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

CASE NO. 15617

IN THE MATTER OF APPLICATION OF C.K. DISPOSAL, LLC, FOR PERMIT TO CONSTRUCT AND OPERATE A COMMERCIAL SURFACE WASTE MANAGEMENT FACILITY, PERMIT NO. NM1-16

FEBRUARY 8, 2017

VOLUME 1

BEFORE: DAVID CATANACH, CHAIRMAN
PATRICK PADILLA, COMMISSIONER
DR. ROBERT BALCH, COMMISSION

REPORTED BY: PAUL BACA
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I N D E X

CHAIRMAN CATANACH: Good morning. This hearing will come to order. This is a meeting of the New Mexico Oil Conservation Commission. My name is David Catanach, Chairman of the Commission, the time is 9:00 a.m. Today's date is February 8, 2017. This meeting is being conducted in Porter Hall within the Wendell Chino State building.

At this time I will take roll. Would the Commissioners please introduce themselves for the record.

COMMISSIONER PADILLA: Patrick Padilla, designee of the New Mexico Commissioner of Public Lands.

COMMISSIONER BALCH: Dr. Robert Balch, designee of the Secretary of the Energy and Minerals.

CHAIRMAN CATANACH: Thank you, Commissioners. Also present today is Ms. Cheryl Beta who will be sitting in as Commission attorney and Ms. Florene Davidson who will be taking minutes of the hearing.

Commissioners, in your packets today you should have an agenda for today's meeting. If you review the agenda. Do I hear a motion and a second to adopt the agenda?

COMMISSIONER BALCH: I have reviewed the agenda and I would move to adopt it.

COMMISSIONER PADILLA: Second.

CHAIRMAN CATANACH: All in favor.

ALL MEMBERS: Aye.

CHAIRMAN CATANACH: Motion to adopt the agenda for today's meeting is passed.

Also in your packet today are the draft minutes from the January 9, 2016 Commission meeting. Commissioners, do you have any changes to the minutes and if not is there a motion and a second to adopt the minutes.

COMMISSIONER PADILLA: I don't have any changes and I move that adoption.

COMMISSIONER BALCH: I also have no changes and I second the motion.

CHAIRMAN CATANACH: All in favor.

ALL MEMBERS: Aye.

CHAIRMAN CATANACH: Motion to adopt the minutes from the January 9, 2016 Commission meeting is passed.

The next order of business this morning is the final disposition of Case Number 15487, which is the Application of the New Mexico Oil Conservation Division through the supervisor of the District 2

Office for adoption of special rules for drilling in certain areas for the protection of fresh water Chavez and Eddy Counties, New Mexico.

Commissioners, this case was heard December 5 through the 7th, 2016, and the draft rule was finalized at a subsequent Commission hearing.

Prior to the hearing I have provided to you a draft order in that case. Commissioners, have you reviewed the draft order and if so are there any changes you would recommend making to that order at this time.

COMMISSIONER BALCH: I have reviewed the order and have no additional changes.

COMMISSIONER PADILLA: I have also reviewed the order and I don't have any changes.

CHAIRMAN CATANACH: Do I hear a motion to approve the order and the rule change.

COMMISSIONER BALCH: I would move to approve the order and the rule change.

COMMISSIONER PADILLA: Second.

CHAIRMAN CATANACH: All in favor.

ALL MEMBERS: Aye.

CHAIRMAN CATANACH: Motion to adopt the order and rule change in Case Number 15487 is passed.

CHAIRMAN CATANACH: Commissioners, next item on the agenda is the final disposition of Case Number 15437, which is the application of cause of Petroleum, Inc., for a nonstandard oil spacing and peration and compulsory pooling. This case was heard by the Commission on November 10, 2016, and deliberations in that case were held on January 4, of 2017.

Commissioners, prior to the hearing I provided to you a draft order in that case. I have subsequently made numerous changes to that draft order and -- which you have not seen, and so what I suggest is that I give you a copy of the change that I've made to that order, have you review them and probably, maybe tomorrow morning we can take final action on this case prior to commencing the hearing.

So if that is okay with the Commission, we will dispose of this case tomorrow morning.

COMMISSIONER PADILLA: That is fine with me.

CHAIRMAN CATANACH: So the next order of business on the docket today is Case Number 15617, which is the application of C.K. Disposal, LLC, for commercial a service waste management facility permitted in Lea County, New Mexico.

At this time I will call for appearances in this case.

MR. WOODWARD: Mr. Chairman, Commissioners, my name is Michael Woodward. I am lead counsel for C.K. Disposal. With me today is Wes McGuffey who will be acting as cocounsel.

Thank you.

MR. BOHNHOFF: Good morning, Mr. Chairman, Commissioners, my name is Hank Bohnhoff. I represent interested party and protested Louisiana Energy Services also known as URENCO. With me at counsel table are Cynthia Loehr and Perry Robinson, cocounsel. May I introduce the other personnel that we have in the room that will have a connection to LES?

CHAIRMAN CATANACH: Who are these, witnesses or.

MR. BOHNHOFF: Witnesses and LES personnel.

CHAIRMAN CATANACH: Okay, that would be fine.

MR. BOHNHOFF: I will start with the LES employees, Steve Kohn. He is the head of compliance at Eunice; Dr. Matt McGovern, he's the head of chemistry; with him is Jessie Miller and then Grant

Graham is in-house counsel down at Eunice. I also have with us today three members of the Hayley Aldridge Consulting firm. They will be testifying as experts: Nadia Gluxberg, Clayton Orwig and Jay Peters.

CHAIRMAN CATANACH: Thank you, sir.

MR. BROOKS: Mr. Chairman, Commissioners, David Brooks, Assistant General Counsel Energy Minerals and Natural Resources Department appearing for the Oil Conservation Division.

CHAIRMAN CATANACH: Well, thank you, Mr. Brooks.

Are there any additional appearances?

Before we get started we will just talk a little bit about some ground rules for the hearing.

We previously discussed with the parties the -- that every attempt will be made to conclude this proceeding in three days, by Friday evening. The schedule for that we will be going until 5:30 today. We will start the hearing on Thursday and Friday at 8:00 a.m. and conclude at 6:00 p.m. on both those days. We will take about an hour for lunch, maybe a little bit longer. And we will take morning and afternoon breaks. We have talked, again, we have talked to the parties to the two main

parties here and they have agreed conceptually to try and limit their presentations and cross-examinations to a day and a half each.

Again, we will make every attempt to accommodate that and conclude this hearing within three days. If we can't conclude the hearing within three days, it will have to be continued to a subsequent date as yet to be determined. Checking with the Commissioners this morning, they -- we are not available next week, so Monday is -- all of next week is definitely out of the question. So, again, we will try and keep it to three days if we can.

We are going to try and keep, as best we can, time for each party so that it is fair, each party gets the same amount of time, but we have never, in my experience, done that before but we will try and do our best to try and keep it that way.

Is there any -- any comments that you would like to make at this time?

MR. BOHNHOFF: Mr. Chairman, do you want opening statements?

CHAIRMAN CATANACH: You know, if you want you can make opening statements, brief opening statements, Mr. Woodward, is that --

MR. WOODWARD: Sure.

CHAIRMAN CATANACH: We will entertain that at this time.

MR. WOODWARD: So long as it doesn't count against my time.

OPENING STATEMENT ON BEHALF OF THE APPLICANT

MR. WOODWARD: Mr. Chairman, Commissioners, thank you this morning for letting us appear before you this morning. My name is Michael Woodward. I am counsel for C.K. Disposal.

C.K. Disposal has filed an application under Part 36 of the regulations of OCD for a service waste management facility. They have two parts of their facility proposed. It is a landfill for the disposal of solids and then they have a storage and processing area for the treatment of liquids. And in the processing area they will recover oil, they will attempt the recycling of water and what can't be recycled they plan to manage through evaporation ponds.

We are going to present six witnesses to show that this application fully complies with the requirements found in Part 36.

The owner, majority owner of C.K. Disposal is going to testify. He is going explain how

difficult it is to find a site that actually meets the citing criteria of Part 36.

We are going to have a hydrogeologist who is going to testify that this location that is proposed meets those stringent criteria. As a matter of fact, he is going to tell you it is the best site he has ever seen in 30 years of permitting land disposal facilities.

The engineer of record is going to testify. He is going to talk about how this design not only complies but exceeds the design criteria of Part 36 of the OCD regulations.

We are going to have an engineer testify. He's got air modeling expertise. He is going to speak to H2S management. He is going to speak about the negligible impacts that will be seen to LES from the potential H2S emissions from the C.K. Disposal site.

The supervising engineer who oversaw the preparation of this application and he performed calculations proving that this is a robust design and will not fail, that it meets or exceeds the design criteria of Part 36.

Then we are going to have a permitting consultant who is going to wrap it all up who has

got expertise and a great deal of experience in New Mexico in siting, permitting, waste disposal facilities, both municipal solid waste disposal facilities and oil and gas disposal facilities. And that is important because the regulations that are in Part 36 were derived from the regulations for the permitting of municipal solid waste facilities. He is going to talk about that.

I think I need to address upfront what you're going to hear from the opposition. I think the best way for me to describe that is a whole lot of noise.

They are going to try to take this agency outside of its regulatory authority.

They want to get into issues that are not properly before this agency. So, I want to address just three issues real quickly.

They are going to claim the Applicant doesn't have necessary authority to access the site for the proposed use.

We admit LES is challenging the easement that crosses the state land to get to this tract of land.

And we have filed, C.K. Disposal has filed responses to those challenges. We think that issue

is appropriately before the State Land Office. It is State land, it is an easement across State land.

We also have heard that LES intends to file legal action if the State Land Office rules against them.

Again, land title, land dispute issues should be before, if it is involving State land before the State Land Office; if it is disputed, a land title, then it should be in the courts of the State of New Mexico, not in front of the agency that regulates oil and gas, exploration production and regulates the disposition of oil and gas waste.

They are going to claim the Applicant needs an air permit and a storm water permit from the New Mexico Environment Department, a sister agency of the OCD.

They are going to claim that C.K. Disposal has not shown that they can satisfy the requirements to receive these permits.

Well, we are not applying for an air permit from the NMED from this agency.

Those issues aren't in our application. They are not addressed. Because if we need an air permit from the NMED, if we need a storm water permit from the NMED, we will apply to the NMED for

those permits.

Again, it is issues that are outside the regulatory purview of this agency. And the third issue is you are going to hear about it should be detecting a theme here, is traffic and traffic safety.

There is no mention in the regulations of the OCD in Part 36 about addressing traffic safety.

There is nothing enumerated in those requirements of what is supposed to be in an application saying that you need to have a traffic safety engineer and provide analysis of what is going to be the impacts to the highway out in front of this agency.

We admit, we recognize that we are going to have to go to the New Mexico Department of Transportation and get permission, get authorization to get access to that State highway. And to get that access we will have to have traffic safety engineers, we will have to do studies, we will have to do analysis, we will have to make recommendations and show that there can be necessary upgrades, if required, to assure that there is no negative impact on the traffic safety of the community.

These are some of the issue that are going

to be raised by the opposition. In contrast we are going to show you that C.K. Disposal has submitted an application that is acceptable, that the requirements for notice of financial assurance have been satisfied, that this facility can be constructed and operated in compliance with all applicable OCD regulations without endangering fresh water, public health, or the environment. There are three pillars of the safety and land disposal: Location, design, and operations. We are going to show you that this proposal meets or exceeds the standards that satisfy each of these pillars.

