. These are the  
9 methane --

10 MR. DOLAN: The question was about groundwater  
11 monitoring program.

12 THE WITNESS: Oh, there you go. These are the  
13 groundwater wells.

14 MR. DOLAN: Can I know what exhibit we're looking  
15 at?

16 MS. JOSEPH: This is Exhibit 57, figure two.

17 MR. DOLAN: Thank you.

18 THE WITNESS: So typically what you'll see is  
19 you'll see a down gradient monitoring well, down gradient  
20 meaning this arrow is basically pointing upper right and  
21 lower left. So the water on this side is gradually moving  
22 from upper right to lower left. And you'll always have  
23 groundwater monitoring wells sort of down gradient of the  
24 waste management site.

25 Typically you'll see a couple of up gradient

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1 wells. In this case there are required two. I think a total  
2 of nine periphery wells. And then you'll see that there is  
3 these four interim wells that are sort of comprised or  
4 monitoring the first 25-year section of the landfill. In  
5 other words, this upper right-hand corner basically. And  
6 then in the sumps up above, which are kind of up here, these  
7 two ends, there's two angled borings.

8 Q. Mr. Taylor, can you explain for the Commission  
9 what the angle, what's the significance of the angled  
10 borings?

11 A. The angled borings are such that they're going to  
12 be sampling the water directly below the two first installed  
13 sumps about ten feet down below in the groundwater and  
14 certainly down gradient. So they would be -- I wish I had a  
15 picture. But the sump, since that's the collection point for  
16 all the leachate that is generated by the landfill and the  
17 angled borings will be monitored directly toward those two  
18 sumps. That's where most of your liquids are. So the two  
19 angled borings and the four interim wells are all in excess.

20 Q. In excess of what?

21 A. Of the standard regulatory.

22 Q. So are the angled borings designed to detect at  
23 the earliest possible point any contamination should it  
24 happen?

25 A. Yes.

1 Q. And that is because -- And if you could explain  
2 to the Commission why.

3 A. Well, as I'm saying that's where all of your  
4 leachate will be collected and that's where you'll have --  
5 actually your sumps are -- you can have greater than one foot  
6 of leachate in your sumps. So if there was going to be a  
7 leak, that's sort of the presumed worst possible point. So  
8 we want to monitor that directly. And it being only about

9 ten-ish feet away, if there's a leak, it's going to be picked  
10 up relatively quickly in landfill time.

11 Q. All right. Now, in addition how is the sampling  
12 of the groundwater going to occur based on this design?

13 A. We're actually, typically what you'll see and  
14 what the regs require is a standard suite of monitoring  
15 constituents. I've added to that by including groundwater  
16 quality parameters. It's a whole list of constituents that  
17 you would see just assessing the actual quality of the  
18 groundwater. We're not just looking for leachate release or  
19 the leachate itself. We're not looking just for that. So we  
20 actually are kind of, it's sort of a three-phased program.  
21 The first go-around will be just assessing background and  
22 groundwater quality at the site before the landfill is  
23 actually even in place. So we'll actually have a feel of  
24 what the water is without any changes whatsoever. Once  
25 leachate begins to be generated in the sumps, we'll start

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1 sampling in the sumps and actually have, and then pick, you  
2 know, specific constituents from the sumps to be included in  
3 to the groundwater monitoring program. So we'll have a  
4 defined connection between what the landfill generates as  
5 leachate, as garbage juice and what we monitor for in the  
6 groundwater. So it will be a site specific, unit specific  
7 monitoring program. So we're looking for something very  
8 specific, not sort of a whole ball of wax, so to speak.

9 Q. And is that kind of customized sampling done?

10 A. Nobody does this.

11 Q. All right. And in addition, isn't there also  
12 included in the permit a liner degradation program?

13 A. Yes. That actually came to light in both  
14 comments and during the public hearing. And I had actually  
15 looked at including that at the beginning. And most of the  
16 white paper is most of the research that's been done on  
17 liners you've got HDPE lasting out in to hundreds of years.  
18 So at first I didn't consider that to be of any added value.  
19 But because there was a lot of concern, I added that, that  
20 was one of the items that I added in the compliance item and  
21 will establish, again, this is a predictive capacity for  
22 telling whether or not the integrity of the liner, our first  
23 line of defense so to speak is compromised by assessing the  
24 structural capacity of the liner itself. So we're not sort  
25 of waiting for an after-the-fact leachate release in to the

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1 groundwater. We're actually assessing, trying to assess the  
2 actual structural integrity of the containment system as we  
3 go along.

4 Q. All right. And is that a program that is  
5 typically included in the permits?

6 A. No way.

7 Q. Next, I think you had mentioned in your testimony  
8 that there were a series of operational controls in addition  
9 to these other controls and features. And can you please  
10 explain for the Commission what operational controls are

11 included in the permit?

12 A. Operational controls will include like a  
13 site-wide contingency plan. One of my concerns is that  
14 especially some of these more remote landfills aren't a  
15 burden on local resources, emergency response, hospitals,  
16 fire departments, that sort of thing. So they must be  
17 somewhat self-sufficient. So there will be lots of training  
18 requirements in there, ongoing training, educational  
19 requirements, the ability to assess the landfills, design  
20 criteria. It's kind of a -- It's what actually puts its arms  
21 around the design and the monitoring components to make  
22 sure -- that's the third leg of the stool, so to speak, so  
23 that everything is functioning properly.

24 Q. Okay. What I'd like to do is direct your  
25 attention to Exhibit 61, which is the groundwater protection

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1 evaluation plan. Are you familiar with that document?

2 A. Yeah.

3 Q. And what is it?

4 A. 61, typically you will see permits that are sort  
5 of issued for facilities and then they're left to run on  
6 their own. This will comprise two comprehensive design  
7 reviews at the ten-year mark approximately and the 25-year  
8 mark, it's actually particular built points, to gather all  
9 the data, groundwater monitoring, the self-monitoring  
10 program, the liner degradation program, training, training,  
11 at the site, operations at the site and try to get your arms

12 around how the site is performing at two meaningful points.  
13 So it's basically design reviews at ten and 25 years.

14 So it's not like the landfill is just being  
15 permitted and left to run on its own. We're actually going  
16 to go back and take a look at it.

17 Q. All right. And what is the point of this  
18 groundwater protection plan?

19 A. To make sure that the facility is operating as  
20 permitted as a containment facility and that and that alone.

21 Q. Okay. So if the design wasn't working as the  
22 engineers expect it to work would this plan help NDEP realize  
23 that?

24 A. Yes. Like I say, it's a comprehensive design  
25 review to identify not just strengths but weaknesses as well.

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1 If there is an identified weakness, we would go back, begin  
2 discussions with the permittee to address those conditions.

3 Q. All right. So Mr. Taylor, we've gone over many  
4 of the features to this design that are protective of the  
5 waters of the state and also that meet or exceed the  
6 regulations. Do you feel that with these features included  
7 in the permit that the waters of the state are protected?

8 A. Yeah. Because you're going to know long before  
9 the waters of the state are impacted that there's a design  
10 failure. And that's what we're looking for.

11 Q. All right. And we heard from counsel that  
12 issuance of this permit within a hundred feet of groundwater

13 was a variance. Now, is it your understanding that NDEP  
14 needs to seek some kind of variance in order to issue a  
15 permit within a hundred feet of groundwater?

16 A. No. No. And if there was another landfill  
17 permit within a hundred feet it wouldn't necessarily look  
18 like that. It would be a site-specific evaluation. So it's  
19 not like this is a template.

20 Q. Okay. So is there something magical about the  
21 100-foot mark?

22 A. No.

23 Q. All right. What are some of the conditions other  
24 than the -- what are some of the site conditions that become  
25 relevant to a landfill design?

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1 A. Proximity to groundwater, stratigraphy, lithology  
2 of the area. And it's kind of detailed out in the location  
3 restrictions in the regulations, wetlands, a variety of  
4 things. There's always going to be some limiting factor that  
5 you will come across and what have you.

6 Q. Okay. So do you feel that the design of this  
7 permit includes sufficient features that compensate for the  
8 proximity to groundwater?

9 A. Yes.

10 Q. Such that the groundwater is protected?

11 A. Yes.

12 Q. Mr. Taylor, I'd like to talk a little bit about  
13 the reporting requirements under the permit. What are the --

14 what is the permittee required to report?

15 A. Well, they'll be doing quarterly sampling for a  
16 variety of things, primarily groundwater but also methane  
17 monitoring. They submit, typically they submit biennial  
18 reports and then do annual reports for waste acceptance,  
19 waste coming in. But mostly you'll get monitoring reports  
20 for the groundwater and methane.

21 Q. All right. And what is the point of those  
22 reports?

23 A. It just gives the regulator a sense of what's  
24 kind of going on at the site. It's kind of a comprehensive  
25 environmental report to tell you if there's been an impact to

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1 the groundwater, the methane is being generated or not being  
2 generated. If it's being generated, collected. That sort of  
3 thing.

4 Q. All right. And as part of those reports would be  
5 some of the information that's gathered through the various  
6 monitoring programs that we talked about; correct?

7 A. Yes. The long term monitoring programs would be  
8 the liner degradation program and the settlement monitoring  
9 program. You're not going to get -- Those are the ten year  
10 and the 25 year sort of chosen as being meaningful because  
11 you're not going to see substantial settlement in one year,  
12 for example. But all the data would be acquired as being  
13 accumulated so it can be requested anytime that it exists.

14 Q. All right. Mr. Taylor, I would like to ask you a  
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15 little bit about the -- I think you were in the room and we  
16 saw some images of water out at the site, some of the  
17 photographs. Do you recall seeing those?

18 A. The ponding?

19 Q. Yes. Now, do you know -- had you seen some of  
20 those photographs when you went through the permitting  
21 process?

22 A. Yes. I have seen pictures on a regular basis.

23 Q. Okay. So you weren't surprised to see some of  
24 the water in the pictures that were shown today; correct?

25 A. No. And the ponding is existent at the site from

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1 the get-go.

2 Q. Okay. And was -- did the design take in to  
3 consideration the fact that there is ponding out at the site?

4 A. Yes. The ponding and the site conditions that  
5 it's in right now is limited to kind of in to a smaller area.  
6 But yes, with the construction of the berms and the smaller  
7 leap across the site. There's only a foot and a half to two  
8 feet of leap across the entire site. We can't get more than  
9 two feet of water on this entire site. And there's only one  
10 small oppression or one corner that promotes drainage in that  
11 direction. So yes, there will be put in surface water  
12 controls. There's run-on and run-off controls as well.

13 Q. Okay. I'd like to direct your attention to  
14 Exhibit Number 15. Let me know when you get there.

15 A. Okay. 15.

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16 Q. Do you recognize this document?

17 A. Yes.

18 Q. And what is this document?

19 A. This is a screening tool that I use whenever I  
20 get a landfill. It's a customized -- Basically it's a site  
21 specific soil resource report that primarily just speaks  
22 to -- Can you just lower that down, scroll down just a hair?  
23 Keep going. Right about there. That will be good. I just  
24 try to recreate the actual footprint of the landfill so that  
25 I've got something that's site specific. And they apply to

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1 data, ponding, engineering properties, soil types, et cetera.

2 Q. Okay. And did you -- what does this report show  
3 with respect to ponding?

4 A. There's two soils there. There's the playa  
5 soils, which is that white stuff in the upper right-hand  
6 corner, and the rest of it are like a boton playa. Most of  
7 the pond use frequency is high in that upper right-hand  
8 corner of the site. The rest of the site sort of encourages  
9 drainage off in that direction..

10 Q. I'm going to direct your attention to page 61 of  
11 that report.

12 A. 61, okay.

13 Q. All right.

14 A. All right.

15 Q. Can you explain to the Commission please what  
16 this table is depicting?

17 A. You ready? Okay. You see the soil, they break  
18 this up in to pond use frequency class and they've got it  
19 basically identified in to two soil types, the boton playa  
20 and then the playa. In the boton playa area, you've got a  
21 rating of none and that comprises about -- This isn't exact  
22 acreage, but it comprises about 95 percent of the site and  
23 the rest of the site, about five percent of the site is where  
24 you have frequent ponding.

25 And if you notice from some of the pictures, if

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1 you're familiar with the site, most of that ponding occurs  
2 kind of in that corner. There's no real pictures of the rest  
3 of the site, so to speak.

4 Q. Okay. So does this table show that 95 percent of  
5 the site where the landfill will be has no ponding?

6 A. Yes.

7 Q. And 4.9 percent shows frequent ponding; is that  
8 right?

9 A. Yes.

10 Q. And what is included as part of the design that  
11 was permitted that helps assist with the ponding in the five  
12 percent of the site area that has ponding?

13 A. They'll have run-on berms as soon as they begin  
14 construction, which will be in that upper corner. Most of  
15 that ponding will kind of go away in favor of engineering  
16 controls. So you'll have run-on berms or actually you've  
17 have run-on ditches on the outside of the site and then

18 you'll have detention basins controlling any of the waters  
19 that come on to the site and fall off the landfill. And then  
20 you'll have more run-on controls for berms controlling from  
21 off site on to the active waste management area kind of  
22 controlling that area.

23 Q. Mr. Taylor, do you feel that you made any mistake  
24 in recommending the issuance of this permit?

25 A. No.

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1 Q. All right. And if presented with all of the  
2 evidence that's in the record today would you again recommend  
3 issuance of this permit?

4 A. Yeah. Given the, you know, some of the back-up  
5 systems that we've bought in place and the engineering  
6 controls, yeah.

7 MS. JOSEPH: I have no further questions.

8 CHAIRMAN GANS: Cross.

9 CROSS-EXAMINATION

10 By Ms. Leonard:

11 Q. Mr. Taylor, I just have a couple of questions,  
12 Mr. Taylor. You testified as to both Lockwood and Apex  
13 landfills being larger than the proposed Jungo Landfill;  
14 correct?

15 A. Right now currently permitted Apex is almost a  
16 billion cubic yards. That's going to be the biggest in the  
17 state by far. Lockwood just submitted a modification to  
18 increase their capacity to about 350 million yards, so they

19 would become number two.

20 Q. And how do you compare that size wise with the  
21 proposed Jungo Landfill?

22 A. Jungo Landfill is about 110 million yards.

23 Q. Now, part of the application review was to get  
24 the input from other state agencies on the application; is  
25 that correct? In other words, were there other state

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1 agencies that wanted to weigh in?

2 A. Oh, sorry. Yes. Division of wildlife wanted to  
3 have some input in to it because of wildlife mortality.  
4 There's going to be detention basins that will be accessible  
5 to wildlife and they may actually -- Recology worked with  
6 them developing a site-specific revegetation plan and kind of  
7 a protective measure reporting. This is not really mine.  
8 But they've got reporting and reporting to Division of  
9 wildlife that they'll be doing for kind of like the first few  
10 years to kind of fine tune sort of wildlife measures.

11 Q. So to your knowledge, any concerns that might  
12 have been raised by Department of Wildlife were addressed by  
13 Recology?

14 A. Yeah. Division of wildlife approved what they  
15 submitted.

16 Q. And counsel asked you a little bit about this  
17 hundred foot to groundwater not being a magic number so to  
18 speak. Really the -- whether groundwater would be protected  
19 is based not necessarily on the distance to groundwater but

20 the soil characteristics; is that correct?

21 A. No. We don't take in to consideration the actual  
22 soils and containment system. The design would stand on its  
23 own. The soil characteristics help in kind of like creating  
24 the design. But we don't permit anything that cannot contain  
25 waste. So we just permit the containment system. We don't

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1 take in to consideration the soils as being contaminated  
2 before any get to the groundwater as part of the containment  
3 system. The design will stand on its own. Does that answer  
4 the question?

5 Q. Yeah, I think so. I think what I was trying to  
6 understand though is if you had a hundred feet of highly  
7 porous soil or sand --

8 A. You might have a different design.

9 Q. Okay. So you take in to account the site  
10 characteristics?

11 A. Yes.

12 Q. And you mix things with the -- the design would  
13 have to mix things with the soil in order to ensure that it  
14 was low permeability?

15 A. Yes. I mean you rarely have site soils that are  
16 perfect. There is always some limiting factor.

17 Q. And I think you testified at length with regard  
18 to the additional protective measures that the agency  
19 required of Recology. Recology was responsive to all of your  
20 design modification requests; is that correct?

21 A. Yes.

22 Q. And the permit incorporates those changes?

23 A. It does.

24 MS. LEONARD: Okay. I have no further questions.

25 CHAIRMAN GANS: Mr. Dolan, the floor is yours.

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1 MR. DOLAN: Thank you. There was an exhibit  
2 earlier shown here. It will speed things up if we can go  
3 back to that. It was a picture of the playa in the upper  
4 right-hand corner, it was the white playa.

5 MS. JOSEPH: I think it was on there.

6 MS. LEONARD: First page.

7 MS. JOSEPH: Oh, the very first?

8 MR. DOLAN: Yeah.

9 MR. FRANKOVICH: Is that the one he wants?

10 MR. DOLAN: Yeah. Thank you, Counsel.

11 CROSS-EXAMINATION

12 By Mr. Dolan:

13 Q. Mr. Taylor, can you take a look at that exhibit.  
14 The upper right-hand portion of that photo is white and  
15 that's the playa?

16 A. That's what they're classifying as playa  
17 material.

18 Q. And the non-white?

19 A. Is the boton playa.

20 Q. Is the boton. Okay. Now, I think I have -- If  
21 you'll turn with me to Exhibit 38, figure 13. Figure 13.

22 A. Just a second.  
23 Q. Well, just take your time.  
24 A. I don't have it.  
25 Q. Here's one.

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1 A. Okay.  
2 Q. Exhibit 38, figure 13.  
3 A. Right.  
4 Q. Okay. Now --  
5 A. That's it. But you have to all lay on your side.  
6 CHAIRMAN GANS: So this is turned wrong?  
7 THE WITNESS: Yeah. It's just -- There you go.  
8 Q. (By Mr. Dolan) Okay. Thank you. Now,  
9 Mr. Taylor, is the upper right-hand portion of figure 13 in  
10 the area where that white playa from the previous exhibit was  
11 reflected?  
12 A. Probably, yeah.  
13 Q. Okay. Now, and that is the first cell area that  
14 this landfill is going to have constructed; right?  
15 A. Uh-huh.  
16 Q. Is that a yes?  
17 A. Yes.  
18 Q. And isn't that the same area that is within the  
19 4.9 percent of the landfill location that is most prone to  
20 ponding based upon the previous testimony that you just gave?  
21 A. Yes.  
22 Q. Okay. Now, isn't it true that the design that

23 was submitted that you approved has no distinctions between  
24 the different cells throughout this landfill site for  
25 purposes of building berms and trenches to control surface

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1 water; right? They're the same all throughout the design;  
2 correct?

3 A. No.

4 Q. Okay. So you're testifying that the report is  
5 designed that the berming and trenching is different in this  
6 cell than in this proposed cell?

7 A. Oh, I'm sorry. I misunderstood. I thought you  
8 meant that -- The berms will lie on the outside of that.  
9 There'll be a run-on channel kind of on the right and on the  
10 top and then there will be berms on the left and on the  
11 bottom that will control surface waters. There's also going  
12 to be a detention pond. This just shows, you know, the first  
13 couple of modules. But there will be detention ponds  
14 controlling all the surface waters that fall just inside that  
15 footprint.

16 Q. So isn't it true, Mr. Taylor, that in terms of  
17 the location, the upper right portion of this landfill site,  
18 the topography in the upper right-hand portion is more prone  
19 to ponding than other portions of the landfill site; correct?

20 A. Yes.

21 Q. Okay. And isn't it also true that there is not a  
22 distinction made in the design for that landfill site to make  
23 any distinction in ponding or berming in the plans submitted

24 to you that makes any distinction between the berming and  
25 trenching as compared to the upper right portion of this

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1 landfill site or the lower left portion of the landfill site?  
2 They're exactly the same; correct?

3 A. Well, yes. Except for --

4 Q. Okay. Thank you.

5 MS. JOSEPH: I think he can finish his response.  
6 You interrupted the witness.

7 MR. DOLAN: It's a yes or no question.

8 MS. JOSEPH: It sounded like it might need some  
9 explanation.

10 MR. DOLAN: That was a yes or no question.

11 Q. (By Mr. Dolan) Now, when you went through the  
12 process of determining whether or not the berming and  
13 trenching was correct, isn't it true that you did not take in  
14 to account the quality of the soil on the site; correct?

15 A. If you look at the NRCS report again --

16 Q. It's a yes or no question, sir. Isn't it true  
17 you did not take in to account the quality of the soil in  
18 determining whether or not the berming and trenching was  
19 adequate; correct?

20 A. No.

21 Q. Okay. In what way did you take in to account the  
22 characteristics of the soil in determining that the berming  
23 or trenching plan was adequate?

24 A. They would have to be able to withstand any of  
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25 the surface waters that come on site. And if you look at the

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1 compliance schedule, I've asked for more engineering detail  
2 for those because they kind of came up.

3 Q. They kind of came up?

4 A. They came up.

5 Q. How did it kind of come up?

6 A. It came up in public comment period in the public  
7 hearing.

8 Q. So had there not been the public comment, the  
9 soil --

10 A. Well, this --

11 CHAIRMAN GANS: We can't speak at the time.

12 Q. (By Mr. Dolan) So had it not come up during the  
13 public comments, is that your testimony that the quality of  
14 the soil would not have been a consideration in determining  
15 the adequacy of the berm and the trenching?

16 A. No. They were already there. The berms were  
17 already existent in the reported design when we went out for  
18 public comment.

19 Q. Now, Mr. Taylor as part of the permit, I noticed  
20 that there is a sentence in the permit that talks about in  
21 the 2.6 incident reporting, okay. And that would be in  
22 Exhibit 1, of course. It says 2.6 incident reporting. So as  
23 part of this permit, Recology is obliged to report incidents  
24 to NDEP?

25 A. Yes.

□

1 Q. Okay. Now, as you issued this permit, what steps  
2 did you take to determine the history of the permittee or the  
3 applicant in terms of their practice of properly and timely  
4 notifying governmental entities about matters that should be  
5 reported under an operating permit? What steps did you take  
6 to confirm their practice in meeting that obligation?

7 MS. JOSEPH: I would object based on relevance.

8 CHAIRMAN GANS: Can you give us relevance here,  
9 Mr. Dolan?

10 MR. DOLAN: Relevance would be reliability of the  
11 information that staff relied upon in granting the permit.  
12 And to the extent that there was not adequate diligence goes  
13 to an overall argument of improper exercise of discretion.

14 THE WITNESS: Well, I can answer the question. I  
15 called California --

16 MR. DOLAN: Hold on just a second.

17 CHAIRMAN GANS: I'm still puzzled. In other  
18 words -- You've got to make this crystal clear for me. I'm  
19 pretty simple. What you're doing is you're questioning the  
20 credibility of Recology, is that what I'm hearing you say?  
21 That's what I got out of it.

22 MR. DOLAN: Judge, there's a lot to get out of my  
23 questions, I grant you that. But the question that I have  
24 here is -- what is it about what I'm saying that's troubling  
25 you? I don't get it.

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1 CHAIRMAN GANS: Okay. Here's what we've got to  
2 do. We need to understand, this panel needs to understand  
3 where you're going and where your points are.

4 MR. DOLAN: The testimony -- I'll follow the  
5 testimony, Judge. Excuse me, I apologize.

6 CHAIRMAN GANS: Okay. If that's what you want to  
7 do. All I'm trying to do is make sure I understand you  
8 because I'm looking for information from you and I'm not  
9 getting it, because I guess I'm not following the responses.

10 MR. DOLAN: I'll rephrase the question.

11 Q. (By Mr. Dolan) So there was some incident  
12 reporting required. You mentioned that you called  
13 California?

14 A. Yeah.

15 Q. Okay. So you called California. And by the  
16 way -- And you called California why?

17 A. Because this was raised whether or not -- I think  
18 it was Mr. Jacka who had identified the fact that Recology  
19 had had some problems with the enforcement agencies of  
20 California at one point. So I called Cal Recycle and got the  
21 LEA there, the local enforcement agency, who oversees the  
22 Austin Road, I think it's the Austin Road facility, and  
23 talked to her at length and she said that it was quite some  
24 time ago that there were some issues. They resolved them  
25 quickly and had absolutely no enforcement problems.

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1 Q. Okay. And so California is the location where  
2 most of the refuse at least at this stage is going to be  
3 derived from to be deposited in this landfill site; right?

4 MS. LEONARD: I'm going to object on the basis of  
5 relevance. The state cannot distinguish between the source  
6 state of the refuse in issuing the permit. So this is not an  
7 appropriate line of inquiry.

8 Q. (By Mr. Dolan) Now, rephrase. Earlier in your  
9 testimony you said there would be no nasties in the -- in  
10 this location; right?

11 A. Hazardous waste.

12 Q. No hazardous waste. And isn't it true that  
13 you're relying upon practices and procedures of California  
14 regulators to govern the transmission of the waste out of  
15 California --

16 A. No.

17 Q. -- to the landfill? No?

18 A. No.

19 Q. So who are the regulators ensuring that what is  
20 expected to be deposited under the permit --

21 A. In the application we've got a waste analysis  
22 plan. And as far as I could reach in to California I did.

23 Q. Right.

24 A. In other words, Recology is required to notify  
25 any facility that they take waste from that it meets the

1 Jungo waste acceptance criteria. That's about as close as I  
2 can get to, you know, reaching in to California and telling  
3 them what to do with their garbage.

4 Q. And you would agree with me that the regulators  
5 in California, the budgets to accomplish this environmental  
6 oversight has been reduced over just in the last three years?

7 MS. JOSEPH: Objection. Lack of foundation.  
8 This witness has no expertise in this area.

9 MR. DOLAN: If you know.

10 THE WITNESS: I don't know. No, I don't know.

11 Q. (By Mr. Dolan) Okay. All right. And so --  
12 well, we'll move on to some other areas. Now, Mr. Taylor,  
13 the questions and comments that were brought to your  
14 attention by such people as Mr. Schlarb with respect to the  
15 fairy shrimp or Richard Cook with respect to the fairy  
16 shrimp, what did you take from that exchange with Mr. Cook  
17 and Mr. Schlarb?

18 A. About the fairy shrimp specifically?

19 Q. Yes.

20 A. We got -- I think it was Mr. Cook that sent me  
21 the public notice of extension because of the locating of the  
22 fairy shrimp. So we initially contacted Division of  
23 wildlife, who apparently don't do fairy shrimp  
24 identification. But US Fish and Wild -- They contacted -- I  
25 would have to actually --

1           Q.   Well, I guess the question just to speed things  
2 up. With respect to the issue of the water ponding for ten  
3 to 14 days at the location, did that play any role in your  
4 calculation of determining whether or not the berming and  
5 permitting standards that were established were set out in  
6 the permit would prevent surface water from becoming part of,  
7 attached to, being over the landfill site itself?

8           MS. LEONARD: I would object on the basis that  
9 there was no testimony that water pooled ponds on the site  
10 for ten to 14 days. And if that's being extrapolated from  
11 the fairy shrimp experiment in somebody's garage, that's  
12 highly inappropriate. I would also object on the basis that  
13 was a compound question.

14          THE WITNESS: I wouldn't have made a connection.

15          MS. LEONARD: You don't want to answer until  
16 after the objection is ruled on.

17          MR. DOLAN: I'll rephrase.

18          Q.   (By Mr. Dolan) You were here for the testimony  
19 about the fairy shrimp?

20          A.   I was.

21          Q.   Okay. Now, there was some discussion -- Did you  
22 come to learn, by the way, in connection with your work that  
23 the fairy shrimp have a life cycle or did you talk about a  
24 life cycle with the ND -- Nevada NDOW people or anything like  
25 that or the fish and game?

1           A. We were primarily trying to decide, I believe, if  
2 they were an endangered species because apparently there's  
3 some that are. Unless they were an endangered species, we  
4 would not restrict what people did on their private property  
5 based upon location of fairy shrimp. That's private  
6 property. I wouldn't be able to make a connection between  
7 the fairy shrimp and the berm height.

8           Q. How many times have you yourself been out to the  
9 landfill site?

10          A. Probably three times.

11          Q. Have you ever been there when it was ponding?

12          A. Yeah. When I was out there in February. It  
13 wasn't very deep. It was five, six inches.

14          Q. Five, six inches in depth?

15          A. Yeah.

16          Q. And was the landfill site fully covered by water?

17          A. I don't think the landfill site ever gets fully  
18 covered with water, but it was just a couple of acres.

19          Q. A couple of acres. Okay. Does the presence of  
20 water play any role in line of degradation?

21          A. Presence of water? Just any kind of water?

22          Q. Yeah, surface water.

23          A. No. You could -- I mean plastics will be here  
24 long enough to work on them. So I mean, you could probably  
25 put a piece of plastic in a bucket of water for 50 years and

1 it would look no different. I mean, if I'm answering the  
2 question correctly.

3 Q. There's some discussion that one liner systems --  
4 well, do liners degrade in the sense of having holes or  
5 deteriorate or get torn or anything along those lines in your  
6 experience?

7 MS. JOSEPH: Objection. Nevermind. I'll  
8 withdraw the objection.

9 MS. LEONARD: I have an objection though. It's  
10 vague and ambiguous as to liner. The liner, we've had  
11 testimony it encompasses a lot of things and it's unclear  
12 what he's referring to.

13 MR. DOLAN: I agree. I'm talking about the high  
14 density.

15 THE WITNESS: HDPE liner.

16 MR. DOLAN: HDPE.

17 THE WITNESS: Yes, everything is going to degrade  
18 over time. But it's the amount of time involved. And like  
19 it was explained before, all the research that I had done and  
20 there's not that much on HDPE liners and that it's in the  
21 hundreds of years category. It's a pretty robust liner and  
22 it's been used for quite some time in a variety -- Mining  
23 uses them all the time and they just dump waste right on  
24 them. And that's also -- I'm trying to answer your question.  
25 As part of the liner degradation program we want to know

1 that, but we want to know that long before it actually fails.

2 Q. (By Mr. Dolan) Now, and you want to know that  
3 because you have a ten-year plan and a 25-year plan,  
4 monitoring plan?

5 A. Reports. They'll be monitored throughout the  
6 entire time frame. We'll just report at ten and 25. And it  
7 can be extended out. It's --

8 Q. Sure. And what is being monitored during the  
9 first ten years relative to the liner system? What's being  
10 monitored?

11 A. Its integrity. Its structural integrity.

12 Q. And you determined that the monitoring is  
13 adequate because you get reports from the operator; right?

14 A. We would get -- Those reports are hard to be  
15 stamped by Nevada. They would be stamped by a Nevada PE, so  
16 they would have a lot of legitimacy associated with them.

17 Q. And the information -- Would you agree with me  
18 that the information that the PE is stamping is provided to  
19 that PE by the operator?

20 A. Yes.

21 Q. Okay. Now -- And the operator in this case is  
22 Recology?

23 A. Yes.

24 Q. Okay. And also, by the way, there was some  
25 ability of Recology to sell this permit to any third party,

1 right, so long as they meet the financial guarantees; right?

2 A. Yes. They couldn't sell until the next party

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3 demonstrated financial assurance.

4 Q. Right. And the next party doesn't have to show  
5 any competency in implementing the plan of operation in order  
6 to effectively be able to transfer the permit as it's  
7 currently drafted; correct?

8 MS. LEONARD: I would object that that issue --

9 MR. DOLAN: well, let's take a look at the  
10 permit. Let's take a look at the permit.

11 MS. LEONARD: Can I lodge my objection?

12 THE WITNESS: The --

13 MS. LEONARD: Just a minute. There's going to be  
14 an objection, but first can you please read the question for  
15 me? I didn't hear it.

16 (Question was read back)

17 MS. LEONARD: And my objection is that the issue  
18 before the commissioner is the issuance of this permit is not  
19 the transfer of the permit to a third party. So this line of  
20 questioning is irrelevant.

21 MR. DOLAN: It is the issuance of the permit  
22 which is at issue and the issuance of the permit, this is  
23 just another example of why there was an abuse of discretion  
24 in issuing this permit. It's replete throughout upon fine  
25 analysis and that's why it's relevant for the overall

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1 argument.

2 MS. JOSEPH: I would also like to just lodge an  
3 objection that this line of questioning is going way beyond

4 the line of questioning where this witness was questioned on  
5 direct. So the cross-examination should really be confined  
6 to that which was on direct. And I think we've been -- I've  
7 been lenient in the objections, but I think we're headed to  
8 an area that's well beyond the direct examination.

9 CHAIRMAN GANS: Mr. Dolan, I agree with counsel,  
10 unless you can show us why this is relevant to our  
11 deliberations on the issuance of this permit.

12 MR. DOLAN: Thank you. Now, Fred Lee has  
13 submitted a report on behalf of Humboldt County at least at  
14 one point in this permitting process; right?

15 MS. LEONARD: I would object to this line of  
16 questioning. My earlier objection was sustained that -- with  
17 regard to Mr. Lee's report.

18 CHAIRMAN GANS: Mr. Lee's report now is in  
19 evidence; correct?

20 MS. LEONARD: Yes.

21 CHAIRMAN GANS: Okay. So if it's in evidence I  
22 want to hear where he's going to go with this.

23 Q. (By Mr. Dolan) So are you with me, sir?

24 A. I think so.

25 Q. Okay. Now, that was a report that you received

1 on or about December 9th of 2011?

2 MS. JOSEPH: What exhibit are you referring to,  
3 Counsel?

4 MR. DOLAN: 63.

5 THE WITNESS: You should have numbered the  
6 binders. Okay. Got you.

7 Q. (By Mr. Dolan) On page 31, do you recall  
8 attending the public Q and A in which you were there in  
9 Winnemucca?

10 A. Oh, yeah.

11 Q. Do you remember that?

12 A. Oh, yeah.

13 Q. Now, do you recall commenting at about 29.28  
14 minutes that you would be testing the leachate, we're going  
15 to be testing for everything under the sun?

16 A. Yes.

17 Q. Okay. Now, isn't it true that in fact what is  
18 tested for excludes a lot of chemicals that haven't yet found  
19 their ways in to the various NAC list of elements to be  
20 tested for?

21 A. Well, we used an appendix two. It's a very large  
22 list.

23 Q. An appendix two does not include all constituents  
24 that are found in leachate; isn't that true?

25 A. I'm not really sure I can answer that. But it

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1 wouldn't actually be necessary. We would only have to find a  
2 couple of them. Because like I say, as I explain in the  
3 groundwater monitoring plan, you only have to identify a  
4 couple of constituents that are well enumerated to come out  
5 of this particular landfill. Once we've got that connection

6 between the landfill and the groundwater monitoring program,  
7 you know, it can start generating pink bunnies in conjunction  
8 with other things. Just because we're not testing for pink  
9 bunnies doesn't mean we wouldn't know that there was a leak  
10 or a leachate or a release because we would have these other  
11 constituents as well. We don't have to see everything.

12 Q. And you would find that out ten years later;  
13 right? You would find out that information about the pink  
14 bunnies ten years after the pink bunnies were leaching out of  
15 the landfill; correct?

16 A. I'm not sure I understand your question.

17 Q. It would be ten years before you would find out  
18 as a regulator that pink bunnies were being leached out of  
19 the landfill; correct?

20 A. No. We would know as soon as it hit one of the  
21 wells.

22 Q. Okay. Now, and you mentioned that there would be  
23 six wells?

24 A. Six additional wells.

25 Q. Okay. And how many in total to find pink

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1 bunnies?

2 A. It would probably only take two. But 15 wells  
3 all in all.

4 Q. Okay. For the 562 acres that is 15 wells?

5 A. Thereabouts, yeah.

6 Q. And how much time will elapse -- what's the

7 shortest period of time -- well, I guess the shortest period  
8 of time to find that pink bunnies are being emitted from  
9 leachate or a part of leachate would be the next day that it  
10 came out; right? what would be the longest period of time?

11 A. The longest period of time? Can you rephrase  
12 that?

13 Q. No.

14 A. No? Okay.

15 MS. JOSEPH: well, if the witness doesn't  
16 understand the question.

17 THE WITNESS: well, the longest period of time  
18 would be never. I mean, if there is never any leachate and  
19 it would never denegrate --

20 MR. DOLAN: well, the question, sir, was about  
21 pink bunnies. So they're there -- The question was if your  
22 monitoring system was working properly what would be the  
23 longest possible time before the monitoring system identified  
24 the fact that pink bunnies were part of the leachate?

25 THE WITNESS: well, from my --

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1 MS. JOSEPH: I'm just going to object that it  
2 calls for speculation and --

3 THE WITNESS: There's a lot of variables in  
4 there. But I mean, that's the purpose of the angled borings  
5 to take that time and make it as short as possible. I mean  
6 typically you would not see it for quite some time because  
7 most wells are typically installed at the periphery, so we're

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8 looking for stuff much earlier than that.

9 Q. (By Mr. Dolan) Now, would you agree with me that  
10 your monitoring wells are found at the first line, line or  
11 level, not the second line or level?

12 A. Most of the wells are screened from 60 to 80  
13 feet, so that pretty much kind of covers above the liner  
14 system and well below it. And this particular --

15 Q. Okay. Where would the -- Isn't the collection  
16 system that you have there in that demonstration --

17 A. Yes.

18 Q. -- above the second liner?

19 A. Yes.

20 Q. Okay. Now, couldn't you agree that it would be  
21 more effective in monitoring leachate emissions if the angled  
22 borings were below the second liner system as opposed to on  
23 top of the second liner system?

24 A. They are below the second liner system.

25 Q. Okay. Now, you have collection pipes; right?

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□

1 A. Yes.

2 Q. Okay. Now, can you maybe help me out by pointing  
3 to the second liner, the polyurethane?

4 MR. FRANKOVICH: From the top or from the bottom?

5 THE WITNESS: You just stay right there. The  
6 second liner is down here.

7 Q. (By Mr. Dolan) Right. Okay. So I'm trying  
8 to -- wouldn't it be more effecticacious if the monitoring

9 system was monitoring for leachate below the second liner  
10 system, so between the second liner system and the aquifer?

11 A. Oh, you mean --

12 Q. Yeah.

13 A. It is monitoring below the second liner.

14 Q. Okay. So is it your testimony that the borings,  
15 the angled borings are below the second poly -- the second --  
16 we're talking about the plastic lining, right, when I'm using  
17 the --

18 A. Yes. It's below the --

19 Q. Can you show me in the design that you submitted  
20 where that is reflected?

21 A. In the figure?

22 Q. Yeah, please.

23 MS. JOSEPH: Mr. Taylor did not submit the  
24 design. It's the design that was submitted by Recology.

25 MR. DOLAN: Thank you, Counsel.

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1 THE WITNESS: Do you know offhand what figure?

2 MS. LEONARD: 61.

3 THE WITNESS: 51?

4 MS. LEONARD: 61.

5 MR. DOLAN: I have 61 here. Right here. So the  
6 angle -- Is this Exhibit 61?

7 MS. JOSEPH: Yes, it is.

8 MR. DOLAN: Okay.

9 THE WITNESS: This is a landfill boundary out

reporters\_record\_day\_one052112.txt  
10 here, perforated landfill right here-ish. Soils, this is  
11 your groundwater level right here. This is the sump, which  
12 is that thing I was talking about that's at the, out at the  
13 end. And then the angled boring would be placed so that it's  
14 just minimally in to the groundwater and directly below and  
15 down gradient of the sump. Is that clear? So we're trying  
16 to -- what we're trying to do basically is where the leachate  
17 would collect and actually you can have or you may end up  
18 with more than a foot because that's where all the leachate  
19 is going, this is where we're looking for a primary release  
20 point and this is why we released the angle borings there.  
21 So we've shortened the time for any sort of movement out of  
22 the sump in to the groundwater as much as possible. Does  
23 that make sense?

24 Q. (By Mr. Dolan) Okay. Thank you, sir. Help me  
25 out. It talks about the liner system. Is that what -- And

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□

1 it points to a line on this.

2 A. Yes. That's that basically.

3 Q. So the liner system consists of how many feet in  
4 depth?

5 A. It's about five feet.

6 Q. Five feet. So the liner system consists of five  
7 feet?

8 A. Yeah. You just can't get enough intell in this.  
9 This thickness here is five feet. There's actually two  
10 leachate collection sumps. The first, the primary, and then

reporters\_record\_day\_one052112.txt  
11 there's a secondary. And from this side you'll have two  
12 pipes that actually drop down in to the sump, in to the lower  
13 sump and in to the upper sump. It's kind of like a second  
14 story, first story where you'll be drawing off the leachate.  
15 Q. Thank you, sir.  
16 A. Sure. Anything else?  
17 Q. No. I'm good with that. Thank you. Now, the  
18 monitoring, the post-closure monitoring process, 30 years  
19 after closure you monitor the landfill?  
20 A. Uh-huh.  
21 Q. Is that a yes?  
22 A. That's a yes.  
23 Q. Okay. Now, what do you make of the comments  
24 submitted to you by Dr. Lee that that period is inadequate to  
25 protect the aquifer?

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1 A. Well, again it's a national standard. I mean  
2 it's in my regulatory system. We have a rate that can extend  
3 it as necessary, but I think you have to kind of take in to  
4 consideration the fact that that closure will occur when that  
5 last bucket of, you know, solid waste goes in that bottom  
6 left-hand corner. That upper right-hand corner will already  
7 have been in "post-closure monitoring" for almost a hundred  
8 years. You'll have a pretty good feel for the integrity of  
9 the liner system, the operation and the site because of those  
10 two angled borings that are focused on those two sumps  
11 because that section of the landfill -- Can you bring up that

reporters\_record\_day\_one052112.txt  
12 picture?

13 Q. Just --

14 A. I'm saying is in that upper right-hand corner --

15 MS. JOSEPH: Is this the picture you wanted?

16 MS. LEONARD: 57.

17 THE WITNESS: Just something that shows the  
18 landfill. That's good enough. In that upper right-hand  
19 corner you've got to realize that's where the first bucket of  
20 solid waste goes in. The bottom left-hand corner is where  
21 the last bucket of waste goes in, so that upper right-hand  
22 corner is going to be in post-closure monitoring, so to  
23 speak, for a hundred years. So you're going to have a pretty  
24 good feel of what's going on by the time you hit the 30-year  
25 criteria. That bottom left-hand corner, way long before you

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1 get there, before you actually get the post-closure period.

2 Q. (By Mr. Dolan) Isn't it true though that the  
3 collection monitoring system and the boring wells are prone  
4 to be plugged up, get plugged?

5 A. The groundwater monitoring wells?

6 Q. Yeah. I mean the collection, the leachate  
7 collection system that you were talking about, don't they get  
8 plugged up?

9 A. They can. This one is oversized.

10 Q. Uh-huh.

11 A. And then you've got, even if the pipe, even if  
12 the pipe did begin to get kind of plugged up you would still

13 have the entire gravel area for the leachate as well. That's  
14 just a central point.

15 Q. Now --

16 A. And you can kind of tell. It's not like  
17 landfills are --

18 Q. Well, if Recology started its operation tomorrow,  
19 okay, the upper right-hand portion of the landfill would be  
20 developed first; correct?

21 A. Yes.

22 Q. Okay. And is it a five-acre cell?

23 A. I think that's -- I think that is broken down in  
24 to ten acre.

25 Q. So that ten-acre cell would be there for maybe 95

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□

1 years, 95 years or so?

2 A. Right.

3 Q. And that's the cell that's most prone to  
4 flooding? That's the area of the side that's most prone to  
5 flooding?

6 A. Yes.

7 Q. And it is the presence of water, would you agree  
8 with me, that is the necessary ingredient for there to be  
9 garbage juice?

10 A. Yes. Except for the insulation will be installed  
11 in order to manage the run-on and run-off.

12 Q. Hopefully; right?

13 A. They will be.

14 Q. Just for the record, the landfill site that  
15 counsel asked you earlier that is within the 100-foot  
16 distance from the base of the landfill to the upper most  
17 portion of the aquifer, what landfill site did you refer to?  
18 A. That's Western Elite.  
19 Q. Western what, sir?  
20 A. Western Elite.  
21 Q. Western Elite, okay. And that's a large  
22 landfill, a small landfill?  
23 A. It's 80 acres.  
24 Q. 80 acres. And how old is that?  
25 A. I think it's 80 acres. How old is that? That

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□

1 got permitted six years ago, something like that. Six years  
2 ago.  
3 Q. Okay. Six years ago. And was that landfill  
4 design consulted by you in connection with this case?  
5 A. No. I did not permit that.  
6 Q. Okay. Did you familiarize yourself with any of  
7 the records with respect to leachate collection or monitoring  
8 at this landfill site that you're talking about that was  
9 permitted about six years ago?  
10 A. Yes. They're generally hardly -- They don't  
11 generate very much leachate for a couple of reasons and they  
12 also take a different waste train.  
13 Q. Why is leachate of such a concern to, for  
14 example, Mr. Hannum with respect to his nearby property? Why

reporters\_record\_day\_one052112.txt  
15 would leachate be a reasonable concern to him?

16 MS. JOSEPH: I'm going to object based on  
17 speculation as to what somebody else's concern is.

18 MR. DOLAN: I'll restate.

19 Q. (By Mr. Dolan) why are there regulations to  
20 determine what's in leachate?

21 A. well, there aren't any regulations to determine  
22 what's in leachate. There's just regulations to manage it.  
23 I mean we have a dry tomb technology.

24 Q. well, you mentioned a list of section two?

25 A. Appendix two.

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1 Q. Appendix two. what is appendix two a list of?

2 A. It's a large list of chemical constituents.

3 Q. Of what? Of leachate?

4 A. Of things that could be presumed to be in  
5 leachate.

6 Q. Okay. And some of those things that are in that  
7 list are deadly, cancer-causing; right?

8 A. I don't know. I suppose.

9 Q. And so the --

10 A. I don't know anything that isn't anymore.

11 Q. Fair enough. Now, with respect to the main issue  
12 here of when you reached the point of telling Mr. Noack --

13 A. Noack.

14 Q. Thank you. The issuing of the permit is in  
15 February '12; right?

16 A. Yes.  
17 Q. Exhibit 1?  
18 A. I'll take your word for it, yes.  
19 Q. I think you're taking my book there.  
20 A. I took your book? I've got a lot of books here.  
21 Q. Now, is that about right?  
22 A. Yeah, that sounds right.  
23 Q. Okay. Was it on -- Let's get the date. Exhibit  
24 1.  
25 MS. JOSEPH: It's on the screen.

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1 MR. DOLAN: Thank you.  
2 Q. (By Mr. Dolan) February 29th of 2012, was that  
3 the same date that you determined that the permit should be  
4 issued, yes or no?  
5 A. Yes.  
6 Q. Okay. Now, what was it -- when did you make --  
7 So on February 29th 2012 you made a determination that the  
8 permit should be issued; correct?  
9 A. Yes.  
10 Q. Now, I noticed some communication to you that was  
11 cc'd to the law firm of -- or Mr. Frankovich. Do you recall  
12 receiving letters that were cc'd to Mr. Frankovich that you  
13 received from Recology?  
14 MR. FRANKOVICH: Counsel, are those in the  
15 record?  
16 MR. DOLAN: Yeah.

17 MR. FRANKOVICH: What exhibit please?  
18 MR. DOLAN: I'm going to find it. Do you recall  
19 it?  
20 THE WITNESS: Letters from me or to me?  
21 MR. DOLAN: To me.  
22 THE WITNESS: I -- Sure.  
23 MS. JOSEPH: If you don't remember.  
24 THE WITNESS: Yeah --  
25 MR. DOLAN: Well, if you do remember.

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1 THE WITNESS: I've seen a lot of letters.  
2 Q. (By Mr. Dolan) Okay. All right. Did you have  
3 any direct contact with counsel for Recology during the  
4 permitting process?  
5 A. Just in the very, very early pre-application  
6 meetings. After that no.  
7 Q. During the -- Describe what your role was with  
8 respect to the permit that was issued, Mr. Taylor.  
9 A. I review it for technical sufficiency, regulatory  
10 completeness, basically those two.  
11 Q. Okay. So it was your project to approve or not  
12 approve? That's what I'm trying to get to.  
13 A. Yes.  
14 Q. Okay. And it was by force of your recommendation  
15 to your supervisor that the permit was granted, is that fair  
16 to say?  
17 A. Yeah.

18 Q. Were there any other concerns that you had  
19 identified during the permitting process that just were not  
20 able to be addressed through engineering?

21 A. I'm not sure I understand the question. It would  
22 either --

23 Q. That's fine. I'll rephrase it. A lot of  
24 technical information was provided to you; right?

25 A. Yes.

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1 Q. Okay. And you gave me the impression and maybe  
2 others that there was a dialogue that occurred between you  
3 and Recology and/or Golder and Associates?

4 A. Yes, there always is.

5 Q. Okay. Nothing improper about that; right?

6 A. No.

7 Q. Were all of your concerns that you found to be  
8 consistent with protecting the health and welfare of the  
9 citizens of Nevada, are you familiar with that NRS 444.440 in  
10 the stated goals of the state?

11 A. I am.

12 Q. To protect the public health and welfare, prevent  
13 water and air pollution, prevent the spread of disease,  
14 increase of nuisance, conserve natural resources, enhance the  
15 beauty and quality of the environment. Are you familiar with  
16 that statute?

17 A. It's not really in my statutes, but I'm familiar  
18 with that, yes. I mean it's not contained in my NAC's, the

19 reporters\_record\_day\_one052112.txt  
NAC's that I work with.

20 Q. Actually this is a statute, not a Nevada  
21 Administrative Code.

22 A. I understand. I work inside the Nevada  
23 Administrative Code.

24 Q. Okay. Were there any concerns that you had as  
25 the person that had substantial responsibility for approving

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1 or rejecting the application? were there any issues that --

2 A. Were left outstanding?

3 Q. Yeah.

4 A. No. I mean, I initially rejected the first  
5 design. And then if you look through the correspondence  
6 file, there is a pragmatic step-by-step correspondence chain  
7 that led me and let, you know, the permit to be structured  
8 the way it is. And you identified the points and I addressed  
9 them either through a protective measure or through a  
10 preventative measure.

11 Q. Do you take issue with -- I have argued in some  
12 of my pleadings that all landfills leak. Do you take issue  
13 with that assertion?

14 MS. JOSEPH: Object as to vagueness. I'm not  
15 sure what you're asking the witness. Take issue with?

16 MR. DOLAN: I'll ask you. Do all landfills leak?

17 THE WITNESS: No, I don't think all landfills  
18 leak.

19 MR. DOLAN: Do all landfills the size of the

20 proposed landfill in this case leak? Or in other words, do  
21 you know of any landfill the size of the proposed landfill  
22 here that doesn't have leachate?

23 MS. JOSEPH: What's the question?

24 MR. DOLAN: He can answer any one.

25 MS. JOSEPH: Okay. Wait. I want to be really

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1 clear about what the question is. I'm not sure what question  
2 is pending.

3 MR. DOLAN: Can you understand what I asked you?  
4 If you don't know, I'll just restate.

5 MS. JOSEPH: Did you understand the question?

6 THE WITNESS: I think so.

7 MS. JOSEPH: Well, then that tells me you didn't  
8 understand the question.

9 THE WITNESS: Okay. I didn't understand the  
10 question.

11 MS. JOSEPH: Can we have you repeat it or we can  
12 ask the court reporter to repeat it? Because I think there  
13 were multiple questions.

14 Q. (By Mr. Dolan) Do you know of any landfill the  
15 size of the proposed landfill that doesn't leak leachate?

16 A. No. I don't have enough information to really  
17 answer that. I can't say that all 648 landfills leak. I can  
18 say landfills -- not all landfills leak. I can say that some  
19 landfills leak.

20 Q. Now, this is an example of too many questions --

reporters\_record\_day\_one052112.txt

21

A. Well, the --

22

Q. Mr. Taylor, the question that I'm trying to get to, did you compare and contrast the information that was provided to you by Recology with any outside agency?

23

24

A. No. We're an autonomous agency. So rather than

25

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1 bringing in to consideration whether or not --

2

Q. Sir, there's no question pending. So with respect to the question about landfills leaking of similar size of the one proposed here, isn't it true that you did not consult with outside sources of information in determining whether or not this landfill under this topography under this ponding circumstance, et cetera would leak leachate?

3

4

5

6

7

8

MS. LEONARD: Objection. Vague and ambiguous.

9

THE WITNESS: What do you mean? What do you mean by outside agency? Do you mean --

10

11

Q. (By Mr. Dolan) Outside of NDEP.

12

A. Well, I review, you know, a large body of literature that's related to landfills that both EPA, some of the states generate so that I can get a sense of comparable sizes, leachate generation rates, geological settings, et cetera. But I don't call up to EPA to ask if it's okay to permit their facility.

13

14

15

16

17

18

Q. Of course you ultimately rely upon materials that are peer reviewed from time to time, is that fair to say?

19

20

A. Sure.

21

Q. And you stay up with the field?

22

A. I try.

23

Q. Okay. Okay. And so the -- that McNeil Lead --

24

what was that landfill name that was operating, granted the

25

permit six years ago?

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1

A. Oh, Western Elite?

2

Q. Western Lead?

3

A. Western Elite.

4

Q. Western Elite. And what county is that in?

5

A. Lincoln.

6

Q. And how close is its base to the aquifer?

7

A. They're about 78 to 80 feet away.

8

Q. 78 to 80 feet away. And how much weight -- And

9

that's a small little landfill with 80 acres?

10

A. It's bigger than that. I would have to look it

11

up. But a --

12

Q. A hundred?

13

A. A hundred acres.

14

Q. A hundred acres, okay. Couldn't you agree with

15

me, agree with me that the weight of the garbage on the

16

landfill in this location would be considerably more than the

17

weight of the garbage at this Western Elite Landfill that is

18

separated by 78 feet?

19

MS. LEONARD: Objection. Vague and ambiguous as

20

to considerably. We're talking, we have very technical

21

information that's in the record and these vague --

22

CHAIRMAN GANS: Mr. Taylor, do you understand the

23 question?

24 THE WITNESS: I don't think he was quite done  
25 with it.

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1 MR. FRANKOVICH: Then the answer is no, he didn't  
2 understand it.

3 THE WITNESS: It didn't sound like he was  
4 finished yet. I mean yes.

5 Q. (By Mr. Dolan) Let's go by the numbers. Are  
6 larger landfills heavier than landfills that are not as big  
7 as them?

8 A. Yes.

9 Q. Okay. So does the weight of the garbage that a  
10 landfill holds, is that affected by the size of the landfill?

11 A. Yes. But that's accounted for in the leachate  
12 calculations.

13 Q. That's not the question, sir. Just stick with  
14 the question.

15 A. I'll give it a shot.

16 Q. Now, so can you agree with me, Mr. Taylor, that  
17 there is no other landfill in Nevada that will have less than  
18 30 feet distance between the aquifer and the base of the  
19 landfill?

20 A. You mean closer to the groundwater?

21 Q. Yeah.

22 A. Can I guarantee that? No.

23 Q. So there is another landfill in Nevada that has

24 an aquifer within 20 -- within 30 feet of the base of the  
25 landfill?

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1 A. That is permitted or will be permitted? I'm  
2 sorry. I didn't hear.

3 Q. Isn't this a precedent setting governmental  
4 event, Mr. Taylor, in that there is not and has never been a  
5 permitted landfill in Nevada where the distance between the  
6 bottom of the landfill and the upper most part of the aquifer  
7 is less than 30 feet?

8 A. This is the only one, that's correct.

9 Q. Right. And so this is creating history in  
10 Nevada, right, Mr. Taylor?

11 MS. LEONARD: I would object to that  
12 characterization. We're just trying to elicit the facts  
13 here, not -- Counsel is adding flourish to it that's  
14 inappropriate.

15 Q. (By Mr. Dolan) This is new. Your decision is a  
16 new one in Nevada; right?

17 A. Yes.

18 Q. Okay. And you have used the word "maximum" a  
19 number of times. There was nothing to prevent you from  
20 saying to Recology or Golder "I would like to have a third  
21 liner system," was there?

22 A. Well, no.

23 Q. Okay. Now -- And nor was there anything to  
24 prevent you from saying "I want a fourth one," was there?

A. No.

□

1 Q. Nor was there anything preventing you from  
2 saying, "I don't want to have 16 monitoring wells" or  
3 whatever the number was that you decided was appropriate but  
4 doubling that to 30? There was nothing to prevent you from  
5 saying, "Gee, I think it's important enough to the policies  
6 of the State of Nevada to have 35 or 40 monitoring wells,"  
7 was there?

8 A. No. But --

9 Q. Nothing. But yet you decided based upon your  
10 knowledge apparently and some readings that you've engaged in  
11 of peer review materials so that you believe, you personally  
12 have made a decision, right, that the health and safety and  
13 welfare of Mr. Hannum is going to be protected by this  
14 permit; right?

15 A. Yes.

16 MR. DOLAN: Okay. Nothing further.

17 CHAIRMAN GANS: Okay. It is five minutes to six  
18 and I still need to ask for public comment. We have not had  
19 rebuttal and the panel has not been able to ask their  
20 questions yet. So you're telling me we need to stop this  
21 thing?

22 MR. WALKER: The building closes at 6:00 o'clock.  
23 We could go on. We can always go out the doors. We just  
24 can't get back in.

25 CHAIRMAN GANS: Okay.

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1 MR. WALKER: The building does close at 6:00  
2 o'clock.

3 CHAIRMAN GANS: would you prefer us to leave at  
4 six then and we'll come back tomorrow morning with rebuttal  
5 and panel questions?

6 MR. WALKER: I would think so.

7 MS. JOSEPH: If it assists, I have two questions  
8 on rebuttal. So I don't know how many questions the  
9 Commission has.

10 MS. LEONARD: I don't have any questions on  
11 rebuttal. So I think we can finish this witness tonight.

12 CHAIRMAN GANS: In five minutes?

13 MR. DOLAN: They opened the door.

14 CHAIRMAN GANS: Go ahead. You've got two  
15 questions.

16 MS. JOSEPH: All right. Mr. Taylor, do you feel  
17 that the double liner in combination with the other features  
18 of this design is protective of groundwater?

19 THE WITNESS: Yes.

20 MS. JOSEPH: Therefore would additional liners be  
21 necessary in your opinion to protect groundwater?

22 THE WITNESS: No.

23 MS. JOSEPH: I have no further questions.

24 CHAIRMAN GANS: No questions?

25 MR. FRANKOVICH: No questions.

□

1 CHAIRMAN GANS: Panel?

2 MEMBER RICHARDSON: I have some questions.

3 EXAMINATION

4 By Member Richardson:

5 Q. With the proximity of the groundwater, I find  
6 interesting that liquefaction hasn't been a concern.

7 A. It was actually. It's in the report of design.  
8 And we were going to do -- As they move out from that upper  
9 right-hand corner then they're going to be doing additional  
10 borings down to about three times what they already did,  
11 twice to three times. Liquefaction is actually included at  
12 each point. I brought it up earlier.

13 Q. That can result in some substantial differential  
14 settlement, which would put a lot of stress on a liner  
15 system?

16 A. If we get a significant seismic event.

17 Q. So it's a concern that is still in the process of  
18 being addressed in the design stage?

19 A. Primarily it's going to be like your saturated  
20 soils. So they address in my initial questions and then as  
21 we do additional borings there will be further evaluation on  
22 that.

23 Q. So then based on the findings of that evaluation  
24 a design could be modified again?

25 A. At all points a design can be modified.

1 Q. Okay. Are you aware of any other, outside of the  
2 State of Nevada, any other precedent for a facility of this  
3 nature, these types of measures put in place to protect  
4 groundwater?

5 A. Not really, no. No, I haven't come across one  
6 like this.

7 Q. So yourself and the bureau chief were the two  
8 individuals, the only two individuals from the NDEP that were  
9 charged with digesting all of this information and making the  
10 final decision?

11 A. Yes.

12 Q. With these monitoring wells if it's detected that  
13 there's been a leak how would you go about addressing that?  
14 You have a very large site, not exactly sure where the source  
15 came from. It could be literally a pin prick. What are the  
16 means to go about addressing that?

17 A. Well, you would have to decide whether it was gas  
18 or liquid. So you would have to assess.

19 Q. So assuming it was liquid?

20 A. Assuming it was liquid, it would depend on where  
21 you picked it up, right.

22 Q. Uh-huh.

23 A. If you picked it up in one of the interim  
24 monitoring wells, just sort of based upon some of the  
25 hydrology, you could kind of look back out and figure if it's

1 coming from a particular area. Depending on how much waste  
2 was in place at that time, you can drill down to the waste,  
3 and exhume some of the waste, you could cap off that area to  
4 basically seal it off. That's a pretty big question. It  
5 would really depend upon first you would go out and assess,  
6 try to figure out where it was, fingerprint it and then start  
7 figuring out what to do with it. It depends on a lot.

8 Q. I've had a hard time tracking down a roof leak I  
9 had on a roof.

10 A. I can't do it on my house.

11 Q. So I can't imagine a leak within a 500-acre  
12 parcel and being able to locate it after it's buried  
13 underneath a significant amount of material. I was just  
14 wondering if there was some mechanism or procedure -- I know  
15 there's testing that takes place during construction to  
16 locate.

17 A. Well, typically most of your leaks occur during  
18 construction. That's when the liner is most mechanically  
19 impacted, right. Once you've got all of these layers in  
20 place, right, you're primarily talking about sort of a  
21 structural weakening of the HDPE itself. The liner doesn't  
22 just all of a sudden create holes. It doesn't all of a  
23 sudden turn to Swiss cheese on you.

24 So in your CQA process you're trying to identify  
25 that and that's one of the purposes of the operations layer

1 is to protect that, right. And then with the liner  
2 degradation program, we're going to have sort of a sense of  
3 the structural capacity of the liner through time. We're  
4 going to be able to -- And this is one of the things that  
5 provided some comfort for me was we got a predictability to  
6 tell whether or not the design is sort of moving in failure  
7 mode. But because of the redundant design, we've got  
8 opportunity to address that, prior to. It's all about, you  
9 know -- It's all about prior, not after the fact. That's the  
10 whole purpose of this landfill design. We want to get stuff  
11 first rather than waiting for something to happen. I'm not  
12 denying your question. But it's a proactive approach taken  
13 with the entire landfill.

14 Q. Isn't it a little unique to issue the permit  
15 before the differential settlement issue has been properly  
16 addressed and resolved?

17 A. Well, just based upon the soil properties you can  
18 come up with the differential settlement calculations, right.  
19 And we know the middle of the landfill is going to settle, I  
20 want to say in like 12 or 16 feet and at the sumps it's going  
21 to settle to something like four or five feet. You can't  
22 really tell what's going to happen in the middle necessarily  
23 because there's going to be variabilities in the soil. But  
24 just based upon the soil properties and the borings you can  
25 make some calculated prediction on how much settlement you're

1 going to get.

2 We're going to confirm that because even if you  
3 get some differential settlement, it won't matter as long as  
4 we have drainage out to the sumps. Who cares, right? As  
5 long as we have drainage out.

6 Q. As long as the membrane is still intact?

7 A. And as long as the membrane is still intact,  
8 which we can tell through the liner degradation program.  
9 It's not like the liner is just going to disappear.

10 Q. Based on the other landfills that you've  
11 permitted, overall where would you rank the suitability of  
12 this site? Is this right up there with the best sites you've  
13 seen or is this at the bottom or in the middle?

14 A. It's probably somewhere in the middle. I mean  
15 every site is problematic. There's no such thing as a  
16 perfect site. Well, there is actually one perfect site in  
17 Nevada but you would have to drop trash in from a B-52 to get  
18 to it. There's no perfect site. There's always some  
19 limiting factor. The soil is limiting. The groundwater is  
20 close. There's no soil at all. It's all rock.

21 At Lockwood they're sitting on salt. So they're  
22 going to have to actually bring out a gravel factory to make  
23 the dirt. They'll be blasting and grinding forever.

24 Down in Mesquite that's a landfill built on sand,  
25 quite frankly. And we overcome that. They overwater a

□

1 little bit and they have some soil cement. They don't have  
Page 278

2 any water down there at all and there's another factor down  
3 there. I mean every site in Nevada is different.

4 MEMBER RICHARDSON: Okay. Thank you.

5 CHAIRMAN GANS: Kathryn.

6 MEMBER LANDRETH: Thank you, Mr. Chairman.

7 EXAMINATION

8 By Member Landreth:

9 Q. I just have a couple of questions, Mr. Taylor.  
10 And I guess the first one is I want to make sure I understood  
11 your answer just a minute ago. But so far as you know, this  
12 is the first time anywhere in the US a double liner system  
13 has been used for a landfill to address groundwater  
14 protection?

15 A. It's unique in the United States for sure.  
16 whether it's the only one, I couldn't -- I haven't been able  
17 to find another one. Somebody else might, but I haven't been  
18 able to find one. Most of them are sort of your standard  
19 descriptives with enhanced leachate control is on fairly  
20 heavy duty CQA plan. And a lot of that stuff occurs back  
21 east because they have very shallow water tables. But even  
22 in some cases back there they haven't gone to a double liner.

23 Q. And the other question I have, and I'm not asking  
24 you to speculate, but somebody put a hundred feet as a -- as  
25 a standard in your regulation. And I think I heard you say

1 earlier in your direct testimony that it's in your opinion  
2 pretty meaningless. I may have misunderstood you, but I'm  
Page 279

3 curious to understand why a hundred feet. You know,  
4 previously we were told not in testimony that it was 300  
5 feet. I was curious if you understand where these numbers  
6 come from and if they have any basis in science?

7 A. I would love to talk to the person that came up  
8 with the hundred feet. I mean in some cases, the hundred  
9 feet is relevant, right. In other cases, the hundred feet is  
10 completely irrelevant, right. I mean permitted landfills in  
11 basically competent rock, right, at the Rawhide site.  
12 Literally competent rock. It's an old mine. And the hundred  
13 feet might as well be two miles. At Mesquite where they've  
14 got very poor soil, a hundred feet might be extremely  
15 relevant. So it's just in my regs. It's just a reg I have  
16 to address. I mean it's just a bar I have to pass over. I  
17 mean that's how I look at it.

18 And then depending on the site conditions you  
19 actually end up with will perhaps drive the design in the  
20 landfill. Am I answering the question?

21 Q. That's fine.

22 A. Okay.

23 EXAMINATION

24 By Chairman Gans:

25 Q. I have a few questions also. And asking these

□

1 questions I'm not trying to attack you. why 60? why not a  
2 hundred mil on those two liners?

3 A. The 60 mil is a national standard. There's no  
Page 280

4 reason to question the 60 mil. It's used predominantly every  
5 where. I mean, I went down and I talked to mining. Mining  
6 uses a 60 mil liner all over the place. Like I say, they  
7 will pour waste drop right on top of the 60 mil liner, no  
8 operational soil, nothing. I actually had a little -- If you  
9 could feel it, it's pretty robust stuff.

10 If I had stuck with the single liner and we tried  
11 to make this a composite case, which is something I actually  
12 considered earlier was moving to a hundred mil liner. It  
13 just gives you an extra touchy feely but it may not be any  
14 real science associated with it. I mean why not a 300 mil  
15 liner? why not a 6,000 mil liner? why not a cast iron  
16 porcelain bathtub liner?

17 Q. Well, I guess to be -- I'm talking about being  
18 reasonable here. I understand that, I guess, that 60 is a  
19 reasonable amount.

20 A. It's a national standard and its in my regs and  
21 that sort of sets the baseline for me. In other words, I've  
22 got a prescriptive call, right. It's right there in 678. 60  
23 mil, two feet of clay. That's where I start. That's the  
24 baseline I move up from.

25 Q. So in your opinion in going to a two liner system

□

1 it was not necessary or unnecessary to go with two 100 mil  
2 versus two 60 mil?

3 A. No particular added value.

4 Q. Okay. Just a quick question. How do you keep  
Page 281

5 the leachate out of that gas line?

6 A. You wouldn't necessarily, but it wouldn't really  
7 matter. I mean the gas will just go right over. It will  
8 preferentially -- If the gas line is actually -- The leachate  
9 pipe is in the bottom of the trough and the gas line is just  
10 slightly up so it will sort of pass through.

11 Q. So it's really not like it looks there?

12 A. No. That's just a cartoon. I mean they're  
13 actually kind of offset slightly. Good question though.

14 Q. Will Jungo have to import most all the material  
15 to make that five-foot section?

16 A. No. Once the soils start coming up, there's a  
17 fair amount of clays, there's a lot of silty sands, sandy  
18 silts. Once the excavation begins at this facility, you're  
19 probably going to have, there's a lot of CL's, MH's, OL's on  
20 this site. So they'll probably have to amend the berms. But  
21 I think for the operation soil, possibly for some of the  
22 gravel for that high capacity leachate system and not for the  
23 low perm. You might have to amend a little bit but not very  
24 much. There's a lot of different soils out on the site.

25 Q. So you'll be inspecting this during construction?

1 You'll make those kind of determinations to make sure that  
2 those layers are what they should be?

3 A. Well, that will be part of the CQA plan, which  
4 will be very detailed document about where everything goes,  
5 how everything is tested, what specifications, how much

6 testing per layer. It's a very large document. The regs  
7 only require an outline in the application. But a CQA plan  
8 is a very detailed how-to cookbook on how to build a  
9 landfill.

10 Q. You did answer one of my other questions. You do  
11 think there will be have to some importation for the berms  
12 though to keep those berms --

13 A. There may be. But they may to have amend some of  
14 the soil with some bentonite, that sort of thing. But like I  
15 say, it's not that unusual.

16 Q. As I see this plan up here, is this thing going  
17 to be built over 560 acres up front or is it going to be  
18 built one-quarter at a time?

19 A. It's actually going to be built one strip at a  
20 time, okay, ten acres, right. And then that will be, it's  
21 kind of like flip-flopping a little bit. And so they go out  
22 and they need to excavate a ten-acre strip, okay, and remove  
23 all of that soil, right, and then build the liner in. And  
24 then the next time they'll leapfrog over to another one. And  
25 you've got the strip and tie the two together and then keep

□

1 moving left like that. So it will actually kind of like  
2 making a bunch of shoe boxes together in a square. I'm  
3 trying to come up with a decent analogy.

4 Q. Yes. But in doing that are they going to do the  
5 first 125 acres or whatever that --

6 A. No. They'll develop ten to 20 acres at a time.

7 Q. Okay. Up to that first quarter, which you had  
8 said then by that time when they get down to the bottom  
9 quarter that quarter has been up there for almost a hundred  
10 years. So if that's the case when you get this 10-year or  
11 this 25-year report, what if something is flawed? Will that  
12 kick in some new regs or rules or requirements on Jungo to  
13 say, wait a minute, this isn't working in the first ten acres  
14 or the first hundred acres and now you're going to have to do  
15 something a little bit different in the rest of this  
16 construction? Is that going to happen?

17 A. As far as I'm concerned, it is, yeah.

18 Q. Does the permit allow that to happen? Is Jungo  
19 going to be out of a thumb and saying, hey, if this doesn't  
20 work in those first hundred acres then by golly, the next ten  
21 acres are going to have to be something a little different?

22 A. If you look in the permit typically what I'll do  
23 is adopt the application by reference and I've adopted the  
24 groundwater protection evaluation by reference which includes  
25 a lengthy outline of the reporting requirements for that --

□

1 The ten and 25 is sort of kind of the two numbers I came up  
2 with as meaningful intervals, right, because you have to have  
3 enough data to actually make a decent decision.