Thank you.

CHAIRMAN CATANACH: Thank you, Mr. Woodward.

Mr. Bohnhoff.

MR. BOHNHOFF: Thank you, sir. May I sit down when I make my presentation?

CHAIRMAN CATANACH: Sure.

OPENING STATEMENT ON BEHALF OF LES

MR. BOHNHOFF: If the Commission members could take the first volume of the C.K. applications that is in front of you, I plan to refer to Figures A.2. and A.7. They are in this first half in Volume 1, Notebook 1, Attachment A volume, or

Attachment A tab.

We met 30 days ago in Eunice, January 9, and at that meeting you heard from approximately 12 citizens in the community. They took time out of their days to speak up for the community. All of them, with no exception, expressed at minimum serious concern about and more often outright opposition to C.K.'s application for an oilfield waste disposal facility. No one supported it. The opposition was based upon traffic and safety, public health, environmental and economic development concerns.

It is not surprising that C.K. wanted this hearing to be held in Santa Fe.

During the next three days we are going to present evidence that follows up on those local residents' concerns about those issues.

I would like to start with a brief description of the legal framework because it really sets the stage for the evidence that LES is going to present. 19.15.36.12A1 in the 2015 version of the New Mexico Annotated Administrative Code, and that is important because the version that was in effect in 2018 that was amended as of January 30, 2016 is the version that applies to this application. What

it requires is that before the OCD can grant a permitted to C.K., C.K. has to demonstrate in its application three basic points. One that it has complied with or will comply with all of these specific detailed requirements in the OCD's own regulation, 19.15.36.

But two, that language specifies as well that C.K. has to prove that it can comply with all other applicable statutes and rules.

So your own regulation requires that an Applicant has to do more than just comply with your rules. They have to demonstrate that they can comply with other agencies' rules.

And then third, the Applicant has to demonstrate that it can construct and operate a facility without endangering fresh water, public health, safety, and the environment.

I observed that the second and third requirements are separate and independent. That is, it is not enough just to show compliance with all other statutes and regulations. Compliance is not a safe harbor, in other words. You have to show the compliance but you also have to show notwithstanding compliance you still don't endanger fresh water, safety, public health and the environment.

The evidence is going to show that C.K. has not demonstrated in its application at all that it can -- that it can meet these three express requirements of 19.15.36.12A1. The evidence that we are going to present will moreover affirmatively show that C.K. is not complying with the OCD's own regulations, it certainly cannot comply with other statutes and regulations and construction and operation of its proposed oilfield waste disposal facility, in fact, will endanger public health, safety, and the environment.

Mr. Woodward is correct that we are going to address legal access. And that is why I wanted to direct your attention to these two charts because I think they best illustrate the point here. If you look, first of all, at A.7. Now this is an aerial photograph what it shows just to orient yourselves that rectangle that is labeled nine, that is the C.K.

COMMISSIONER PADILLA: Sorry, Mr. Bohnhoff, did you say A.7?

MR. BOHNHOFF: Yes, Figure A.7.

CHAIRMAN CATANACH: Are we on the right --

MR. BOHNHOFF: May I show you what I am referring to? This is the first two pages after tab

Attachment A.

MR. BOHNHOFF: Figure A.7.

CHAIRMAN CATANACH: That is not the same one we are showing.

MR. BOHNHOFF: Do we have the aerial photograph A.7?

CHAIRMAN CATANACH: Yes, we do.

MR. BOHNHOFF: The point to note here is if you look at that Rectangle 9, that is the C.K. property, it is about 320 acres. That is on Section 5. And immediately north of Section 5 is Section 32 and that is essentially the section of land that the LES plant is on. Section 32 is bisected by Highway 234 or 176. And the roughly pie-shaped parcel of land that is south of the highway but still within Section 32, that is owned by the State Land Office.

It is an approximately 75-acre parcel of land.

Common sense would tell you that before you are going to be asking for a permit to build an oilfield disposal facility you need to be establishing your legal right to get to that parcel from a public road.

And in fact, it is expressly required in

your own regulation 19.15.36AC2.

That provision states that with the application the Applicant must provide a topo map showing the roads that give access.

Legal access is also required by New Mexico Transportation Department regulations for issuance of an access permit, which C.K. was required to access its facility off of Highways 176, but then because we have this State Trust Land parcel that lies between 176 and C.K.'s land, as a matter of State Land Office regulations, C.K. has to establish its legal right to cross that trust land.

Now, it is important to note that that pie-shape slice of State Trust Land is leased to LES. And the testimony is going to be that LES is planning in the future to have a solar power facility on that land.

Now, if you can turn, at least in my copy of this notebook it is two figures back from this aerial photo what I have is Figure A.2. Do you have that in your notebook as well? Figure A.2.

CHAIRMAN CATANACH: Yes.

MR. BOHNHOFF: If you look there you will see that what C.K. is proposing is that its access road is going to run down the far eastern edge of

that State Trust Land that is leased to LES. The far eastern edge of Section 32.

Now C.K. doesn't discuss legal access at all in its application, but in any event it can't make a showing of legal access because there is no easement across State Trust Land along the eastern edge of that 75-acre parcel. And we will demonstrate that with certified copies of real estate instruments.

The second.that we are going to address is traffic concerns, and that is implicated by a question of whether or not C.K. can get an access permit from the Transportation Department. I think Mr. Woodward is effectively admitting that their application doesn't address traffic at all.

And based on that second prong of that 19.15.36.12A1 provision, the basic requirements to get your permit, we would argue that without more from C.K. about traffic safety you should deny the permit on that basis alone. But LES is going to affirmatively establish that C.K. cannot obtain a driveway access permit from the Transportation Department.

We are going call Mr. Ron Bohannan. He is a well-regarded New Mexico traffic and development

engineer out of Albuquerque. He has extensive experience with, among other development and traffic engineering issues, obtaining Transportation Department driveway access permits. He is going to testify first of all that to get a permit from the DOT you need to have legal access. C.K. doesn't have that. In addition, he will testify that the Transportation Department would require a traffic analysis before a permit is issued. It is called a level of service analysis.

C.K. hasn't performed a level of service analysis, Mr. Bohannan has. Level of service is a major of traffic delay. It is a safety analysis because delay translates into risk of accident. The longer you have people having to wait to make turns in traffic, the greater the risk of accidents.

Mr. Bohannan's analysis generates terrible levels of service. Because of existing traffic on Highway 176, including the traffic going in and out of LES, LES' driveway is roughly 500 feet to the west of that eastern edge of Sections 5 and 32. Now Mr. Bohannan is going to testify that the Transportation Department would require a minimum of 550 feet of separation between the entrances, the LES entrance and the C.K. entrance and then the C.K.

entrance and the County landfill entrance that is on the other side of that eastern boundary of Section 5.

550 feet of separation doesn't exist. There is about 520 feet of separation between LES and C.K.'s proposed entrance, and Mr. Bohannan will testify that 10 feet is significant when you're talking to the Transportation Department, much less 30 feet. There is about 400 feet of separation between where LES is proposing its entrance and the County landfill entrance.

We are going to talk about hydrogen sulfide. We intend to establish that C.K., its supplemental information which we contend they should not have been permitted to provide supplemental information about hydrogen sulfide, not only that they provided in September of last year after a determination of administrative completeness was made, that that modeling itself demonstrates that C.K. will not be able to comply with applicable standards for hydrogen sulfide concentrations.

This will be the testimony of Clayton Orwig. Mr. Orwig has substantial experience with air quality compliance issues, modeling issues. He is going to criticize the model that C.K. came up

with, but his testimony will be that notwithstanding the fact that it likely underestimates hydrogen sulfide emissions and concentrations going past the fence line, what he will testify is the emissions at the south fence line of C.K., which is the operative point at which concentration should be measured because it the closest fence line and it is going to generate the highest concentration, that those concentrations are far above public health standards.

Mr. Orwig is going to address VOC, volatile organic compound emissions as well. And we will establish that C.K.'s application, first of all itself, doesn't show compliance with air quality rules that bear on VOCs, and we will establish affirmatively through Mr. Orwig's testimony that the expected VOC emissions from this facility will exceed health standards, they will also exceed the thresholds required for permitting from the New Mexico Environment Department.

Mr. Woodward's protestations to the contrary notwithstanding, what that means is C.K. is required to show that it can comply with the Environment Department permitting requirements. C.K. is not making that showing.

Mr. Bohannan, he is also going to talk about C.K.'s form water drainage plan.

They propose to have two detention ponds, one at the southeast corner of their property, the other at their southwest corner. These detention ponds are supposed to carry storm water that falls within the confines of the 320-acre parcel and keep it from flowing off of the property where contaminants picked up on the property could contaminate the neighbors' land.

Supposedly, those ponds are designed to handle the runoff from a 25-year event. In fact, the testimony will be that as designed and as shown in the application, those detention ponds won't handle the runoff from a 25-year event. Further Mr. Bohannan is going to testify that in New Mexico what is required is drainage measures that can withstand a 100-year event, which would be even more wide.

In the interest of time I am not going to address the other points that we are going to bring out, instead I am going to conclude by returning to economic development.

Your counsel, I believe, is probably quite familiar with the 2005 New Mexico Supreme Court

case. It is the Colonias development case, also known as In Re: Rhino Environmental Services. In that case the developer proposed to the Environment Department a solid waste landfill to be built near some Colonias, some settlements, unincorporated settlements outside of El Paso. Now, the community protested. They expressed concern at a public meeting about the impact on their quality of life.

Because of the proliferation of landfills, not just the one that was proposed but other landfills in the area of their Colonias. The Environment Department refused to consider that protest. They -- the Department concluded that the arguments that the points about quality of life, proliferation of landfills were irrelevant and instead the Environment Department said it's only going to consider the technical aspects of the landfill application.

And the Supreme Court rejected decisively that construction of the solid waste landfill law.

Because the statute and the regulation provided for public comment, the Court said that the Environment Department must consider the community's quality of life concerns because it had a nexus to the regulation that protects the environment.

Well, there is a parallel in our case. In our case economic development has a nexus to the regulation, the OCD regulation that protects the environment, public health and the safety.

And the citizens down in Eunice drew that connection for you. Public health, safety and environment are problems caused by C.K.'s proposed facility and they are important in their own right. But those problems also are going to impact economic development.

I think those, that point was most cogently made by the individual who is the president of the Lea County Economic Development Corporation.

As a result, you, Commissioners, are going to have to consider the economic development ramifications of the application.

You must consider the message it would send, particularly during this period when State government is disparately trying to bring jobs to New Mexico. The message it would send to other companies that are thinking about relocating in the southeast part of the State. For all of those reasons, LES will ask this Commission to deny C.K.'s application.

Thank you.

CHAIRMAN CATANACH: Thank you, Mr. Bohnhoff.

Mr. Brooks?

OPENING STATEMENT ON BEHALF OF OCD

MR. BROOKS: Mr. Chairman, Honorable Commissioners, the Oil Conservation Division is not going to present a technical presentation in this case to support, of course, the Oil Conservation Commission will not in any case present a technical presentation to oppose the permit that they themselves granted. But, in fact, we are not going to present a technical presentation in support of it. We believe the burden of proof remains on the Applicant until an actual permit is granted. What has been issued by the Division is only a tentative permit, so we will not be presenting technical evidence.

We will -- the only evidence we intend to present is to show that the OCD has complied with the procedural requirements for the granting for the granting of a permit as the -- as they are set out in the applicable part, Part 36 which is the version prior to the 2016 amendments.

And, we are going to do that mostly by stipulation, which I will have ready to present. I anticipate that we will -- our case will be presented either at the close of applicant's case which we would prefer or at the close of the

Respondent's of the Protestant's case, which they have, I believe, requested.

But however the Commission decides to do it we will abide by their judgment.

The facts to which I wanted to prove on behalf of the Division have been largely stipulated. Because there are a couple of matters which have not been stipulated, I will need to put Mr. Jim Griswold on the stand to explain some things about the procedures that are relevant to those -- to the area, small area of disagreement. I would add that Mr. Griswold will be present throughout this proceeding and that the Division has no objection to his being called as a witness by any other party.

I would further add one thing on the wall, the Division does not agree with the interpretation of 36.12A1 that has been advocated by Mr. Bohnhoff. We believe, instead, that there are alternative interpretations of Section 36.12A1 which does not require this agency to make determinations that by the laws and rules applicable for the State of New Mexico are committed to other agencies to make.

If you were to undertake to make such determinations it would risk conflict between agencies, with possibly in some instances

overlapping jurisdiction which would, we believe, would not be a good thing.

Thank you.

CHAIRMAN CATANACH: Thank you, Mr. Brooks.

Any other statements at this time?

Let's get all the witnesses to stand and be sworn in, at this time, all witnesses and potential witnesses.

MR. BOHNHOFF: I have not had all of my witnesses come this morning at the outset because I don't anticipate some will testify tomorrow or Friday. The ones that are here can certainly be sworn.

CHAIRMAN CATANACH: Okay. We can swear anybody that doesn't get sworn in today.

MR. WOODWARD: Also a witness that we will be taking testimony by telephone tomorrow and so he will need to be sworn in telephonically.

CHAIRMAN CATANACH: Got you. We will handle that at that time.

(Whereupon all witnesses were sworn.)

CHAIRMAN CATANACH: So for purposes of timing, the parties will say the hearing is actually getting underway at 9:45 this morning.

MR. BROOKS: Point of procedure,

Mr. Chairman. I believe, I know it would take a little bit of time, but I believe we should have the persons who have been sworn state their names at this time, because, this is, unlike an examiner hearing, this is a proceeding that the record of which will be reviewed and it does make a difference whether or not the person whose testimony appears on the record was in fact sworn.

CHAIRMAN CATANACH: Mr. Woodward, you may proceed.

MR. WOODWARD: The Applicant calls Mr. Bryce Karger to testify.

THE WITNESS: My name is Bryce Karger. It's B-R-Y-C-E, K-A-R-G-E-R. And I have been sworn.

(Whereupon, the witness was sworn.)

BRYCE KARGER,

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. WOODWARD:

Q. Mr. Karger, what is your role with this application?

A. I am the majority shareholder of C.K. Disposal.

Q. Who is C.K. Disposal?

A. C.K. Disposal is a LLC that was formed back around May of '15 to acquire land and a Part 36 surface oil and gas waste disposal permit from OCD.

Q. Is C.K. Disposal authorized to do business in New Mexico?

A. Yes.

Q. When was the initial application for C.K. Disposal filed with the OCD?

A. It was May 1 of '16.

Q. And was there an application filed before then?

A. There was an application -- well, it was a draft, I guess per se, the one I signed the official one was May 1.

Q. Who prepared the application for C.K. Disposal?

A. That would be Parkhill, Smith & Cooper Engineering firm that we hired.

Q. Does C.K. Disposal intend to construct and operate the proposed facility?

A. We do.

Q. Why is C.K. Disposal pursuing this permitted?

A. Well, because we feel there is a need for a Part 36 disposal facility in Lea County permit

area.

Q. Is this the first permit application of this type that you have been involved with?

A. No.

Q. Would you please tell the Commissioners about the first application for a surface waste management disposal facility that you were involved in?

A. My wife and I owned D&CS Properties, LLC, and we acquired a Part 36 permit in December of '14, so it was what I believe the first one of the Part 36 since those rules were enacted.

MR. WOODWARD: May I approach the witness?

CHAIRMAN CATANACH: Certainly.

Q (By Mr. Woodward) I want to provide you a document that is labeled in the notebooks and was pre-submitted as marked as Exhibit J. Do you recognize this document?

A. I do.

Q. And what is that document?

A. Signature for the permit application submitted on 5-1-16.

Q. Is that your signature on the document?

A. It is.

Q. And does this document, is it a true and

accurate copy of the original that you signed on May 1, 2016?

A. Yes.

MR. WOODWARD: I move admission.

CHAIRMAN CATANACH: What is the number of that exhibit?

MR. WOODWARD: J.

CHAIRMAN CATANACH: Exhibit J will be admitted.

MR. BROOKS: No objection.

MR. BOHNHOFF: No objection.

(Exhibit J admitted.)

Q (By Mr. Woodward) Was a Part 36 surface waste management facility permit issued to DNCS?

A. It was.

Q. And when was that permit issued?

A. December of 2014.

Q. And when I say issued, that was issued by the OCD?

A. Correct.

Q. Do you still -- do you and your wife still own DNCS?

A. No, I don't have any -- I sold my shares in DNCS.

Q. Who did you sell your shares to?

A. R360, which is a subsidiary of Waste Connections, I guess.
Q. You guess?
A. Well, I don't know if that is the right wording for it, but Waste Connections does own R360 and so -- but the paperwork I have is I actually sold to R360.
Q. And R306 is now the shareholder of DNCS?
A. Yes. They are the shareholder of DNCS.
Q. DNCS still exists as --
A. DNCS, yes, it does exist and it still holds the Permit 36.
Q. Mr. Karger, I am going to need you to wait until I finish asking my question so that we are not talking over each other for the transcript.
A. Sorry. Okay.
Q. Did you purchase the property that is the subject of the C.K. Disposal permit application?
A. I did.
Q. And has this property been transferred to C.K. Disposal?
A. It has.
Q. How did you find this property?
A. Research, effort, time, phone calls, trying to figure out where the best site would be to

have one of these.

Q. How long did you search before you found this property?

A. Probably I would probably say around two years I would say.

Q. Why did you select this location?

A. It is really a great site for what we want to do. These sites aren't easy to find as far as when you take the rules and the regs that you have to abide by and, you know, geology of it had -- obviously has to work. It has to be in a location conducive to the oil and gas industry, and you have to find a landowner that is wanting to sell it to you. So, it takes a lot of time and effort and luck to be able to sort one of these out and actually in the end get a permit.

Q. When you found this property did you take into account the surrounding land uses?

A. I did.

Q. Did you believe that the surrounding land uses were incompatible with what you wanted to use the property for?

A. I believe that it was a great fit for us. I mean, next to me is the Lea County landfill, across the street is a uranium plant. Right next to

them is a waste storage facility, a nuclear waste storage facility. Right across from the uranium plant, right north of them that touches their land is Legacy Disposal site that was already there. So to me, the way I saw it, we actually bringing a Part 36 one into this, it is a state-of-the-art facility that they don't have one in the area which I think it is desperately needed. We were really excited to bring that there. We actually think it fits perfectly.

Q. So you believe that the -- your proposed use or the C.K. Disposal use is compatible with the surrounding land uses?

A. I do.

MR. BOHNHOFF: Mr. Catanach, I am not going to object to the leading nature of the past several questions, but I do want to make sure that this is establishing essentially a ground rule that the Commission is going permit leading questions.

CHAIRMAN CATANACH: Mr. Woodward, would you be careful in that regard.

MR. BOHNHOFF: I will certainly try, Mr. Chairman.

Q. (By Mr. Woodward) Mr. Karger have you met with any of the surrounding landowners?

A. I've spoken with the Commissioner of the County, Ron Black is his name, twice. I have tried -- we have tried to get in contact with LES URENCO actually I asked Mayor White from Eunice, New Mexico, if he could help get us in contact with them. He was going to try, and we have also asked Senator Carroll Lavell as well if he could set up a meeting between us and URENCO, and so far it is to no avail whatsoever. I don't know if they don't want to meet or whatever, but we've definitely tried to reach out.

MR. BOHNHOFF: We are getting into hearsay here and I don't want to be technical about evidentiary objections, but I do want to make sure that the same leeway is provided to LES when LES puts on its case. I am perfectly willing to abide by leading questions, questions that call for hearsay, hearsay testimony, I just want to make sure that it is not a double standard here.

MR. WOODWARD: I am not sure if that was an objection if you want a response I don't believe it was hearsay. I think he was testifying to personal knowledge but...

CHAIRMAN CATANACH: Okay. I will allow that.

Q. (By Mr. Woodward) Have you attempted to reach out directly to URENCO to speak with them?
A. Have I myself?
Q. Yes.
A. Have I made a phone call or a letter of any kind?
Q. Yes, sir.
A. No.
Q. Do you recognize that there is the potential that C.K. Disposal will need permits, licenses or other authorizations from other regulatory authorities?
A. Yes.
Q. And do you commit on behalf of C.K. Disposal to obtaining all necessary authorization prior to constructing and operating this proposed facility?
A. Yes.
Q. Have you reviewed the draft permit prepared by the OCD?
A. I have read it, yes.
Q. On behalf of C.K. Disposal do you commit to construct and operate the proposed facility in strict compliance with the commitments contained in the application filed on behalf of C.K. Disposal?

A. Yes.
Q. Do you also make that same commitment to comply with the strict compliance with the provisions contained in the draft permit?
A. Yes.
Q. And any other provisions that might be put into that draft permit?
A. Yes.
Q. Do you make the same commitment that C.K. Disposal will maintain strict compliance with the regulations of the OCD?
A. Yes.
Q. What is the amount of financial assurance that is required to be posted by C.K. Disposal for closure, the guaranteed closure and post-closure care of the proposed facility?
A. That is $2,311,000 and maybe I think it is 192, so 2,311,192, something like that.
Q. Will C.K. Disposal have the wherewithal to post such financial assurance?
A. We will.
Q. And does C.K. Disposal commit to ensure that the proper financial assurances are posted to guarantee closure and post-closure care of the proposed facility?

A. Yes.
Q. Does C.K. Disposal commit to construct, operate and close the proposed facility in full compliance with all local, state and federal authorizations?
A. Yes.
MR. WOODWARD: I pass the witness.
CHAIRMAN CATANACH: Mr. Bohnhoff?
MR. BOHNHOFF: I think it would be appropriate if Mr. Brooks asked any questions.
MR. BROOKS: I have no questions, Mr. Chairman.
MR. BOHNHOFF: Mr. Chairman, last week when we delivered copies of our exhibits for the Commission, we also delivered a copy for the court reporter and for the witness.
Do you have the witness copy?