4 Q. I appreciate that.

5 A. But I got that by reference so the permit  
6 requires that design review which has a long outline  
7 associated with it. So it's kind of a conglomeration of all

8 the data, all the information, settlement data, the  
9 degradation data for the liner, all the groundwater  
10 monitoring and will include a comprehensive design including  
11 proposed design changes that need to be done to the landfill  
12 to make it operate more efficiently.

13 So yes, it included just basically -- I mean the  
14 permit is written as a process to some extent, right. In  
15 other words, this isn't the last time this landfill is going  
16 to be looked at. It will be looked at at the ten-year mark  
17 and the 25-year mark. And a comprehensive design review is  
18 done so that if something is not working, we know. And  
19 intermediate to that, we're going to be getting reports and  
20 doing inspections too. So does that answer the question?

21 Q. It does. It does. I'm just making sure I  
22 understand how this 95-year thing is going to go. And 95  
23 years is a long time in my opinion.

24 A. And I've reached out 25 years basically. I mean  
25 past that, I mean if the test site is reaching out 10,000 and

□

1 it just gets kind of weird out there.

2 Q. I agree with that, but I want to make sure  
3 there's a provision where the state still has the wherewithal  
4 to come back and say Jungo?

5 A. The State always has the wherewithal to do that.  
6 In Section 2.2, we can revoke, suspend or modify this permit  
7 for cause, period.

8 Q. Okay.

9 A. We just go out there and we can say, we don't  
10 like you doing any of this stuff and here's what you're going  
11 to do. Typically we don't do that. We work with the  
12 applicant to revise the application, to revise how they  
13 design the site.

14 But this is, like I say, a proactive approach to  
15 like a review so that, you know, they're continuing to revise  
16 the design of the landfill to make sure that it's compliant.  
17 Nobody wins. They don't win. We don't win.

18 Q. But you have the authority? That's what I want  
19 to make sure.

20 A. Absolutely.

21 Q. Last question is kind of a speculative question  
22 and I apologize for it. But if you look at this large valley  
23 area we saw all of those little squares and we saw Jungo  
24 pretty much in the middle of it. Would you have preferred to  
25 put this landfill somewhere else on higher ground in that

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□

1 area?

2 A. Well, I always prefer landfills to go just about  
3 every where but where they end up going. But like I say,  
4 there's only one good site that I'm concerned. I don't  
5 really look at it that way. I just permit them, you know. I  
6 make the best out of what I've got. That's just what I do.

7 CHAIRMAN GANS: Okay. Fair answer.

8 THE WITNESS: It's not a Make a Wish foundation.

9 CHAIRMAN GANS: I have no further questions at  
Page 286

10 this point. So with that I think we can dismiss the witness  
11 off the hot seat.

12 THE WITNESS: Thank you.

13 CHAIRMAN GANS: And it's time for me to ask for  
14 public comment before the counsel next to me kicks me again.

15 MR. FRANKOVICH: Mr. Chairman, I don't want to  
16 prolong it. I just will put it on notice, put everybody on  
17 notice and we can do it now or tomorrow morning. But I  
18 intend to renew the motion to dismiss after the testimony  
19 where we've now had an explanation of the liner system, which  
20 the commissioners were looking for. And Mr. Dolan has been  
21 given his opportunity to find his magic moment of abuse of  
22 discretion and I think now I at least intend to renew the  
23 motion to dismiss. I don't know if the Commission would  
24 rather hear it tonight or tomorrow morning.

25 CHAIRMAN GANS: I would rather do it tomorrow

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1 morning.

2 This is the time set for again public comment.

3 If there is anyone in the audience from the public that wants  
4 to make comments, the same restrictions that I mentioned this  
5 morning applies now also.

6 Mr. Cook.

7 MR. COOK: Yeah. My first --

8 MR. DOLAN: Your Honor, can I ask that the light  
9 be turned off?

10 CHAIRMAN GANS: Put the cover on it.

11 MS. MAYO: Thank you.

12 MR. COOK: I would enjoy this garbage dump if  
13 it --

14 MS. REYNOLDS: And before you go any further, I  
15 need to find out are you going to be talking specifically  
16 here about Jungo? This morning you just talked about garbage  
17 in particular. That's why I let you.

18 MR. COOK: I was going to be talking about the  
19 SEC.

20 MS. REYNOLDS: Okay. I'll let you go a little  
21 bit further. But just be warned if you start getting too  
22 close in to the topic here I'll have to cut you off.

23 MR. COOK: When I filed my appeal, I asked that  
24 the SEC secretary, John Taylor, how often does the appellant  
25 prevail here. He mumbled something about the archives and

□

1 side-stepped the question. Over time I asked him twice again  
2 and never got a satisfactory answer to my simple question.

3 what are the appellants' odds here? The cases  
4 are so different they can't be compared, he said. That was  
5 not my question, John. If I had to -- If I have to, I will  
6 indeed come to Carson City and research the archives and  
7 obtain a simple win/loss score. However, I shouldn't have  
8 to. This is, after all, the information age and in the  
9 interest of fairness and transparency in government, that  
10 information should be readily available on line to anyone  
11 rather than being some worrisome secret hidden away in the

12 archives.

13 what's worrisome? Is the SEC an unbiased  
14 truth-seeking Commission or is this a reality of rubber stamp  
15 ferenda? Knowing the record would go a long way toward  
16 answering that question in my mind. Thank you for the  
17 opportunity to ask this question.

18 CHAIRMAN GANS: Thank you.

19 Anyone else in the audience wish to speak?

20 Mr. Hannum.

21 MR. HANNUM: Yeah. I hate to take up any more of  
22 your time than I did already. But again, I would like to  
23 just add one more comment about Taylor's responses to what  
24 would happen if there was a leak past the --

25 MS. REYNOLDS: Nope.

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□

1 MR. HANNUM: We can't?

2 MS. REYNOLDS: No.

3 MR. DOLAN: That's the rules.

4 MS. REYNOLDS: Yeah. You're going in to -- You  
5 would have to --

6 MR. HANNUM: Then I hope you take it in to  
7 consideration that the people who bought land up there, and  
8 there's a lot of land up there and a lot of different people  
9 bought up there, take in to consideration what they were  
10 thinking and what their future and their minds were when they  
11 bought that land and what the ramifications of this will be  
12 on that potential future community.

13 CHAIRMAN GANS: Thank you.  
 14 Anyone else in the audience? Seeing none, we'll  
 15 adjourn.  
 16 When do you want to start in the morning? How  
 17 you early do you want to start.  
 18 MS. REYNOLDS: 8:30 is the time we're agendized  
 19 for, so you can't start before 8:30.  
 20 CHAIRMAN GANS: 8:30. we'll start here again  
 21 tomorrow morning at 8:30 promptly. Thank you.  
 22 (Hearing concluded at 6:20 p.m.)  
 23  
 24  
 25

□

1 STATE OF NEVADA            )  
 2 COUNTY OF WASHOE        )ss.  
 3  
 4 I, CHRISTY Y. JOYCE, Official Certified Court  
 5 Reporter for the State of Nevada, Department of Conservation  
 6 and Natural Resources, State Environmental Commission, do  
 7 hereby certify:  
 8 That on Monday, the 21st day of May, 2012, I  
 9 was present at the Department of Conservation and Natural  
 10 Resources, Carson City, Nevada, for the purpose of reporting  
 11 in verbatim stenotype notes the within-entitled appeal  
 12 hearing;  
 13 That the foregoing transcript, consisting of  
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14 pages 1 through 299, inclusive, includes a full, true and  
15 correct transcription of my stenotype notes of said appeal  
16 hearing.

17

18 Dated at Reno, Nevada, this 15th day of June,  
19 2012.

20

21

22

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CHRISTY Y. JOYCE, CCR #625

23

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1 Q. BEFORE THE STATE ENVIRONMENTAL COMMISSION

2 STATE OF NEVADA

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6 In Re:

7 Jungo Landfill  
Final Solid Waste Permit

8 SW495REV00

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13 TRANSCRIPT OF PROCEEDINGS

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14

APPEAL HEARING

15

TUESDAY, MAY 22, 2012

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CARSON CITY, NEVADA

17

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REPORTED BY:

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Nevada CCR #625

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CHAIRMAN GANS: Good morning again. This is a

4

continuation of the State Environmental Commission appeal

5

hearing on the Jungo Landfill, Final Solid Waste Permit

6

SW495REV00. It's 8:30 this morning on May 21st. 22nd,

7

excuse me. And we're at the Department of Conservation and

8

Natural Resources in Carson City, Nevada.

9

I want to start out our meeting as usual with

10

public comments. And my same comments still pertain to

11

anybody from the public that wants to speak. So I will open

12

the floor to anybody that wants to speak from the public

13

first before we go any further.

14

Mr. Cook.

15

MR. COOK: I believe this has been submitted, G.

16

Fred Lee's report.

17 MS. REYNOLDS: Are you going to be speaking

18 specifically to the --

19 MR. COOK: I'm just going to read it. Not the

20 whole thing.

21 MS. REYNOLDS: It pertains to the landfill?

22 MS. COOK: It pertains to landfills.

23 MS. REYNOLDS: Just landfills in general?

24 MR. COOK: Yeah.

25 MS. REYNOLDS: Okay.

4

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□

1 MR. COOK: while in principle, such dry tomb

2 landfilling approach can offer protection for public health,  
3 groundwater resources in the environment from pollution by  
4 waste-derived chemicals, the approach relies in the ability  
5 of containment system to keep the waste dry essentially  
6 forever.

7 This is because without perimitation and leaching  
8 process acting on the very MSW, the hazardous or otherwise  
9 deleterious components simply remain in tune. Those  
10 components do not become non-hazardous or non-deleterious  
11 just by the pad's decline. Thus, as long as the varied  
12 wastes are kept dry they are a threat to generate leachate  
13 and landfill gas effectively for hundreds to a thousand years  
14 or more.

15 In current practice, the landfill lands are  
16 covered are composed of plastic sheeting and clay layers,  
17 which are relied upon to keep the waste in a dry tomb drop.

18 The plastic sheeting layer, typically HDPE, in the landfill  
19 cover deteriorates over time and allows water to penetrate  
20 through the cover and enter the waste where it generates  
21 leachate.

22 The landfill liner typically consists of a layer  
23 of plastic sheeting, HDPE, and a compacted clay liner under  
24 the plastic sheeting. At best, those systems can be  
25 effective in keeping the waste dry for a comparatively short

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1 period of time compared to the time that the waste in the dry  
2 tomb type landfill will be a threat to generate landfill gas

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3 leachate.

4 Thus, even if those systems were well designed  
5 and well constructed, over time their ability to keep the  
6 waste dry will deteriorate. They will not be amenable to  
7 ready and thorough inspection, maintenance and repair as they  
8 will be buried beneath the waste or cover layers.

9 Similarly, the systems designed to detain,  
10 collect leachate and manage landfill gas will function for a  
11 short period of time compared to the duration of time that  
12 the waste in a dry tomb type landfill will be a threat to  
13 generate leachate and landfill gas.

14 It has been well established that plastic  
15 sheeting, HDPE layers, deteriorate over time and the low  
16 permeability properties diminish decreasing the ability of  
17 the liner system to collect all leachate that can be  
18 generated in the landfill when water enters the landfill or a

19 landfill cover.

20 It was recognized by some in the technical  
21 community in the early 1980s when the regulations requiring  
22 dry tomb type landfills were promulgated by the USEPA and is  
23 now widely recognized in a practice in the dry tomb  
24 landfilling approach is seriously flawed for the protection  
25 of groundwater quality. It serves only to postpone release

6

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1 of waste-derived constituents to the environment.

2 CHAIRMAN GANS: Thank you. I appreciate that.

3 Any other members of the public like to be heard?

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4 Okay. Seeing none, we will continue with our appeal hearing.

5 This morning I would like to call back to the witness stand

6 Mr. Taylor. One of our panel members has some questions that

7 he would like to ask Mr. Taylor.

8 You're still under oath. Good morning,

9 Mr. Taylor.

10 THE WITNESS: Good morning.

11 CHAIRMAN GANS: I know we are upsetting your

12 normal schedule this morning. We appreciate you coming back.

13 THE WITNESS: No problem.

14

15 JOHN TAYLOR

16 Recalled as a witness on behalf of the

17 Respondent, having been first duly sworn,

18 was examined and testified as follows:

19

20

FURTHER EXAMINATION

21 By Member Richardson:

22

Q. Sorry to start you back off in that chair again

23

this morning. I'm sure you were happy to get out of it last

24

night.

25

A. That's okay. I'm getting used to it.

7

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1

Q. I just want to make sure I was clear. Am I

2

correct in understanding that the determination of the

3

probability of liquefaction at the site is not yet complete?

4

A. Well, there's the five borings give us a sense of

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5 the sole properties. And it really didn't get spoken to too  
6 much yesterday. But they're going to be doing additional  
7 borings to confirm the model that they put in the  
8 application. So as the landfill sort of progresses out,  
9 there will be additional borings. Go back and compare that  
10 to the submitted results. Compare that to the monitoring  
11 program and fine tune and make sure that everything is  
12 consistent.

13 Q. So the liquefaction is more of a product of a  
14 seismic event; correct?

15 A. Yes. I mean if you've got a significant seismic  
16 event you can get soils that act like a liquid.

17 Q. So has it been determined whether there's a low,  
18 medium or high probability of liquefaction at this site?

19 A. Right now it's in the application as a low one.

20 I did kind of -- There was one of the questions that came in

21 response to the comments was somebody asked about earthquake  
22 magnitude out there. So I went back and sort of read the  
23 USGS database. And the largest earthquake that they've had  
24 out there for their data set is a 6.2, I believe, which is  
25 kind of a medium, rather teeter, but you're not going to get

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1 cracks in the world, so to speak.

2 Q. Uh-huh. But it would be sufficient if you had  
3 soil conditions conducive to liquefaction to potentially  
4 create that condition?

5 A. Well, right now the soil conditions aren't

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6 conducive to it. It was an original request because of the  
7 proximity to groundwater and we've got these fine soils. So  
8 with capillary rise you might start to see stuff kind of move  
9 around. But seismic analysis didn't bear it up.

10 Q. So then the analysis for liquefaction is complete  
11 and it was determined that it was a low probability for  
12 liquefaction?

13 A. Right.

14 MEMBER RICHARDSON: Okay. Thank you.

15 THE WITNESS: But we're going to continue to  
16 confirm that.

17 MEMBER RICHARDSON: Okay.

18 THE WITNESS: Because you've got -- It's all our  
19 site. So you may get different results in which case we  
20 would just sort of modify the design if necessary.

21 CHAIRMAN GANS: And therefore back to my

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22 question, my last question to you yesterday, if you find  
23 something like that you have the wherewithal under the permit  
24 to require Jungo to do something different?

25 THE WITNESS: Yes. That's all built in the

9

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1 reporting, in the application. These are all ongoing design  
2 reviews for the entire site.

3 CHAIRMAN GANS: Okay. Thank you.

4 MEMBER RICHARDSON: Thank you.

5 CHAIRMAN GANS: I'm going to release you a second  
6 time.

7 MR. DOLAN: May I ask a question on the

8 liquefaction, follow-up? Thank you.

9 RE-CROSS-EXAMINATION

10 By Mr. Dolan:

11 Q. Mr. Taylor, are you aware of any drilling  
12 activity within five miles of the landfill site?

13 A. It was brought to my attention during the public  
14 comment period for the geothermal plant.

15 Q. At Bull Mountain?

16 A. Right.

17 Q. Operated by Nevada Geothermal; right?

18 A. Yes.

19 Q. Now, did you -- were you curious at all and to  
20 whether or not what the drilling activity at the Blue  
21 Mountain site was? Did you investigate that at all?

22 A. No.

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23 Q. Did you familiarize yourself with the fact or at  
24 least the industry of power generation through the use of  
25 technology that is operating at the Blue Mountain Power Plant

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1 as it relates to microquakes, microquakes being increased in  
2 intensity and frequency?

3 A. No.

4 Q. What are microquakes, by the way?

5 A. Mini earthquakes.

6 Q. Okay. How many mini earthquakes occur at the  
7 landfill site or within five miles on an annual basis within

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8 the last ten years, would you say?

9 A. I have no idea. The USGS map provides kind of  
10 like epicenters of little mini earthquakes that occur out  
11 there. The earthquake that generated 6.2 was, degradation  
12 showed it to be 18 miles away. But as far as little mini  
13 quakes in the immediate area, I couldn't speak to that.

14 Q. Okay. So is it fair to say that no data was  
15 incorporated in to the landfill design that relates to  
16 microquakes within five miles of the landfill site?

17 A. No. The only requirement would be the 200 feet  
18 to Holocene, to a recent Holocene event or an event within  
19 Holocene times. That's about as far off the footprint.

20 Q. Within 200 feet?

21 A. Yeah. Located a landfill within 200 feet.

22 Q. Of what?

23 A. Of an earthquake that occurred during Holocene

24 times.

25 Q. And Holocene times are what, sir?

11

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1 A. It's a tertiary age, like Jurassic, dinosaurs.

2 It's a geologic time frame.

3 Q. Okay. You have to help me out with this. In

4 terms of years what are we talking about?

5 A. Off the top of my head I think it's 10,000.

6 Q. So did you just say that you were concerned about

7 earthquakes within 200 feet of the landfill site that

8 occurred in the past 10,000 years?

9

A. There's a location standard for Holocene,

10 earthquakes that occurred during the Holocene era. I mean

11 I'm not a geological --

12

Q. Well, I guess since we learned that you are the

13

person at NDEP who had the singular authority to approve the

14

permit, right, isn't that fair to say?

15

MS. JOSEPH: I'm going to object. That misstates

16

the testimony.

17

Q. (By Mr. Dolan) Okay. You approved this permit;

18

right?

19

A. Uh-huh.

20

Q. Okay. Did anyone else approve this permit other

21

than your supervisor?

22

A. No. Me and Eric.

23

Q. Okay. And Eric approved the permit based upon

24

your recommendation; right?

25

A. Uh-huh.

12

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1 Q. Is that a yes?

2 A. Yes.

3 Q. Okay. So that being said, you made your decision

4 to approve the permit excluding any information about

5 earthquakes or microquakes that occurred 300 feet away from

6 the landfill site?

7 MR. FRANKOVICH: I'm going to object to the

8 question. It's compound. Either it's earthquakes or

9 microquakes. Ask the question. One way or the other.

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10 They're very different.

11 MR. DOLAN: Well, I can break it down.

12 Q. (By Mr. Dolan) Earthquakes, did you just testify  
13 that you excluded from your analysis earthquakes that had an  
14 epicenter 300 feet from the landfill site during the past  
15 10,000 years?

16 A. Well, what we look at is the seismic  
17 acceleration.

18 Q. Did you exclude from your -- Isn't it true --  
19 Isn't it true that you excluded from your analysis  
20 earthquakes that occurred within the last 10,000 years 300  
21 feet from the landfill site? Yes or no?

22 MS. JOSEPH: And I'm going to object that if he  
23 can't answer it with a yes or no he's entitled to respond to  
24 the question.

25 MR. DOLAN: Sir, it's a yes or no question.

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1                   CHAIRMAN GANS: It isn't. But can you answer yes

2 or no?

3                   THE WITNESS: It's just a qualified statement

4 because we looked at the spectral acceleration which is

5 related to an earthquake event. We don't look at -- It's not

6 a site restriction based upon a magnitude ten earthquake or a

7 magnitude two earthquake. It has to do with site

8 acceleration in the soil pack.

9                   CHAIRMAN GANS: So you're saying it's not, the

10 question cannot be answered yes or no because of the way you

11                   reporters\_record\_day-two052212.txt  
11    have to analyze it?

12                   THE WITNESS:  Yeah.  Kind of.  No.  The answer  
13    is --

14                   CHAIRMAN GANS:  I think you better ask a  
15    different question.

16                   Q.  (By Mr. Dolan)  Is it true that you excluded from  
17    your analysis the existence of microquakes 300 feet or more  
18    from the landfill site?

19                   A.  Caused by the Blue Mountain facility?

20                   Q.  Answer the question as it's posed.

21                   A.  Yes.

22                   Q.  Okay.  So you excluded from the analysis  
23    microquakes that occurred within the last 10,000 years 300  
24    feet or more from the landfill site; correct?  That was your  
25    testimony?

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1           A.    Yes.

2           Q.    Okay.  Now, is it also true that you excluded  
3    from your -- well, strike that.  Let's explore a little bit  
4    more about what I was trying to get at a second ago with  
5    respect to earthquakes.  You indicated that you could not  
6    answer the question yes or no with respect to the epicenter  
7    of an earthquake 300 feet or more from the landfill site;  
8    correct, Mr. Taylor?

9           A.    Yes.

10          Q.    Okay.  And I believe you were talking about some  
11   manner of measuring earthquake force, is that fair to say?

12 A. The permittee is required to submit a seismic  
13 analysis if they're in a seismic impact zone looking at  
14 the --

15 Q. All right. Stay with my question. I'm speaking  
16 about 300 feet because earlier you spoke about a requirement  
17 of measuring earthquakes and/or seismic events within 200  
18 feet of the landfill site. Is that what you testified  
19 earlier?

20 A. Not -- we don't measure them. They're just --  
21 The permittee is obligated to identify faults that have moved  
22 during Holocene times. That's part of the location  
23 restrictions in the application.

24 Q. And of course the questions relate to  
25 liquefaction. What significance did you find in -- well, let

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1 me -- strike that. was this the minimum amount of  
2 information that was provided that you believe is required  
3 under the regs in order for you to determine that  
4 liquefaction won't be a threat to the aquifer?

5 A. well, liquefaction wouldn't be a threat to the  
6 aquifer. It would be a threat to the landfill itself. But  
7 no, liquefaction is not actually contained in the regulation.  
8 The seismic impact analysis is. It's just sort of part and  
9 parcel because of the soils I added liquefaction to the  
10 analysis and as part of the ongoing analysis.

11 Q. Now, when you say you added liquefaction to the  
12 analysis, was that your personal idea or was that generated

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13 by adherence to the --

14 A. It's in one of my letters. It's a request.

15 Q. A request by you to Recology?

16 A. To Recology.

17 Q. Now, and the request that you made, was it --

18 what was the request that you made?

19 A. Please include a liquefaction analysis in your  
20 facility.

21 Q. Okay. And why did you ask for that?

22 A. I just wanted to include that as part of the  
23 narrative of the application.

24 Q. And why did you want to have that as part of the  
25 narrative of the application?

1 A. Because of the soils?

2 Q. Okay. And the soils created some concerns for  
3 you. And what were those concerns?

4 A. That they were sufficient to not compromise the  
5 integrity of the landfill.

6 Q. And as part of your thinking in this regard,  
7 earthquakes and microquakes, were they part of your concerns?

8 A. Yes. Not microquakes specifically. Anything  
9 that was -- Microquakes by definition would be less than an  
10 earthquake.

11 Q. What is a -- what's a microquake?

12 A. A tiny little earthquake.

13 Q. Tiny little earthquake. It's when the earth

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14 shakes a little bit?

15 A. I guess. Like I said, I'm not a geological  
16 engineer, but it would be a minor earthquake.

17 Q. Did you consult with a geological engineer in  
18 connection with approving this permit?

19 A. That would be part of the --

20 Q. Did you consult with a geological engineer? Did  
21 you, sir? That was the question.

22 A. No.

23 Q. Does the -- To your knowledge does NDEP have a  
24 geological engineer on staff?

25 A. Not to my knowledge.

17

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1           Q.    So if the soil is compromised through  
2    liquefaction, what are the concerns relative to the landfill  
3    integrity?

4           A.    You might get excessive settlement or  
5    displacement.

6           Q.    And if there's excessive settlement or  
7    displacement?

8           A.    You compromise the integrity of the facility.

9           Q.    And that could result in leachate escaping and  
10   landfill gas escaping; correct?

11          A.    Yes.

12          Q.    Now, isn't it true as part of the activity of the  
13   proposed permit going forward in connection with the  
14   questions that Mr. Gans had asked you, there is no

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15 requirement for NDEP to receive from the operator any  
16 information about microquakes or measuring same going in to  
17 the future; correct?

18 A. There's not to be a seismic monitor installed  
19 on-site, no. The USGS would manage that.

20 Q. And we're speaking about -- That's a federal  
21 agency, isn't it?

22 A. Yes.

23 Q. That's not a State of Nevada agency, is it?

24 A. No.

25 Q. Okay. And does the State of Nevada have the

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1 technical capabilities to monitor seismic activity in its  
2 state?

3 A. We would have no -- The state would have no need  
4 to. We would just prefer --

5 Q. The question, sir, was do you have the technical  
6 ability to do it?

7 A. No. Not that I know of.

8 Q. Okay. Now, needs and wants and desires change  
9 over time in societies, don't they, Mr. Taylor?

10 MS. JOSEPH: Objection. Vague.

11 MR. DOLAN: Okay. Now, by the way, yesterday you  
12 took issue, I think that's the way I understood it, you took  
13 issue with the verbiage found in the NAC concerning the  
14 hundred foot distance requirement that's found in the Nevada  
15 Administrative Code?

16 MR. FRANKOVICH: I'm going to object. We're way  
17 beyond the comments made this morning and yesterday by the  
18 Commission. Mr. Dolan is trying to reopen his case in  
19 recognition that he didn't present it yesterday and I'm going  
20 to object.

21 MR. DOLAN: Oh my God.

22 MS. JOSEPH: Well, I am going to second the  
23 objection.

24 CHAIRMAN GANS: Mr. Dolan, the reason we brought  
25 him back, the panel, primarily -- And obviously you have

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1 every right --

2 MR. DOLAN: I appreciate that. I was with  
3 counsel until the unnecessary comment, but that's life.

4 Q. (By Mr. Dolan) So with respect to liquefaction,  
5 Mr. Taylor, is it fair for me to conclude that in light of  
6 the fact that the plan, I believe you testified that the  
7 liquification(sic) plan is not complete. Is that an accurate  
8 statement? There's some subsequent plan to be submitted?

9 A. No. We're just doing additional analysis to  
10 confirm the liquefaction analysis that was already done.  
11 We're just confirming that as the site goes through.

12 Q. And that's based upon -- And the plan is going to  
13 receive additional information as a result of some boring  
14 samples?

15 A. They'll be doing borings ahead as they move the  
16 modules out. I mean they --

17 Q. Is there any plan to go back over a portion of  
18 the landfill that perhaps had a final cover to test to see if  
19 a seismic event created an unstable soil environment?

20 A. Can you rephrase that?

21 Q. I'm not sure I can.

22 A. I'm not sure I understand it. You mean go back  
23 and reanalyze the landfill that's already closed?

24 Q. Yeah.

25 A. Well, in the report, in the plan of operations,

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1 what we've got are ongoing closure certifications that are  
2 done by NDEP. In other words, the facility goes through

3 closure, the applicant will request of NDEP to come out and  
4 do a closure certification and that closure certification  
5 would include a CPA plan, a final cover.

6 Q. Okay. So when there's a final cover, let's just  
7 talk about the final cover, a final cover is when the  
8 landfill area or the cell, the 10-acre cell or 20-acre cell  
9 is closed; right?

10 A. Uh-huh.

11 Q. And the final cover, the land is on top of it?

12 A. Uh-huh.

13 Q. Hopefully some vegetation? Yes?

14 A. Yes.

15 Q. Hopefully? In fact that's one of the expressions  
16 as part of the final cover, vegetation on the site; right?

17 A. Yeah. They worked out a revegetation plan with

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18 the department.

19 Q. Good. Okay. So if there is a, let's say a  
20 seismic event, a 6.2 or greater, isn't it true that under the  
21 permit there is no obligation by the permittee to provide  
22 NDEP with any information about whether or not the soil has  
23 liquefied or liquefaction has occurred in that cell site;  
24 correct?

25 A. No. I would have to disagree with that. Because

21

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1 if you had liquefaction, you would have some form of obvious  
2 failure. If you had an obvious failure -- If you had  
3 liquefaction at the site, you would have some sort of

4 catastrophic failure, some sort of visual indication that  
5 something occurred.

6 Q. And aren't there degrees of liquefaction?

7 A. I'm not a geological engineer. I would say  
8 probably to some extent, major and minor. It either begins  
9 to act like a liquid or it does not. So I said once it  
10 reaches that sort of liquid phase the failure would be the  
11 same.

12 Q. And the process of soil turning in to liquid  
13 doesn't occur instantaneously, does it?

14 A. It would occur because of a seismic event, which  
15 could happen very quickly, yes. You wouldn't see little tiny  
16 minor micro earthquakes gradually liquefying the site. It  
17 would be a catastrophic failure.

18 MR. DOLAN: Okay. Thank you. That's it.

19 MS. JOSEPH: May I follow up with just one

20 question, please?

21 Mr. Taylor, does the seismic and liquefaction

22 data that you reviewed in connection with this permit show

23 that the possibility for liquefaction was low?

24 THE WITNESS: Yes.

25 MS. JOSEPH: Thank you. Nothing further.

22

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1 CHAIRMAN GANS: Panel? Okay. Now you're

2 dismissed. Are you going on vacation?

3 THE WITNESS: I am.

4 CHAIRMAN GANS: Okay. I want to reconfirm that

5 that does complete the State's presentation?

6 MS. JOSEPH: It does.

7 CHAIRMAN GANS: And so now we're on to the

8 intervener. Mr. Frankovich.

9 MR. FRANKOVICH: Thank you, Mr. Chairman. Before  
10 we proceed, I would like to renew the motion to dismiss that  
11 was made yesterday now that we've proceeded a little bit  
12 further.

13 I think it's clear from everybody in the room  
14 that the Commission gave the appellant a second chance, that  
15 they hadn't met their burden and it should have been  
16 dismissed at that point in time. And it presented no  
17 competent --

18 MR. DOLAN: Objection. Improper argument. He's  
19 rearguing a decision that was previously made. He's not

20 making a motion to reconsider. He's making a motion to

21 dismiss. What he just argued is out of line.

22 MR. FRANKOVICH: I disagree. Let me proceed with

23 my motion.

24 MR. DOLAN: Well, I --

25 CHAIRMAN GANS: I understand.

23

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1 MR. FRANKOVICH: The Commission did allow him to

2 proceed and ask some questions of Mr. --

3 MR. DOLAN: Your Honor, I object to argument for

4 him to not proceed at all. Mr. Hannum proceeded. Mr. Cook

5 proceeded. Let's be sticklers for words, Counsel. They're

6 important in life.

7 MR. FRANKOVICH: Yes, they are.

8 MR. DOLAN: Yes. You have to learn --

9 MR. FRANKOVICH: In a response yesterday,  
10 Mr. Dolan argued that he needed more time to develop his  
11 case. He wanted to cross-examine the State representatives  
12 who reviewed this permit because he said that by doing that  
13 he could establish. And he was Mr. Dolan, so we're very  
14 clear about who said that. He could establish that they  
15 abused their discretion in approving a permit at less than a  
16 hundred feet of groundwater is what he said.

17 The Commission gave him that leeway and I think  
18 it's -- I'm not going to argue with that decision. Give the  
19 appellants every right. You had some questions you wanted  
20 answered. You wanted to learn a little bit more about the

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21 landfill.

22 First, I do want to comment on the hundred foot.

23 we're not seeking a variance. The regulations say it must be

24 a hundred feet unless it's approved by NDEP. If you're more

25 than a hundred feet you have to be approved by NDEP. It's

24

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1 not a line drawn in the ground that says you cannot penetrate

2 this under any circumstance. And we're not asking for a

3 variance. The regulation specifically provides that you can

4 go less than a hundred feet if NDEP is satisfied. The

5 standard really is are you going to impact or degrade the

6 waters of the state. That's what we're concerned about and

7 that's what the whole purpose of the liner system that you  
8 heard about.

9           And we, as I said, appreciate the comment that  
10 the Commission's interest in hearing more about the design of  
11 the liner and the drainage system. You heard for quite a  
12 while yesterday the qualifications of Mr. Taylor, his  
13 experience, what the process he went through for four years  
14 in evaluating this and that the requirements for this far  
15 exceed any of the state standards, the most highly regulated  
16 approved landfill in the State of Nevada.

17           Mr. Dolan had the opportunity to cross-examine  
18 Mr. Taylor for almost an hour and he did it and then he did  
19 it again today for almost a half an hour. Never showed  
20 anything approaching an abuse of discretion. Mr. Taylor  
21 testified that he had applications and reports from qualified

22 engineers and sources upon which he based his decision on  
23 everything he did. And his opinion was unequivocal and  
24 reiterated again that groundwater is protected with the  
25 systems in place. And the other thing he testified he put in

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1 all of these not only protections up front, monitoring going  
2 forward and systems to ensure compliance going forward.

3 I think the most important thing that Mr. Taylor  
4 testified to, besides the design, is that with the systems in  
5 place, any problem or failure of any of the systems would be  
6 detected before anything got in to the groundwater so that  
7 the standard of protection of the groundwater is in place.

8 And as I say, his opinion was this meets all of the  
9 requirements and the groundwater will be protected.

10 The standard we're here today on, we've talked  
11 about before, is abuse of discretion. If there's a  
12 legitimate basis for the issuance of the permit, then you do  
13 not have an abuse of discretion. It's not the function of  
14 this Commission to second guess or substitute its judgment of  
15 Mr. Taylor. If Mr. Taylor had a legitimate basis for doing,  
16 making his opinions, his opinions should be followed.

17 You've given Mr. Dolan and the appellants a  
18 second chance. You answered all the Commission's questions.  
19 I think now we're ready to say that the appellant has not now  
20 met their burden and we should dismiss this case before going  
21 any further. Thank you.

22 MS. JOSEPH: The State would like to join in the

23 motion. I just want to add one aspect. I agree with what  
24 Recology's counsel has stated in terms of appellants' counsel  
25 not meeting the burden of showing that the State acted

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1 improperly or acted arbitrarily or capriciously in issuing  
2 the permit.

3 And one aspect that I think is important again is  
4 to look at the Nevada regulations and those regulations under  
5 which NDEP staff is guided in terms of issuing a permit. And  
6 in those regulations there's an actual prescription for use  
7 of a liner system. And here we've gone way beyond just the  
8 typical liner system that's prescribed in those regulations.

9 And that's important because the regulations then accept and  
10 adopt a liner system of being protective of groundwater. And  
11 for staff to then refuse to issue a permit based on the use  
12 of a liner system and in fact a very enhanced liner system is  
13 counter to the regulations.

14 And I think that, just to reiterate, appellants  
15 have not met their burden of showing that there was any  
16 mistake or that there was any violation of any of the  
17 regulations. Thank you.

18 CHAIRMAN GANS: Mr. Dolan.

19 MR. DOLAN: This appeal is not about Robert  
20 Dolan. It's not about me. And it's not even necessarily  
21 about Mr. Hannum or Mr. Cook. I find it passing strange that  
22 counsel for Recology maybe honors me by saying that it's  
23 about me and Mr. Dolan had that and Mr. Dolan had this.

24 This has been an action brought by people who are  
25 not in the business of bringing appeals to challenge

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1 government actions. That's not Mr. Hannum's j-o-b. It's not  
2 Mr. Cook's job, nor is it necessarily my job.

3 But what this is about is Nevada, the citizens of  
4 Nevada and the desert, which is going to be blighted by this  
5 landfill.

6 There is a statute that says, which I've repeated  
7 earlier yesterday. It's NRS Chapter 444. It's the goal and  
8 policy of the state is to protect the beauty and protect the  
9 health and welfare of the citizens. Nothing about this

10 decision by Mr. Taylor is consistent with that law.