CROSS-EXAMINATION

BY MR. BOHNHOFF:
Q. Good morning, Mr. Karger.
A. Good morning.
Q. Look, if you would, please, at Volume 1 of your application and if we go past the January 30, 2017 transmittal letter to the Commission and Clerk, do you see the next document being an application

for surface waste management facility form? This is --

A. Yes.

Q. -- past the yellow piece of paper?

A. Yes, I do.

Q. And the second page of that form is signed by Nicholas Ybarra --

A. Right.

Q. -- on November 6, 2015?

A. Uh-huh.

Q. Did Mr. Ybarra submit that on behalf of C.K. Disposal?

A. He did.

Q. There isn't any statement anywhere that this November 6, 2015 application is a draft application, is there?

A. In this letter right here in these that you are referring to? Not that I see.

Q. Nowhere in this volume does it state that it is a draft, does it?

A. I am not going to look through it right now, but not that I am aware of.

Q. I think you just testified that you had never written to URENCO.

A. Excuse me?

Q. You just testified in response to a question by Mr. Woodward that you had never written to URENCO.

A. I testified that I had not reached out to URENCO to meet over this, over this C.K. Disposal.

Q. In fact, you did write URENCO in December, did you not?

A. I did write URENCO concerning a contamination issue that we feel like they have of uranium in the groundwater, and I wanted to address that issue with them.

Q. What you did is you essentially made a threat to URENCO, correct?

A. A threat?

Q. A threat.

A. Please continue.

Q. Would you agree --

A. That I made a threat?

Q. -- that the letter that you wrote was a threat?

A. I would not agree that it was a threat.

MR. BOHNHOFF: Mr. Catanach, if I could approach the witness, this is an exhibit that I wasn't anticipating using until I heard the testimony on direct. I would like to show him an

exhibit.

CHAIRMAN CATANACH: Okay.

MR. WOODWARD: Mr. Chairman, I am not necessarily going to oppose the entry of this, but I would like to hear the good cause for not including this in the exhibit list and what the need to put it into the record at this time.

CHAIRMAN CATANACH: Well, I think that is a reasonable request, Mr. Bohnhoff.

MR. BOHNHOFF: Well, shall I have the witness identify the document first and then...

CHAIRMAN CATANACH: Yes.

Q (By Mr. Bohnhoff) Mr. Karger, can you identify LES Exhibit PP, that is P as in Paul, is a copy of your December 2, 2016 letter to Mr. Dave Sexton of LES?

A. Uh-huh. I can, yes.

MR. BOHNHOFF: Mr. Chairman, this is an exhibit that, one, contradicts and impeaches the witness' testimony; two, it shows that Mr. Karger knew very well how to communicate with LES if he wanted to communicate with LES, contrary to the implication of his testimony on direct examination and I move its admission on that basis.

CHAIRMAN CATANACH: Any response?

MR. WOODWARD: We don't oppose its entry.
CHAIRMAN CATANACH: Is that marked, exhibit number.
MR. BOHNHOFF: Yes, Exhibit PP.
(Exhibit PP admitted.)
MR. WOODWARD: We would request copies.
MR. BOHNHOFF: Because I didn't know I was going to be introducing it, I don't have copies at a break or at lunch I can arrange to get copies made.
CHAIRMAN CATANACH: Are you going to cross-examine the witness on this document?
MR. BOHNHOFF: Not any further, no.
CHAIRMAN CATANACH: If you would provide that to us, Exhibit PP will be admitted as evidence.
Q. (By Mr. Bohnhoff) Mr. Karger, if you would look at that black notebook binder.
A. Sure.
Q. Turn now to Tab P, as in Paul, single P this time.
A. (Witness complies.)
Q. Do you recognize Exhibit P, LES Exhibit P as a copy of a December 13, 2016 letter sent to you by Elizabeth Bisby Keen minor source manager of the Air Quality Bureau of the New Mexico Environment Department?

A. I do.
Q. Did you receive that?
A. I did.
MR. BOHNHOFF: Mr. Chairman, I move the admission of Exhibit P.
CHAIRMAN CATANACH: Any objection?
MR. WOODWARD: Yes, sir, I do object. I believe that this exhibit is communications from a sister agency of the OCD. I think it is trying to get into matters that are outside the jurisdiction of the OCD. And if we are going to go down the path of adjudicating the air permitting requirements of the NMED, we will never finish in three days. I'm not sure we will finish in three months. We have got numerous regulations of the NMED that apply to air permitting issues and I think this is just a first step on the path of getting down that way. So I do object, yes, sir, as being irrelevant, immaterial and not necessary for the determination of this Commission.
CHAIRMAN CATANACH: Mr. Bohnhoff, what is the purpose of this exhibit?
MR. BOHNHOFF: It is going to speak to the question of C.K.'s compliance with the second prong of the requirements under 19.15.36.12A1. Compliance

with all other applicable statutes and rules. This is a letter that addresses C.K.'s need to comply with the New Mexico Environment Department's air quality permitting regulations and it is relevant on that basis.

I believe that by denial of the motion to limit the evidence C.K. filed last week, and communicated the Commission's ruling yesterday, the Commission has, I think, made a decision that we can address this issue at the hearing. The Commission may have not made a final decision on the legal interpretation question, at least for purposes of hearing and getting the evidence in, I think we should be entitled to make our case.

It certainly is much more efficient now that we are here to hear the evidence that LES issues to present. Mr. Woodward's position is you don't need to consider it. Well, he can make that argument and he has apparently made clear he doesn't intend to present any evidence about compliance with other applicable statutes and regulations. C.K.'s argument position seems to be we can just kick that can down the road. It's our position, no, though that is not what the statute says, that is not what the regulation says. But if that is a legal

argument, then they are not going to be presenting any evidence, that is fine, that is their choice but I think we are entitled to present our evidence that is consistent with our theory of the case.

CHAIRMAN CATANACH: I think that -- I am not sure the Commission at this point in time is prepared to make a determination on the interpretation of that Rule 36 provision that you are citing. We have already heard what the Commission's opinion is on that. I think that at this time we will move forward with that and we can make that determination when we need to make that determination, but in the meantime I think we should keep going and allow you to keep moving on.

MR. BOHNHOFF: Thank you, sir.

MR. WOODWARD: Mr. Chairman, may I respond? This is -- this is an evidentiary ruling, it is not an ultimate ruling about the interpretation of Rule 36. And the rules of the OCD as pertaining to these evidentiary hearings say that parties may present evidence unless it is immaterial to the proceeding. And this is an evidentiary ruling that we are asking you to make because it becomes a slippery slope that if we have to now cross-examine on matters pertaining to NMED

regulations and their authority, it is going to become a very unwieldy hearing for the Commissioners and a very unwieldy record.

COMMISSIONER PADILLA: I would move to go into executive session.

COMMISSIONER BALCH: Second.

CHAIRMAN CATANACH: All in favor.

ALL MEMBERS: Aye.

CHAIRMAN CATANACH: Gentleman, we are going to go into executive session to discuss this particular issue. So, we will stop at this point and have the parties vacate the hearing room.

(A recess was taken.)

CHAIRMAN CATANACH: Commissioners, do I have a motion to go back into regular session?

COMMISSIONER PADILLA: So moved.

COMMISSIONER BALCH: Second.

CHAIRMAN CATANACH: All in favor.

ALL MEMBERS: Aye.

CHAIRMAN CATANACH: For the record, we -- during the executive session, we discussed the issue of the interpretation of the rule with regards to other permits that may be required and at this time I am going to turn it over to my esteemed colleague, Mr. Padilla, to address that.

COMMISSIONER PADILLA: Right. So we made a determination as to how we are going to interpret that particular rule for the purposes of this hearing, and we decided that in practice permits from OCD or OCC are conditioned on subsequent approvals from other agencies, but that the OCC is not in a position to determine the permitting requirements of those agencies and it is also beyond our jurisdiction to do so.

For the purposes of this hearing, we will still hear testimony that relates to fresh water, public health safety, and the environment, but we won't consider those as they relate to the permitting requirements of other agencies.

MR. BOHNHOFF: Mr. Chairman, Mr. Padilla, that is the ruling of the Commission, and I will abide by it. I want to -- you just made it clear that rules of other agencies, including permitting requirements, generally are predicated upon a determination that those rules, those permits are required in the interest of the public health, safety and welfare, including the environment.

I am going to be presenting evidence that speaks to the third prong, endangerment of the environment, public health and safety, and there is

going to be overlap between that evidence going to that prong and permitting issues. I will be mindful of the ruling that I cannot, if I am understanding your ruling, that I cannot address permitting requirements in isolation and I won't do that because, I understand it is your ruling.

COMMISSIONER PADILLA: Correct.

CHAIRMAN CATANACH: That's correct. We have no jurisdiction over, for example, DOT regulations. We don't have the expertise on this Commission to deal with that kind of issue. That type of permit, we understand, will have to be obtained by the Applicant and so we would defer to DOT to handle that.

We would like to hear, again, evidence testimony with regards to public safety and the environment, fresh water-type issues.

MR. BOHNHOFF: That is fine. Just so it is clear, I think the record has been made and if there is error as LES believes, I think that error has been preserved. My question of condition, granting a permit on condition of future compliance with all other applicable statutes and regulations, it is LES's position that your regulation, as the OCD, I guess in conjunction with the OCC, has

promulgated it requires that the showing of compliance with other applicable statutes and regulations needs to be made in advance of granting the permit as opposed to granting the permit on condition of some subsequent showing of compliance with those rules and regulations. It may be that that is what the Commission and the Division has done in the past, but we respectfully submit that it is contrary to the language of that regulation.

And the Commission has ruled against LES on that point, but I do want to make sure that it is clear on the record that that is LES' position.

CHAIRMAN CATANACH: Just one more comment. You know, we don't agree that any other permits should be issued prior to coming to OCD. Typically how we issue permits, Mr. Bohnhoff, is we -- we do issue conditional permits. Let's say our permit is subject to like approval by the Bureau of Land Management or the State Land Office or whoever else has jurisdiction over that particular permit, so we believe that if we approve the application and the permit and subsequently DOT denies their application, we don't believe that our permit -- we believe our permit would be dead at that point. So, that is -- they are going to have to obtain other

permits. If they don't, then that is -- they are going to have to deal with that.

COMMISSIONER PADILLA: We also avoid the issue of jurisdictional overlap that Mr. Brooks alluded to earlier which could cause problems, in our view, for both parties.

MR. BOHNHOFF: I think the issue has been framed for a subsequent court.

MR. BROOKS: Mr. Chairman, surplusage for lawyers to say anything after the Court has ruled, but I would like to know for the record that the rule that has been cited does not say all applicable statutes or regulations and it is subject to the interpretation that it means those statutes or regulations which the Oil Conservation Division is charged with enforcing.

CHAIRMAN CATANACH: Thank you, Mr. Brooks.

CHAIRMAN CATANACH: At this point you may proceed.

MR. BOHNHOFF: Thank you.

CROSS-EXAMINATION (Continued)

BY MR. BOHNHOFF:

Q. Mr. Karger, if you would turn to this same Figure A.2 in your application.

A. I am not on this anymore, the black book.

Q. Can you close the black notebook and go to the following one.
A. Where do you want me to go?
Q. Figure A.2 I referred to in my opening. It is behind the tab Attachment A.
A. Figure A.2?
Q. Yes.
A. Okay.
Q. And that reflects, does it not, that the access road that C.K. is proposing for its facility will run along essentially the eastern edge of that State Land Office tract that lies between C.K.'s property and Highway 176?
A. Are you saying it shows it on this map, is that what you're asking me?
Q. I am saying it reflects that, doesn't it?
A. This map, I know that is where it is, if that is what you're asking me. But it doesn't say where the State Land Office is -- the State land is on this map.
Q. The State Land Office land is to the north?
A. It is, correct, right it doesn't point that out on this map, but I agree that it is there.
Q. All right. Can we agree that the State

Trust Land strip that lies between your land and Highway 176 is leased to LES?