11 I remember back in law school in torts, we took  
12 torts. And the professor enumerated facts for us to decide  
13 if there was a breach of duty. And there was a truck that  
14 was the best truck ever manufactured that had all of the best  
15 safe designs. And in that truck was put nuclear waste and  
16 there was an accident in New York city. And in this question  
17 they wanted us to discuss, you know, is there any liability,  
18 when it was clearly established that the truck was the best  
19 truck and they were driving slowly but an accident happened.

20 And the answer to that question was it was -- the  
21 whole program, the idea of bringing nuclear waste through the  
22 city was, that was the breach of duty. It was not that the  
23 truck was defective or the tires didn't have the right air  
24 pressure or the driver of the truck didn't have the

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25 appropriate CDL. And I find this decision here to be

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1 somewhat analogous. That's why I'm sharing it with you.

2 The rules and regulations as they are, the three  
3 members of the Commission are aware that lobbyists in the  
4 trade wrote those for the EPA back when the EPA was  
5 established. It's operative here now in the State of Nevada.

6 The State of Nevada has the ability as a  
7 sovereign state to increase standards. Mr. Taylor indicated  
8 that he has incorporated or tried to incorporate some better  
9 policies and procedures, but it's still not enough. The  
10 state can do more.

11                   The challenges that Nevada has, and it's  
12   unfortunate that we don't have the political and governmental  
13   leadership of the State of Nevada, sort of amicae in this  
14   case assisting us. There's a lot of silence out there. And  
15   I can opine as to why there is and you can also opine for  
16   yourself quietly.

17                   But it's passing strangers. I've been in Nevada  
18   14 years. From New York originally. I can imagine an  
19   operator out of Connecticut saying to a New York regulator,  
20   by the way we're going to deposit 4,000 tons of garbage from  
21   Connecticut in to New York for 95 years, and in the process,  
22   that hundred-foot barrier in the aquifer for the barrier  
23   that's in the rules, we'll just do away with it. We'll  
24   design it so that you'll be happy. It meets these regs that  
25   our lobbyist got incorporated in to the administrative code.

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□

1                   Mr. Taylor testified that he would like to speak  
2                   to the guy or maybe a woman who was responsible for inserting  
3                   the thousand -- the 100-foot figure in that reg. It showed  
4                   the kind of disdain that was brought to the analytical table  
5                   was the same approach with reference to the 1,000-foot  
6                   requirement for surface water to be excluded from the  
7                   landfill site. Maybe we need to talk to that person also.

8                   There obviously is some verbiage to sort of say  
9                   to the citizens, we are concerned about the environment.  
10                  Let's establish a standard and then you have to draw a line  
11                  somewhere. But that line was meaningless to Mr. Taylor

12 because ultimately engineering, he believes that engineering  
13 will solve all problems.

14 But that's not the human history. Engineering  
15 doesn't solve all problems and I anecdotally spoke of some  
16 yesterday.

17 The abuse of discretion that occurred here that  
18 we've more than adequately shown is that -- And you can make  
19 this judgment. I'm asking you to make this judgment. Is  
20 that this decision to approve the landfill in light of the  
21 stated goals and policies abuses the discretion because  
22 there's not enough safety and safeguards built in.

23 Yesterday during cross-examination of Mr. Taylor,  
24 I indicated so you were the person responsible for the number  
25 of wells, not four or six or eight, it could have been 12.

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1 ultimately yes, it could have 40 wells or 40 testing  
2 locations in the landfill. He didn't. He settled on where  
3 it is. It's not enough. He has not done enough.

4           The shame of this hearing is that in some ways I  
5 do agree with Mr. Frankovich over there about bringing to the  
6 hearing and you commented about this yesterday where are the  
7 experts, where are the experts. Humboldt County had Mr. Fred  
8 Lee. He's not here. It ultimately came down to money.

9 People want to come and testify here and want to be paid.

10 And the resources weren't available to talk about

11 liquefaction in greater detail, the permeability and

12 degradation possibilities of the liners. And then you can

13 have competing experts all day long. That's not present.

14 We got some information before the Commission

15 here through Mr. Taylor's testimony and I'm grateful for

16 allowing for that to occur. And I think a lot of what

17 Mr. Taylor testified to supports the appellants' position.

18 And I probably could have done more, I probably could have

19 done more and I wish I did have more time and resources to do

20 more and better. But I did the best I could under the

21 circumstances.

22 And I think with that being said, I will submit

23 the matter to your decision. Thank you.

24 MR. FRANKOVICH: Mr. Dolan's arguments were a lot

25 of words and stories, but what we've lacked the whole time is

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1 evidence of non-compliance. He cited the statute. There was  
2 a statute that regulated in part Mr. Taylor's review.  
3 Mr. Taylor found that there was compliance with all the  
4 statutes.

5 Mr. Dolan argues the State could do more, we lack  
6 political and legislative leadership. If he disagrees with  
7 the law, this is not the forum to change the law. The law  
8 forum, you have to go to the legislature, who sets the law of  
9 the State of Nevada.

10 This Commission applies the law as it exists and  
11 in this case is reviewing what NDEP did and specifically  
12 Mr. Taylor. Mr. Dolan is asking you not to follow the law  
13 but to come to some what he perceives higher principle before

14 the State of Nevada not adopted by our elected officials.

15 He pointed out, he said there's abuse of  
16 discretion in approving these, period. But we have a  
17 professional qualified engineer who reviewed this for four  
18 years and was satisfied. He based his opinion on other  
19 professional qualified engineers, submittals of reports, all  
20 of which he's done. I think we're at the point where it's  
21 pretty clear that the appellants haven't carried their burden  
22 and that this case should be dismissed before going any  
23 further. Thank you.

24 CHAIRMAN GANS: It's now back to the panel. Time  
25 for panel comments about the motion to dismiss by the

1 intervener. would you like me to start?

2 I knew when we came to this hearing that it was  
3 going to be up to the panel to make the determination.  
4 whenever you're on a panel like this and you know you're  
5 going to make that determination, you've got to figure out  
6 what that determination is based on.

7 Now, I could 100 percent agree with Mr. Hannum  
8 and Mr. Cook. And in fact, you may not know that I was an  
9 employee of the Clark County Sanitation District for 25  
10 years, the largest sewer district in the State of Nevada.  
11 And one of the things that always concerned me is when we had  
12 evaporation ponds, how do we line those ponds and keep that  
13 treated waste water from percolating in to the ground. we  
14 had to use liners. So I'm very familiar with liners. I'm

15 also very concerned with liners because it was my  
16 responsibility and I didn't want to contaminate the  
17 groundwater and then have Colleen or somebody give me a fine  
18 for contaminating the groundwater. So there were controls  
19 that I lived with it 25 years.

20                   However, I've also found that there's always,  
21 life is just a series of compromises. Because while I'd like  
22 to put in two feet of concrete to make damn sure there's not  
23 going to be any leachate, or in my case waste water, treated  
24 waste water, going in to the groundwater. There's no way I  
25 could do that. Our customers were not willing to pay a

1 hundred dollars a month for sewer bills. They're not going  
2 to do it. And so I had to compromise and do the best I could  
3 under the laws to keep from getting the fines that I would  
4 have to pass on to my customers anyway and they would have to  
5 pay them in the end. So I was always between a rock and a  
6 hard place trying to make sure I did the best job I could  
7 under the rules and regulations and not get fined but not let  
8 stuff get in to the ground. It was a series of that for 25  
9 years. And so I really appreciate where you're coming from.

10 But it doesn't really matter if I agree with you  
11 or not. What matters is, and I think we all know this,  
12 Mr. Dolan knows that, is that we've got to hold Mr. Taylor's  
13 feet to the fire. But he's got to have something to go by.  
14 He's got to have some standard. If I go 15 miles per hour in  
15 a 35 mile per hour zone, I'm going to get a ticket. That's

16 the standard. I blew it. So he's always looking at those  
17 regs and saying I've got something to follow here. I've got  
18 to make sure it's this, this and this.

19                   And I think we talked about that yesterday when  
20 we went to the hundred mil thing. And my question, well,  
21 yeah there's other things he can do, but is it reasonable, is  
22 it cost-effective? Hey, we're all going to generate sewer  
23 and waste. We've got to do something with it. And so what  
24 we try to do is pass laws to give us the best ability we can  
25 at a reasonable cost to the customer to dispose of our liquid

1 waste and our solid waste and that's what we're trying to do  
2 here.

3 And so as far as I can see, the State has  
4 followed the laws that the legislature have put in place.  
5 It's not for me to say, hey, legislature, you're wrong and  
6 the stuff you gave Mr. Taylor to abide by is wrong, therefore  
7 the appellants are right. This is no good.

8 No. We've got a duty as a panel also to stick  
9 with the law and stick with the standards that we have to  
10 stick with. And right now it doesn't matter what I think  
11 personally. What matters is did the State do their job given  
12 the constraints for the rules and regulations they have to  
13 abide by, which our legislature has said this is reasonable.  
14 They're probably saying there could be a compromise also. I  
15 don't know. So from there is where we're coming from.

16 But I want to make sure the appellants understand  
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17 that. Because Mr. Hannum, I really took in to consideration  
18 your comment last night in the public comment part of the  
19 meeting. I understand your frustration and I understand how  
20 I think you feel. I was kind of in that position for about  
21 25 years. But that's not what we do here. That's not what  
22 we do. We have standards that we have to also abide by and  
23 judge the state by. And I'm not afraid to judge the state.  
24 They judged me for many years. But that's not the point.  
25 The point is we have standards and laws and rules and

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1 regulations that we have to abide by and that's what we look

2 at when we hear the testimony. So I'm just letting you know  
3 how we have to operate. And so there's my statements that we  
4 can start with.

5 MEMBER RICHARDSON: There's certain aspects of  
6 the site selection that personally I have concerns with, I  
7 do. It's a 95-year expectancy of use of this facility. It's  
8 a long time. How long is there going to be a potential  
9 hazard there? We don't know. But there is a hazard there  
10 for a period of time, for a very long period of time.

11 But today the question for me is, is there an  
12 abuse of discretion. And I just haven't seen any evidence  
13 that would allow me to say yes, I see an abuse of discretion  
14 here. I just don't see any. Mr. Taylor worked very hard  
15 through engineering principles and the rules in front of him  
16 that he has to satisfy. Are those engineering rules going to  
17 solve all of these issues? I don't know. But those are

18 rules that he has to work with and that we have to work with  
19 within. So I'm just not -- I'm just not seeing an abuse of  
20 discretion.

21 MEMBER LANDRETH: The two issues that really  
22 remain for me -- And I know that the State is going to wince  
23 when I say this -- is back to the hundred-foot standard. We  
24 can no more say, in my opinion, that the State is obliged to  
25 use liners because they're prescribed in regulation and then

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1 say but the hundred-foot rule is meaningless. There's  
2 something wrong. We have to take them both seriously. In

3 other words, if the regulations say we need to use liners to  
4 address the problem of groundwater protection, then we need  
5 to recognize with some respect the hundred-foot rule. It's  
6 there for a reason. And on the other hand, the regulation  
7 clearly permits the NDEP to make a determination to go below  
8 the hundred-foot rule. But it's not clear, you know, the  
9 rule doesn't give us much guidance on how that departure from  
10 a hundred feet should be determined. We don't know. So that  
11 remains a problem for me.

12 The second issue that I see, I'm very impressed  
13 with the work that the State has done with Recology in terms  
14 of the development of these three parts, the design, the  
15 operation and the monitoring. To the extent that we rely on  
16 self-reporting, that gives me some pause too. The more the  
17 State is involved with monitoring, the more comfort that I  
18 would have with this operation because, I said it yesterday

19 and I'll say it again, water and groundwater are our most  
20 precious resources in this state. And so the potential  
21 threat to groundwater is paramount in my mind.

22 Having said that, I'm not sure that I can say  
23 that there has been any evidence of an abuse of discretion in  
24 the process and the ultimate decision.

25 CHAIRMAN GANS: Having worked with the state for

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1 many, many, many, many, many years, I've been a critic  
2 because I've been on the other end of this rope with the  
3 state. But I, like Kathryn, cannot see where the State,

4 Mr. Taylor representing the State took his best judgment and  
5 said okay, I want to be careful with this. I have to admit  
6 dealing this for 25 years I'm pretty impressed with that over  
7 there. I'm pretty impressed. I'm not saying it's perfect.  
8 Nothing is perfect. But I think what he tried to do is say,  
9 well, look, we're going to go beyond a single liner. That's  
10 what I used to use, a single liner. We do percolation tests,  
11 but we use a single liner. He went beyond the single liner  
12 And what I consider buffer zones between those liners to try  
13 to compensate for what he saw as a potential problem and meet  
14 the safety and health of the people and the waters of the  
15 state.

16 Is this going to do it? Time will tell. It's  
17 not that I disagree with the appellants at all. But what do  
18 we do next? And do we monitor this and we make darn sure  
19 that if something isn't right, if somewhere our reasoning or

20 engineering wasn't quite what it should have been, we can  
21 correct it. And that's as much as I'm going over.

22 I don't see an abuse of discretion. I don't see  
23 where the State varied from the law that they have to follow.  
24 we all live by laws. It doesn't matter where we go or what  
25 we're talking about. So I tend to agree with you, Kathryn,

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1 that I didn't see that abuse. I don't see where the State  
2 didn't follow the laws that they must follow.

3 So we have a choice. We can go ahead and let  
4 Recology put on its case and deny the motion to appeal -- the

5 motion to dismiss or we can support the motion to dismiss.

6 And we need a motion one way or the other. Do you realize

7 that I can't make a motion?

8 MEMBER LANDRETH: Yes. I have to say if given my

9 choice I would hear the evidence but that's --

10 CHAIRMAN GANS: That's your choice. You're the

11 panel member. You're in the driver's seat.

12 MEMBER RICHARDSON: I haven't seen an abuse of

13 discretion. I don't know if going any further is going to

14 shed any additional light or not.

15 MEMBER LANDRETH: No. I'm not sure that it will

16 change the opinions that have been expressed here. That's

17 pretty late in the game. What I was thinking was that it

18 will, if anyone wants the fuller record it will flush out the

19 record. But that may not be justification, looking at our

20 attorney here.

21 MS. REYNOLDS: You can go either way.

22 MEMBER RICHARDSON: So your thought process is to  
23 continue forward so that there's a full record?

24 MEMBER LANDRETH: Yes. But our attorney is  
25 saying we can go either way, that we need not do that.

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1 MEMBER RICHARDSON: So does that information  
2 become part of the record without this process continuing?

3 MS. REYNOLDS: No. If you grant the motion to  
4 dismiss, that is where the record ends.

5 CHAIRMAN GANS: Probably what we're looking for

6 more than anything else if we stop and think about it is  
7 further confirmation of where we stand right now if we go  
8 forward with Recology's presentation. And I'm not saying  
9 that would happen. But at the point we're at, that's  
10 probably what we're thinking.

11 MEMBER LANDRETH: I agree. We're not likely to  
12 find evidence at this point that's going to contradict it.  
13 It would confirm more likely than not. So the question is do  
14 we want more in the record or are we ready.

15 MEMBER RICHARDSON: I'm not sure of the overall  
16 benefit of having a more complete record. It's a very  
17 serious consequence to this so it's not to be taken lightly.

18 CHAIRMAN GANS: How many witnesses?

19 MS. LEONARD: We have three witnesses.

20 CHAIRMAN GANS: I'm willing to hear further  
21 testimony.

22                   MEMBER RICHARDSON: I mean if something were  
23 somewhat conflicted with although by the regulations we are  
24 working within, we appear to understand the direction, but  
25 still this has been keeping us all up at night to a certain

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1 extent. I would be glad to see all the way through.

2                   CHAIRMAN GANS: Is that a motion? I need a  
3 motion.

4                   MEMBER RICHARDSON: Motion to continue on with  
5 the hearing.

6                   CHAIRMAN GANS: Deny the --

7 MEMBER RICHARDSON: To deny the motion to  
8 dismiss.

9 MEMBER LANDRETH: Second.

10 CHAIRMAN GANS: Okay. Any discussion or comments  
11 on the motion? All those in favor, signify by aye.

12 (The vote was unanimously in favor of the motion)

13 CHAIRMAN GANS: Opposed? None.

14 Mr. Frankovich, you can present your case.

15 MS. LEONARD: Intervenors call Ken Haskell.

16 (witness was sworn in)

17

18 KEN HASKELL

19 called as a witness on behalf of the  
20 Intervener, having been first duly sworn,  
21 was examined and testified as follows:

22

23 DIRECT EXAMINATION

24 By Ms. Leonard:

25 Q. Mr. Haskell, can you please introduce yourself to

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1 the commissioners.

2 A. I'm Ken Haskell, H-a-s-k-e-l-l. I'm a principal  
3 engineer with Golder Associates.

4 Q. And what was your responsibility for the Jungo  
5 Landfill project?

6 A. I was the project manager. I coordinated our  
7 engineering and geology, hydrogeology team.

8 Q. Can you provide the commissioners with some  
9 background on Golder Associates?

10 A. Golder is a national, in fact an international  
11 environmental consulting firm. Here in the US we're involved  
12 in geotechnical engineering, designing environmental systems  
13 primarily for solid waste.

14 Q. And I'm going to need you to project your voice a  
15 little bit more for the court reporter.

16 And what type of services does Golder provide in  
17 those areas?

18 A. Well, again, geotechnical engineering for solid  
19 waste, mining, transportation projects, landfill design, you  
20 know, mining design projects.

21 Q. Can you provide the commissioners with your  
22 educational background?

23 A. I have a Bachelor's in science in geological

24 engineering from Washington State University and a Master of  
25 science from the University of Idaho in geological

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1 engineering.

2 Q. Do you have any certifications?

3 A. I'm a registered civil engineer in the State of  
4 California.

5 Q. Besides the Jungo project have you worked on any  
6 other landfills in Nevada?

7 A. I have. I was involved in the due diligence for  
8 the proposed acquisition of the Truss Line facility, so we

9 had a team that came in and looked at the environmental  
10 controls for the baseline system to monitor and control,  
11 looked at the operations plan and provided some advice to our  
12 client on that acquisition.

13 I've also provided technical review for the last  
14 baseline construction project that was completed for the Apex  
15 Landfill. Golder Associates was involved in designing that  
16 base liner system.

17 And I also provided technical review for the  
18 sunrise closure on the civil grade and drainage aspects of  
19 that project.

20 MS. LEONARD: I think in those binders there  
21 those are the witness exhibits; is that correct?

22 MS. JOSEPH: That's right.

23 Q. (By Ms. Leonard) I want you to turn to Exhibit  
24 117.

25 A. Okay.

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1 Q. Let's wait for the commissioners to get there.

2 Is exhibit -- what is Exhibit 117?

3 A. That's my resume.

4 Q. Is that a true and accurate description of your  
5 education and professional experience?

6 A. Yes.

7 Q. So let's go through and talk a little bit more  
8 about that experience. How long have you been an engineer?

9 A. A little over 25 years.

10 Q. And during that 25 years have you designed other  
11 landfills besides the Jungo landfill?

12 A. Quite a few. I have been the engineer of record  
13 for the design of 25 individual base liner construction  
14 projects that have been completed over the course of my  
15 career. I've also served as the CQA of record for another  
16 25. A CQA is the construction quality assurance portion of  
17 the project where you're inspecting and making sure that the  
18 liner has been installed according to the plans and  
19 specifications.

20 Q. And again, I'm going to need you to project your  
21 voice a little bit more.

22 So in those landfills that you just described  
23 that you worked on, have you worked on any that are in close  
24 proximity to groundwater?

25 A. Probably most of those have been in close

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1 proximity to groundwater.

2 Q. Can you describe those please?

3 A. In California the prescriptive standard  
4 requirement is a minimum separation distance of five feet in  
5 comparison to a hundred feet in Nevada. We've got a number  
6 of sites that have engineered alternatives even to the five  
7 feet because you've got a number of landfills in the central  
8 valley where groundwater is relatively shallow. A couple  
9 examples would be Yolo County Central Landfill. Groundwater  
10 is only about two feet below the ground surface. So by the

11 time we build our liner system, groundwater is essentially at  
12 the bottle liner. we have a double liner system where the  
13 lower liner acts as a groundwater barrier.

14 Hay Road Landfill, again out in the Central  
15 valley. The design groundwater separation distance there is  
16 two and a half feet. And we've got a double liner system for  
17 that particular project.

18 Ostrom Road Landfill would be another example  
19 with a design groundwater separation distance of two and a  
20 half feet.

21 Q. And Hay Road and Ostrom Road Landfills that you  
22 just described, are those Recology landfills?

23 A. Those are owned and operated by Recology.

24 Q. And during the course of your career have you  
25 worked on landfills that are in close proximity to the

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1 surface water?

2 A. Yes.

3 Q. Can you describe those?

4 A. Well, there's a number of landfills that are  
5 right next to San Francisco Bay. Tri-City Landfill, City of  
6 Palo Alto, Redwood Landfill. The Ostrom Road Landfill is  
7 right next to the Best slough, so there's a surface water  
8 body that borders the landfill there.

9 Q. And have you worked in landfills that are in  
10 variable soil conditions?

11 A. Quite frequently. Anything from interbedded sand

12 and silts, clays and alluvial soil deposits that we see in  
13 the Central valley to weather rock to competent bedrock.

14 Q. And of the soil conditions in which you've dealt  
15 with on other landfills, are there any that are similar to  
16 the Jungo?

17 A. Well, the Jungo soils are interlayered sands,  
18 silts and clays, alluvial-type deposits. We have those type  
19 of soils also in the Central valley. Hay Road Landfill, Yolo  
20 County Landfill, Ostrom Road Landfill are just a couple of  
21 examples.

22 Q. Have you worked on landfills in areas that are  
23 subjects to rainy and wet conditions?

24 A. Yes. Frequently.

25 Q. And have you worked on landfills that are in dry

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1 conditions?

2 A. Yes. Some of these landfills span sites that  
3 have annual precipitations that range from say 40 inches of  
4 rain a year to less than ten inches of rain.

5 Q. Do you have experience in designing for  
6 all-weather access to a landfill?

7 A. Yes. It's a requirement for all of the landfill  
8 facilities.

9 Q. Do you have experience designing landfills to  
10 control run-on and run-off of water?

11 A. Yes. That's a requirement for all landfill  
12 facilities.

13 Q. And do you have experience designing landfills to  
14 withstand flooding?

15 A. Yes. We, depending on the classification of the  
16 landfill and where it's located, we have to prevent flooding  
17 from a hundred-year flood event. The Ostrom Road Landfill is  
18 an example. We just completed the levy design for the  
19 Redwood Landfill, which borders a creek next to San Francisco  
20 Bay, and that was to upgrade the facility to a hundred-year  
21 flood protection.

22 Q. Now, the hundred-year flood protection, that's  
23 not part of the requirement for the Jungo Landfill; correct?

24 A. No.

25 Q. Do you have experience designing landfills to

□

1 withstand seismic activity?

2 A. Yes. We have most of our sites are near very  
3 large and very active faults in California. So in comparison  
4 here for the Jungo site, the peak ground accelerations that  
5 we're designed for are .25 G. That's moderate. It's not  
6 insignificant but it's moderate ground motion. We've got  
7 sites that we're designing that are subject to more than two  
8 or three times that amount of ground motion.

9 Q. And all of the other landfills that you've  
10 described, those are all subject to regulatory oversight?

11 A. Yes.

12 Q. Do you review the regulations when you're  
13 preparing landfill designs?

14 A. Yes.

15 Q. And do you design to ensure compliance with the  
16 regulations?

17 A. Yes.

18 Q. Now, in the course of these other landfill  
19 designs, you mentioned some other liner systems. Did you  
20 design those liner systems as well?

21 A. Yes.

22 Q. And have you designed other leachate control  
23 systems?

24 A. Yes.

25 Q. And have you designed other landfill gas systems?

1           A.    Yes.

2           Q.    All right.  Let's turn to talk a little bit about  
3 what you did specifically with regard to the Jungo site.  Can  
4 you describe the process that you went through from the  
5 initiation point?

6           A.    We went out initially to take a look at the site  
7 and review the site conditions, went back, we reviewed the  
8 regulations, made a determination whether or not there were  
9 any inconsistencies with siting regulations.  We found that  
10 the site appeared to be consistent with the regulations.

11          Q.    And did you do any preliminary investigations?

12          A.    Yeah.  So we developed an initial concept for the  
13 landfill and then went out and completed the subsurface  
14 borings to both characterize the geotechnical properties of

15 the soils as well as the hydrogeology out there.

16 Q. Can you describe the process, what you did with  
17 the borings?

18 A. Well, we took soil samples in most cases at  
19 five-foot intervals. There's a few instances where we have  
20 soil samples at ten-foot intervals. We collected those  
21 samples. We classified them. We submitted those samples to  
22 a lab for geotechnical testing of various properties. We  
23 converted four of those borings in to monitoring wells and  
24 then continued to monitor the groundwater.

25 Q. And when you did your initial site investigations

1 where did you find the groundwater to be?

2 A. Approximately 60 feet below ground surface.

3 Q. And in the world of geotechnical engineering is

4 60 feet considered shallow?

5 A. No. That's relatively deep, when you're

6 considering issues such as liquefaction.

7 Q. And we'll talk a little bit about liquefaction in

8 a minute. During the course of your initial investigation in

9 to the Jungo site did you meet with representatives from

10 NDEP?

11 A. Yes.

12 Q. So using the information that you obtained from

13 the borings and the other, the soils analysis what did you do

14 then?

15 A. We did a number of engineering calculations to

16 look at things like base settlement. We were concerned about  
17 the compressability of the soils. We looked at stability  
18 both under static and seismic conditions. We did look at  
19 liquefaction at the site. We looked at leachate generation  
20 to design our leachate collection system.

21 Q. And then did you develop the report of design?

22 A. Yes, we did.

23 Q. Can you describe that process a little bit?

24 A. Well, the report of design is a requirement of  
25 Nevada Administrative Code. It describes the field

1 investigations that we completed, the engineering analyses  
2 that were completed to support the project. We also prepared  
3 a plan of operations and a series of engineering plans for  
4 the facility.

5 Q. And did Golder also develop a monitoring plan?

6 A. Yes, we did.

7 Q. And then did you submit the application on behalf  
8 of Recology?

9 A. Yes.

10 Q. After submission of the application and the  
11 application was deemed complete by NDEP, what happened next?

12 A. NDEP went through their technical review.

13 Q. And did NDEP provide technical comment?

14 A. Yes, several times.

15 Q. And did Golder make a number of design revisions  
16 to respond?

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17 A. Yes, we did.

18 Q. Let's talk briefly -- And I know some of them  
19 have been mentioned earlier and I'm very sensitive to not  
20 duplicating testimony, but I wanted to make sure they're all  
21 in one place.

22 CHAIRMAN GANS: Take it easy.

23 Q. (By Ms. Leonard) Okay. Can you summarize some  
24 of your design modifications that occur?

25 A. The early detection monitoring program. The most

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1 significant is being the increase to a double liner system.

2 The inclusion of a base settlement monitoring program. We  
3 initially did qualitative liquefaction analysis. John Taylor  
4 asked for quantitative analyses. We prepared an integrated  
5 site-wide contingency plan. There's probably a number of  
6 others.

7 Q. Was the groundwater protection evaluation plan  
8 part of the initial application?

9 A. No, no.

10 Q. Was that something that you --

11 A. That's part of the early detection monitoring  
12 program that I mentioned.

13 Q. And the liner degradation evaluation plan, was  
14 that part of the initial application?

15 A. No.

16 Q. So that was something additional that NDEP  
17 required?

18 A. That's right.

19 Q. And had you ever encountered, in any of the  
20 experience that you described before had you ever encountered  
21 a requirement to do a liner degradation evaluation plan?

22 A. No. In fact, I'm not aware of any facility in  
23 the US that's been required to do that.

24 Q. Now, was there any change to the sequencing of  
25 cells?

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1 A. We did. We originally were going to start along  
2 the west side. We were asked to resequence to the northeast

3 corner of the site so that would allow us to instead of first  
4 detecting a release along the western property boundary, we  
5 could detect a release using this early detection network  
6 that's been shown earlier.

7 Q. And were there any changes to the run-on or  
8 run-off controls?

9 A. Yes. We were asked to rather than presume  
10 run-off from what we call a non-contact area, so any rain  
11 that comes in to contact with refuse is treated as leachate.  
12 If we have rain that comes in contact with soil cover and  
13 runs off, we treat that as non-contact. Normally at most  
14 sites it's pumped to some sort of a detention basin, unlined  
15 detention basin.

16 we were asked to first pump that to a lined basin  
17 so we could sample it and test it before releasing it to an  
18 unlined basin. So that's another first. It's the first time

19 in my career that we've been asked to do that.

20 Q. And all of the additional requirements that NDEP  
21 imposed that you just described, those have all been  
22 integrated in to the final permit?

23 A. Yes.

24 Q. All right. Let's talk a little bit more  
25 specifically about the liner system. And I know yesterday

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1 Mr. Taylor went through in some detail and described it. But  
2 one thing he mentioned was redundant capacity. And I'm  
3 wondering if you can talk a little bit more about that. And

4 you're welcome to go up to the figure.

5 A. So I'm not going to repeat everything that John  
6 said about the liner system. I thought he did a pretty good  
7 job covering it. But I wanted to just sort of quantify the  
8 redundancy. Most LCR systems constructed in the US are  
9 constructed using a sand. So a sand at best is going to have  
10 a permeability of one times ten to minus two centimeters per  
11 second. Probably closer to ten to minus three centimeters  
12 per second.

13 what we've done is come in with a fine gravel.  
14 we've used this before at other facilities in California.  
15 And we expect a minimum permeability of a centimeter per  
16 second, so that's a hundred to a thousand times greater than  
17 what's often done at many facilities in the US.

18 The importance of that, as John alluded to, is  
19 that it minimizes the depth on top of the liner system. we

20 know from past studies if there's a defect in the geomembrane  
21 that the leakage potential through there is proportionate to  
22 the leachate depth. So if we were to allow leachate to build  
23 up to 12 inches, which is common at many facilities, we would  
24 have a certain leakage, potential leakage rate if we had a  
25 defect. By minimizing it to a fraction of an inch, and

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1 again, we're not expecting a lot of leachate. So leachate is  
2 primarily a function of rain water that infiltrates --

3 MR. DOLAN: Objection. Beyond the scope of the  
4 question.

5                   CHAIRMAN GANS: I want him to continue. I want  
6 to know more about this.

7                   THE WITNESS: Leachate is primarily water that,  
8 rain water that infiltrates through the refuse and is  
9 collected on top of the liner system. So if you're in an  
10 arid environment, we know that you end up collecting or  
11 generating a lot less leachate than if you're in a wet  
12 climate. So we're really not expecting that much leachate  
13 out there to begin with. We've only got eight inches of rain  
14 a year. We see moderate to very low amounts of leachate in  
15 California where we've got 20 to 30 inches of rain a year.

16                   So we really don't have to put in this high  
17 capacity system just for leachate management. We've put it  
18 in to make sure that the leachate depth is a fraction of an  
19 inch. And our calculations show it's going to be on the  
20 order of a couple-hundredths of an inch.

21                   That means that by going to this type of a system  
22   instead of a sand-type LCRS, the leakage potential is more  
23   than a hundred times better than what we would have out of a  
24   sand-type built LCRS.

25                   So the other significance is that if you're

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1   talking about and you're concerned about very small holes in  
2   the liner system, you know, a pin hole, water has surface  
3   tension. It will not readily flow through very small  
4   diameter holes until you have enough hydraulic head to force  
5   it through that hole. So if you had small holes or pin holes

6 and you're minimizing and limiting the leachate depths to a  
7 very small amount, you're again providing another level of  
8 redundancy in the leakage potential.

9           Our calculations show that we can maintain this  
10 very small leachate depth without this pipe. We don't need  
11 the pipe. Because again, we're not expecting a lot of  
12 leachate out here. But we've included the pipe, again as  
13 another redundant feature.

14           Q. (By Ms. Leonard) Thanks. Stay right there for a  
15 second because I want to ask you about one other aspect of  
16 the liner system, again, trying not to be repetitive. But  
17 there's a secondary collection system below. Can you  
18 describe that a little bit more and what type of sampling you  
19 can do there?

20           A. Well, this layer is what we refer to as a  
21 geocomposite. It sits on top of another geomembrane. That's

22 going to slope to the outer edge of the landfill to a sump.

23 we will be monitoring that. It is in the monitoring plan.

24 so we'll be looking for volumes of liquids. we will be doing

25 water quality monitoring out of the liquids. so the early

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1 detection program is if we see something we're not expecting

2 in here, we're going to see it here long before we ever see

3 it in the angled borings or the other early detection boring

4 system.

5 Q. Thanks. You can have a seat again. So on the

6 initial application to NDEP you had proposed a single

7 composite liner; is that correct?

8 A. That's correct.

9 Q. And did you -- were you satisfied when you  
10 submitted that, that that was going to be protective of  
11 groundwater?

12 A. We were. It was a single composite. But it also  
13 had from the very beginning this high transmissivity  
14 component or high transmissivity LCRS.

15 Q. And what gave you the confidence that the initial  
16 design would have been adequately protective of groundwater?

17 A. Well, the EPA conducted a study that was  
18 published in 2002 that went back and looked at the  
19 performance of landfills and it looked at a lot of different  
20 aspects. But one of the interesting things that they did --

21 MR. DOLAN: Which study are we talking about here  
22 for purposes of --

23 Q. (By Ms. Leonard) Do you want to describe the  
24 study a little bit more? This is something that you use in  
25 your professional work to decide on landfill design or liner

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1 design; correct?

2 A. Yes.

3 Q. Can you describe it a little bit more?

4 A. Well, the EPA, it was a study that kind of took a  
5 look at the status of how are landfills performing. And one  
6 of the things that they looked at is they went through and  
7 they --

8 MR. DOLAN: Objection. Is this study in the  
9 exhibit book? I'm unable to cross-examine this witness if I  
10 don't know what study he's referring to.

11 CHAIRMAN GANS: Good question.

12 MS. LEONARD: This is something that Mr. Hannum  
13 talked about yesterday and so we're addressing and responding  
14 to that. And I do not believe it was in the exhibit book.  
15 This is something that went in to Mr. Haskell's thought  
16 processes and professional judgment when he was designing the  
17 liner. Maybe you can provide the title of it if you remember  
18 it off the top of your head.

19 THE WITNESS: It's a performance assessment. I  
20 don't recall the exact title.

21 CHAIRMAN GANS: We really would -- If we're going  
22 to use the study, we need to know what that study is so if we  
23 need to refer to it. So we need a little more specificity on

24 the study.

25 Q. (By Ms. Leonard) what year was the study done?

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1 A. 2002. It was published in December 2002 by EPA.

2 Q. And do you recall the names of the authors on the  
3 study?

4 A. Primary authors were Dave Daniels, Kern, and I  
5 forget -- There was a third author. I forget who that was.

6 MS. LEONARD: Can I get through his testimony and  
7 then get the information for Mr. Dolan? Because I have it on  
8 my computer. I just wanted to keep it going.

9 CHAIRMAN GANS: I think he makes a good point.

10 He can't cross-examine if he doesn't know what you're talking  
11 about.

12 MS. LEONARD: Okay. And I appreciate that. But  
13 before cross-examination can I provide the information to  
14 him?

15 CHAIRMAN GANS: Sure.

16 Q. (By Ms. Leonard) Okay. So go ahead. You were  
17 talking about what gave you a sense of the efficiency or why  
18 you were satisfied that the initial liner would be protective  
19 of groundwater?

20 A. So one of the things that they were interested in  
21 is asking the question are single composite liner systems  
22 protective of the environment. So subtitle D was a national  
23 regulation passed in 1993. This was an opportunity to kind  
24 of come back ten years later and look at the landfills and

25 see how they're performing.

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1                   So what they found was a number of double-lined  
2   landfills. And most of these are on the east coast and they  
3   happen to be in relatively wet climates. But they were  
4   constructed with double liners similar to this. And what  
5   they did is they went back to the records of the leachate  
6   records, the volume of leachate that was collected out of the  
7   LCRS system and compared that to what was collected out of  
8   the leak detention system. And they were able to figure or  
9   quantify what the efficiency of those systems were. And

10 their conclusion was that these efficiencies are very, very  
11 high if you subtract out the effects of construction water or  
12 consolidation from clay from some of these sites. They came  
13 up with an average number of 99.96 just for a single  
14 composite liner system. And again, all of these liner  
15 systems or the majority of them had sand LCRS systems.

16 Q. And so now the revised or the redesign that was  
17 submitted and ultimately approved by NDEP has extra  
18 protections in addition to those that were found to be 99.96  
19 percent?

20 A. That's right.

21 Q. And so do you anticipate the Jungo liner would be  
22 more effective than 99.96 percent?

23 A. Well, again, keep in mind this was just the upper  
24 composite, so we've got an additional liner as well as the  
25 other features to minimize leachate head on the liner system.

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1           Q.    So besides the double liner and the features to  
2   minimize leachate head, what other features exist either in  
3   design or construction of the liner that give you the extra  
4   assurance as to the protection of groundwater?

5           A.    I think I went over most of those.

6           Q.    Is there anything during the construction  
7   process? Can you talk a little bit about construction  
8   quality assurance?

9           A.    All right. The other thing that Reology does as  
10   a standard, which will be part of the CQA program, is a geo

11 electric leak location survey. So what that does is allow us  
12 to assess whether there's been any damage to the geomembrane  
13 during construction. So if I can go up to this diagram. We  
14 end up installing an electrode liner system, apply a power  
15 source. We build our liner system and then we come back in  
16 with, and measure the electrical potential.

17 The HDPE is an electrical isolator. So no  
18 electric current goes through the system if it's intact. If  
19 there's a defect, there's an electrical current that travels  
20 through the system and you can measure the electrical  
21 potential. So that's another method that wasn't used back in  
22 the 1990s prior to when they used or did their study back in  
23 2002. So it's another reason that we think this liner is  
24 going to be even more protected.

25 Q. Now, if there were a lack of effectiveness of the

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1 liner, when are you most likely to see it?

2 A. I think we would see it pretty quickly.

3 Q. Can you explain that?

4 A. well, if we had a leak through the liner system,

5 we would expect leachate to migrate to that lower layer and

6 we would be able to detect it within anywhere from months to

7 years.

8 MS. LEONARD: Before I forget, I would like to,

9 this is a schematic of the actual engineering design that is

10 in the record already. But I would like to move for the

11 admission of this. And we have a smaller copy of it that

12 might make the record more manageable, I guess you could say.

13 CHAIRMAN GANS: What do you mean by smaller copy?

14 MS. LEONARD: It's not on a big poster board.

15 It's eight and a half by 11.

16 MS. REYNOLDS: I was going to say we would never

17 be able to --

18 MS. LEONARD: No. I respect that. I won't to do

19 that to you. We can give you an eight and a half by 11 for

20 the record, but I would like to move for its admission. All

21 the parties have relied on it and I think it would be helpful

22 to complete the record with that.

23 CHAIRMAN GANS: Counsel.

24 MS. JOSEPH: No objection.

25 MR. DOLAN: No objection.

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1                   CHAIRMAN GANS: That's great. Will you provide  
2 that for us?

3                   MS. LEONARD: Yes. And that will be marked as  
4 Exhibit 129, I think. Is that correct, Rosemarie?

5                   MS. REYNOLDS: I don't have the books.

6                   MS. JOSEPH: Yes, it would be 129. 128 is the  
7 last one.

8                   MR. DOLAN: Excuse me, Counsel. What would you  
9 describe Exhibit 129 as being?

10                  MS. LEONARD: Schematic of the liner system.

11                  MR. DOLAN: Thank you.

12                  Q. (By Ms. Leonard) So in your professional

13 judgment can you really get much more of a guarantee as to  
14 the effectiveness of the liner than what you've just  
15 described?

16 A. I think it's a highly effective liner system.

17 Q. Notwithstanding the effectiveness, in the event  
18 that there might be a leak that is detected, what are the  
19 possible options for addressing that?

20 A. Well, again, the first thing that would be done  
21 is to find the source of the leak, is it gas or leachate. If  
22 it's landfill gas, that can be dealt with using a vacuum,  
23 installing more wells, getting the vacuum and grading it back  
24 in to the landfill mass. If it's leachate, there would be  
25 additional investigations, borings to look at the extent of

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1 the plume, try to figure out where it's coming from, make  
2 some assessments on generally where it's located. And then  
3 as part of some sort of corrective action plan, we would be  
4 looking at actions of potential waste excretion. That  
5 would be pretty extreme. We could construct another liner  
6 over that to seal it off.

7 we know that when you construct in closed  
8 landfills we shut off 90 percent of the leachate production  
9 within about four years. That's again in the CPA study. And  
10 then after nine years it's negligible. Or in extreme cases  
11 we could, the site could go under closure or a portion of the  
12 site can go in to closure.

13 Q. All right. Let's turn and talk a little bit

14 about surface water because that's another issue that's been  
15 raised by the appellants. Appellants produced a number of  
16 photos that showed ponding. Did you anticipate in the design  
17 that there would be some ponding on the Jungo Landfill site?

18 A. Yes. It was pretty evident to us.

19 Q. And how was it evident?

20 A. Well, for one, the grades are relatively flat.

21 You can see small depressions out at the site. The railroad  
22 is consistently raised about five feet off the ground  
23 surface. And the primary reason for that is the ponding.

24 Q. And so in the report of design that you submitted  
25 to NDEP did you describe that anticipated ponding?

1 A. Yes.

2 Q. Can you describe the design elements that were  
3 employed in the report of design to control run-on?

4 A. We have a perimeter run-on control berm that will  
5 be constructed early on in the project. We're going to have  
6 all-weather access roads for employees to access the site.  
7 The rail yard is going to be all-weather access. Travel to  
8 and from the landfill is going to be all-weather access.

9 Q. And can you describe the height of the perimeter  
10 berm?

11 A. At the top elevation is 4180 feet in elevation.  
12 The typical ground surface is 4175. It does vary a little  
13 bit. We've got one corner that's 4176. But the typical berm  
14 elevation is about five feet.

15 Q. And when you're constructing the berm how do you  
16 address those variabilities? Because I know that there was  
17 some questions raised with regard to that by the appellant?

18 A. Well, it's constructed to a consistent elevation.

19 Q. All right. I'd like you to turn to Exhibit 114  
20 in the binder. Before I go on, you described the elevation  
21 of the berm as being, the top of the berm as being 4180?

22 A. Correct.

23 Q. How does that compare to the railroad berm?

24 A. The railroad berm is about five feet above grade.  
25 So it's approximately the same.

1           Q.   Okay.  Now, I know that this diagram has a lot in  
2   it and it's very hard to see.  But can you generally describe  
3   what is depicted on this?  And the next slide I have kind of  
4   a blow-up of it.

5           A.   well, the low basin or the low point of the basin  
6   occurs several miles to the west of our site.  That's at  
7   elevation 4163.  So that's topographically an elevation  
8   difference of 17 feet between the low point of the basin and  
9   the top of our perimeter berm.

10          Q.   And I believe Mr. Cook in his testimony said that  
11   if this site were a couple miles to the west he wouldn't have  
12   a problem with it.  Do you see a problem with that?

13          A.   well, yeah.  You're moving closer to where there  
14   could be more extensive ponding or even flooding to the west.

15          Q.   So this is just a blow-up of that, of Exhibit

16 114. So again, this is just showing perimeter berms at 4180

17 compared to the low point; isn't that correct?

18 A. Yes.

19 Q. Okay. If you can turn to Exhibit 115. And

20 again, this one figure is showing a lot. But can you

21 describe -- I know the appellants have raised some concerns

22 with regard to flooding. Can you describe what this figure

23 depicts?

24 A. Well, we were to address a condition other than

25 ponding at our site, the shallow ponding that we recognize.

1 There's been some allegations that the basin is going to fill  
2 up with water and it's going to flood our site. So we did a  
3 basin-wide flood analysis. The area in the blue is our  
4 projections.

5 CHAIRMAN GANS: Dark blue or light blue?

6 THE WITNESS: Excuse me. The dark blue is our  
7 projection of the area of ponding that would occur under a  
8 hundred-year event. So the lighter blue outside of that is  
9 what would occur in a thousand-year event. Now, the reason  
10 it doesn't get any higher than a thousand-year event is  
11 there's a minor topographic divide to the north so that the  
12 top elevation of this minor topographic divide, which is  
13 mentioned in the USGS Berger report, is about 4166 to 4168  
14 feet in elevation. So any water levels above that elevation  
15 are now going to flow northward to the Quinn River. And the  
16 Quinn River is the outlet to the basin in the south. So that

17 provides a natural limit to how high basin-wide flooding can  
18 actually occur at the south end of the basin.

19 Q. (By Ms. Leonard) Let's look, this is just a  
20 further blow-up of that, but does that confirm that the site  
21 will not be impacted by a thousand-year flood event?

22 A. Correct.

23 Q. And the regulations in Nevada require you to  
24 design and engineer for what type of flood event?

25 A. A hundred year.

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1 Q. Is that --

2 A. Well, we have to be outside of the hundred-year  
3 flood plain.

4 Q. So is this a -- But the Jungo site is not in a  
5 flood plain?

6 A. It's not in a flood plain.

7 Q. Okay. Thank you. All right. Can you describe  
8 the -- Oh, let me give you one -- Let's look at one more.  
9 And this is the next exhibit, 116. Can you describe what  
10 that depicts?

11 A. Again, it's a cross-section and it's going from  
12 the Jungo site to the west. So to the left would be this  
13 basin-wide flooding elevation that we're looking at. And  
14 then our site to the right with our perimeter berms up to  
15 4180.

16 Q. And so you've described the run-on controls. Can  
17 you describe the design elements to control run-off?

18           A.    Yes.  We have -- So we're going to initially when  
19 we built this thing we're excavating in to the ground.  We  
20 construct these interior storm water basins next to the  
21 landfill so that things are draining to these basins in the  
22 excavation, water from that point will be pumped up to the  
23 ground surface where it goes in to the lined pond to be  
24 sampled and tested before it ends up going in to the pond.

25           Q.    And can you turn to Exhibit 51, please.  It might

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1    be in a different binder than what you've been looking at.

2    And I know there are a number of drawings on there, but let's

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3 look at plan 3E. Did I send you to the wrong one?

4 A. No.

5 Q. Can you describe what that is please?

6 A. well, this is the storm water controls where we  
7 have initially a lined storm water basin for water from the  
8 landfill to the cell. The interior collection points that we  
9 pump are sampled and tested before it's discharged to the and  
10 exterior unlined basin.

11 Q. And so this is one of those additional controls  
12 that you described earlier that NDEP asked you to integrate  
13 in to the design; correct?

14 A. Yes.

15 Q. And just for the -- to help the commissioners  
16 out, I want to direct your attention, this is Exhibit 121-E,  
17 121-E. Can you describe what that is?

18 A. This is the Ostrom Road Landfill. I don't know

19 if I can go up to the --

20 Q. Absolutely.

21 A. Use a pointer or something. So this is the

22 current active portion of the landfill continuing up this

23 way. This is -- The landfill development is progressing here

24 to the east. This is a localized storm water basin that

25 collects water at this end. We've got another localized

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1 storm water basin at the other end. Again, this is in that

2 depressed excavated area.

3 water from this basin is pumped to surface water

4 ditches that flow to this surface water impoundment where it  
5 either infiltrates, evaporates or under large enough events  
6 it would discharge to the nearby slough.

7 Q. And before you sit down, can you point out where  
8 Best slough is on the map?

9 A. It's not shown exactly on this photo, but it's  
10 right here along the perimeter. So this is our flood control  
11 berm on this roadway here. And Best slough is in this area.

12 Q. So directly adjacent to the Ostrom Road Landfill?

13 A. Yes.

14 Q. And so these, what you just described in the  
15 Ostrom Road Landfill, those are essentially typical of what  
16 you've also designed in Jungo?

17 A. Yes. Similar in concept.

18 Q. Thank you. Now, what size storm event are these  
19 run-off controls designed to withstand?

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20 A. For Jungo?

21 Q. Yes. Sorry.

22 A. The state requirements are a 25-year 24-hour  
23 storm event. We thought that that wasn't large enough for a  
24 facility that was going to be operating for 95 years, so we  
25 designed it for two back-to-back 25-year 24-event -- 24-hour

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1 event. That's pretty significant. And if you go through and  
2 look at the return period that you would have two events from  
3 one day to the next, it's greater than 500 years.

4 Q. So essentially it's been designed to be two times

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5 the regulatory requirement?

6 A. Yes.

7 Q. All right. You talked briefly in the landfill  
8 liner design about landfill gas. But I want to just touch on  
9 that just for a minute. Can you describe the various  
10 elements of the landfill gas control system?

11 A. Well, a couple points. We have an additional  
12 leachate or an additional piping system and leachate  
13 collection layer that will allow us to apply a vacuum to  
14 collect gas. So again, that helps control landfill gas  
15 migration. We have additional wells that will go, be  
16 installed within the refuse. A vacuum showing vertical  
17 wells, but we also discussed the potential for horizontal  
18 wells to collect methane.

19 Q. And how is the gas actually extracted from the  
20 landfill?

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21 A. Applying a vacuum to it.

22 Q. And then what happens to it once it's extracted?

23 A. Initially it will be conveyed and combusted in a

24 flare.

25 Q. And then? You said initially.

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1 A. And it will continue that way unless there's

2 another opportunity to build a landfill gas to energy

3 facility and find another way of beneficial use for the

4 landfill gas.

5 Q. At what point will the landfill gas control

6 reporters\_record\_day-two052212.txt  
system be constructed?

7 A. Well, the first part of this will be installed  
8 with the liner. So there will be available and the wells  
9 will be installed as the refuse is placed.

10 Q. And is that typical or is that required?

11 A. It's not required. Most landfill facilities wait  
12 until the methane emissions reach a certain limit that the  
13 air rates kick in and depending on the site, that can be a  
14 couple of years. We've seen sites go ten, 12 years, 15 years  
15 without landfill gas controls. We want to operate our system  
16 as soon as we can and as soon as we start generating  
17 collectible amounts of methane.

18 Q. Okay. Let's turn and talk briefly about the  
19 soils. You described the borings that you did and I can't  
20 recall it. Did you describe how deep you did the borings  
21 initially?

22           A.    They range from approximately a hundred feet to  
23    140 feet.

24           Q.    And what geotechnical parameters did you analyze  
25    in the soils that were obtained?

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1           A.    There were index properties, grain size  
2    distribution, Atterberg limits and we did some consolidation  
3    of that.

4           Q.    And how does the liner design incorporate or  
5    account for the native soil characteristics?

6           A.    We use the consolidation testing to estimate the

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7 settlement. We looked at the soils that we have available  
8 on-site and determined that they're not going to meet this  
9 clay layer, the requirements for this clay layer by  
10 themselves. So we're going to either have to import material  
11 or we're going to have to add to it, which is a common  
12 practice.

13 Q. And how does the design account to -- account for  
14 the weight of the landfill?

15 A. We've designed the height and the loading in the  
16 estimated predicted settlements that we're going to get based  
17 on the geotechnical properties of the soil.

18 Q. Can you describe the settlement monitoring  
19 program?

20 A. There will be settlement monitoring plates  
21 installed under various portions of the liner system. I  
22 think John Taylor showed where those were going to be

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23 located. We're going to be monitoring those periodically.

24 we have a settlement model of what we expect as this landfill

25 is being loaded and filled with refuse. So we'll be able to

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1 track whether it's settling greater than we think at any

2 point in time.

3 If the settlement is exceeding our predictions,

4 we're not going to wait until we finish and say we made a

5 mistake. We can make adjustments and reduce the height of

6 the landfill.

7 Q. And why is it important to make sure that the

8                   reporters\_record\_day-two052212.txt  
landfill settles as you anticipate?

9                   A.    We want to make sure that we have positive  
10 drainage grades to the exterior sumps.

11                  Q.    And do you plan to perform any additional soil  
12 borings?

13                  A.    Yes.  We want to make sure that our  
14 characterization is appropriate going forward.  We are going  
15 to be completing a number of borings.  Every time we go to  
16 build a new module, there is additional borings that will be  
17 completed to verify that the site conditions that we  
18 encounter in that module are consistent with our  
19 characterizations.

20                  Q.    Can you modify the design if it's necessary?

21                  A.    Yes, we can.

22                  Q.    Let's turn briefly to the cover.  How does the  
23 design of the cover account for the existing soil

24 characteristics on-site?

25 A. We're using the existing soils for the foundation

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1 layer and we'll be using existing soils for the vegetative

2 cover.

3 Q. And in addition to the foundation layer and the

4 vegetative cover, what else does the final cover entail?

5 A. It has an HDPE membrane and a drainage layer on

6 top of that geomembrane.

7 Q. And can you inspect the integrity of the cover

8 over time?

9 A. You can. You can do landfill gas surface  
10 emissions monitoring. So if there's a breach in the cover  
11 system and the landfill is still generating methane, that can  
12 be an indication that you've got a defect somewhere. We can  
13 continue to monitor leachate collection in the sumps. Once  
14 we close the landfill, we expect leachate generation to  
15 essentially be negligible after nine to ten years, maybe  
16 sooner since we're in an arid environment. If we saw  
17 leachate generation rates increase, that would cause us to go  
18 back and investigate the cover system.

19 And you can use the geo electric leak location if  
20 we needed to. You can complete the geo electric leak  
21 location survey after the fact. If we wanted to investigate  
22 whether there are holes or defects, that would involve  
23 installing electrode underneath the geomembrane, applying the  
24 current and walking the cover surface and checking for

25 defects. So it can be done.

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1 Q. Let's turn briefly to seismic activity. And I  
2 know that's been an area the appellants have raised and the  
3 commissioners are interested in. And you touched on it  
4 briefly, but I want to go in to a little bit more detail.  
5 Describe how the landfill is designed to withstand seismic  
6 events.

7 A. The requirement is we have to withstand an  
8 earthquake with a ten percent chance of exceeding a 250-year  
9 period. As a recurrence interval of 2,474 years. So using

10 the data that's available by USGS that John Taylor alluded  
11 to, we look at all potential sources within about a  
12 hundred-kilometer of the site of existing faults and look at  
13 potential magnitude of earthquake and associated ground  
14 accelerations from those fault sources to determine which one  
15 is resulting in the greatest amount of predictive ground  
16 accelerations.

17 So for our site going through that process, again  
18 it's not looking at just one fault, it's looking at all of  
19 these fault sources within a hundred kilometers of the site,  
20 we come up with a peak ground acceleration of .25 G, as in  
21 the letter G, as in gravity.

22 Q. And the containment systems and environmental  
23 controls that Golder designed in the Jungo Landfill, those  
24 are designed to withstand an event of this acceleration; is  
25 that correct?

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1 A. Yes.

2 Q. And you don't anticipate that the integrity of  
3 the systems would be compromised?

4 A. No. So we looked at both stability of the waste  
5 mass. We don't want it to slide on top of the liner system.

6 We evaluated the performance of the final cover when it's  
7 closed and we also did complete a liquefaction assessment.

8 And our conclusions were that liquefaction potential based on  
9 what we've seen so far is negligible. And the reason for

10 that, you have to have three conditions to really have a

11 liquefiable source. You have to have strong ground motions.

12 And we have moderate ground motions out at the site. You

13 have to have loose, generally fine sands or silty sand

14 conditions. And then they've got to be saturated.

15 we typically most often see liquefaction

16 potential occur in the upper 40 feet. And that's because as

17 we get deeper and deeper in the ground we have more and more

18 confining stress that kind of prevents that liquefaction from

19 occurring. Now, it can occur at deeper depths, but you have

20 to have very, very loose soils and you have to have very

21 strong ground motions for that to occur.

22 At our site, we found that by the time we got to

23 40 feet our borings were showing that soils were very compact

24 and dense. We actually had pretty high blow counts in the

25 soils. And then by the time we got to groundwater, we saw a

□

1 tendency for those blow counts to continue to remain high.

2 So before we get to groundwater we've got soils

3 that have been sitting in their condition for a long, long

4 time with over 60 feet of soils above ground where again we

5 need saturated conditions. So we're not going to get

6 liquefaction until we get the groundwater.

7 We've got 60 feet of soils that have been

8 compressing those soils for a long, long time. So we

9 actually have dense soils out at the site and we don't have

10 groundwater conditions that are particularly amenable to

11 liquefaction.

12                   we initially quantitatively, our quantitative  
13 assessment was that it was unlikely. John Taylor asked us to  
14 go back and do more quantitative analysis and actually  
15 calculate the factors of safety factors of this liquefaction.  
16 And our calculations showed that the liquefaction was not  
17 going to occur. It will not occur.

18                   Q. The appellants have raised some concern with  
19 regard to microquakes. Can you address that concern?

20                   A. Micro earthquakes are non-events in this type of  
21 design. The appellants submitted an exhibit from a guy that  
22 talked about micro earthquakes. I did a site restoration  
23 project for a geothermal power plant that was demolished back  
24 in 2000-2002 time frame in a geyser area. So I'm well aware  
25 of potential impacts by micro earthquakes. These are small

□

1 magnitude earthquakes that many times people can't feel.

2 That means that they're small ground motions, very, very

3 small ground motions.

4 we're designing for much, much greater ground

5 motions. If we can withstand much, much greater ground

6 motion, we can withstand a micro earthquake.

7 Q. So you testified that you reviewed the

8 regulations before you did the design on the landfill;

9 correct?

10 A. Yes.

11 Q. So based on your review of the regulations and

12 the terms that have been proposed by NDEP does the Jungo

13 Landfill design meet or exceed the regulatory requirements in

14 Nevada?

15 A. I think it exceeds it.

16 Q. And based on the design elements that you've

17 described, do you have a reasonable degree of engineering

18 certainty that the groundwaters and other surface water of

19 the state are going to be protected by the landfill design?

20 A. Yes.

21 MS. LEONARD: I have nothing further of this

22 witness.

23 CHAIRMAN GANS: Okay. Before we continue, I'd

24 like to take a break. So we'll take a ten-minute break and

25 come back and I'll have the State cross.

1 (Recess was taken)

2 CHAIRMAN GANS: we'll reconvene the hearing on  
3 the Jungo permit. We're at the point where the State should  
4 be ready to cross-examine the witness please.

5 MS. JOSEPH: The State has no questions for this  
6 witness.

7 CHAIRMAN GANS: Okay. Mr. Dolan, it's your turn.

8 MR. DOLAN: Thank you.

9 CROSS-EXAMINATION

10 By Mr. Dolan:

11 Q. When is the last landfill that you designed in  
12 California?

13 A. I'm trying to think of the last construction

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module. Hay Road.

15 Q. And when was that?

16 A. We've done several modules in Hay Road over the  
17 years.

18 Q. And when was that?

19 A. The latest one, two years ago.

20 Q. Okay. And you had the opportunity during direct  
21 to talk about some California regulations. The landfill  
22 waste that will be deposited in the Jungo landfill primarily  
23 is derived from, and I think you site this in your papers to  
24 the NDEP, is from the San Francisco city area, the nine  
25 surroundings counties, is that fair to say?

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1 A. Yes.

2 MS. LEONARD: I object on the basis of relevance.

3 Again, NDEP cannot regulate the source of the waste in terms

4 of the state from which it's coming from.

5 CHAIRMAN GANS: Now wait a minute. That wasn't

6 my understanding of the question. You were just asking where

7 the waste is coming from?

8 MR. DOLAN: Yeah. Counsel goes off in to left

9 field.

10 CHAIRMAN GANS: Not now. I just want to make

11 sure --

12 MR. DOLAN: I heard the objection. I'm not sure

13 how to categorize it. But I, the question was as the

14 chairman understood it.

15

CHAIRMAN GANS: Okay.

16

MR. DOLAN: I believe there was a response.

17

THE WITNESS: Yes.

18

CHAIRMAN GANS: There was a response.

19

Q. (By Mr. Dolan) Now, explain to me if you would

20

whether or not the design that was submitted for the landfill

21

is affected by what actually is in the refuse stream?

22

A. Well, it has to be non-hazardous, so the waste

23

needs to be municipal solid waste.

24

Q. And how is that being determined?

25

A. Well, at the transfer station there's load

1 inspection programs. There's also going to be load

2 inspection programs out at the site.

3 Q. The load inspection programs at the site is not

4 the same as the load inspection program in California, is it?

5 A. No.

6 Q. Or are they the same?

7 A. No. They're different.

8 Q. Tell us what they are.

9 A. Well, the load inspections at the source are

10 going to be again by each transfer station has their own load

11 inspection program. I don't think we went in to those sorts

12 of details. Out at the site there's going to be --

13 Q. Well, let's stick with the transfer stations.

14 The transfer stations at the source, are those transfer

15 stations in California?

16 MS. LEONARD: And I'm just going to object on two  
17 bases. One, it's irrelevant. And two, it exceeds the scope  
18 of the direct.

19 MR. DOLAN: It doesn't exceed the scope of the  
20 direct because we were talking about the landfill design and  
21 we've already established a question about whether or not the  
22 landfill design is affected by the refuse received.

23 CHAIRMAN GANS: It's going in to argument.  
24 Overruled. Proceed.

25 Q. (By Mr. Dolan) Can you answer the question?

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1 A. would you repeat it?  
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2 Q. The transfer stations that you referenced are in  
3 California; right?

4 A. Yes.

5 Q. And the inspections of the waste at the transfer  
6 stations, are they part of -- are there some assumptions that  
7 you engaged in relative to the efficaciousness of the  
8 inspections at the transfer stations?

9 A. Yes. We're assuming that the source of the waste  
10 is municipal solid waste.

11 Q. Now, how many transfer stations are there in  
12 California?

13 A. I don't know.

14 Q. Okay. Now, is it significant to this design that  
15 you created to ensure that certain types of materials are  
16 excluded from the landfill site?

17 A. Well, Nevada regulations, if we had hazardous

18 waste we would be designing to different standards.

19 Q. So, but what is hazardous waste?

20 A. Well, it has to meet the hazardous definition.

21 It can be acidic, explosive, acutely toxic materials.

22 Q. Okay. So acidic waste, are you saying that at

23 the landfill site the employees are looking for acidic waste?

24 A. Yes.

25 Q. Before it's deposited?

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1 A. Yes.

2 Q. What would they look for to see that?

3 A. Drones, batteries, things of that nature.

4 Q. And they're going to look for that. Now, the  
5 waste comes to the site in a railroad car; right?

6 A. Correct.

7 Q. And there's waste inside of the railroad car that  
8 gets dumped on top of a landfill salt, is that what happens?

9 A. Yes.

10 Q. And so there's a man or a woman or a person in a  
11 bulldozer that at that point then moves this waste around;  
12 right?

13 A. There's typically an operator that is spreading  
14 the material. But there's another person on foot that's  
15 doing the divisional inspection.

16 Q. And this is going to be done 24 hours a day,  
17 seven days a week; right?

18 A. There's ongoing -- So there's training for the  
19 employees.

20 Q. Is the 24 hour -- This operation goes 24 hours a  
21 day, seven days a week; right?

22 A. Correct.

23 Q. And that means it occurs at nighttime; right?

24 A. Correct. With lights.

25 MS. LEONARD: I'm just going to object to a

1 couple things. Mr. Haskell testified as to design. We have  
2 another witness who is going to testify as to operations and  
3 these questions are more appropriately put to that witness.

4 And this exceeds the scope of direct.

5 CHAIRMAN GANS: I'd ask the witness to just if

6 you don't know, just say you don't know.

7 Q. (By Mr. Dolan) Yeah, if you don't know, say you

8 don't know. So you said that there were lights, is that what

9 you said?

10 A. If there's a night operation there's lights.

11 Q. Okay. And so the operator is driving the

12 bulldozer and the person walking around, it's a ten-acre cell

13 is worked at any one time looking for hazardous waste at

14 nighttime, is that what you expect?

15 A. No. The working face is much smaller than that.

16 Q. Oh, okay. Five feet, when's the last time a

17 landfill was designed in California when the groundwater is

18 within five feet of the landfill base?

19

A. Ostrom Road was 2002 or 2003.

20

Q. And that's landfill has the groundwater within

21

five feet of it?

22

A. Within two and a half feet.

23

Q. Two and a half, okay.

24

A. Two and a half.

25

Q. In your opinion, relative to safety and the like,

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1 has -- are landfills established in Europe?

2

MS. LEONARD: I'm going to object. Vague,

3

ambiguous.

4

MR. DOLAN: Can you answer that question?

5 THE WITNESS: I'm aware that Europe has done away  
6 from landfills, the European union has moved away from  
7 landfills.

8 Q. (By Mr. Dolan) And were you able to -- How long  
9 have you been in this industry?

10 A. 25 years.

11 Q. Did it occur to you based upon your training or  
12 experience did you conclude or reach an opinion that the  
13 reason why the European union has moved away from landfills  
14 is because they were concerned with such things as polluting  
15 groundwater?

16 A. No. That's absolutely wrong. We have -- I  
17 talked to my colleagues in Europe.

18 Q. Tell us about that.

19 A. The problem in Europe is they don't see, the land

20 is at a premium and landfilling they don't have as much space  
21 for landfilling and they don't see it as being a sustainable  
22 waste management strategy going forward. So they're really  
23 focused on waste minimization rather than creating more  
24 landfills.

25 Q. And have your colleagues in Europe told you that

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1 they have been successful in treating their waste other than  
2 through landfills?

3 MS. LEONARD: I would object on the basis of  
4 relevance. This also goes to the appellants' policy  
5 arguments and not to actual facts.

6                   CHAIRMAN GANS: Mr. Dolan, we are drifting away  
7 at this time. I want to focus on what we have here.

8                   Q. (By Mr. Dolan) That was kind of a tough  
9 question, so we'll move on to something else.

10                   When you submitted the first plan of design, had  
11 that been approved, you would have called it a day and said  
12 that the design that you submitted met the standards and your  
13 services to your client Recology would have been complete;  
14 correct?

15                   A. Correct.

16                   Q. Okay. But now the new plan or the plan that's  
17 currently before the NDEP that Mr. Taylor has approved  
18 modified your initial plan; right?

19                   A. Yes.

20                   Q. Can you tell me then what confidence Mr. Hannum

21 or Mr. Cook would have or anyone else in your approach to

22 designing the landfill when -- I suspect it met the minimum

23 standards of Nevada law?

24 A. It exceeded the minimum standards.

25 Q. The first -- The first submission?

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1 A. Yeah, yes.

2 Q. Okay. And the decisions to exceed the minimum

3 standards were your decisions?

4 A. It was our assessment within Golder, our

5 engineering team.

6 Q. Okay. And was this in connection with the height  
Page 169

7 of the berm or the depth of the landfill? what was part of  
8 the plan that exceeded the minimum requirements?

9 A. Primarily the depth to groundwater.

10 Q. And explain that to me please.

11 A. Well, the requirements in Nevada are the  
12 prescriptive standard of a hundred feet. NDEP has the  
13 ability to approve a liner design as long as they feel it's  
14 protective if you have a lesser distance than a hundred feet.  
15 After we did our initial characterization, we concluded that  
16 had we had groundwater at the depth of 60 and by the time we  
17 ended up creating the landfill our depth was going to be  
18 closer to 29 or 30 feet. We knew that NDEP, or felt that  
19 NDEP was going to expect to see a more stringent liner system  
20 than just a prescriptive standard.

21 Q. Regarding the landfill and the aquifer, isn't it

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22 true that in 1975, the mid-70s that the aquifer was actually

23 50 feet below ground surface, BGS?

24 A. It was higher. I don't know if that's the right

25 number or not.

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1 Q. Now, for purposes of these following questions,

2 let's assume that you wrote in the information submitted to

3 NDEP that you were aware that in the mid-70s the aquifer was

4 50 feet BGS and that over the next 95 years it's possible

5 that the aquifer will rise ten feet towards the surface. Are

6 you with me, sir?

7 A. Yeah.

8 Q. Okay. Any qualms about that being a possibility?

9 A. No.

10 Q. Okay. In fact, you did some studies about the

11 past history of the aquifer and the history of the basin;

12 right?

13 A. Yes.

14 Q. Okay. Now, isn't it true that the design of the

15 landfill and the plan of operation is based upon the aquifer

16 not rising, in fact possibly sinking or going lower in to the

17 earth from the surface?

18 A. Could you repeat that again?

19 Q. Yeah. Well, the aquifer can go up or go down;

20 right?

21 A. That's right.

22 Q. Okay. Your design and plan of operation is

23 predicated upon the landfill not going up but possibly going

24 down?

25 A. The landfill or groundwater?

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1 Q. The groundwater. Excuse me. Thank you.

2 A. We were asked to do a basin study by NDEP to look

3 at what the effects could be, what the historical water

4 levels were in the basin. We didn't do the study just to do

5 a study and put it in there. Our design reflects that.

6 Q. And how does it reflect that?

7 A. With the more stringent liner design that we have

8 incorporated, the operating measures that have been included

9 in the monitoring measures.

10 Q. So with respect to this liquefaction issue, we  
11 have water on the side of the landfill that you indicate  
12 won't reach the landfill because of berming and trenching;  
13 right?

14 A. Correct.

15 Q. Okay. If the berms are breached and if there's a  
16 rainfall and if the aquifer rises, isn't water affecting the  
17 landfill cell from all four sides?

18 A. The issue -- The surface water doesn't have an  
19 impact.

20 Q. The rain doesn't have an impact?

21 A. Not on the moisture content of the landfill.  
22 we've got an impermeable liner system.

23 Q. Okay. If the aquifer rises?

24 A. If the aquifer rises it could have an impact.

25 Q. And the impact, would that affect the

□

1 liquefaction?

2 A. It would -- well, the liquefaction potential.

3 Q. Sure.

4 A. It could increase slightly. But we don't think

5 it would be significant for all the reasons that I went

6 through. Again, the soils are very dense. We don't have a

7 condition where we've got loose soils present at the site.

8 Q. And the loose soils aren't present at the site,

9 you're talking about the soil about 40, 50, 60 feet down?

10 A. Well, below the liner system, yes.

11 Q. Did NDEP or specifically Mr. Taylor ask you to  
12 adjust your initial design in any way that you subsequently  
13 objected to and convinced Mr. Taylor that that was not  
14 needed?

15 A. I don't believe so.

16 Q. So is it your testimony then that each amendment  
17 to your initial plan as made to you by Mr. Taylor was  
18 accepted by you as you went forward designing the landfill?

19 A. We addressed his comments, yes.

20 Q. Okay. And is it the same response with respect  
21 to not just the design of the landfill but the operating, the  
22 plan of operation?

23 A. Yes.

24 Q. Are you aware of other techniques that are

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25 available to landfill operators that for whatever reason have

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1 not been incorporated in to this plan because of difference  
2 of opinion between you and Mr. Taylor?

3 MS. LEONARD: Objection. Vague and ambiguous.

4 Q. (By Mr. Dolan) I'll rephrase. You mentioned you  
5 responded to Mr. Taylor's comments; right, sir?

6 A. Yes.

7 Q. Did some of your comments include, "I disagree  
8 with you, Mr. Taylor. Your suggestions are not needed"?

9 A. I don't recall. We may have disagreed on a few  
10 technical points here or there. But I don't recall

11 specifically what those would have been.