A. Yes.

Q. Would you admit that the State Land Office has not granted a permit to anybody, granted an easement to anybody for access along the eastern edge of that State Land Office piece of land?

A. I am under the impression that we do have access on that road that is there to -- to our land. So, I don't know.

Q. Are you talking about the existing dirt road?

A. I am.

Q. The existing dirt road is not on that eastern edge of the property where you are proposing to have your access road in the future.

A. Right, okay.

Q. Would you agree with that?

A. I am not sure.

Q. If you turn two pages from Figure A.2 do you arrive at Figure A.7?

A. I do, I got it.

Q. If you look at this aerial it shows that existing dirt road some distance from the eastern edge of your property and the State Land Office

property, correct?
A. Correct.
Q. Is it your contention that C.K. Disposal has an easement that runs along that existing dirt road some distance from the east boundary of Sections 32 and 5?
A. Are you asking if we have an easement on that actual dirt road?
Q. Is that your position?
A. I am trying to clarify what you're saying. Are you asking me if I feel I have an easement on that dirt road?
Q. Yes, sir, that is my question.
A. Yes.
Q. Your position is based upon an easement that was granted by the State Land Office in 2009 to Mr. Sims, correct?
A. Correct.
Q. Now, go back to that black notebook. And turn to Exhibit N1.
MR. WOODWARD: Mr. Chairman, I am going to have to object as we go down this line of questioning. Once again, this is involving a matter that is before a sister agency of the OCD. And it involves the adjudication of property rights and it

is going to be a matter that is determined by lawyers from another agency and what I understand possibly in the court system of the State of New Mexico. But to sit here and go down this path of whether this easement is legitimate or not is really outside of the bounds of what we should be discussing in terms of protection of the groundwater, whether this design meets the design criteria of Part 36. If you look at their notebook it is -- a good portion of it is filled up with easements and deeds. It looks like somebody did a title search down in Lea County on whether there is appropriate title to this property or not. And I just don't think that we need to be taking up your time going through all of these documents.

MR. BROOKS: Mr. Chairman, Honorable Commissioners, the Division concurs in the objection and we would further object to any questions of the witness that call upon him to interpret legal title instruments inasmuch as he has not been qualified as an expert title lawyer.

Thank you.

MR. BOHNHOFF: Certainly, Mr. Catanach, not asking the witness to state a legal opinion about any title document. What I am asking him is

what his position is.

It is true that in order to get an access permit from the State Department of Transportation and to get a right to cross the State Land Office property, C.K. Disposal would have to get authorization from the Transportation Department and from the State Land Commissioner.

But in addition to that, it is expressly addressed in your own regulations. It is 19.15.36AC2, and that states that the application must include a plat or map showing the road that provides access to the facility.

Implicit in that is a requirement that C.K. has to make a showing to the satisfaction of this body that it has legal access and that is reasonable. You shouldn't be granting a permit conditioned or otherwise unless at minimum the Applicant can show you that it has legal access to the property it wants to build a facility on.

MR. WOODWARD: Mr. Chairman, may I respond?

CHAIRMAN CATANACH: Yes.

MR. WOODWARD: I think you heard there mention of two other sister agencies where we have got to go get authorizations. So, again, he is

trying to pull this agency outside of its regulatory authority. He is, I think, also trying to build a record to utilize in other proceedings.

So you have heard the witness testify he believes he has legitimate easement to access his property. We will show you, the map is in here, showing where the access is going to be to this property satisfying that regulation. When we started trying to say implicitly we have got to have a legal opinion on the legitimacy of the easement from the Land Office, then, this just gets out of control. So, I think that based on your ruling, my objection is very consistent with your previous ruling on which you went into executive session.

CHAIRMAN CATANACH: I don't believe that our rule -- again, I think our rule states that you have to present a map that shows your access to the facility. I don't think that we are in a position to interpret whether or not the Applicant has legal authority from the Land Office or from DOT to make that to access that property. It is -- again, it is not our jurisdiction to do so. That is a road that they are going to have to travel down with other agencies and I would agree with Mr. Woodward.

COMMISSIONER PADILLA: What is the

threshold, permitting threshold for access for APD?

CHAIRMAN CATANACH: There is no permitting threshold. We don't typically -- in any permit we issue we don't go into detail on accessing the property. It is not within our...

MR. BROOKS: Mr. Chairman, Members of the Commission, I would like to note that the Timber Sharp case, which was decided by this Commission is somewhat analogous on this point because in that case we held that an Applicant for a permit to drill need to only show that he has a good faith belief that he has a right to drill a well on the premises.

Since we don't have jurisdiction to determine whether or not, in fact, he does have such a legal right -- I'm sorry not we, you.

CHAIRMAN CATANACH: That didn't have anything to do with accessing the site, that had to do with being on the site to drill the well.

MR. BROOKS: Well, in that case the question was not whether -- whether the operator had access but whether the operator had the right under question -- the underlying question was whether the lease had expired. The question was whether the operator had the right to drill, as I remember the case. And this Court said, one, we don't have

jurisdiction to determine that issue, and, two, our rule would be that we -- we will grant an APD if the person has a good faith belief that they have a right to drill the well on that property.

And if they don't well that is a question for the Courts to determine. I don't have a citation here but I can provide it to you.

CHAIRMAN CATANACH: So I believe that the Applicant has met the requirement of the rule stating that they have to provide a map showing the access to the property. I think that is as far as we can go.

MR. BOHNHOFF: Okay. For the purposes of making a record for subsequent proceedings, I would move the admission of Exhibits K1, 2, 3, K1 through 9; L1 and 2; M1 through 5; N1 through 4, and O. These are all certified copies, they are self-authenticating, and on that basis there should be no technical evidentiary objection. The original certifications are in the court reporter's notebook.

I understand your ruling, but for purposes of essentially, one, making the offer of proof and then, two, making the record clear on the subsequent chapter of this matter, I would ask that you go ahead and admit those exhibits into evidence subject

to the ruling that you are not going to hear, address that issue.

CHAIRMAN CATANACH: Mr. Bohnhoff, can you give me those exhibit numbers again.

MR. BOHNHOFF: K1 through K9. L1 and L2. M1 through 5. N1 through N4. And O.

CHAIRMAN CATANACH: Mr. Woodward?

MR. WOODWARD: Yes, sir. For purposes of the record, we are going to object to the admission of this evidence as being irrelevant and immaterial for the purposes of this proceeding.

CHAIRMAN CATANACH: Mr. Bohnhoff, the exhibits that you cited, is that all related to easements and access to the property?

MR. BOHNHOFF: It is related to -- it is relevant to this legal access question, yes.

CHAIRMAN CATANACH: Mr. Woodward, are you objecting -- as to an offer of proof, are you objecting to that also.

MR. WOODWARD: In terms of an evidentiary objection, if they are certified copies of -- from a State agency, no. I clarify my objection as they are not relevant. They are concerning a matter that is within the jurisdiction of other agencies and the Courts and they are not involving matters that are

within the jurisdiction of the OCD.

CHAIRMAN CATANACH: Mr. Bohnhoff, I think we are going to deny the admission of those exhibits at this point as offers for proof at this time.

MR. BOHNHOFF: I understand denying admission of the evidence. I would hope that the Commission would let me make the offer of proof by virtue of what I put in the record, already. I think I am entitled to make a statement that makes the offer of proof.

MR. BROOKS: Mr. Chairman, Honorable Commissioners, if he is offering this in the nature of a Bill of Exception for purposes of the record, I believe he is correct that he does have that right. It doesn't often arise in the OCD proceedings, but since this proceeding will be reviewed on the record, it seems appropriate to me that that should be allowed.

CHAIRMAN CATANACH: So, what should be allowed, Mr. Brooks?

MR. BROOKS: That the admission of documents for the -- as to make them part of the record for the limited purpose of allowing an appellate tribunal to determine the propriety of the Commission's ruling.

MR. WOODWARD: Mr. Chairman, we can agree that these documents are part of the LES exhibits that were submitted to the agency as part of their prehearing statement.

And for that purpose, they are in the administrative record.

CHAIRMAN CATANACH: Okay. So they will be in the record as part of the exhibits that were a part of the record that was submitted by LES.

MR. BOHNHOFF: No further questions.

CHAIRMAN CATANACH: Commissioners?

COMMISSIONER BALCH: Maybe a couple of clarifications, Mr. Karger.

EXAMINATION

BY COMMISSIONER BALCH:

Q. On the Figure A.7, the one that follows A.2 not the one that follows A.6. It should be in your Book 1. I believe you testified that there were several other waste management facilities of various types within this area?

A. Correct.

Q. Would you on this map point out to me exactly what these facilities are and what their purposes are.

A. You see here the Number 3.

Q. Yes.
A. That is the Lea County Solid Waste Landfill. You see -- you will see four and it has got right by State line right above that would be, I guess, northeast, that would be Waste Control Specialist which is the --
Q. Is that the same facility that continues on into the Texas side?
A. It does, yeah. I am drawing a blank. The nuclear waste facility there. One and six, that entire six that drops down, that is LES URENCO. And the one right above them, you see all of those fascinating open, it looks like ponds and slugs and dirt and oil and crap, that is Sundance, which is a Legacy --
Q. That is not labeled on the map.
A. Right. That is a Legacy facility that was grandfathered in under old rules from my understanding.
Q. That is a surface waste facility?
A. It is.
Q. Similar to what you're proposing, but under different regulatory.
A. Way different rules.
COMMISSIONER BALCH: Thank you very much.

COMMISSIONER PADILLA: Is that a 7-Eleven facility, do you know, Sundance as far as what rule governs it?

THE WITNESS: I think so, correct.

COMMISSIONER PADILLA: That is actually all I have, Mr. Chairman.

EXAMINATION

BY CHAIRMAN CATANACH:

Q. Mr. Karger, your proposed site is -- how large is that proposed site.

A. It is 316 acres.

Q. And is that -- on your exhibit, is that outlined in the lines as Number 9.

A. Yes, sir.

Q. I want to understand the access there is a dirt road that appears to be on that eastern edge --

A. Correct.

Q. -- that goes back to the west, is that your access road that you will utilize into the facility?

A. From what I understand, yes.

Q. The tract, the 316-acre tract, is that a fee tract of land, privately owned?

A. It is. It is owned by C.K. Disposal.

Q. So there is no federal or State acreage

involved in that site?

A. No, sir. No, sir, there is not.

CHAIRMAN CATANACH: Okay. That is all the questions I have.

MR. WOODWARD: We have no redirect. Thank you.

The Applicant calls Mr. Kevin Carel.

THE WITNESS: My name is Kevin Carel, K-E-V-I-N. My last name is spelled C-A-R-E-L.

(Whereupon, the witness was previously sworn.)