12 Q. Okay. The exhibit that you had up earlier about  
13 the thousand-year flood and the basin-wide flood analysis, I  
14 think it was Exhibit 115 and 114, I found -- Do you remember  
15 those? The blue area was depictive of --

16 MS. LEONARD: Bob, would you like us to project  
17 those?

18 MR. DOLAN: I think it would be helpful. Thank  
19 you. Is that 115?

20 MR. FRANKOVICH: Yes.

21 MR. DOLAN: Thank you, Mr. Frankovich.

22 Q. (By Mr. Dolan) with respect to this, again, the  
23 blue area is what?

24 A. I can't read the contour. So what we did is we  
25 calculated the elevation which would be --

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1 Q. Mr. Haskell, what's your name?

2 A. Ken.

3 Q. Ken, what is the blue area depictive of, water?

4 A. Yes. The dark blue is the hundred year and the  
5 light blue is a thousand year.

6 Q. So it's your testimony -- And you created this  
7 exhibit?

8 A. Yes.

9 Q. You created it?

10 A. With help with other people.

11 Q. Other people. But you're responsible for this  
Page 179

12 exhibit?

13 A. Sure, sure.

14 Q. well, did you see the photos that were -- You

15 were here yesterday; right?

16 A. Yes.

17 Q. And it would appear to me that you're trying to

18 convey to the commissioners that even if there's a

19 thousand-year flood there won't be water on the landfill

20 site; right?

21 A. No, we didn't say that.

22 Q. Isn't that what the exhibit is saying?

23 A. No. The allegations that have been is that

24 there's going to be basin-wide flooding that's going to

25 result in water building up to an elevation that's going to

□

1 overtop the berm. And that's what this is depicting, a  
2 potential flood condition. We've always said, and my  
3 testimony earlier was at the site, the pond water.

4 Q. Okay. So then -- You can have a seat, sir. So  
5 by conceding or acknowledging or admitting as you discussed  
6 with counsel on direct and this was discussed yesterday,  
7 ponding was something that you're aware of during the design  
8 process; right?

9 A. Yes.

10 Q. Okay. So if it rained a half a mile east of this  
11 landfill site, right, you have a lot of rain there, by your  
12 own calculations the rain, the water will drain west because

13 it's a lower elevation in that direction?

14 A. It will first feel up any localized depression.

15 Q. Right.

16 A. And if the rain is large enough then it will

17 overtop those depressions and it will eventually work its way

18 westward, yes.

19 Q. Is that called sheeting?

20 A. Yes.

21 Q. So on the eastern side of the landfill you have

22 four feet of berm design; right?

23 A. Four to five.

24 Q. Four to five. Okay. Four to five feet of berm.

25 So the soil is not -- Characterize the soil that you plan on

□

1 using on site for the berm building.

2 A. well, it's going to consist of the upper soils.

3 They're predominantly a silty sand, but they can vary in silt  
4 content and sand content.

5 Q. Hasn't that soil been described in -- Are you  
6 familiar with it being described as poor or limited in  
7 quality for purposes of berming?

8 A. No.

9 Q. Okay. what about the -- Okay. Let's see. Okay.  
10 Are you familiar with the custom soil resource report on  
11 Exhibit 15?

12 A. Yes.

13 Q. And in summation, didn't this report find that  
Page 183

14 the soil on site was of poor quality for purposes of use for  
15 berming?

16 A. This is a study that only looks at suspicious  
17 soil conditions. It doesn't look at what the soil conditions  
18 are at depth.

19 Q. And even with that limitation didn't this report  
20 conclude that the soil on-site is not -- is of poor quality  
21 for berming purposes?

22 A. Without any engineering mitigation measures, yes.

23 Q. Right. Okay. Thank you. So a berm is basically  
24 dirt piled up to about four feet in height, right, four or  
25 five feet in height?

1           A.    Sure.

2           Q.    Okay.  So there's a lot of confidence, I guess,  
3   that we place in this dirt to prevent sheeting from the east  
4   going to the west maybe coupled with a rain fall to prevent  
5   surface water from interfering with or making contact with an  
6   active cell of the landfill; right?

7           A.    Correct.

8           Q.    So it is this soil there that's going to protect  
9   against refuse being transported off of the landfill site if  
10  there's sheeting occurring; right?

11          A.    Repeat that again.

12          Q.    So it's this soil that we have built up to four  
13  or five feet in height that's going to prevent refuse from  
14  being transported off of the landfill site; right?  If

15 there's sheeting occurring, that was the premise upon which  
16 the question was.

17 A. well, it is going to prevent sheet flow from  
18 occurring to the site. There will be engineering  
19 specification that will be developed, permeability  
20 requirement. If we need to amend the soil with bentonite, we  
21 can do that. We can compact it. We can provide grain size  
22 specifications. There's a lot of things we can do to make  
23 sure there is a well-engineered perimeter berm.

24 Q. So couldn't there have been part of the plan  
25 maybe concrete walls four or five feet in height constructed

1 to the exterior of the landfill that would be more effective  
2 than a four or five-foot pile of dirt?

3 MS. LEONARD: I'm going to object. The review of  
4 the Commission is whether the application as accepted and the  
5 permit as granted, whether there's an abuse of discretion.  
6 It doesn't take in to -- If there were other alternative  
7 designs is irrelevant.

8 CHAIRMAN GANS: And I agree, Mr. Dolan. I mean  
9 we're getting in to Pretend Land here. We said the same  
10 thing on that over there. Let's put 60 mil in. Let's put --  
11 we can put six foot height in there. I'm not sure where  
12 you're going with this.

13 MR. DOLAN: It comes down to money.

14 CHAIRMAN GANS: Yes, it does.

15 MR. DOLAN: You mentioned about the modifications  
Page 187

16 going forward; right? You alluded to possibly making  
17 modifications going forward about plans of operation; right?

18 THE WITNESS: I alluded to changes of plans? I  
19 don't recall.

20 MS. LEONARD: I don't remember.

21 MR. DOLAN: You don't remember? I thought you  
22 just said that if there was some modifications with bentonite  
23 you might have to incorporate that in to the berm.

24 THE WITNESS: well, that wouldn't be the plan of  
25 operation. Before we actually build and construct a landfill

1 salt, we have to put together the details --

2 MR. DOLAN: Well, the question that I really want  
3 to --

4 MS. LEONARD: I'd like to interject an objection  
5 to the extent that Mr. Dolan interrupted the witness and if  
6 the witness wants to have a response -- if he wants a  
7 responsive answer, he's going to have to give an opportunity  
8 to allow the witness to respond.

9 Q. (By Mr. Dolan) During direct, Mr. Haskell, you  
10 made reference that modifications going forward could take  
11 place, didn't you?

12 A. There will be more details on some of the  
13 engineering components before they're constructed and they'll  
14 have to be approved and reviewed and approved by NDEP.

15 Q. And if there were some detections of leachate  
16 greater than anticipated, I believe you testified that you

17 could perhaps modify the design of the cell and/or other  
18 aspects of the landfill going forward; right?

19 A. Correct.

20 Q. Okay. Now, that costs money, doesn't it, to do  
21 those kinds of things?

22 A. Yes.

23 Q. Now, who makes the decision to spend that money  
24 to make that modification?

25 A. Which modification are you referring to?

1 Q. Any one of them that you were alluding to in  
Page 190

2 connection with responses to your -- questions from

3 Ms. Leonard.

4 MS. LEONARD: Objection. Vague and ambiguous.

5 Compound.

6 MR. DOLAN: well, we'll break it down then.

7 Q. (By Mr. Dolan) Mr. Haskell, you talked about a  
8 monitoring plan, didn't you?

9 A. Yes.

10 Q. Okay. What are you monitoring, Mr. Haskell?

11 A. Monitoring leachate so that we can characterize  
12 the quality of the leachate.

13 Q. All right. Let's just stop at that. With  
14 respect to you monitoring leachate, are you monitoring the  
15 leachate just because it's fun and games or are you  
16 monitoring it because if certain factors arise you can do  
17 something about that?

18 MS. LEONARD: Objection. Argumentative.

19 MR. DOLAN: You can answer.

20 THE WITNESS: We're monitoring it to characterize

21 the quality of the leachate so that if there was a release

22 and we're monitoring groundwater, we can determine whether or

23 not potential impacts are associated with leachate.

24 Q. (By Mr. Dolan) Let's assume that you've found

25 leachate and there was potential impacts, okay, Mr. Haskell?

□

1 A. Sure.

2 Q. Okay. would that be the kind of data that would

3 prompt a possible adjustment of the landfill operations?

4 A. Yes.

5 Q. Okay. would that cost money to adjust the

6 landfill operation?

7 A. Yes.

8 Q. Okay. who makes the decision to spend that

9 money?

10 A. The owner makes the decision to spend the money.

11 But it has to be approved by NDEP.

12 Q. And what's your understanding of how frequent

13 information has to be reported to NDEP regarding leachate

14 collection at the site?

15 A. I don't recall what the monitoring frequency is

16 in the plan.

17 Q. Do you want to take a look at the plan?

18 MR. FRANKOVICH: Counsel, we'll have the operator  
Page 193

19 here later on. You can ask him these questions.

20 CHAIRMAN GANS: We've gone through that before,

21 Mr. Dolan. He's the consultant for design. We have an

22 operator expert here we can pull up.

23 MS. LEONARD: We're also going to have a witness

24 that's going to be talk about the monitoring plan itself.

25 Q. (By Mr. Dolan) Okay. Now, I recall you

□

1 testifying that you submitted the application, the first

2 application and you deemed it to be complete. Is that what

3 happened or the NDEP staff deemed it to be complete, the

4 first design that you submitted?

5 A. NDEP deemed it complete.

6 Q. Okay. They deemed it complete. And then there  
7 was some technical comments thereafter; right?

8 A. Yes.

9 Q. Okay. When you submitted the application, the  
10 first application, you yourself deemed it to be complete  
11 also; correct?

12 A. Yes.

13 Q. And that means that it met the minimum standards  
14 under Nevada law?

15 MS. LEONARD: I'm going to object. This is  
16 beyond the scope of direct. He's not the appropriate witness  
17 on this. I mean we're going on and on.

18 CHAIRMAN GANS: This is not the appropriate  
19 witness.

20 MR. DOLAN: They testified about -- These are his  
21 words from his own testimony.

22 CHAIRMAN GANS: Go ahead.

23 MR. DOLAN: After it was deemed complete, it went  
24 to technical comments.

25 MS. LEONARD: He also just testified that it's

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1 NDEP that determines whether it's complete or not.

2 CHAIRMAN GANS: Yeah.

3 MR. DOLAN: And the question was did he also  
4 believe that it was complete. So if that's offensive to

5 counsel, I guess --

6 CHAIRMAN GANS: You can answer if you know.

7 Q. (By Mr. Dolan) So did you think it was complete  
8 also, Mr. Haskell?

9 A. I said yes earlier.

10 Q. You also testified about electrodes underneath  
11 the liner. I just wanted to briefly talk about that. Are  
12 you with me?

13 A. Yes.

14 Q. When are the electrodes on the liner installed?

15 A. During construction.

16 Q. And are they utilized throughout the lifetime of  
17 the landfill?

18 A. No. It's just the techniques that are used are  
19 limited in terms of their accuracy and depth. So they're  
20 good at the completion of either a final cover layer that's

21 several feet thick or the liner system.

22 Q. So just help me. The electrode is underneath the

23 liner. Which of the liners is the electrode going to be

24 under with respect to this exhibit there?

25 A. Well, there's two different --

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1 Q. There being Exhibit Number --

2 MS. LEONARD: 129.

3 THE WITNESS: It will be completed on both

4 layers.

5 Q. (By Mr. Dolan) Okay. So the electrode

6 underneath the liner is -- Is the liner itself the electrode?

7 A. No.

8 Q. Help me out. Explain that to me.

9 A. No. It's a flat electrode that's placed under  
10 the liner systems. They're generally about four or five feet  
11 in length and relatively thin. And we bury a copper wire out  
12 to the edge of the landfill so that we can hook up an  
13 electrical current.

14 Q. And that is designed to determine if the liner  
15 itself has a tear in it?

16 A. Yeah. At the end of construction, yes.

17 Q. Okay. Is that part of this design that you  
18 submitted to NDEP?

19 A. It would be part of the CQA plan that gets  
20 submitted prior to construction.

21 Q. So it's not part of -- It has not yet been

22 submitted to NDEP; correct?

23 A. It's not in the report of design. It's part of  
24 the construction documents that come next.

25 Q. Is there any standard in the industry with

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1 respect to the use of this electrode underneath the liner  
2 that you're familiar with?

3 A. ASTM standards.

4 Q. And ASTM stands for what?

5 A. American Society of Testing Materials.

6 Q. And have you used this technique elsewhere?

7 A. Many times.

8 Q. To what degree of success?

9 A. Well, I mean success is if you don't find it.

10 But as far as the ASTM standard, to make sure that you can  
11 find a hole, you go through a calibration and you do it one  
12 of two ways. So either artificially or physically putting a  
13 hole in the liner system and surveying it so you know where  
14 it's at and then bringing the third party contractor who  
15 specializes in this type of survey to conduct a survey.  
16 You've got to make sure that the methods and techniques  
17 detect this artificial leak or intentional test leak.

18 Q. Mr. Haskell, I just found it certainly  
19 interesting when you were talking about the pin hole  
20 possibility in the liner and how water might not go through  
21 the pin hole. Do you remember that testimony?

22 A. Uh-huh.

23 Q. Okay.

24 MS. LEONARD: Can you answer with a verbal yes or

25 no.

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1 THE WITNESS: Yes.

2 Q. (By Mr. Dolan) Okay. What I took from your

3 testimony then was that a pin hole is not necessarily a

4 problem for water permeability, vis-à-vis the liner. Is that

5 what you were trying to convey?

6 A. No. What I was conveying is a pin hole could be

7 of concern if you had adequate leachate depth on top of that,

8 such that the head pressure overcomes the surface. When that  
9 happens, you can get a leak through a pin hole.

10 Q. Now. Excuse me if I interrupted. Tears, have  
11 you during your career inspected liners that have been torn?

12 A. Yes.

13 Q. Typically, have you determined how that typically  
14 happens?

15 A. Either through visual inspection or sometimes  
16 through these leachate leak locations.

17 Q. And have you determined how the tear occurred?  
18 what caused the tear?

19 A. Most common is a bulldozer placing materials on  
20 top.

21 Q. Now, if there's a tear, a tear such that they're  
22 affected by other factors, weight, maybe the tear continues,  
23 how did the tear -- what's the technology of tears? Once

24 there's a tear does it stop, the tear in the liner stop?

25 Does it continue to tear?

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1 MS. LEONARD: Objection. Vague.

2 MR. DOLAN: I'll try again. I'll try again.

3 Q. (By Mr. Dolan) These tears, have you analyzed

4 liners to determine how to improve liners -- Okay. I'll

5 strike that. So we've established that you've looked at

6 liners that are torn; right?

7 A. Yes.

8 Q. Okay. And we've established that sometimes the

9 tears occur because the bulldozer rips it, is that fair to  
10 say?

11 A. It can occur.

12 Q. And what are some other causes of tears?

13 A. I've seen not just tears but in terms of  
14 puncturing, somebody dropping a tool on a liner system and  
15 causing a hole.

16 Q. Okay. And at what frequency is this electrode  
17 geo electric survey conducted using this electrode underneath  
18 the liner. What frequency is that?

19 A. It's a hundred percent coverage.

20 Q. Meaning how often? Once a month do you do the  
21 test?

22 A. Oh, no. It's done at the end of construction.

23 Q. I mean is that 95 years later? Is that when the  
24 end of construction is?

25 A. At the end of the construction of each module,

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1 this construction will be ongoing, every time we construct it  
2 before we put refuse in it, we will conduct this test.

3 Q. Okay. So for the first module you dig a hole and  
4 you -- at some point in the hole being dug you put this  
5 electrode measuring device before refuse is placed in the  
6 hole?

7 A. We conduct the test before the refuse is placed,  
8 yes.

9 Q. And then refuse is placed in the hole; right?

10 A. Yes.

11 Q. And isn't it true that no subsequent test is  
12 conducted using that technology?

13 A. That's correct.

14 Q. And it is more likely that the liner will be torn  
15 during the process of putting refuse on top of the liner than  
16 being torn without refuse being placed on the liner; right?

17 A. No. That's absolutely wrong.

18 Q. Oh, really? why is that?

19 A. The most likely occurrence of damage is during  
20 construction because we've got heavy equipment placing  
21 materials.

22 Q. Okay.

23 A. And operating closer to the liner system. So the  
24 occurrence of a tear afterwards once we've got a thick  
25 protected soil is much, much less.

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1 MR. DOLAN: Okay. Thank you. Nothing further.

2 MS. LEONARD: I just have a couple of brief  
3 things on redirect.

4 REDIRECT EXAMINATION

5 By Ms. Leonard:

6 Q. The -- Can -- Just so the commissioners  
7 understand, and this is addressing the point you were just  
8 describing, can you talk about the function of the operations  
9 layer in terms of protecting the liner from tears?

10 A. Well, it does two things. One, the equipment

11 that will be operating and dumping refuse, we want to get  
12 that equipment that has wheel loads as far away from this  
13 layer -- not as far away, but we want a good distance, three  
14 feet, so that we're reducing wheel loading on the material.  
15 And it also provides an effective barrier against things like  
16 a dozer blade digging too deep and puncturing the geomembrane  
17 there.

18 Q. And with regard to the completeness review that  
19 Mr. Dolan was asking you about, your understanding is the  
20 completeness is just to make sure, it's essentially a  
21 checklist to make sure that all of the application materials  
22 are present, it has nothing to do with compliance of the  
23 regulations. Is that your understanding?

24 A. Yes.

25 MS. LEONARD: I have nothing further.

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1 CHAIRMAN GANS: Okay. To the panel.

2 MEMBER RICHARDSON: I have some questions.

3 CHAIRMAN GANS: Go right ahead.

4 EXAMINATION

5 By Member Richardson:

6 Q. Was the amount of refuse to be stored in the  
7 landfill reduced at one point during the design process?

8 A. It was. We initially had a concept before we  
9 completed our geotechnical testing of how high we thought  
10 based on the footprint we ought to be able to go. And based  
11 on the results of the geotechnical testing that showed that

12 we had soils that were compressed a little more than what we  
13 anticipated, we reduced the height.

14 Q. And those soils would compress because they were  
15 loosely compacted to begin with or because they were clays or  
16 something of that nature?

17 A. It's the clays that are compressible. So we do  
18 have various layers and depth of clay that are going to --  
19 that are going to compress under the refuse layer.

20 Q. So the rest of the material is densely compacted,  
21 which is why liquefaction is negligible?

22 A. Yes. And a lot of these layers also occur fairly  
23 deep but they're still being compacted by the refuse.

24 Q. So you're the team lead on design of this  
25 project?

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1 A. I was the coordinator, the project manager, yes.

2 Q. But you're not a licensed engineer in the State  
3 of Nevada?

4 A. No. But I work with a couple of licensed  
5 engineers in the State of Nevada.

6 Q. Okay. So then you're not the engineer of record?

7 A. I am not.

8 Q. Okay. And I did notice out of the 23 projects on  
9 your resume that two of them were in the State of Nevada?

10 A. Yes.

11 Q. Would this, the design of a facility in this  
12 climate and in this area of Nevada be within your main area

13 of expertise?

14 A. No, I don't think so. Because it's just a couple

15 of projects. Most of my projects have been in California.

16 So on those projects I have not served obviously as the

17 engineer of record. I'm familiar with the designs.

18 Q. Would the settlement potential -- what measures

19 did you take in order to alleviate the strains on stresses

20 that would be incurred on the liner?

21 A. Well, it's usually tensile stresses that we're

22 concerned about with HDPE. So if you look at the grading of

23 the landfill towards the middle, the highest point where we

24 think we're going to get with predicting where you get the

25 most settlement is in the center. So the liners are coming

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1 up like this to a point and they're going to settle and  
2 compress more so. They're not going to go in to detention.  
3 So that's where most of the settlement is occurring. The  
4 settlement that's occurring at the sumps where there is a  
5 little bit of tension on the liner system is much, much less.  
6 And we took that in to account.

7 Q. And when the settlement happens you're trying to  
8 convey to the leachate at fractions of an inch. What kind of  
9 runs of pipe are we looking at, an average run for the  
10 leachate pipe in a cell?

11 A. That would be a little over 2,000 feet, I  
12 believe.

13 Q. So are you comfortable that in a 2,000 foot run

14 you're able to convey the leachate at a depth of fractions of  
15 an inch, which is pretty darn flat, as things are moving?

16 A. We've taken that in to account in our  
17 calculations.

18 Q. So you're comfortable that's been addressed?

19 A. Yes, yes.

20 MEMBER RICHARDSON: Those are my questions.

21 Thank you.

22 EXAMINATION

23 By Member Landreth:

24 Q. Will you respond to the concern about just the  
25 deterioration of the liner that could come not necessarily

1 through a traumatic impact like in construction or the  
2 settlement but merely because of the age of the material. Is  
3 there a significant deterioration that would be predicted to  
4 occur over 95 years?

5 A. No, not over 95 years. So the prediction is  
6 somewhat temperature-dependent. Higher temperatures, the  
7 material will degrade a little bit faster. At lower  
8 temperatures it degrades slower. So the best predictions are  
9 about 200 to 500 years right now for the base liner systems.

10 The important thing for our site, and this is  
11 typical of most landfills, is that we're going to be closing  
12 as we go. So we're going to be closing -- we're not waiting  
13 to close the landfill until after 95 years. We're closing as  
14 we go, so that the primary containment will eventually become

15 the cover system and not just rely on the base liner system.

16 we also have a clay layer underneath that is geologically

17 stable that will be in place.

18 MEMBER LANDRETH: That's all I have. Thank you.

19 CHAIRMAN GANS: Mr. Frankovich, I'm going to beg

20 for your patience on some of my questions, please. No

21 objection is what I'm asking you.

22 MR. FRANKOVICH: I won't object, Mr. Chairman.

23 EXAMINATION

24 By Chairman Gans:

25 Q. Is it your opinion that the regs in California

1 are harder to meet and more stringent than in Nevada?

2 A. I don't know if that's true or not. They're  
3 different requirements. In some cases they might be, but not  
4 necessarily. They're different is what I would say.

5 Q. Okay. Not necessarily more or less stringent,  
6 just different?

7 A. It depends in what specific areas you're talking  
8 about.

9 Q. I know it's a big question. That's why I'm  
10 asking his forgiveness.

11 A. So groundwater separation, for example,  
12 California is less stringent because we allow waste to be  
13 within a five-foot distance of groundwater.

14 Q. And I heard you say that even right under the  
15 layer they have approved that?

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16 A. That's right.

17 Q. Okay. Do you sleep well at night?

18 A. I do.

19 Q. And I know that's a funny question. But do you  
20 ever worry about your designs fading and thinking, oh, God  
21 what am I going to do?

22 A. Well, I'm comfortable with what we've done, what  
23 we understand, where the weaknesses are, what we're doing to  
24 improve these things. And at the end of the day, at the  
25 sites that I've been involved with, and I've been involved

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1 with many sites for well more than a decade, we don't see  
2 groundwater contamination due to leachate migrating through  
3 the landfill liner. And this is sites that only have a  
4 single composite liner system. So we're not seeing failure  
5 in these things. So I feel pretty comfortable with the  
6 technology that we're using.

7 Q. So from that testimony it would seem to me that  
8 you don't agree with what I've heard here on more than one  
9 occasion, all liners leak?

10 A. I don't agree with that. And the EPA study that  
11 I cited where they went through and monitored these landfills  
12 where they were monitoring that layer, there's a bunch of  
13 those cells that had no leachate or no liquids in them. So  
14 the leakage was essentially zero. So not all liners leak.

15 Q. Okay. And another statement I heard was maybe  
16 they don't leak in the first ten or 20 years, but with time

17 all liners will leak, it's just a matter of time?

18 A. Well, again, the EPA study looked at how liners

19 are performing and concluded that they perform very well

20 during the operational life. And so eventually if you never

21 closed a landfill you might get leakage through the liner

22 system after 300, 400 years. But we close the landfill, we

23 shut off leachate generation and that becomes a continuance

24 system.

25 Q. What is the elasticity of HDPE when you're using

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1 it in a liner?

2           A.    It's pretty high.  It usually strains to at least  
3    12 percent or 15 percent before it begins to yield.  And it  
4    will strain a lot more, several hundredths of a percent  
5    before it actually breaks.

6           Q.    So does that in any way contribute to the good  
7    usability of HDPE when it comes to microquakes or something  
8    like that?  I would imagine even if you had something like  
9    that, or liquefaction, it would seem like the elasticity  
10   would help in this respect or not?

11          A.    If you had something that -- And again, I said  
12   that micro earthquakes aren't an issue out here.  But if you  
13   had an event that caused a little bit of differential  
14   settlement, HDPE is very flexible material that's able to  
15   accommodate all sorts of stress.

16          Q.    My experience is from hiring consultants for 25  
17   years.  In this case it seems like you have three clients.

18 You have the customer out there, the appellants. And if I  
19 own property close to this landfill, I sure as heck wouldn't  
20 want that leachate to get in to my water system. That goes  
21 without saying. So there's one. So you're really designing  
22 for him.

23 You're also designing for NDEP because you better  
24 do what Taylor says or he'll fire on you. And I know that's  
25 stupid because -- but you better listen to what he's telling

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1 you because they're the ones going to put that permit out.  
2 So you've got another client there, it would seem to me.

3           And then you've got the client that's hiring you,  
4 okay. So one client says you're bought and paid for by this  
5 guy. The other client doesn't know what the heck to expect  
6 from you. And that guy is saying you better not break me.  
7 You better not make this so extensive that I can't afford it.

8           You're walking a tight rope all the time. What  
9 do you do here? Who is your real client? How do you  
10 compromise these various stresses and strains on what they  
11 want you to do?

12           A. Well, again, we give our client our best advice.

13           Q. Which client?

14           A. Well, Recology.

15           Q. Recology is your client. I know that's your  
16 official client.

17           A. Sometimes it's news that they may not want to  
18 hear. But at the end of the day from our perspective, to be

19 successful, we have to maintain regulatory credibility. And  
20 if we're doing something that's not protective of the  
21 environment, NDEP loses faith in us, there isn't any client  
22 that's going to hire us to do the next landfill job.

23 I've been doing this for a long, long time. The  
24 first thing we have to do is maintain the respect of the  
25 regulatory agency, convey that to our other client. The

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1 other clients we don't have, that you're referring to, we  
2 don't have direct involvement.

3 Q. And I know that.

4 A. I understand philosophically where you're coming  
5 from.

6 Q. Okay. So you can sleep at night. You feel  
7 you're doing your best for all three clients or you're out of  
8 business?

9 A. That's right.

10 Q. I'm going to ask the same question to you that I  
11 asked Mr. Taylor. Why 60 mil and not a hundred mil?

12 A. One, I'm not aware -- I don't have personal  
13 experience using a hundred mil. That's starting to get a  
14 little bit thick and a little more difficult to maneuver and  
15 weld. We're using 60 mil. We're comfortable with 60 mil. I  
16 know that more sounds like it's better. A lot of people have  
17 that perception. But I don't know of any studies that says  
18 that 80 mil is going to result in less leakage than 60 mil.  
19 So we're very comfortable with 60 mil. At least 80 percent

20 of the landfill designs that I've been involved with are 60  
21 mil.

22 Q. Have you used less than 60?

23 A. Not as the primary liner. As a secondary liner  
24 we've gone as thin as 40 mill.

25 Q. You talked about the road bed. To make that an

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1 all-weather road bed is that going to have to be five feet  
2 high?

3 A. I don't know that it has to be five feet high.

4 It's got to be about the elevation of the ponding that's out

5 there.

6 Q. So to make it an all-weather road bed, you

7 foresee it having to be raised somewhat?

8 A. Oh, yeah, it will be. And the design plans call

9 for a minimum of two feet, a minimum. And recognizing that

10 the topography over this changes is going to have to be

11 established in elevation to well above the ponding.

12 Q. The makeup of the waste, and I'm not talking

13 about hazardous waste, I'm talking about what I consider

14 residential waste, are there chemical constituents in the

15 waste -- And I'm not just talking about Jungo now, but I'm

16 talking about any type of landfill that has these liners --

17 such that these chemicals can break down the HDPE? I read

18 some information, and I don't know where in these volumes,

19 but there are many chemicals in common waste that have a

20 tendency to break down the HDPE and cause the integrity

21 compromise?

22           A.    So there were in the '70s and '80s a number of  
23 HDPE incompatibility tests and they were evaluating the  
24 compatibility of different liner types with different  
25 chemicals.  And that's probably what they're referring to.

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1    These compatibility tests were done with pure product.  We  
2    don't see that in landfills.  So in landfills, if we've got a  
3    solvent or something like that in there, that's relatively  
4    low concentration so when you see it in the leachate or  
5    landfill gas, we're measuring it in parts per million or

6 parts per billion. So when you have the concentration that  
7 flow, it doesn't have a big impact on HDPE.

8 Q. Okay. To your knowledge, being the expert you  
9 are in this, are there elements of solid waste that can  
10 compromise the integrity of HDPE that you're aware of?

11 A. No.

12 Q. Your monitoring system, should the, for whatever  
13 reason that first liner fail, the leachate will work down in  
14 to that second two-foot layer, that layer there, where is  
15 your monitoring system actually going to detect it? And I  
16 know you talked about the grid, the electrical grid. But I'm  
17 talking about now your monitoring system itself, which is  
18 more physical, actually picking out leachate. Are you going  
19 to detect it after it breaches the first layer and the second  
20 layer or are you going to be able to detect it when it  
21 breaches the first layer? It's all hypothetical.

22           A.    It will be when it gets down to the secondary  
23 collection layer, which is down here.

24           CHAIRMAN GANS:  Okay.  That's all my questions,  
25 Mr. Haskell.  Thank you very much.  I have been waiting for

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1    you to take the witness stand.  You're the guy I wanted to  
2    see.

3           THE WITNESS:  All right.  Thank you.

4           CHAIRMAN GANS:  Okay.  We're ready for your next  
5    witness.

6           MS. LEONARD:  All right.  The interveners call

7 Kris Johnson.

8 (The witness was sworn in)

9

10 KRIS JOHNSON

11 Called as a witness on behalf of the

12 Intervener, having been first duly sworn,

13 was examined and testified as follows:

14

15 DIRECT EXAMINATION

16 By Ms. Leonard:

17 Q. Mr. Johnson, can you please introduce yourself to

18 the Commission.

19 A. My name is Kris Johnson, K-r-i-s J-o-h-n-s-o-n.

20 I'm a senior consultant at Golder Associates and I'm a

21 certified engineering geologist.

22 Q. And what was your involvement in the Jungo permit

23 application?

24 A. I designed the monitoring program and the

25 monitoring locations.

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1 Q. And besides the Jungo landfill can you describe

2 the other work that you have done in Nevada?

3 A. I've done work at the Recology Crestline class

4 two landfill, which is located in Lincoln Nevada. And that

5 work involved modifying, bringing up to date the vetoes zone

6 monitoring plan for the facility and initiating background

7 groundwater modeling.

8 Q. And just so the commissioners understand what  
9 vetoes means, can you explain that?

10 A. Vetoes zone is a term that's applied to the  
11 material that's in the unsaturated zone, so that's above  
12 groundwater and below the ground surface.

13 Q. And so in the course of doing that work on the  
14 Crestline Landfill did you have the opportunity to work with  
15 NDEP before?

16 A. Yes. We worked with John Taylor to modify the  
17 vetoes zone monitoring plan that has been incorporated in to  
18 the facility permit.

19 Q. What is your educational background?

20 A. I have a Bachelor of science degree in geology  
21 from San Jose State University and a Master of science in  
22 geology from California State University, Hayward.

23 Q. Can you turn to Exhibit 118. It should be in the

24 binders in front of you. I'll wait for the commissioners to  
25 get there too. What is Exhibit 118?

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1 A. It's a copy of my Golder resume.

2 Q. And is that a true and correct description of  
3 your professional experience?

4 A. Yes, it is.

5 Q. So you testified that you're an engineering  
6 geologist. Can you describe what an engineering geologist  
7 does?

8 A. In general we characterize geologic and

9 hydrogeologic conditions for engineering design applications.

10 Q. And how long have you been an engineering  
11 geologist?

12 A. For approximately 20 years.

13 Q. In the course of your professional career have  
14 you developed other groundwater monitoring programs?

15 A. Yes.

16 Q. Can you briefly describe in general what that  
17 entails?

18 A. We look at the site-specific characteristics of  
19 the subsurface conditions, the hydrogeology and the geologic  
20 materials. We look at the regional information to help us  
21 design the monitoring plan, which will be where the  
22 monitoring wells and other monitoring locations will be  
23 placed, what monitoring intervals we'll use. And then we  
24 look at the applicable regulations that list the monitoring

25 parameters that we need to address. We would look at the

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1 site-specific conditions to incorporate monitoring parameters  
2 that would be reliable detection indicators and meet the  
3 regulations.

4 Q. And in the course of your experience, how many  
5 landfill projects have you worked on previously?

6 A. I've worked at over 40 landfill sites, and  
7 approximately 25, probably more than 25 of those would have  
8 been initiating or developing groundwater monitoring and  
9 other monitoring programs for the landfills.

10 Q. And let's turn to look at the Jungo site  
11 specifically now. In the course of developing the  
12 groundwater monitoring plan, what did -- did Golder perform a  
13 background investigation?

14 A. Yes. And it's been described before, but from  
15 the geologic and hydrogeologic standpoint, we drilled five  
16 soil borings, one in the center of the site and four at the  
17 corners. The one in the center was 140, 150 feet deep. The  
18 ones at the corners were approximately a hundred feet deep.  
19 And the four corner borings were converted to groundwater  
20 monitoring wells to monitor the first encountered groundwater  
21 below the site.

22 Q. Okay. And if you can turn to Exhibit 57. It's  
23 figure two in Exhibit 57. It might be helpful actually if  
24 you went up to the figure up there?

25 CHAIRMAN GANS: Again, you're being careful of

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1 duplication?

2 MS. LEONARD: Absolutely.

3 Q. (By Ms. Leonard) Can you just point to the four  
4 monitoring wells that you just described?

5 A. I can -- Yeah, I can try. One is up there in the  
6 northwest corner. There's one here. One there. And then  
7 another one there at the northeast corner of the site.

8 Q. All right. And then did you work to develop this  
9 groundwater monitoring network?

10 A. Yes.

11 Q. Did you develop a groundwater monitoring --

12 Excuse me -- a groundwater contour map?

13 A. Yes. The groundwater contours are depicted in  
14 blue on this diagram.

15 Q. And can you in general explain what they depict?

16 A. Well, to get these groundwater contours we  
17 measure the --

18 MR. DOLAN: Didn't we do this yesterday?

19 CHAIRMAN GANS: Well, that's what I'm asking.  
20 I've seen this thing so many times.

21 MS. LEONARD: I'm sensitive to that. I just  
22 wanted to get -- This will be very fast. I want to make sure  
23 to get a couple pieces of evidence in and I want this  
24 background. This will go very quickly.

25 THE WITNESS: I'll try to move fast. We measure

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1 the depth to groundwater in each of the wells. And using the  
2 surveyed elevation of each of the wells, we calculate the  
3 groundwater elevation in the wells based on the, on those two  
4 sets of data and contour the data as shown on the diagram.

5 Q. (By Ms. Leonard) And so the groundwater on the  
6 site move towards the southwest?

7 A. Yes. And it's shown by that arrow right there  
8 toward the southwest.

9 Q. And did you use any information to substantiate  
10 your, the findings that Golder did at the site?

11 A. Yes. One of the things that I mentioned before

12 as we look at site-specific characteristics and we look at  
13 regional characteristics and we like those to gel, to match.  
14 And so we looked at the regional study that's been done on  
15 the Desert Valley Basin, which is the Berger USGS report.  
16 And that report showed that groundwater at the Jungo area  
17 flowed toward the southwest. And so we have those conditions  
18 at the site. We felt comfortable that the site conditions  
19 matched what the regional conditions were.