KEVIN CAREL,

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. WOODWARD:

Q. Mr. Carel, would you please state your educational and professional experience.

A. I have a Bachelor's of Science in geology from the University of Oklahoma and my work experience involves 30 years. I started a little over 30 years ago in a small consulting firm in Oklahoma City.

I spent some time at Conoco. After Conoco I worked for Laidlaw Waste Systems for eight years.

My last position there was director of environmental management for their western U.S. operations.

Laidlaw was acquired in 1997 by Allied Waste Industries and at that time I elected to started my own firm, the Carel Corporation, and I have been president and owner of that for the last 20 years.

MR. WOODWARD: May I approach the witness?

CHAIRMAN CATANACH: Yes.

Q (By Mr. Woodward) I have handed you a document that has been previously marked as Exhibit C. Do you recognize this document?

A. Yes.

Q. Did you prepare this document?

A. Yes.

Q. What is it?

A. It is my resume.

Q. Does this document accurately --

MR. WOODWARD: It is Applicant's Exhibit C.

Q (By Mr. Woodward) Does Applicant's Exhibit C correctly and -- represent your educational work experience?

A. It does.

MR. WOODWARD: I would move admission of

Exhibit C.

CHAIRMAN CATANACH: Any objection?

MR. BOHNHOFF: No objection.

CHAIRMAN CATANACH: All right. Exhibit C will be admitted.

(Exhibit, C admitted.)

Q (By Mr. Woodward) Mr. Carel, are you a registered professional geoscientist?

A. I am.

Q. In what States?

A. I am registered in the State of Texas, in Louisiana, and in Mississippi.

Q. Does the State of New Mexico have a requirement for licensing of professional geoscientists?

A. They do not.

Q. How many different types of disposal facilities have you worked on?

A. Different types? Currently at the Carel Corporation we provide routine services for about 64 different facilities. Most of those are municipal solid waste sites. We also do the work at three hazardous waste sites, some contaminated industrial sites, other industrial landfills, construction and demolition landfills, and three other oil and gas

disposal sites similar to the proposed C.K. site.

Q. What type of work do you provide for these facilities?

A. We provide different types of environmental consulting. But our bread and butter work is really the groundwater work. We do provide the field services for groundwater sampling, we do the analysis of the laboratory data, statistical analysis where it is required.

Reporting, we are involved in well installations, subsurface investigations, remediation, things of that nature.

Q. Would you please describe for the Commissioners what your role is in the C.K. Disposal application?

A. Yes. My firm performed the subsurface investigation at the site. I -- staff geologists at my firm was on-site during the drilling of the five borings used to characterize the subsurface, and we compiled that information. We compiled other information obtained regarding geology and groundwater in the vicinity of the site and used that to prepare the Attachments G, the hydrogeology report. We also prepared Attachment H, Vadose zone monitoring plan and Attachment I, a sampling

analysis plan.

Q. What documents were used in preparation of your report and getting ready to present your testimony today?

A. Documents included the regulations that applied. We found published literature on geology and hydrogeology. We obtained available well logs from the State Engineer's office and we obtained data, geologic data, groundwater data from Internet searches.

Q. In front of you is a copy of the C.K. Disposal application. Would you please refer to Volume 2 of that application.

Are the reports that you prepared and responsible for contained in Volume 2 of the C.K. Disposal application?

A. Yes, sir, they are.

Q. Would you please identify for the Commissioners the two reports you are responsible for?

A. Three.

Q. Three.

A. Attachment G, the hydrogeology report. Attachment H, the Vadose zone monitoring plan, and attachment I, the sampling analysis plan.

Q. Would you please refer to Attachment G, Page 11, Section 3.3.

I want to draw your attention to the second paragraph there. In your opinion has C.K. Disposal established that the depth to groundwater is greater than 100 feet below the deepest excavation proposed landfill?

A. Yes, they have.

Q. And why is that?

A. There were five borings drilled to a depth of 175 feet below ground surface. That depth is up to 130 feet below the deepest elevation of the base of the landfill.

And there was no groundwater observed in those borings.

Q. Were those borings left open for any period of time?

A. Yes, they were.

Q. Was there ever water found in those borings?

A. No, there was not.

Q. How long were the borings left open before they were closed?

A. They were left open at least 24 hours. I really wasn't there in the field, but I believe they

were open for a period of time after that until they could be appropriately plugged.

Q. Based on the subsurface investigation that you conducted and your review of the available data, have you formed an opinion regarding the geological formations beneath this facility?

A. Yes, I have.

Q. And what is that opinion?

A. Well, we had identified the various strata that we encountered in the -- in the borings. My opinion is that that strata is consistent with published literature and what other sites have encountered.

The lower unit is the Chinle formation. It is a clay stone low permeability type of sediment that restricts the migration, downward migration of water. And that the depth to water is over 130 feet below the base of the landfill.

Q. Is the Chinle formation also sometimes known as the Triassic Red Bed?

A. Yes.

Q. Is it true that is the formation that holds up the Ogallala aquifer?

A. It underlies the Ogallala, yes.

Q. Has the -- in your opinion has the

subsurface geology in the immediate vicinity of a C.K. Disposal facility been fully characterized?

A. Other facilities have done their characterizations of the site, correct.

Q. And which other facilities are those?

A. As previously stated, the Lea County Landfill, Municipal Solid Waste Landfill immediately east of the proposed facility. There was that WCS facility, the low level radioactive waste facility about a mile and a half or so northwest of the proposed site, proposed C.K. site.

And then URENCO is just north of this proposed site.

Q. You said the WCS facility is northwest, isn't it northeast --

A. Northeast I'm sorry.

Q. -- from the C.K. facility?

A. That's correct, I stated that incorrectly. Northeast.

Q. And each of those land disposal facilities were required to fully characterize the subsurface before getting their permits. Isn't that correct?

MR. BOHNHOFF: Just objection. I think he is characterizing the URENCO facility as a land disposal facility. I am not sure that's correct.

Q. (By Mr. Woodward) Set aside the URENCO facility, the two other facilities are land disposal facilities, are they not?

A. They are.

Q. And so there data was submitted and reviewed by regulatory authorities before issuing those permits?

A. That is correct.

Q. Would you please refer to Figure G.2.

A. (Witness complies.)

Q. Would you please identify this figure?

A. Yes. It is a drawing that we prepared. It is titled Local Streams, streams -- I'm sorry, Springs and Water Wells.

Q. The title seems self-explanatory but would you please tell the Commissioners what this map is showing?

A. Yes. It shows the proposed cite. We have a mile radius that extends out in all directions around the site. That mile radius is a green line. Inside that green line we illustrate the five borings that were drilled as part of the subsurface characterization. And we have identified 37 other wells or borings within that mile radius. Twenty-six of them were obtained from the State,

Office of the State Engineer and they're associated with either URENCO or WCS. Eleven of them are associated with the Lea County landfill.

Q. When you say that the borings are shown, the borings done by C.K. Disposal, would you please verbally describe where those borings are on the map and how they are designated.

A. Yes. They are designated as a solid black circle. And they are labeled BH-01 through BH-05.

Q. Are the wells shown on this map also depicted somewhere else in the report?

A. I am sure they are.

Q. I will refer you to Table G.5.

A. Yeah, we list them.

Q. Tab A?

A. We list them in a tabular format in two tables, G.5A and G.5B.

Q. And did you prepare these tables, were they prepared under your control and supervision?

A. They were.

Q. And do you testify that they are true and accurate?

A. Yes, they are.

Q. Was the map found in Figure G.2 prepared by you or under your supervision?

A. Yes, it was.
Q. And do you testify that it is a true and accurate depiction?
A. Yes, I do.
Q. Are there any springs shown within this one-mile radius on Figure G.2?
A. No, there are not.
Q. Are there any streams?
A. No, not within the mile radius.
Q. What is the closest stream?
A. Well, there is an intermittent stream about a mile and a half west of the proposed cited that is referred to as Monument Draw.
Q. When you say intermittent, it sometimes has water?
A. Correct.
Q. Now, if we could refer to Table G.4 on Page 12. For clarity purposes, I am referring to Attachment G of Volume 2 of the C.K. Disposal application.
What does Table G.4 show?
A. It provides the chemical the results of chemical analysis for several groundwater parameters.
Q. Are these from wells located in the

vicinity of the C.K. Disposal facility?

A. They are. Some of the data was obtained by reports for URENCO, some of the data was obtained from a report for the WCS facility, and then the remainder of it was obtained by a report done by a company called Geohydrology Associates.

Q. Is this the type of data that you would typically rely on when doing the type of analysis you have done in Attachment G?

A. Yes.

Q. Have you found that the numbers are reasonable?

A. They seem reasonable, yes.

Q. Do they appear to be reliable?

A. They do.

Q. Does this data come from any particular geologic zone?

A. Yes. The data from the URENCO report is from a saturated zone within the Chinle formation. Similarly, the same zone for the WCS site?

For Geohydrology Associates, the reported well was completed at a depth of 350 feet and that should be within the Chinle formation also, so they should also be from within the Chinle.

Q. If I could refer you to Figure G.7 in that

same report.

A. Okay.

Q. Did you or did someone under your supervision prepare this figure that is labeled G.7?

A. Yes.

Q. Is the zone that you were referring to about where the groundwater data came from in -- that's listed in Table G.4, is that formation shown on this cross section?

A. Yes. We labeled it Chinle formation and we also identify a 225-foot zone on the cross section.

Q. I guess, let me back up. Would you please identify what Figure G.7 is.

A. Yes. It is a hydrogeological cross section. It is roughly about nine or ten miles long. It runs from east/west through the proposed site. It includes well logs obtained from the Office of the State Engineer as well as two boring logs prepared from the subsurface investigation.

We obtained the topography from the elevations of the wells and from topographic maps and we obtained the elevation of the Ogallala saturated zone from a published report.

Q. To be clear, the Ogallala zone appears at

the location of the C.K. Disposal facility, correct?
A. It does.
Q. But it is not saturated?
A. That is correct.
Q. Does this cross section show the thickness of the Chinle formation?
A. It does.
Q. And what does it show?
A. In terms of thickness?
Q. Yes.
A. Well, I don't know how thick it is illustrated here. I know that published reports, publish the thickness as being up to 1,270 feet thick. It may be a little thinner here, I have to measure it.
Q. But over a thousand feet?
A. Yeah. Well, yeah, right at, just slightly over a thousand feet, yeah.
Q. Do you have an opinion as to whether the Chinle formation acts as a barrier to downward migration of contaminants and water?
A. I do.
Q. What is that opinion?
A. I believe that it functions as a downward barrier, yes.

Q. A good one?
A. Yes.
Q. Is the 225 zone marked in this figure utilized in any way for domestic fresh water or industrial fresh water?
A. Not to my knowledge, no.
Q. And why is that?
A. It is reportedly a low yield saturated zone it doesn't make a lot of water, it is primarily just used at two of the sites for ground water monitoring purposes.
Q. Have you identified the shallowest fresh water aquifer?
A. I have.
Q. And which zone is identified as the shallowest fresh water aquifer?
A. Well, I identified as what is called the 225-foot zone at the WCS facility. They similarly identify that as what they call the uppermost aquifer.
Q. Is the 225 zone deeper than 100 feet from the deepest excavation proposed by C.K. Disposal?
A. Yes.
Q. When I want to reference Appendix G.B in your report.

CHAIRMAN CATANACH: Where are we at?
MR. WOODWARD: Appendix G.B.
MR. BROOKS: That is B as in boy.
MR. BOHNHOFF: Attachment G is pretty big, where in the appendix?
MR. WOODWARD: Page 10.
MR. BROOKS: Well, it appears that these appendices are separated by the tan-colored separators.
COMMISSIONER PADILLA: Page 10 behind the separation then?
THE WITNESS: I can help you, sir. So keep going. Keep going.
MR. WOODWARD: The boring logs site boring logs Appendix G.B.
MR. BROOKS: The appendices are not only separated by the tan sheets, they are also labeled on the front of the tan sheets, at least in my copy.
Q. (By Mr. Woodward) Would you please identify the documents that comprise Appendix G.B?
A. Yes, sir. Those are the boring logs for the five borings drilled during the subsurface characterization of this site, or for the subsurface characterization.
(Discussion off the record.)

Q. (By Mr. Woodward) Okay. I think we have now found it. Would you please identify the documents that are contained in Appendix G.B?

A. Yes. Those are the boring logs for the five borings installed for the subsurface characterization.

Q. Were these boring logs prepared by you or under your supervision?

A. Yes, they were.

Q. Is it your testimony that these boring logs accurately reflect the conditions that were found when the wells were drilled at the C.K. Disposal facility?

A. Yes, they do.

Q. Do they describe the soil types found?

A. Yes.

Q. The lithologic soil and rock universe?

A. Yes, sir.

Q. Have you prepared cross sections -- we have talked about Figure G.7. Have you prepared other cross sections for this location?

A. Yes, sir.

Q. Would you please identify those cross sections?

A. In addition to G.7 I have prepared

Figure G.5 a regional cross section, regional geological cross section. And then I also prepared Figures G.8 and G.9 which are site specific cross sections.

Q. In referring to G.8, there are about three stratums indicated in this cross section. Would you please describe the three stratums.

A. Yes. So Stratum 1 is a clay sand that we've encountered at the surface. And, as I remember the sand is -- ranges from seven to 17 feet thick in the various borings.

The second stratum is silty sand with caliche in it and it ranged from 23 to 36 feet thick. All of the borings penetrated that stratum as well?

And then the Stratum 3 is the lowermost of the three. It was encountered at depths that were roughly 35 to 50-foot below ground surface and it was consistent to the depth of 175 feet below ground surface. It is a clay stone, generally a red clay stone. It is the Chinle formation.

Q. Then referring to Figure G.5 could you briefly describe what this depicts?

A. Again, it is a regional cross section across a portion of the southern part of the State

projected over toward the proposed facility. And it shows the regional geology of the area and the portion of the Permian basin, asymmetry of the Basin and some of the lower Paleozoic sediments and some of the more shallow sediments as well.

Q. There is a zone labeled Triassic in the upper right-hand corner of the cross section and it is a dark red, is that the Chinle?

A. Well, the Triassic would include the Chinle and the Santa Rosa.

Q. Then you have shown the approximate site location on this drawing also?

A. That is correct.

Q. And where is that?

A. It is over on the far left-hand side -- I'm sorry, far right-hand side, easter, far eastern stream of the cross section.

Q. And then let's refer to Figure G.6. Would you please describe what this figure is?

A. It is a copy of a published map that is a groundwater contour map, also known as a potentiometric map. It illustrates various wells and the City of Eunice, some roads, but more importantly it shows the elevations of the top of the groundwater surface and most notably the

groundwater is not -- I'm sorry, the sediments, Ogallala, in this case, are not saturated in the eastern extreme of the map in the vicinity of proposed site.

Q. Is the information contained in Attachment G true, correct and accurate to the best of your knowledge?

A. Yes, it is.

Q. And you're responsible for the content contained in Attachment G?

A. Yes, I am.

MR. WOODWARD: I would move admission of Attachment G of Volume 2.

CHAIRMAN CATANACH: Any objection?

MR. BROOKS: No objection.

MR. BOHNHOFF: No objection. I would assume the entire application is in evidence.

MR. WOODWARD: I would be glad to move the admission of the entire application.

MR. BROOKS: We have no objection to that.

MR. BOHNHOFF: No objection.

CHAIRMAN CATANACH: C.K.'s entire application will be admitted into evidence.

MR. BROOKS: I would note that C.K. lettered all of their exhibits except that the

application was sent in separately from the rest of them and it does not have an identifying letter, so perhaps it should be designated some some way.

It says two large volumes.

CHAIRMAN CATANACH: Again, your point is it is not identified correctly?

MR. BROOKS: Well, the Applicant's exhibits are lettered from A to Z. Coincidentally they came out with exactly 26. I would suggest that the application be marked as Exhibit AA Volumes 1 and 2 so that it can be made a part of the record in away that it will be identifiable.

MR. WOODWARD: We agree.

CHAIRMAN CATANACH: Exhibits AA which is the permit application will be admitted.

MR. BROOKS: Thank you.

(Exhibit, AA admitted.)

CHAIRMAN CATANACH: We are not admitting at this time the other exhibit book. We are?

That is not part of the permit application. Is that correct?

MR. WOODWARD: It is not.

CHAIRMAN CATANACH: Should we deal with that as we get to it or as you testify?

MR. WOODWARD: I have witnesses to sponsor

the individual exhibits and I can offer them at that time.

CHAIRMAN CATANACH: Okay. Let's do that then.

Q. (By Mr. Woodward) Mr. Carel, would you please now refer to Attachment H of Volume 2 of Exhibit AA.

Would you please identify for the Commissioners what is included in Attachment H?

A. Yes. This is a Vadose zone monitoring plant.

Q. What is Vadose monitoring?

A. Vadose monitoring -- the Vadose zone is another term for the unsaturated zone. So in this case we are proposing to monitor the Vadose zone or the unsaturated zone.

Q. What is the purpose of the monitoring?

A. To detect any potential leakage that might occur.

Q. Why propose Vadose monitoring instead of groundwater monitoring?

A. Well, we propose Vadose zone monitoring for a couple of reasons. First, we didn't encounter groundwater during our subsurface investigation. We believe that there is a zone of saturation below the

facility but it is some considerable depth below the facility. And I am not sure that it is that beneficial to monitor that zone.

And Vadose zone monitoring has been accepted at other facilities in New Mexico, most recently another oil and gas disposal facility has Vadose zone monitoring approved, and the Lea County landfill adjacent to this site performs Vadose zone monitoring.

Q. I would like to go back to cross section in Attachment G, I think G.8, Figure G.8.

Can you identify on Figure G.8 what you mean by where the Vadose zone and what area you would be monitoring?

A. Well, truly in this case since we didn't encounter groundwater everything on the cross section is a Vadose zone.

Q. Okay. Identify where you will be monitoring it.

A. So we designed the wells to be screened across the contact of Stratum 2 and Stratum 3. So they are designed to be drilled a few feet into Stratum 3 and completed there, which would mean that a screen and filter pack interval would extend up about ten feet into Stratum 2.

Q. And why did you pick that depth?
A. Stratum 2 is the more -- there is sand, it has some porosity and permeability. If there is leakage from the landfill it would likely move downward in that sand until it hit the Chinle formation, and then it would move laterally along the contact of the Chinle and the overlying silty sand.
Q. Is it your opinion this would be the earliest point of the detection in the unlikely event there was release from a landfill?
A. Yes.
Q. Have you performed a critical receptor analysis?
A. Yes.
Q. What is a critical receptor analysis?
A. We look for what we call critical receptors, which would be other water wells that people might use for domestic irrigation, livestock, public and private source.
We looked for any other potential water intakes in proximity to the site.
Q. Did you find any critical receptors within a mile of the C.K. Disposal site?
A. No.

Q. Have you done analysis on the potential contaminants of the release of potential contaminants?

A. We did a contaminant migration pathway analysis, yes.

Q. And what did you find based on that analysis?

A. Well, it was essentially the same that I just explained a minute ago that leakage moved down through the sand until it hit the contact with the underlying Chinle, which is a low permeability clay stone, and we have mapped the surface of that, top of that Chinle formation and it dips down to the southwest, and so we conclude that the contaminants, should they ever occur, would migrate down to the southwest along the top of the Chinle.

Q. How many wells are proposed as part of the Vadose monitoring plan?

A. Eleven.

Q. How are they proposed to be situated?

A. There are two wells that are located up-slope of the facility, that is a requirement of the rules, and they are there to detect any water that may come from an up-slope or up-gradient source onto the landfill property.

And then we designed nine other Vadose zone monitoring wells and we considered the landfill design, which has, I believe, 12 different leachate collection sumps. We considered those sumps the most likely locations of potential release because they are the lowest point. They would retain liquids longer periods of time than other portions of the facility.

And so based on contaminant migration pathway analysis, we then designed the monitor wells to be downslope of those leachate collection sumps at least along the south side and the west side of the site.

Q. Is there a drawing in Exhibit H that shows the location of the monitoring wells Attachment H?

A. Yes.

Q. Which drawing is that, which figure?

A. H.6.

Q. Would you please describe the what H.6 represents?

A. Yeah. It is a drawing of the proposed facility. The drawing shows the landfill, proposed landfill on the western side of the site. We have the different phases and units designed by Parkhill, Smith & Cooper on the drawing. The red squares are

the leachate collection sumps. The proposed monitor wells are designated as a closed black dot with a circle around them.

They are designated with numbers VW and a number for Vadose zone or Vadose well. And then we have -- the blue arrows would illustrate the direction of contaminant migration that would emanate from one of those sumps, should it occur.

Q. There are also maroon lines on this drawing with a number in the line. Can you describe what those represent?

A. That is the -- kind of look brown to me, but they are the contours of the top of the Chinle surface.

Q. And do they represent that it dips to the southwest?

A. Yes. South and southwest, correct.

Q. Does the application include a Vadose zone sampling and analysis plan?

A. It does.

Q. And where in the application is the sampling analysis plan included?

A. That is Attachment I.

Q. Would you please describe what is included in Attachment I?

A. That's again, so a sampling analysis plan and the sampling analysis plan basically provides procedures for collection of water samples. It provides details on the frequency of monitoring, procedures on how to collect a sample, some quality assurance information, handling procedures, and reporting procedures.

Q. What are you mainly looking for in these wells when you go to sample?

A. Well, first, we expect the wells to be dry. So first of all, the wells will be inspected for water. There is a device commonly used in this industry that you lower and it will emit a noise and a light will go off if it encounters water downhole.

Q. What is the interval that the wells would be monitored?

A. We have specified that they will be monitored monthly for the first 12 months and then after that period of time they will be monitored on a semiannual basis.

Q. What happens if water is found in the wells?

A. Then you follow the procedures contained in the sampling analysis plan for collection of the water sampling.

Q. Are the water samples analyzed?
A. Yes.
Q. For what?
A. The samples we have specified to be analyzed for 21 different constituents. Three of those are field measurements, pH, temperature, electrical conductance. Then there will be laboratory analysis for BTEX, TPH, total dissolved solids, major anions and some RCRA metals.
Q. In your opinion is the proposed Vadose monitoring program as protective as a groundwater monitoring program?
A. Yes. I think it is more protective in this case.
Q. And why is that?
A. Well, the geology lends itself quite nicely to detecting leakage before it is going to get to groundwater. So we can detect it in the Vadose zone and the unsaturated zone before it ever migrates down into the groundwater.
Q. Have you developed an opinion regarding the appropriateness of this location for a land disposal facility?
A. I have, yes.
Q. And what is that opinion?