20 Q. Mr. Hannum testified that his property is to the  
21 northeast of the Jungo site. Based on your findings in the  
22 regional study would you anticipate any of the groundwater  
23 from the Jungo site going on to Mr. Hannum's property?

24 A. No. Because the water flows toward the  
25 southwest, away from the site.

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1                   CHAIRMAN GANS: Let me interrupt. Because this  
2                   has been asked and answered also, that's why I agree with  
3                   Mr. Dolan. The real is if that groundwater should be  
4                   contaminated, just because it runs that direction, does that  
5                   mean that none of the contamination can go the other  
6                   direction?

7                   THE WITNESS: Correct.

8                   CHAIRMAN GANS: It cannot? It won't form a  
9                   plume? It's all going to go one way? That's your expert  
10                  testimony.

11                  THE WITNESS: Yes. It's going to go in the  
12                  direction of groundwater flow.

13 Q. (By Ms. Leonard) Now --

14 A. Can I sit down?

15 Q. Yes, absolutely. I just want to look through

16 briefly to make sure that I don't do anything repetitive.

17 Besides the perimeter monitoring wells that have been -- Can

18 you describe the other monitoring wells that will exist on

19 the site?

20 A. The drawing shows the proposed groundwater

21 monitoring wells and there's two background wells and those

22 have been talked about before. There's the four interior

23 wells that are interim groundwater monitoring wells for the

24 initial two landfill cells that would be developed. And then

25 there are wells that were installed along the southern

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1 perimeter of the site down gradient of each of the leachate  
2 sumps that are located along the southern perimeter. And  
3 those are located there because that's the greatest  
4 accumulation of leachate and that's the most likely location  
5 to have significant release from the facility. And so we  
6 want to have monitoring at those locations to detect that.

7                   And then there's wells along the western  
8 perimeter of the site at a similar spacing to the wells along  
9 the southern edge of the site. And those wells are down  
10 gradient of the leachate sumps that will be located along the  
11 northern part of the facility.

12                   Q. And can you describe the monitoring that will  
13 occur?

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14 A. Well, I think John Taylor described it.

15 Q. Is there anything that you could add to that?

16 A. I think he covered it well. I think the idea is  
17 that we monitor groundwater quarterly. We report that to the  
18 state on a semi-annual basis. There's determinations that  
19 are ongoing during that monitoring program. There's also  
20 the -- There's three different phases that we monitor  
21 groundwater for 12 consecutive quarters before we do sort of  
22 a site-wide evaluation of the performance of that groundwater  
23 monitoring system.

24 I think the thing to take away from how we're  
25 going to approach monitoring is it's not a program that's

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1 set. There's opportunities to make modifications along the  
2 way and that's where the leachate monitoring comes in. We  
3 monitor the leachate for appendix one and appendix two  
4 parameters. We have an ability to change what we monitor in  
5 groundwater based on what we see in the leachate just to make  
6 sure that we have the capability detecting a potential  
7 leachate release.

8 Q. And does monitoring occur between the -- or above  
9 the -- in the secondary leachate collection?

10 A. Yes. And Ken addressed that toward the end of  
11 his, I think a specific question that you asked. The  
12 secondary leachate collection layer drains to a sump that  
13 underlies the primary sump. And that secondary leachate  
14 collection layer allows for an opportunity to sample any

15 waters that would accumulate in the sump and gets analyzed  
16 for leachate parameters. And so we would be able to see if  
17 there was potential leachate leakage through that initial  
18 lining system.

19 MS. LEONARD: I have nothing further of this  
20 witness.

21 MS. JOSEPH: No questions from the State.

22 CHAIRMAN GANS: Mr. Dolan, and its back to you.

23 MR. DOLAN: Thank you, sir.

24 ///

25 ///

1 CROSS-EXAMINATION

2 By Mr. Dolan:

3 Q. The aquifer that's under the landfill site, is it  
4 a perched aquifer?

5 A. No.

6 Q. Meaning it's -- I'm trying to get to -- The  
7 aquifer when you say it's perched, what does that mean?

8 A. I didn't say it was perched. I can define what a  
9 perched aquifer is for you.

10 Q. Please.

11 A. A perched aquifer is groundwater that occurs  
12 above a more extensive groundwater table. And so you can  
13 think of it as water that would sit on an impermeable layer  
14 and below that impermeable layer there would be dry soil and  
15 then you would have your regional groundwater.

16 Q. The chairman asked you a question about leachate,  
17 if leachate, Heaven forbid, got in to the aquifer. Do you  
18 remember that line of questioning?

19 A. No.

20 CHAIRMAN GANS: I asked you about the flow, if  
21 there was a leachate flow, would it all go up in a plume and  
22 get up and contaminate above.

23 THE WITNESS: I remember that.

24 CHAIRMAN GANS: Okay.

25 MR. DOLAN: It's been my experience that none of

1                   reporters\_record\_day-two052212.txt  
my witnesses remember anything.

2                   THE WITNESS: Well, if your question was more  
3 specific, I may have remembered it.

4                   MR. DOLAN: I know. I know. It was difficult.

5                   MR. FRANKOVICH: We will agree, the chairman has  
6 more thorough questions.

7                   MR. DOLAN: Now, Mr. Frankovich, I don't  
8 interrupt you.

9                   MR. FRANKOVICH: Yes, you do, with great  
10 frequency.

11                  MR. DOLAN: Why do you feel you have the luxury  
12 of returning that?

13                  Q. (By Mr. Dolan) Now, does the inflow and outflow  
14 components of the groundwater, amounts of inflow and outflow  
15 components, does that affect how the, the leachate again, if  
16 leachate was to get in to the aquifer that's underneath the

17 landfill, does the rate of inflow and outflow of water in to  
18 the aquifer affect where a plume would, which direction a  
19 plume would go?

20 A. Yes.

21 Q. And you're not testifying that under no  
22 circumstance can Mr. Hannum's water -- by the way, do you  
23 know if Mr. -- if Mr. Hannum is within a hundred and --  
24 within 2,000 feet northeast of the aquifer that's on this  
25 landfill, that's the same aquifer that he has that is

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1 underneath the landfill; right?

2 A. Based on the regional hydrogeologic work that's  
3 been done, I would say yes, that's probably correct.

4 Q. Okay. And there's a notion out there, once an  
5 aquifer is contaminated it remains contaminated. How do you  
6 feel about that?

7 A. That's incorrect.

8 Q. And what's not correct about it?

9 A. There's nothing that says that the aquifer would  
10 remain contaminated. There's many things that can make it  
11 uncontaminated.

12 Q. Okay. I'm trying to go -- The aquifer water  
13 moves elsewhere, would that be one reason why the aquifer  
14 once contaminated would no longer be contaminated?

15 MS. LEONARD: Objection. Vague and ambiguous.

16 MR. DOLAN: Can you answer that question?

17 CHAIRMAN GANS: Do you understand what he said?

18 THE WITNESS: Yes.

19 CHAIRMAN GANS: Okay. You can answer it.

20 THE WITNESS: No. If it's moving somewhere and

21 it's still in the aquifer, the aquifer would still be

22 contaminated.

23 Q. (By Mr. Dolan) well, when the contaminants leave

24 the aquifer.

25 A. Yes.

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1 Q. And the contaminants leave the aquifer because

2 it's -- How would you describe that aquifer? It's not

3 reporters\_record\_day-two052212.txt  
perched?

4 A. I don't understand your question.

5 Q. well, if water can leave an aquifer, it can leave  
6 the aquifer because it is what kind of aquifer?

7 A. Any kind of aquifer the water can leave.

8 Q. Does it have a name, so that I can use that name?

9 A. There's several different names for types of  
10 aquifers and water basically leaves every type of aquifer.

11 Q. Okay. water basically leaves every type of  
12 aquifer. so if this aquifer is contaminated by chemicals  
13 that aren't collected and disposed of, that contamination can  
14 leave that aquifer and go anywhere? Is that what I'm  
15 understanding?

16 A. No, it can't go anywhere.

17 Q. It can't go anywhere? Could it go to, well, an  
18 adjoining aquifer?

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19 A. If the aquifer is connected to an adjoining  
20 aquifer, yes.

21 Q. Is this aquifer connected to any adjoining  
22 aquifers that's underneath the landfill site here?

23 A. There's no information that shows that the  
24 aquifer is connected in the southern part of the basin to any  
25 other aquifer.

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1 Q. How about the northern part?

2 A. Yes. I believe the Berger report indicated that  
3 the northern part of the basin discharges to the Quinn and

4 reporters\_record\_day-two052212.txt  
the Kings River basins on the north part.

5 Q. As part of your studies did you determine whether  
6 or not the water from the Quinn River is used by people to  
7 drink?

8 A. No.

9 Q. Did you determine if the Quinn River water is  
10 used by stock to drink?

11 A. No.

12 Q. By the way, is there any aquifer to the east or  
13 the west that you know of relative to this landfill site?

14 A. Yes. There's thousands of aquifers to the east.

15 Q. I'm talking about contiguous.

16 A. No, there are none.

17 Q. There are none?

18 A. That I know of.

19 Q. So when you said there were thousands, you were

20 talking --

21 A. well, you asked if there --

22 Q. we can't both be talking at the same time.

23 Okay. With respect to aquifers to the east, you

24 were intimating all the way to Long Island, New York or

25 Maine, is that when you were trying to --

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1 A. Yes, because your question was unspecific.

2 Q. Well, perhaps going forward with respect to

3 aquifers we can limit our question and answer to the State of

4 Nevada, all right. would that help?

5 A. Yes, I can do that.

6 Q. Okay. Now, there was to the east of the landfill  
7 where was the closest aquifer?

8 A. I believe it's the Humboldt River basin, but I do  
9 not have a map in front of me so I can't specifically say  
10 that that's correct.

11 Q. Okay. With respect to the activities at the  
12 Nevada geothermal and the drilling for hydropower -- Excuse  
13 me. It's a geological.

14 A. Geothermal.

15 Q. Geothermal. Thank you. Was that activity taken  
16 in to account?

17 MS. LEONARD: Objection. This is not relevant  
18 and exceeds the scope of direct.

19 Q. (By Mr. Dolan) You are the -- what was your role  
20 with respect to this landfill?

21           A.    I designed the groundwater monitoring program and  
22   the monitoring indications.

23           Q.    As you designed the groundwater monitoring  
24   program, was the activity at Nevada Geothermal at Blue  
25   Mountain taken in to account?

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1           MS. LEONARD:  Same objection.

2           MR. DOLAN:  You can answer the question, sir.

3   was it taken in to account?

4           MS. LEONARD:  well, I have an objection pending.

5           THE WITNESS:  I need to hear what --

6 CHAIRMAN GANS: Be more specific on your

7 objection, please.

8 MS. LEONARD: This exceeds the scope of the  
9 direct and it's irrelevant because there was no -- there's  
10 nothing in any -- that the appellants have indicated that  
11 there's any relevance to the geothermal activity with regard  
12 to the monitoring program that was developed on this site.

13 CHAIRMAN GANS: I agree with you. But I'm going  
14 to overrule it because I read the geothermal stuff in my  
15 package. It's in the documents. There was some comments on  
16 that. I agree with you but I'm going to allow it.

17 THE WITNESS: The geothermal activity west of the  
18 landfill was not used in the groundwater monitoring program  
19 mostly because it's in a completely separate groundwater  
20 basin and has no effect on the Jungo site.

21 Q. (By Mr. Dolan) The geothermal activity is east

22 of the landfill site, sir, not west?

23 A. That is correct.

24 Q. So you don't even know where it is; correct?

25 A. I guess I thought you had said west earlier.

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1 when you asked me the question I thought you said the

2 geothermal activity west of this.

3 Q. So isn't it true that you did not take in to

4 account any of the drilling activities conducted by Nevada

5 Geothermal as you developed your groundwater monitoring plan?

6 MS. LEONARD: For the record I'm just stating the

7                   reporters\_record\_day-two052212.txt  
same objection.

8                   CHAIRMAN GANS: Continue. Overruled.

9                   THE WITNESS: Pardon me.

10                  MR. DOLAN: Answer the question, sir.

11                  THE WITNESS: well, I didn't understand what he  
12 said and I --

13                  MR. DOLAN: Answer the question.

14                  THE WITNESS: Can I understand what he said  
15 before you say that? Groundwater in a completely separate  
16 basin from the Jungo Landfill site has no effect on the  
17 landfill site and so we did not use any information from any  
18 geothermal drilling in a completely separate groundwater  
19 basin to develop the groundwater monitoring plan for the  
20 site.

21                  Q. (By Mr. Dolan) Okay. So are you now admitting  
22 that there is a completely separate basin east of the

23 landfill site that's underneath the Nevada Geothermal plant?

24 A. You know, the question that you're asking is --

25 Q. I know what the question is. Just --

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1 A. -- sort of has a -- I didn't say that -- Yes,

2 it's a completely separate groundwater basin.

3 Q. Okay. And that's a completely separate

4 groundwater basin. Do you know where that's -- Do you know

5 where the geothermal plant is relative to the landfill site?

6 MS. LEONARD: I'm just stating my continuing

7 objection. This is getting very far afield from direct

8 reporters\_record\_day-two052212.txt  
testimony.

9 CHAIRMAN GANS: And you are, Mr. Dolan. I don't  
10 oppose your line of questioning because I did read about  
11 this, but let's be specific and get to the point.

12 Q. (By Mr. Dolan) Do you know where the Nevada  
13 Geothermal plant is relative to the landfill?

14 A. I don't recall.

15 Q. Okay. Now, we can find it for you.

16 A. If it's on an exhibit, I can look at the exhibit.

17 Q. Yeah, it is. It's about 86, 87. If you take a  
18 look, sir, at Exhibit 86 and 87, if that refreshes your  
19 memory about the location of the Blue Mountain?

20 A. 86 is not --

21 Q. Just take a look at it and just read it to  
22 yourself.

23 A. Neither one of these pages provides any real

24 indication of where the facility is located that I can  
25 locate, other than it says Humboldt County, Northern Nevada.

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1 Q. Okay. So by looking at Exhibits 86 and 87 that  
2 doesn't refresh your memory as to where this Nevada  
3 Geothermal power plant is?

4 A. No.

5 Q. Okay. Fair enough. During what period of time  
6 did you create the groundwater monitoring program that you're  
7 testifying about today?

8 A. We started drilling in 2007 and the final report

reporters\_record\_day-two052212.txt  
9 I believe was issued in the beginning of 2012.

10 MS. LEONARD: Would it be helpful to refer to it?

11 THE WITNESS: Yeah. I could look at the plan. I  
12 don't know what exhibit number it is.

13 Q. (By Mr. Dolan) Did you drive to the location on  
14 Jungo Road?

15 A. No.

16 Q. So did you have direct dealings with Mr. Taylor  
17 with respect to your role in this plan that you developed?

18 A. Yes.

19 Q. What kind of contact?

20 A. I believe we had telephone contact.

21 Q. One time?

22 A. At least once.

23 Q. And what was the maximum number of phone  
24 conferences?

25

A. Five.

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1 Q. Okay. Did Mr. Taylor make suggestions to you  
2 that were incorporated in to the groundwater monitoring plan  
3 that ultimately is before the NDEP?

4 A. I wouldn't categorize them as suggestions.

5 Q. How would you categorize them?

6 A. I would categorize them as there were specific  
7 issues that he would like to see addressed and we tried to  
8 address those issues.

9 Q. So he didn't make suggestions, he made orders?

10

A. No.

11

Q. So how many monitoring wells do you have? I know

12

you talked about four corners.

13

A. In the plan or proposed?

14

Q. In the plan.

15

A. On that map I believe there are 18 monitor

16

willing wells and then there's two additional wells that are

17

not on the map. Those are the angled wells that will be

18

installed underneath the first two leachate zones.

19

Q. Okay. So you have the four corners and then you

20

have some other wells along the side? Is that what you got?

21

A. Yes.

22

Q. And the other two, are they in the middle or on

23

the side also?

24

A. They're along the northern portion of the side

25

underneath the first two leachate sumps. And those are the

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1 two triangles at the northeast corner of the site that are  
2 labeled with the elevation contour 4150. So inside the very  
3 top of those triangles the initial two angled groundwater  
4 monitoring wells will be used.

5 Q. Thank you. On the east, on the right-hand side,  
6 I see a well on the top right and then the bottom right. Is  
7 there one -- Is there one -- Is there a well between those  
8 two points on the right-hand side?

9 A. Yes. It's labeled VG-1.

10 Q. Can you explain why there's not a similar or

11 fourth well on the right-hand side maybe six inches above the  
12 bottom right-hand corner?

13 A. Groundwater flows to the southwest and so there's  
14 no reason to have a well in that location because it wouldn't  
15 be monitoring water down gradient of the sump.

16 Q. Are all of these wells at the same depth on the  
17 perimeter of the landfill?

18 A. They're proposed to be installed at the same  
19 depth.

20 Q. And what depth would that be, sir?

21 A. I believe the groundwater occurs at 60 feet and I  
22 believe in the plan it calls for -- I'm not sure if it  
23 actually is specifically in the plan. But the top ten feet  
24 of the aquifer would be where the wells would be installed.

25 Q. And if the aquifer level sinks to 70 feet below

□

1 ground surface, what adjustments could be made to monitor the  
2 health of the aquifer if it sinks during the 95-year portion  
3 of the landfill?

4 A. You would need to -- If the wells -- If the  
5 aquifer fell below the bottom of the wells you would need to  
6 install new wells.

7 Q. Is that part of the plan?

8 A. Not specifically, no.

9 Q. Okay. Who would make a decision that the data  
10 for groundwater monitoring is compromised by the fact that  
11 the aquifer has sunk? Who makes that decision?

12 A. Any number of people. One would be who ever is  
13 doing the groundwater monitoring and then the state agency  
14 that's overseeing them.

15 Q. And the folks who are going to be doing the  
16 monitoring is not your group, is Golder and Associates;  
17 right?

18 A. I don't understand the question.

19 Q. Golder Associates is not planning to be  
20 monitoring these wells for 95 years; correct?

21 A. I'm not sure that that's correct.

22 Q. Does Golder and Associates monitor groundwater  
23 wells on landfills?

24 A. As I stated in my testimony that I've worked at  
25 at least 25 landfills where groundwater monitoring is a

□

1 portion of that.

2 Q. Okay. So have you had experience with aquifers  
3 rising and sinking at landfill sites?

4 A. Yes.

5 Q. Okay. In Nevada?

6 A. No, not specifically in Nevada.

7 Q. Okay. So I've come to learn that there are some  
8 landfills in California that maybe could be within two feet  
9 of groundwater or two and a half feet. Did you hear that  
10 testimony?

11 A. Yes.

12 Q. So when I'm talking about rising and falling of

13 aquifers in some sense we could be talking about six inches

14 or eight inches in some context; right? A very small

15 negligible amount?

16 A. Aquifers typically fluctuate on a matter of  
17 inches or feet depending on where the aquifer is seasonally.

18 And so we would expect monitoring programs to incorporate  
19 fluctuations in the monitoring table over time.

20 Q. Okay. And were you familiar with the -- I'm  
21 making -- I have a question about Exhibit 41. You don't need  
22 to look for it. But if you want to, it's fine. There was  
23 appendix C, the historical groundwater elevation study,  
24 conducted by Golder Associates, on page three of that  
25 Exhibit, 1.6 summary. Within the summary, sir, the last two

1 or three sentences, would you agree with me that the summary  
2 reads in part "Current depth to groundwater at the site is  
3 approximately 58 to 60 feet BGS, BGS being below ground  
4 surface, therefore assuming a return to the 1975 groundwater  
5 levels, the highest anticipated groundwater levels at the  
6 site are estimated at approximately 50 feet BGS." Are you  
7 with me?

8 A. Yes.

9 Q. Isn't it also -- And this whole study talked  
10 about the fact that there's been some groundwater discharge  
11 from mining and other purposes. Is the location of the  
12 wells, did you take in to account the information about the  
13 possibility that the groundwater can rise up to the level of

14 1975?

15 A. Yes.

16 Q. How so?

17 A. It's in the plan of design, so it's in the

18 record. And so we know that the water level could rise to 50

19 feet.

20 Q. And it can also sink another ten, 15 feet, right,

21 the aquifer?

22 A. Yes.

23 MR. DOLAN: All right. Thank you. Nothing

24 further.

25 MS. LEONARD: I have nothing on redirect.

1 CHAIRMAN GANS: Panel.

2 MEMBER RICHARDSON: I have a couple of questions,

3 Mr. Chairman.

4 EXAMINATION

5 By Member Richardson:

6 Q. On that exhibit, is that the flow rate underneath  
7 the arrow, the .003?

8 A. That's the gradient. So that's the slope of the  
9 surface.

10 Q. That's the slope, okay. What is the flow rate of  
11 that aquifer?

12 A. It's dependent on the slope of the surface and  
13 the permeability of the material. And I would have to  
14 refresh my memory on what the specific number is. It's a

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15 calculation that we do.

16 CHAIRMAN GANS: Is it high, low, medium in your  
17 field?

18 THE WITNESS: The gradient is relatively shallow  
19 and so the flow rate is relatively slow.

20 Q. (By Member Richardson) So with a slow flow rate  
21 would that affect the opportunity for a contaminant to  
22 migrate upstream, so to speak?

23 A. Basically there's no mechanism for contamination  
24 to flow upstream. Diffusion was mentioned in yesterday's  
25 testimony as a potential for groundwater contamination to

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1 expand. And that's a distinct possibility. If you have  
2 water that is contaminated or has a substance in it that is a  
3 higher concentration that is outside of the initial area, it  
4 could be chloride, it could be a solvent or something like  
5 that, it's trying to diffuse in to the areas where there's  
6 lesser concentration of it.

7           The rate of diffusion is much slower than the  
8 rate of groundwater flow. So even though there may be  
9 diffusion moving backwards because it's going to move in all  
10 directions, the groundwater flow is pushing that water away  
11 from where it's diffusing faster than it can move backwards.  
12 And so the contamination can't move backwards because the  
13 water is pushing it forward.

14           Q. Even with this slower flow rate?

15           A. Even with that slower flow rate. Because the

16 rate of diffusion is a hundred to a thousand times slower

17 than the rate of groundwater flow.

18 Q. And you designed the groundwater monitoring

19 system; correct?

20 A. Yes.

21 Q. And is that something that has to be done by a

22 Nevada State Engineer?

23 A. No. It has to be -- The way the regulation is

24 stated, I believe it has -- it says a competent -- A Nevada

25 state Engineer can design it but also a competent groundwater

2 groundwater professional in the eyes of the regulators.

3 Q. Because you're not a Nevada State Engineer;

4 correct?

5 A. Correct.

6 Q. I did notice that out of nine notable projects on

7 your resume, none of them were in the State of Nevada also;

8 correct?

9 A. Correct.

10 MEMBER RICHARDSON: Those are all the questions.

11 MEMBER LANDRETH: No questions.

12 EXAMINATION

13 By Chairman Gans:

14 Q. I just have one question, Mr. Johnson. There was

15 a line of questioning on the Quinn River. And you've got to

16 correct me, I think the Quinn River is north of the Jungo

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17 Landfill if I remember correctly?

18 A. Yes. There's two rivers where the northern part  
19 of the basin discharges to. One is the Kings River and one  
20 is the Quinn River and those are at the northern portion of  
21 the groundwater basin.

22 Q. So looking at this and looking at the flow  
23 direction, would there be some possibility of any leachate  
24 from Jungo reaching those two rivers?

25 A. No. There's a groundwater divide north of the

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1 Jungo hills and groundwater north of the Jungo hills, which  
2 is north of the Jungo Landfill site flows to the north.

3 Q. Okay.

4 A. And that flows to the King River and the Quinn  
5 River basins. Groundwater south of the Jungo hills in the  
6 area where the landfill is located flows to the south. And  
7 so much like there's a topographic divide that prevents flood  
8 waters from accumulating in the southern part of the basin,  
9 there's a groundwater divide that separates groundwater in  
10 the northern part of the basin from the southern part of the  
11 basin. And that information was in the Berger USGS 1995  
12 report.

13 Q. And how far is that groundwater divide from the  
14 Jungo Landfill? Just estimate. A hundred feet?

15 A. No, no, no. It's a couple miles, maybe five  
16 miles. I'm not sure. There is a map that is an exhibit.

17 Q. I just wanted to know in general. Because it

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18 would sound to me like with the flow of that direction you're  
19 indicating up there that it might have been very difficult  
20 even without the groundwater divide for anything from Jungo  
21 to reach the river?

22 A. Yes. There's no data that shows it can flow  
23 there.

24 CHAIRMAN GANS: Okay. You're excused.

25 THE WITNESS: Thank you.

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1 CHAIRMAN GANS: So we have one more witness?

2 MR. FRANKOVICH: We have one more witness. I

3 don't know if we want to take him now or --

4                   CHAIRMAN GANS: Are you suggesting we should only  
5 take him on a full stomach?

6                   MR. FRANKOVICH: It sounds to me like I am.

7                   CHAIRMAN GANS: would you like to break for lunch  
8 or how long is this witness?

9                   MR. FRANKOVICH: 30 minutes.

10                  CHAIRMAN GANS: Okay. we'll just press on if  
11 that's okay with you.

12   (Recess was taken)

13                  CHAIRMAN GANS: Ms. Leonard, you have one more  
14 witness?

15                  MR. FRANKOVICH: This one is mine.

16                  CHAIRMAN GANS: Oh, so this is going to take  
17 longer than I want?

18                  MR. FRANKOVICH: I will respect your admonition.

reporters\_record\_day-two052212.txt  
19 we call Tim Daleiden.

20 (The witness was sworn in)

21

22 TIM DALEIDEN

23 Called as a witness on behalf of the

24 Intervener, having been first duly sworn,

25 was examined and testified as follows:

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1 DIRECT EXAMINATION

2 By Mr. Frankovich:

3 Q. State your name please and spell your last name

4 for the reporter.

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5 A. Tie Daleiden, spelled D-a-l-e-i-d-e-n.

6 Q. And what's your occupation?

7 A. I'm a civil engineer.

8 Q. I'll beat Mr. Richardson to the question. Are  
9 you a licensed engineer in Nevada?

10 A. No. A registered engineer in the State of  
11 California.

12 Q. What is your educational background?

13 A. A Bachelor of science in civil engineering from  
14 Santa Clara University.

15 Q. And what's your professional background?

16 A. I've worked in the civil engineering  
17 environmental field since I graduated from college in 1989.  
18 And it's been primarily in the solid waste industry working  
19 with landfills, transfer stations and compost facilities.

20 Q. Over what period of time have you dealt with the

21 design of landfills?

22 A. That entire period.

23 Q. Have you also been involved in the construction

24 of landfills?

25 A. Yes, that time period.

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1 Q. Operation of landfills?

2 A. Since 1995.

3 Q. Would you explain to the Commission a little and

4 brief history of Recology and who they are, what they do?

5 A. Certainly. Recology is a 100 percent

6 employee-owned company. We've been around since the early  
7 1900's. And we have currently have operations throughout  
8 Northern California, in Nevada, Oregon and Washington. And  
9 we provide recycling services, residential collection,  
10 commercial collection, processing of those materials and well  
11 waste streams and composting services, transferring of waste  
12 product or commodities from recycling to land users or  
13 disposal locations. And we also dispose of waste both at  
14 landfills that we own and landfills that we operate for other  
15 owners.

16 Q. How long have you been with Recology?

17 A. Since 1995.

18 Q. What is your current duties and responsibilities  
19 with Recology?

20 A. My current title is engineering manager for the

reporters\_record\_day-two052212.txt  
21 composting and landfill group within Recology. And my duties  
22 include overseeing capital improvement projects at the  
23 compost facilities, on-site development, roads, path,  
24 aeration systems, drainage improvements as well as at the  
25 landfills, the totality of what we've been talking about the

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1 last two days, the containment systems, the final cover, the  
2 landfill gas collection systems, leachate collection systems,  
3 access roadways, drainage improvements.

4 Q. And how many landfills do you currently perform  
5 those responsibilities?

6 A. We have two, well, three landfills that we own  
Page 291

7 and operate. And then we have an additional two landfills  
8 that we're just operating for other, for county entities, so  
9 five.

10 Q. Have you been involved in the actual design of a  
11 landfill?

12 A. Yes, I have.

13 Q. And what was your involvement with the Ostrom  
14 Landfill?

15 A. I was involved with the design of the Ostrom  
16 Landfill after it had obtained its use -- full permitting  
17 process back in the early '90s. That's when I worked for a  
18 solid waste consulting firm. I was involved with the design  
19 of the first cell and construction and have been involved  
20 since then in all of Ostrom and its construction.

21 Q. Where is the Ostrom Landfill located?

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22 A. It's located near wheatland, California.

23 Q. And at the Ostrom what is the --

24 MR. DOLAN: Your Honor, excuse me. Can we move

25 past the Ostrom Landfill for purposes of brevity?

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1 MR. FRANKOVICH: It's important foundation for

2 his subsequent testimony because we're going to compare

3 Ostrom with Jungo. They're very similarly-situated.

4 CHAIRMAN GANS: Okay. Try to keep it brief. I

5 agree with Mr. Dolan.

6 Q. (By Mr. Frankovich) One more question on it.

7 what's the distance to groundwater at the Ostrom Landfill?

8           A.    The distance varies across the site.  And also  
9           historically the site right now is designed at the minimum or  
10          the closest that the landfill phase will be to the highest  
11          anticipated groundwater is less than five feet.

12           Q.    In connection with the Jungo property did you  
13          review the design plan?

14           A.    Yeah.  I was on a peer review group.

15           Q.    And as a peer review group of Jungo, did that  
16          group approve the design as submitted by Golder?

17           A.    Yes.

18           Q.    Were you involved in the preparation of the  
19          operation plan?

20           A.    Again, I reviewed that as a peer review.

21           Q.    Did you approve that or did Recology approve that  
22          as a peer review group?

23

A. That's right.

24

Q. And do you anticipate that you will be involved

25

in the construction aspect, phase of the Jungo facility when

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1 it begins?

2 A. Yes.

3 Q. And what will be your responsibilities in

4 connection with the construction of the Jungo Landfill?

5 A. I and staff that I work with would work with the

6 engineering firm that will prepare the construction plans and

7 specifications and CQA reports and we will hire the

8 contractor or contractors that will perform the work and we

9 will in addition do our own inspection in addition to the  
10 third party construction quality assurance that we will have.

11 Q. So you'll have a certain part on construction  
12 quality?

13 A. That's correct.

14 Q. In your experience with Recology are you  
15 accustomed to dealing with groundwater that's closer to the  
16 surface than 29 feet?

17 A. Yes.

18 Q. And have you done so in your career without  
19 incident?

20 A. Yes, I have.

21 Q. Is the liner system that you talked about to  
22 propose for Jungo similar to that that exists at Ostrom?

23 A. Yes. That's generally similar. There's some

reporters\_record\_day-two052212.txt  
24 small details that are different.

25 Q. And has that liner system proved effective at

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1 Ostrom?

2 A. Yes, it has.

3 Q. How do you individually and Recology ensure the  
4 integrity of the liners that we talked about during the  
5 course of construction?

6 A. Well, it starts with a good design. So we hire  
7 competent experts in the designing of the site. And then we  
8 also hire a qualified third party engineering firm to do  
9 inspection of the construction to ensure that the contractor

10 is constructing it in accordance with the plans and  
11 specifications.

12 In addition, when we solicit proposals from  
13 contractors to do the work, we do screening to make sure that  
14 the contractors have experience in doing this type of work.

15 And then probably the one additional layer that's  
16 been talked about already in testimony today is we do the  
17 electronic survey of all of our liners to make sure they  
18 are -- there is no holes in the liners after the construction  
19 is complete.

20 Q. And that's the electronic detection system that  
21 Mr. Haskell --

22 A. That Mr. Haskell described, yeah.

23 Q. And do you take any particular activities in  
24 connection with the installation to ensure the validity of

reporters\_record\_day-two052212.txt  
25 the test?

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1 A. Yeah. You don't see the test. You see guys  
2 walking with the wands and we want to make sure that we're  
3 getting a valid test result. And so we have created holes in  
4 the liner at survey locations where we know where they are  
5 but the third party firm that's doing that testing doesn't.  
6 And they find those tests, those holes. And that's how we  
7 know that it's an effective test.

8 Q. And in your experience has the system been  
9 effective in detecting the holes that you put there yourself?

10 A. Very effective, yeah.

11 Q. And do you then patch those holes?

12 A. Yes. We have a liner contractor patches those  
13 holes.

14 Q. And we've heard about the leak detection system.

15 Based upon your review, is it your understanding that the  
16 leak detection system put in here will detect any leachate  
17 leak before it reaches groundwater?

18 A. Yes.

19 Q. In your experience there has been instances where  
20 there is damage to the liner during operation of the liner?

21 A. Yes.

22 Q. And how does that happen?

23 A. Typically it's been on the edge of the liner  
24 where you're transitioning from a roadway to the waste cell  
25 and there can be some erosion of the protective soil cover

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1 through the traffic. And at some point, heavy equipment, a  
2 dozer or other heavy equipment has damaged the liner. And  
3 what we've seen then is an operator will say, hey, I see  
4 something that looks like it damaged that plastic and so we  
5 notify the manager and come investigate it. And if it's in  
6 fact the liner and there's damage, we repair it.

7 Q. Is the occurrence of any damage to a liner more  
8 likely to occur during construction or during operation?

9 A. During construction.

10 Q. And operations in order to do that would have to  
11 penetrate your two feet of protective soils plus your --

12 whatever this layer is called? I forget.

13 A. The LCRS. The LCRS groundwater layer, yes,  
14 that's correct.

15 CHAIRMAN GANS: He needs your help, Debbie.

16 MR. FRANKOVICH: I do indeed.

17 Q. (By Mr. Frankovich) Have you trained your staff  
18 to be on alert if during operation they ever detect or -- a  
19 liner that's damaged?

20 A. Yes. We have monthly meetings with our employees  
21 on health and safety and other topics. And when we are  
22 constructing new liner systems, we're talking about what the  
23 liner system has. We have similar maps like that in our  
24 facilities that identify to the crew and to the visitors what  
25 the liner system consists of. And we have pieces of the

□

1 plastic material to show them this is what it is. If you see  
2 this, notify, you know, your supervisor, your foreman and  
3 let's have somebody investigate it.

4 Q. We've heard a lot about the leachate control  
5 system. Based upon your review of the design, do you agree  
6 with Mr. Haskell that the volume of leachate is anticipated  
7 to be a fraction of the inch of --

8 A. Yes.

9 Q. And this drains off to sumps that are located on  
10 the boundary of the --

11 A. North and south side, that's correct.

12 Q. And these are the lowest points on the landfill

13 where the sumps are?

14 A. Correct.

15 Q. And have you -- are you involved in the testing

16 of the leachate that is collected?

17 A. Yeah. Over different times in my career with

18 Recology, I've had various levels of compliance

19 responsibilities. Right now the way our group is organized,

20 we have a full-time compliance manager who oversees all of

21 the consulting, third party testing personnel that collect

22 the samples of leachate and test that.

23 Q. So who does the leachate testing on the recovery

24 sites?

25 A. It varies from the different sites. But Golder

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1 Associates does a lot of that monitoring.

2 Q. And you have a third party consultant though  
3 that's not Recology doing it themselves?

4 A. Right. We hire a third party to come out and  
5 collect the samples and send it to a certified lab to run the  
6 tests.

7 Q. And I have heard leachate referred to here as  
8 garbage juice. What is leachate made of?

9 A. Leachate is a liquid that drains out the bottom  
10 of a landfill. Predominantly it's rain water that has  
11 traveled through the waste. We see a very -- we see a lot  
12 more leachate generated at our sites during the winter months  
13 when we're receiving rain fall. And during the summer months

14 it may drop off in order of magnitude or even more.

15 And the constituents in the leachate could have,

16 be a type EOD level, could have various small amounts of

17 different things that are in the waste drain. Those smaller

18 components are measuring in the parts per million typically.

19 Q. So the contaminants that are in the leachate are

20 in the parts per million?

21 A. For the most part.

22 Q. So the largest volume then is water?

23 A. By far.

24 Q. In an arid climate like Nevada, that would result

25 in less leachate?

1 A. That's correct.

2 Q. Are you accustomed to dealing with leachate  
3 systems that have much larger volume than anticipated at the  
4 Jungo site?

5 A. Yes, I am.

6 Q. Talk about the landfill gas collection system.  
7 what is the concern of landfill gas with respect to water  
8 contamination, if any?

9 A. Well, there's a couple of big concerns with  
10 landfill gas. Landfill gas is primarily 50 percent carbon  
11 dioxide and 50 percent methane. And methane is an explosive  
12 gas. It's a natural gas that we use in our homes and  
13 businesses for heat. There is a small component of landfill  
14 gas that will be volatoric organic compounds. And those

15 compounds can, if exposed to water can enter in to the water,  
16 in to the liquid phase. And that's the concern with the  
17 groundwater.

18 Q. At the Jungo site which do you think is the  
19 greater concern with respect to any potential harm to the  
20 groundwater, the landfill gas or the leachate?

21 A. The landfill gas.

22 Q. And are you comfortable with the gas collection  
23 system as proposed by the Jungo project?

24 A. Yes, I am.

25 Q. And that's being, as I understand it, installed

1 at the very beginning of the project?

2 A. It will be installed as the landfills develop,  
3 yeah.

4 Q. And who will monitor the landfill gas?

5 A. We'll have a -- we will hire a consulting firm  
6 that specializes in landfill gas operations.

7 Q. We have had some testimony about the drainage and  
8 the ponding anticipated. Do you have drainage plans that  
9 Recology follows at the Ostrom project?

10 A. Yes, we do.

11 Q. And do you deal with volumes of water, surface  
12 water much greater than those you anticipate at Jungo?

13 A. Yes.

14 Q. And how is the water, do you separate the water  
15 on the on-site drainage?

16 A. Separate?

17 Q. Or is the water, does the water that comes in

18 contact with the waste, is it separated from other drainage

19 water on the site?

20 A. Oh, yeah. Yeah. So rain fall that is in contact

21 with the exposed garbage, you have a small area of releasing

22 waste every day and it could be raining during the day when

23 we're doing that activity. We build soil berms around that

24 area to prevent rain water that's contacting the garbage from

25 running off and mixing in the storm water run-off system. So

1 we capture any contact -- we call that contact water. We  
2 capture any of that water on site and then the storm water is  
3 all just storm water running off the soil covers.

4 Q. And the storm water that doesn't come in contact,  
5 is that collected in a retention basin on site?

6 A. That's right.

7 Q. And is that the same in Ostrom as it's proposed  
8 in Jungo?

9 A. That's correct.

10 Q. What sort of all-weather surfaces do you  
11 anticipate will be at the Jungo property?

12 A. There will be an access road from Jungo Road  
13 itself across the rail line to the landfill area itself. And  
14 there will be another road from where the rail off area is to  
15 the working area.

16 Q. And have you had experience in dealing with

17 similar type of roads at other landfill facilities?

18 A. Yes.

19 Q. How do you ensure that they remain all-weather

20 roads?

21 A. Based on the size of trucks that we'll be using,

22 we'll have a thickness in gravel section design on how thick

23 the rock bed should be to support the trucks and they'll be

24 shaped and graded to draining and rain events and then

25 maintain the regular blading, smoothing of the gravel surface

1 to allow the truck traffic flow.

2 Q. You mentioned a working surface. What is a  
3 working surface at a landfill?

4 A. It's called the daily cell, the working face. A  
5 couple different names. And that's the area where waste is  
6 placed in any one day.

7 Q. Is that the only area at that particular time on  
8 which waste is exposed?

9 A. That's correct.

10 Q. And how large typically is the working surface?

11 A. It depends on the size of the amount of waste  
12 that comes in on a daily basis. At this landfill when we're  
13 at the peak daily time is 4,000 tons per day. It could be as  
14 large as 200 feet by 200 feet, roughly a football field size.

15 Q. So at any one period of time the largest exposed  
16 area would be approximately a football field?

17 A. That's right.

18 Q. And do you -- what do you do at the end of the  
19 day's operation?

20 A. At the end of the day we're required to cover it  
21 with daily cover. And that can be six inches of soil. That  
22 can be a tarp or it can be some other alternative cover  
23 material that's been approved by NDEP.

24 Q. Do you have other areas that you're not working  
25 on that you anticipate you may be working on in the future

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1 where you'll also cover those?

2 A. Yes.

3 Q. What's that called?

4 A. It's intermediate cover. And that's minimum of  
5 12 inches of soil and that's for areas that are going to be  
6 receiving waste in the future but more than 180 days or six  
7 months out from now.

8 Q. We have heard testimony about how this facility  
9 is going to be built in distinct cells. Would you explain  
10 that process, how that works and how long it takes to the  
11 Commission.

12 A. Yeah. So the big landfill, Jungo, is 550 acres.  
13 And it's comprised of ten different modules, they're each 55  
14 to 60 acres. And then each one of those is going to be  
15 further built in stages. We won't build one big 60-acre cell  
16 at a time. I think the initial cell is sized to be 25 acres  
17 and with that large of a liner system. And then once that  
18 first portion of the module baseline is constructed, we'll be

19 placing waste in there and we will be placing waste up to a  
20 total depth of maybe 80 or a hundred feet initially. we  
21 won't place it that thick all at once. we will be building  
22 in lifts that are 15 to 20 feet thick and each of those lifts  
23 will go along the entire base area.

24 But each -- But we won't do that in one day. One  
25 day will only be an acre of the 25 acres. And it may take

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1 us -- it may take us a week or two weeks to build a full  
2 thickness on that one working cell area. So we've got  
3 multiple cells and then we'll move over and work across the

4 whole phase liner and then we'll come back and build the  
5 second one.

6 Q. And as each discrete cell or you completed your  
7 work that you are going to put a final cover on?

8 A. We will be building final cover as we did large  
9 areas of the landfill built to grade. We have the operation  
10 report and design report talk about after we built a final  
11 grade allowing a minimum of five years of settlement to let  
12 the waste settle before we place that final cover.

13 Q. And what does the final cover consist of?

14 A. It consists of three feet of soil and the  
15 geomembrane.

16 CHAIRMAN GANS: Three feet?

17 THE WITNESS: Yeah. I think it's a one-foot  
18 foundation layer and a two-foot veg layer and then a  
19 geomembrane and a composite layer in between those two

20 layers.

21 Q. (By Mr. Frankovich) And if this landfill were to  
22 proceed at its anticipated life in excess of 90 years, would  
23 you have a chance to observe the effectiveness of the final  
24 cover over a period of years before you're finished with this  
25 particular project?

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1 A. Oh, yes.

2 Q. And you continue to monitor an area after it's  
3 been built?

4 A. That's correct.

5 Q. And again, that's a third party that does that  
6 for you?

7 A. Some of the monitoring we'll do with our site  
8 personnel as far as walking the area or looking at drainage  
9 slopes and making sure that the landfill is covered and  
10 integrity is proper.

11 Q. Any testing of leachate or landfill gas will be  
12 done by third parties?

13 A. That's right.

14 Q. How does Jungo or what does Jungo do or Recology  
15 do to ensure that they're in compliance with the permit?

16 A. That's a real important part of our business, our  
17 corporation, is maintaining our permits in compliance with  
18 the permits and their rules and regulations that are in  
19 place. There's a very strong compliance program that  
20 consists of each subsidiary level with a local compliance

21 manager and then also at the corporate level with a regional  
22 compliance manager and team of people that assist him.

23 In addition to that to make sure that we're on a  
24 daily basis and weekly and monthly basis meeting all of the  
25 obligations that are in our permits, we have developed a

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1 computer program tracking program that we enter in what all  
2 of those requirements are and then every week, month, spit  
3 out these are the things we're going to have to do next  
4 month, next week. So we'll make sure that our local  
5 management team is apprised of requirements that they have to

6 follow.

7 Q. I'd like to put up Exhibit 121. Can you  
8 identify -- And this is 121-A in our binders. There's a  
9 series of photos here. I would ask the witness to identify  
10 it.

11 A. This is a photo of the Ostrom Road landfill. We  
12 are -- The photographer is --

13 MR. DOLAN: Can we move past the Ostrom Landfill,  
14 Judge? I mean your Honor.

15 MR. FRANKOVICH: This is my last line of  
16 questioning with this witness and I think it's important for  
17 you to see how the proposed Jungo site actually works in  
18 practice and that's what this is intended to show. Highly  
19 relevant.

20 CHAIRMAN GANS: Overruled.

21 Q. (By Mr. Frankovich) Go ahead. You can answer  
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22 the question.

23 A. This is the Ostrom Road Landfill from the view of  
24 the southwest corner of the landfill. So it's southwest from  
25 the southwest corner of the landfill looking to the

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1 southwest. Here on the lower portion you see just a sloped  
2 area that has erosion control measures in place, both  
3 vegetation and the straw wattles. This here is the access  
4 road from the scale house to the working area. And in the  
5 background here is the storm water detention basin where all  
6 of the water from the active landfilling is temporarily

7 stored.

8 Q. And what do you do with that water?

9 A. That water either evaporates, infiltrates or on  
10 very wet seasons it will run off.

11 Q. To where?

12 A. It will discharge in to -- discharge this way in  
13 to the Best slough, which is just outside the photo.

14 Q. So we heard about the Best slough earlier from  
15 Mr. Haskell. That's a picture of the Best slough there?

16 A. Actually these trees could be, yeah.

17 Q. We have a better picture of it. Does that show  
18 the road that's utilized by the equipment?

19 A. Yes, it is.

20 Q. Go to B, 121-B.

21 A. This is a photo of the same site, just a little

22 father north of the facility. You can still see the drainage  
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23 basin in the back there. we see one of the refuse all  
24 vehicles returning from dumping their load. And then in  
25 addition you see a gas collection pipeline here, a landfill

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1 gas collection pipeline.

2 Q. Go to C, 121-C.

3 A. This is on the southeast side of the landfill  
4 looking at the east. And you can see over on the perimeter  
5 there on the landfill is the Best slough. You can also see  
6 in the foreground of the photo straw that had been placed as  
7 part of the erosion control for that slope. You see some

8 soil stockpiled here for the use and daily cover. It looks  
9 like this area was recently placed with waste. You can see  
10 our tipping machine that's used to tip the transfer truck  
11 that's identified in the prior photo. And just beyond that,  
12 a yellow piece of equipment is the compactor.

13 Q. Is the working face depicted there?

14 A. It doesn't appear that the working face is. I  
15 think it's on the back side where the compactor is located.

16 Q. And in the background it looks like there's some  
17 houses or residential development. Are there houses in  
18 proximity to Ostrom?

19 A. Yeah. You can see in the hills here you can see  
20 some homes and those are a couple miles away.

21 Q. And that is the slough there?

22 A. That is Best slough on the south side of the  
23 property.

24 Q. Go to the next one, which is D.

25 A. This is a view from the northwest corner of the

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1 site looking to the northwest and it shows our entrance  
2 facility and scale. These are our scales here and our scale  
3 house, our administrative office and break room for the crew.  
4 And then here is a player and the energy plant where we take  
5 landfill gas and convert it to electricity.

6 Q. So that's the gas to energy facility that's  
7 located at Ostrom?

8 A. That's correct.

9 Q. Does this picture also depict any garden area on  
10 the side?

11 A. Yeah. We have employees who run an organic  
12 garden farm right here. You can see the darker soil that had  
13 recently added compost to.

14 Q. How is that garden irrigated?

15 A. We have well water on site.

16 Q. Employees all share in the proceeds of the  
17 produce from that garden?

18 A. Yes.

19 Q. So you have an organic garden by a well located  
20 immediately adjacent to the land?

21 A. That's correct.

22 Q. The last photograph.

23 CHAIRMAN GANS: Does anybody eat that stuff?

24 MR. FRANKOVICH: The Recology employees have  
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25 great faith.

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1 Q. (By Mr. Frankovich) Now, what is the picture,

2 121-E?

3 A. This is an aerial view of the eastern two-thirds

4 of the Ostrom Road site. It shows the developed area of the

5 landfill right here about 60 acres. It also shows excavation

6 area of the future liner modules to be constructed. And then

7 over here is the retention pond that we discussed earlier.

8 And then up here is the entrance of the facility that we were

9 just looking at.

10 MR. FRANKOVICH: I don't have any further  
11 questions.

12 MS. JOSEPH: The State has no questions.

13 CHAIRMAN GANS: Mr. Dolan, it is back to you for  
14 cross.

15 MR. DOLAN: Thank you. I suspect I'll be brief.

16 CROSS-EXAMINATION

17 By Mr. Dolan:

18 Q. The leachate on site, what's the current plan to  
19 deal with the leachate that's collected?

20 A. At the Jungo landfill?

21 Q. Yeah.

22 A. We would use that, reincorporate that in to the  
23 landfill and use it for dust control to control dust in the  
24 working area or if it's of a sufficient volume that exceeds  
25 those abilities, haul it to off site to a treatment plant.

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1           Q.    At some point, correct me if I'm wrong, I  
2 understood that the leachate was not to be used for dust  
3 control with respect to this application. Did you ever have  
4 that understanding?

5           A.    I don't -- I don't recall. If that's a  
6 requirement from NDEP, we would not. If that's a requirement  
7 from NDEP, we would not use it that way. That's our -- Those  
8 are the things we're using leachate for in California  
9 landfills.

10          Q.    The use of leachate is not used -- is not legal

11 for dust control in many other states, would you agree with  
12 me?

13 A. I don't know.

14 Q. Maybe you have an opinion on this, maybe you  
15 don't. If the landfill was and is as -- I'm not trying to be  
16 clever here -- a good idea as presented by your testimony,  
17 why, can you maybe tell me and the Commission why the  
18 counties along the rail line in California all passed on  
19 siting the landfill in their county?

20 MR. FRANKOVICH: Objection. One, assumes facts  
21 not in evidence that anybody passed on it. And it's  
22 certainly not within the scope of this witness' testimony or  
23 expertise.

24 CHAIRMAN GANS: If you don't know the answer,  
25 just say you don't know.

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1 THE WITNESS: I don't know.

2 MR. DOLAN: I can reach the point if I want to  
3 suspend some skepticism that this Jungo landfill may be the  
4 best thing the human mind could conceive of.

5 CHAIRMAN GANS: Is that a question?

6 MR. DOLAN: Do you agree with that? This is a  
7 wonderful thing we have here; right? And all of the concerns  
8 that have been raised have been addressed by engineering?

9 CHAIRMAN GANS: Do you understand the question or  
10 do you have an opinion?

11 THE WITNESS: well, sure, everybody has opinions.

12 I'm not sure what the question is.

13 Q. (By Mr. Dolan) well, there's nothing -- I'm  
14 getting the impression from the presentation there's actually  
15 nothing for me or my clients to be concerned with; right?

16 A. I can't speak for what you or your clients would  
17 be concerned with.

18 Q. Okay. well, your employees are eating the food  
19 that's grown on the landfill site with the water that is  
20 derived from the landfill site; right?

21 A. well, I wouldn't characterize it as water from  
22 the landfill site. I would say it's groundwater. That's  
23 what it is.

24 Q. Okay. Has the contractor been selected by  
25 Recology in terms of who's going to do the building?

□

1           A.    To construct the first phase of the landfill, no.

2           Q.    There was a question about the employees, maybe

3           it was misasked or misunderstood by me.  But at some point I

4           understood a question to be asked of you about the employees

5           and the training of the employees and you indicated that

6           employees have monthly meetings with you or training sessions

7           in which you go about plans of operation?

8           A.    We have monthly health and safety training

9           meetings with our employees.

10          Q.    However, isn't it true that the folks that would

11          be running the dozers on site are not -- there's no plan for

12          them to be employees of Recology?

13 A. I don't know.

14 Q. The fact is the plan is for third party

15 contractors to be the folks who are actually moving the --

16 MR. FRANKOVICH: I'm going to object to that.

17 There's no evidence of that in the record. You can ask a

18 question if that's the case.

19 THE WITNESS: I'm not aware of that.

20 CHAIRMAN GANS: That's fine.

21 Q. (By Mr. Dolan) So it's your expectation then

22 that the actual individuals who will be operating the dozers

23 and looking at the lines on a daily basis will be employees

24 of your company, Recology?

25 A. That's my understanding.

□

1           Q.    With respect to the methane that you anticipate  
2   being generated, at what year would you expect the flaring  
3   system to be established?

4           A.    Landfill gas generation rate is typically a  
5   couple of years or lags the placement of the waste by a  
6   couple of years.  And that's the time that it takes the  
7   biology and the landfill to convert the organic matter in to  
8   the gasses that we measure.  So I would anticipate it would  
9   be two to three years.

10          Q.    And I would assume this -- would there be more  
11   than one flaring location because it's a very large proposed  
12   landfill?

13          A.    It's a large landfill.  It could end up with a

14 couple.

15 Q. Let's say 50 years from now, what would you  
16 reasonably expect?

17 A. It could have a couple flare locations. That  
18 could be a good efficient way of doing that.

19 Q. Is the flare locations and flaring the same as --  
20 that's not the same as actually using the methane for energy  
21 generation, is it?

22 A. That's right. It's different processes.

23 Q. Has that been part of your plan all along to  
24 generate electricity or power from the site?

25 A. At all of our landfills we're looking at how to

1       beneficially use any resources that we have.

2               Q.    Okay.  Is that being done anywhere?  Are you  
3       generating electricity?

4               A.    We're currently generating 1.6 megawatts  
5       electrical power at the Ostrom Road Landfill and we're going  
6       to be constructing this summer a second engine of that  
7       landfill so we'll be doubling our electrical generation rate.  
8       And we're working on a project at the Hay Road Landfill to  
9       generate, to install one engine of 1.6 megawatts of power.

10              Q.    Okay.  You indicated you were part of the peer  
11       review process for Recology relative to the product that  
12       Golder and Associates was presenting to your company?

13              A.    That's correct.

14              Q.    Did you approve the initial plan that was

15 submitted by Recology to NDEP?

16 A. I don't believe I was involved at that stage of  
17 the project.

18 Q. Have you familiarize yourself with any of the  
19 writings on landfill design and landfill operation of and by  
20 G. Fred Lee?

21 A. I've seen some of his information.

22 Q. What did you think of it?

23 A. I think he has a standard statement and he just  
24 writes about that.

25 Q. And what's his standard statement that he just

1 writes about?

2 A. That landfills are inadequate and they can be  
3 done better.

4 Q. And do you know about his credentials?

5 MR. FRANKOVICH: I'm going to object at this  
6 point in time to having this witness try to testify about G.  
7 Fred Lee.

8 CHAIRMAN GANS: Sustained.

9 MR. DOLAN: That's it.

10 CHAIRMAN GANS: Thank you.

11 MR. FRANKOVICH: We have nothing further.

12 CHAIRMAN GANS: well, then it's back to the panel  
13 again.

14 MR. FRANKOVICH: Excuse me.

15 EXAMINATION

16 By Member Richardson:

17 Q. Quick question. So will this be your first  
18 facility in Nevada that you're working on?

19 A. No. Recology owns the Crestline Landfill which  
20 is in Lincoln County.

21 Q. And I'm sorry. It's southern?

22 A. Southern, southeastern.

23 Q. Okay. And how many facilities in California are  
24 you working on or are you involved in?

25 A. Well, facilities, there's nine including our

1 compost operations and transfer stations.

2 MEMBER RICHARDSON: Thank you.

3 MEMBER LANDRETH: I have no questions.

4 CHAIRMAN GANS: I've got a couple.

5 EXAMINATION

6 By Chairman Gans:

7 Q. Everybody talks about detecting leachate and you  
8 also had a couple questions to respond to on leachate  
9 detection. When we talk about detecting leachate and we have  
10 the monitoring wells and you're looking at it and you're  
11 going to collect it and all of that, if there's something  
12 happens and fails and you detect it and you have to do  
13 something about it, what kind of time interval are we talking  
14 about? Is it going to be, and I'm being facetious here, five  
15 minutes, ten years? Is it the timeliness that we can detect  
16 this and do something about it?

17 A. If there's a release of leachate from the

18 landfill --

19 Q. Yes.

20 A. -- when we would detect that?

21 Q. Yes.

22 A. Oh, if there's a release of leachate from the

23 landfill, when would we detect that? It would not be five

24 minutes from the release.

25 Q. Okay.

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1 A. It would be longer. It would be years. It would

2 be half a year to a couple years before we would detect it.

3 Q. Okay. So it takes some time to detect a leachate  
4 leak or some kind of release. In that time period is the  
5 damage already done? Is it just really after the fact? And  
6 I'm not trying to be argumentative, Mr. Frankovich. I'm  
7 trying to get a flavor for detection and resolution and how  
8 far this stuff goes before we can actually address it.

9 A. Yeah. It's an interesting question, the idea of  
10 a leak from a lined landfill. Because most of the landfills  
11 until probably the mid-80s and even later than that weren't  
12 lined at all. And we operate at and own some landfills that  
13 are unlined that were built in the '50s, '60s, '70s, even in  
14 to the '80s. And the groundwater monitoring system we have  
15 in place around those landfills, we're not detecting leachate  
16 release per say. You may see VOC impacts and have the  
17 chemistry people look at that and they say, well, this is by

18 carbonate level and look at this pH and all of this chemistry  
19 that they understand. They tell us this looks like landfill  
20 gas and we install landfill gas collection systems to pull  
21 the gas out of the landfill and/or from the gas that's  
22 migrated off site. And those VOC's disappear from the  
23 groundwater.

24                   So my understanding is landfill gas is the real  
25 transport mechanism for contaminants from landfills. And

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1 these are unlined or portions of sites that are unlined. And  
2 that's where I see the real need to have a robust landfill

3 gas collection system.

4 Q. Yes. And I noted that. I never could -- we've  
5 been talking so much for the last two days about the monster  
6 we call leachate. And I'm not saying it isn't, okay. I'm  
7 not belittling that. But if I was one of the these  
8 appellants, I would have these same concerns. What can you  
9 tell us about what is leachate? I mean, we've had that --  
10 It's mostly water, probably 99 percent water.

11 A. It's mostly water. But, you know, let's be real.  
12 So is sewage. So is dish water. That's mostly water. But  
13 that's the appropriate place for that is to treat that. It  
14 has a lot of biological activity in it. You don't want to  
15 use that for any purpose just at large.

16 Leachate is similar. You know, it has  
17 characteristics of organics from draining through the organic  
18 waste and it picks up, you know, some other components,

19 finger nail polish, cleaning solvents people use in their  
20 household cleaning.

21 Q. In my younger days I was a little more stupid and  
22 I drank a glass of tertiary-treated waste water and I'm still  
23 alive. I had no ill effects, okay. would you drink a glass  
24 of leachate?

25 A. No.

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1 MR. FRANKOVICH: Ask if him if he would drink it  
2 if it was tertiary-treated.

3 Q. (By Chairman Gans) So leachate isn't a good

4 thing is what I hear you saying and that's why we do these  
5 monitoring things, we try to catch it and do something about  
6 it. But you're telling us that more than leachate you  
7 believe the gas collection is where the real culprit is.  
8 That's what I thought I heard you say.

9 A. Yeah. And to be more specific, landfill gas has  
10 a higher probability of transporting constituents of concern  
11 off the site.

12 Q. Rather than leachate?

13 A. Rather than leachate. And that's been my  
14 experience working at these landfills.

15 Q. And we talked about parts per million. Or was it  
16 billion? Million?

17 A. Million and billion. The technology allows us to  
18 detect.

19 Q. Now it does. It didn't 30, 40 years ago. So

20 again, not trying to belittle the fact, that's not my point,  
21 how can that be a problem, a part per million or billion?  
22 And we know it is a problem. And so we're not trying to say  
23 that because of the low level, low levels of these  
24 contaminants therefore it's not a problem. It's still a  
25 problem even at those levels, is that correct, because you

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1 won't drink it?

2 A. Well, it's different. You asked me about  
3 leachate. This is what we might detect in groundwater.

4 Q. Right.

5 A. At those low levels.

6 Q. So you would drink it in groundwater?

7 A. Well, I probably am drinking it in groundwater.

8 The reality is the testing that they do on the city water  
9 that I get doesn't test, you know, we're not notified about,  
10 so I imagine there is levels that I'm not aware of.

11 Q. Right. I appreciate that. So again, and again,  
12 I'm trying to put this in perspective for all of us, once the  
13 leachate gets in to the groundwater obviously it's diluted --  
14 we used to say in Vegas that the solution to pollution is  
15 dilution in Lake Mead. So certainly it's polluted. And at  
16 that point you're saying it's not quite as detrimental. In  
17 other words, you say I won't drink a glass of leachate but I  
18 would drink a glass of groundwater with leachate?

19 A. Right.

20 Q. So it's not quite as bad and it's not going to

21 kill you on the spot. But it's still something that we all  
22 have to be careful of, to recognize and do something about it  
23 is what I think I'm hearing you say or you wouldn't have a  
24 job?

25 A. You're right. Yes, my job is in large part

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1 because of the regulatory controls that we have for waste  
2 disposal operations.

3 Q. Are you going to drill any wells at the site so  
4 you have water out there?

5 A. We have some water rights and I actually don't

6 recall the specifics on where the water rights are.

7 Q. So if you can't use the leachate for dust  
8 control -- I heard some comment about that -- you're going to  
9 have to get the water from somewhere?

10 A. Yes.

11 Q. So it would probably be a groundwater well that  
12 you would dig and then use that water?

13 A. Right.

14 Q. Is there a reason -- And I haven't talked to NDEP  
15 about this. Is there a reason you shouldn't use that  
16 leachate for dust control on those roads?

17 A. We use that at our California landfills and there  
18 may be some requirements in Nevada that's different and  
19 prohibits that. I'm not aware.

20 Q. So what could happen is by you using leachate for  
21 dust control and then it rains and washes that leachate in to

22 the groundwater, is that what I'm supposed to understand or  
23 not? That could be one of the reasons. Do you see that as a  
24 problem?

25 A. I don't see that as a problem.

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1 Q. Something that has been mentioned here, and  
2 again, Mr. Frankovich, I'm going out a limb here, but it  
3 certainly has been a problem in some landfills. Of course  
4 with Jungo being out in the middle of no where, at least from  
5 a population standpoint. You did point out some houses  
6 fairly close. What about odors?

7           A.    Odor of landfills are, in my experience, been  
8           limited to just in the working face area where the fresh  
9           garbage is being placed and also at sites that are not yet  
10          collecting their landfill gas, there will be gas coming out  
11          of the surface of the soil covers and that gas can have an  
12          odor associated with it. Those are the two areas that I've  
13          seen odors of landfills. Neither one of them travels very  
14          far as far as an odor source.

15                Q.    Have you had any odor problems at any of the  
16          plants that you operate or are aware of?

17                A.    Not associated with the landfill operation.

18                Q.    Not associated with the landfill operations.

19                A.    The composting operations are a larger source of  
20          odors. Composting is taking the green waste organic matter  
21          and active, you know, composting it is almost a rotting  
22          process and that can have some stronger odors associated with

23 it.

24 Q. Okay. How come you're not asphaltting those

25 all-weather roads?

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1 A. That's just a -- That's an efficiency economic

2 consideration.

3 Q. Okay. So it's not necessary and it costs money?

4 I mean, it's unnecessary to actually do that and it costs

5 money if you do do it, is that what you're saying?

6 A. Yes.

7 CHAIRMAN GANS: I have no more questions. You're

8 dismissed.

9 Mr. Frankovich, do you mind if the panel member  
10 asks Mr. Haskell another question?

11 MR. FRANKOVICH: I have no problem.

12 CHAIRMAN GANS: Mr. Haskell. You're still under  
13 oath.

14

15 KEN HASKELL

16 Recalled as a witness on behalf of the  
17 Intervener, having been first duly sworn,  
18 was examined and testified as follows:

19

20 EXAMINATION

21 By Member Richardson:

22 Q. Is Richard Kiel, K-i-e-l, is he an employee of  
23 yours?

24 A. He's an employee of Golder Associates.

25 Q. And what capacity does he work at Golder and

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1 Associates?

2 A. Right now Rick is based in Colorado. Rick and I  
3 both started our office in Roseville in 1995. We worked very  
4 closely over the years. He transferred to Colorado in 2000,  
5 2001, but we still work together on projects.

6 Q. What was his role on this project?

7 A. Well, he was the engineer of record. So he has  
8 some responsible charge. He was aware of the reviewed plans

9 for field exploration. He reviewed the plans, provided  
10 comments and we incorporated those comments. Same thing with  
11 the operating plans and the reported design.

12 Q. Was he the only member on the design team that is  
13 a licensed Nevada engineer?

14 A. No. Phil Migliorle, M-i-g-l-i-o-r-l-e, is based  
15 out of Reno and he did our surface water analyses.

16 Q. The majority of the design took place in the  
17 Sacramento office?

18 A. The majority of it, yes.

19 Q. The two licensed engineers were in Reno and  
20 Colorado?

21 A. Yes.

22 Q. Okay. But they were both in, or at least the  
23 engineer of record was in a decision-making capacity?

24 A. Yes, absolutely.

25 MEMBER RICHARDSON: Okay. That's all. Thank

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1 you.

2 CHAIRMAN GANS: Thank you. That completes the

3 intervener's --

4 MR. FRANKOVICH: Yes.

5 CHAIRMAN GANS: while I would like to press on,

6 I'm trying to be a little considerate of our court reporter.

7 Let me just ask a couple questions. We have closing

8 arguments left and of course our deliberations. Can you guys

9 give any idea about how long your closing arguments might

10 take or whether they're going to be waived or not?

11 MR. DOLAN: Speaking for myself, a substantial  
12 part of the closing arguments have already been made I think  
13 by all parties. I'll depend upon if counsel restates  
14 arguments, then I don't think there's much new for me to  
15 argue about. But if they're going to make additional  
16 arguments I'll adjust my personal presentation. But I'm  
17 prepared to waive final argument because I think I've already  
18 addressed it previous.

19 MS. JOSEPH: The State is prepared to waive  
20 closing arguments if Mr. Dolan is.

21 MR. FRANKOVICH: How can we not go along?

22 CHAIRMAN GANS: Pardon me.

23 MR. FRANKOVICH: How can we not go along with  
24 that?

25 CHAIRMAN GANS: So closing arguments may not be a

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1 big issue here.

2 (Discussion was held off the record)

3 CHAIRMAN GANS: Okay. We will continue on then.

4 The next step is the final -- Now we're back on record. The  
5 next step is the final arguments and I need to hear from each  
6 counsel about waiving these final arguments.

7 MR. DOLAN: For the appellant, thank you. We've  
8 had some discussions I think off the record about the  
9 arguments. Appellants are prepared to restate and  
10 incorporate in to the final argument those arguments that

11 have been previously made. To the extent that that  
12 constitutes a waiver, I'm just saying we're not waiving the  
13 formal argument. We're incorporating by reference the  
14 previous arguments made in connection with the motion to  
15 dismiss. Thank you.

16 CHAIRMAN GANS: The State.

17 MS. JOSEPH: The State waives closing argument.

18 CHAIRMAN GANS: Intervener.

19 MR. FRANKOVICH: If that was Mr. Dolan's waiver,  
20 then we will waive. If he's going to say something else,  
21 we're going to say something else.

22 CHAIRMAN GANS: Okay. As far as I'm concerned,  
23 the final arguments are waived and the next step is to go to  
24 deliberation. And now, Panel, we are back to the very first  
25 original appeal. We're back to the appeal. We're not

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1 talking about dismissal. we're talking about the appeal. so  
2 we are now at a point where we want to discuss or deliberate  
3 about the motion to appeal. we need to either deny it or  
4 support it. And if we support it, we would have to say why  
5 what we want to do that. Same with denying it. So I need  
6 comments, discussion.

7 MS. REYNOLDS: You have a third option in there.  
8 You can affirm. You can also modify. Or you can reverse.

9 MEMBER RICHARDSON: As long as I understand it,  
10 the issue before us is was there an abuse of discretion. And  
11 I don't see an abuse of discretion.

12                   CHAIRMAN GANS: I would agree. I think what I  
13 was hoping for in this appeal is I was looking for  
14 information that would confirm that staff did not follow the  
15 regulations and that staff was arbitrary and capricious in  
16 making any waivers under any of the regulations and that --  
17 did not do their diligence to protect the groundwaters in the  
18 health and welfare of the state. That's what I was looking  
19 for.

20                   So more than just abuse discretion, I think I  
21 have to understand from all the testimony in the last two  
22 days that staff did their job under law, under the regs.

23                   Kathryn.

24                   MEMBER LANDRETH: And I would agree with  
25 Mr. Chairman's representation. I think while technically the

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1 standard is abuse of discretion, I thought as a panel we were  
2 obligated to ensure that staff was conscientious in its  
3 obligation to protect typically the groundwaters, but the  
4 waters of Nevada. And the evidence that was presented  
5 strongly suggests that staff worked diligently to make sure  
6 that the groundwater particularly is protected.

7 CHAIRMAN GANS: Any other discussion?

8 Since you're going to have to write this up as  
9 affirmed, deny or modify, is there anything that you want  
10 from the panel in detail?

11 MS. REYNOLDS: No. I think he's given me  
12 sufficient reasons so that I can write the decision.

13 CHAIRMAN GANS: So with that, if there is no more  
14 discussion, we need a motion.

15 MEMBER RICHARDSON: I would move to deny the  
16 appeal for Permit Number SW495REV00.

17 CHAIRMAN GANS: And with that motion, can you  
18 give us at least your reason for that motion?

19 MEMBER RICHARDSON: That the appellant has not  
20 demonstrated abuse of discretion or that the department has  
21 acted arbitrarily or capriciously.

22 CHAIRMAN GANS: Okay. Second?

23 MEMBER LANDRETH: I second the motion.

24 CHAIRMAN GANS: Is there discussion on the  
25 motion? Anything you want to add to the record? Okay.

□

1 Motion has been made and seconded. All those in favor  
2 signify by aye.

3 (The vote was unanimously in favor of the motion)

4 CHAIRMAN GANS: Opposed? None heard. The motion  
5 carries.

6 And that completes the hearing but not the  
7 meeting. We still have public comment to take. And I am  
8 very willing to take any public comment. Anyone in the  
9 audience, I will limit it if I need to. Anybody in the  
10 audience that wants to make public comments before we close  
11 the hearing? Okay. Seeing none, the hearing is closed.

12 (Hearing was concluded at 1:38 p.m.)

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1 STATE OF NEVADA )  
 )ss.  
2 COUNTY OF WASHOE )

3

4 I, CHRISTY Y. JOYCE, Official Certified Court  
5 Reporter for the State of Nevada, Department of Conservation  
6 and Natural Resources, State Environmental Commission, do  
7 hereby certify:

8 That on Tuesday, the 22nd day of May, 2012, I  
9 was present at the Department of Conservation and Natural  
10 Resources, Carson City, Nevada, for the purpose of reporting  
11 in verbatim stenotype notes the within-entitled appeal  
12 hearing;

13 That the foregoing transcript, consisting of  
14 pages 1 through 190, inclusive, includes a full, true and

15 correct transcription of my stenotype notes of said appeal

16 hearing.

17

18 Dated at Reno, Nevada, this 15th day of June,

19 2012.

20

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22

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CHRISTY Y. JOYCE, CCR #625

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