A. Well, in my opinion, my 30 years, I have worked on well over 100 various landfills, including hazardous waste facilities under Subtitle C of the EPA and, numerous states, and my opinion is this is the best site I have ever seen for a waste disposal site.

MR. WOODWARD: No further questions.

CHAIRMAN CATANACH: Mr. Brooks.

MR. BROOKS: No questions.

CHAIRMAN CATANACH: Let's go ahead and proceed.

CROSS-EXAMINATION

BY MR. BOHNHOFF:

Q. Mr. Carel, let me start by following up on that last point which you think this is a good site. If I understand what you are telling us, it is a good site because given the geology beneath the site, namely, this Chinle formation, you will be able to detect any contamination before it ever gets to the fresh water aquifer that is directly below the site. Is that fair?

A. I wouldn't quite say it that way.

Q. Well, tell me again, then, why you think this would be a great site for an oilfield waste disposal facility.

A. I think it is a great site biased on the geology, based on the Chinle formation, its characteristics being a low permeability type of a sediment, barrier downward migration to the groundwater flow. Not only that, its thickness, it's reported to be as thick as 1,270 feet thick.

Q. So we've got a barrier and we've got a thick barrier and that is why it is a great facility?

A. That is correct.

Q. All right. The Chinle formation is present for some distance to the north, south, east, and west of this particular 320-acre tract of land. Is that correct?

A. I believe so.

Q. In the same thickness that you have testified to is present beneath the C.K. land, roughly 1,300 feet.

Q. Well, I can't testify that its thickness is 1,270 or whatever it is, everywhere. Again, the published literature that I refer to is it is up to 1,270 feet thick.

Q. It's thick --

A. Thick.

Q. -- for some distance of miles to the

north, south, east and west, right?

A. That's correct.

Q. So would it be correct, then, that in terms of meeting your criteria for a great place to build this kind of facility, there is the barrier and it is a thick barrier, the facility could be built some distance from C.K.'s land to the north, east, south and west and still be a great site, would that be fair?

A. No.

Q. What is wrong with my statement?

A. Well, this particular location, the Chinle formation is -- actually these -- this proposed site, the Lea County site, WCS and URENCO are in proximity to a structure called the -- in New Mexico it is referred to as the Rattlesnake Ridge. In Texas they refer to it as the Dockum Red Bed Ridge or the Red Bed Ridge. And so the facilities in proximity to that, that allows the Ogallala, which overlies the Chinle, to be structurally high so the Ogallala is not saturated. And so if we go other areas of the State you're likely going to have the Ogallala saturated. The Ogallala, as you know, is the largest aquifer in the United States. It is widely used as public and private water source.

So, it is the geology in combination with this locale that make it a really good site.

Q. All right. So you have, if I understand you correctly, and I apologize I am not a geologist, but if I understand you, it is this presence of an unsaturated Ogallala formation that in addition to criteria that you previously mentioned adds to why this is a good site?

A. Yes.

Q. For how much distance to the north, south, east and west do we have an unsaturated Ogallala formation?

A. You know, I don't know that I can answer that.

I know that the Ogallala is saturated about a half a mile west of the site. But I haven't seen a map that -- that illustrates the aerial extent of that unsaturated portion of it.

Q. So you can't -- as we sit here today you can't tell us for how many miles to the north, south or east you would continue to find this great site for an oilfield lease disposal facility?

A. No, I can't say that I have seen a map that illustrates that.

Q. Let's turn back to Attachment G.

Q. This is your hydrogeology report. If I understand you correctly, you were aware that -- let's make sure we are looking at the right figure.

Turn to Figure G.7 which is labeled hydrologic cross Section B-B. Are you with me?

A. G.7.

Q. G.7, yes.

A. Yes.

Q. We've got this 225-foot zone that is 225 feet below the surface and you were aware that there was water in that 225-foot zone?

A. I was aware that there was water?

Q. Yes.

A. I am aware now that there is water in it.

Q. When you did your research in this project?

A. I became aware of it during the research.

Q. Sure. You knew about that before you did your -- before you drilled those five bore holes?

A. No, sir.

Q. Was that something that you could have -- knowledge that could you have acquired before you did the bore holes?

A. I guess I could have acquired it if I had had time to find all the documents and read them.

Q. Turn to Page 11 of Attachment G. If we look at the last paragraph on Page 11, this reflects the previous documentation that the 225-foot zone within the Chinle formation is the uppermost aquifer in this neighborhood.

A. Yes.

Q. And that was based on the data from the WCS site and also the URENCO site?

A. That is correct.

Q. You drilled your five bore holes down a level of 175 feet below ground surface. Is that correct?

A. That's correct.

Q. So if you drilled another 50 feet you would have reached the 225-foot zone of this uppermost aquifer, right?

A. Potentially.

Q. Well, why wouldn't we if we are talking about a 225-foot zone that is the uppermost aquifer?

A. Again, I didn't know anything about the 225-foot zone when we were in the field.

Q. Turn to the next page Attachment G, your Table G.4. The groundwater -- the groundwater quality data that you show here is not taken from the aquifer directly below C.K.'s site, correct?

A. There is no data on this table that was taken from below C.K.'s site, correct.

Q. And instead this is data taken from locations elsewhere, for example, the URENCO, the WCS site or whatever site Geohydrology Associates took it from?

A. That's correct.

Q. If you drilled your bore holes another 50 feet down to get to the aquifer directly below the C.K. site you could have taken these groundwater samples directly from them, correct?

A. If a well was installed. I don't -- I don't believe that the rules require that.

Q. Once you drilled down to 175 feet you could have come back, once you didn't find out at that point that there was a fresh water aquifer another 50 feet down farther, you could have come back and drilled down into the fresh water aquifer, right?

A. Could have.

Q. And if you would have installed the proper equipment you could have obtained the groundwater constituent data from directly underneath the site, correct?

A. That is correct.

Q. And that would have given you the best possible baseline data for determining concentrations of these potential contaminants, right?

A. No.

Q. Let me make sure I understand Figure G.8, if you would turn to that. Your geological cross section ends 175 feet below ground surface on these, on this figure, correct?

A. Yes, sir.

Q. And it doesn't provide a cross section that includes the shallowest fresh water aquifer?

A. Is that a question?

Q. Yes.

A. That is correct.

Q. Then turn to Figure G.6. Did you refer to this as a potentiometric map?

A. I have it labeled as groundwater contour. The term potentiometric and groundwater contour are often used interchangeably.

Q. The practice within your profession is to create a potentiometric map using site data, isn't it?

A. Yes, we often use site data.

Q. That is the best practice, isn't it?

A. When you have it.
MR. BOHNHOFF: No further questions.
CHAIRMAN CATANACH: Any redirect?
MR. WOODWARD: No, sir.
CHAIRMAN CATANACH: What is the pleasure of the Commission.
COMMISSIONER PADILLA: Just a few questions for you.

EXAMINATION

BY COMMISSIONER PADILLA:

Q. There has been some discussion about the 175-foot depth. How was that chosen as the total depth for these bore holes?

A. I did not make that decision. Others, I believe, made that decision in consultation with the State.

Q. Meaning the OCD?

A. Yes, I believe it is the OCD.

Q. Is it safe to assume that 175 feet would give you adequate buffer underneath the 100-foot cutoff?

A. I believe that it was determined that there was an estimate made for the excavation depth and so we would drill 100 feet beyond that plus some buffer. Does that answer your question?

Q. It does.

I believe when Mr. Bohnhoff asked you is the best constituent, water constituent data would come from actually drilling to 225 feet and sampling that water, did I hear you correctly that you said no.

A. Yes, uh-huh.

Q. Can you explain that.

A. Sure, yeah. So generally you don't get water quality data during your subsurface investigation. And it is not one sample at one spot.

And so we do this all the time, and typically you have a network of wells such as I have designed, and they are sampled. First the wells are properly installed and they are developed. And well development is something that is often overlooked, and by that, I mean that all of the artifacts that are entrained in the well during drilling get muds and stuff in there, you pump that out, clean the well out so you get clean water that is representative of the formation.

And often we do that at more than one well, numerous wells, up-slope or upgradient and downgradient and those wells are sampled for at

least four different samples over a period of time that allows for temporal variation of the water. Typically we look for eight, so about two years worth of data. So as the question was kind of phrased to me, I -- that is why I answered no. I think there is a lot more to getting that water quality data.

Q. So you have to establish production intake your measurements over a period of time?

A. Over a period of time.

Q. So it is really not feasible to just drill and sample?

A. That is correct.

Q. You said early on in your testimony that you were associated with 64 facilities, not necessarily of this type, but can you tell us, maybe not -- maybe not a Rule 36 but are there any other oil and gas disposal facilities that you consult with?

A. Yes, uh-huh, yes, sir, uh-huh. There are two in Texas; I would rather keep the client confidential, I don't know if that is acceptable or not, but they are facilities that I understand to be very similar to this. They have some processing and landfill disposal. We do the groundwater monitoring

work there for them. Those sites are sampled on a quarterly basis.

The analytical constituents are pretty similar to what is done or proposed here. And then we do one in Oklahoma. I am not as familiar with their operation, frankly, and unfortunately in Oklahoma the sampling and the analytical requirements are only a bare fraction of what is proposed here. This is much more protective of the groundwater and the environment than what is being done in Oklahoma.

Q. Have you ever seen a problem with a facility like this?

A. You know, we have seen problems at sites, to answer your question about these types of sites, the answer is no. On the oil and gas sites that we do the work for we haven't seen any oil and gas related contaminants, the BTEX, the TPH, benzine, xylylene, none of those. We have seen -- the contamination that we have seen and we have dealt with is often from older Legacy landfills that are were unlined or had liners that were nothing like as designed here. This is really a state-of-the-art lining system. And in my experience I am unaware of any contamination we have seen from these modern

dual line composite-lined facilities with leachate collection. They generally just don't leak.

Q. Okay. Going to the Vadose monitoring plan for a moment. For the first 12 months you said that it would be monitored every month, the well would be monitored and then semiannually. To me that seems, especially based on what you just said about things having to be in production to see any kind of steady or even flow, I know that there is no flow, we are talking about Vadose here, but in the first 12 months, I would imagine this facility would be just getting up to speed and it is not going to be carrying the loads that it would be carrying into the future. Is there any reason why you are going to monitor more then and taper off rather than the other way around?

A. Yeah. I don't really know how to answer that. I think what frankly we modeled that frequency after another permit application.

And often the sampling that we do, we probably sample about 650 or so wells. The typical sampling frequency is semiannual. We do a few quarterly, we do a few annual. This monthly frequency that we had set up here is very protective. And I think that it is anticipated

that, you know, if there is any any kind of problem early on we will see it, you know.

Q. So do you think --

A. Does that answer your question?

Q. Sure. Is semiannually enough?

A. I think it is. It is based on the hydraulic characteristics often of the units you are monitoring. The flow and the subsurface is frankly a lot slower than you imagine. So, I think that a semiannual schedule is -- is very protective. It is protective for the vast majority of the work we do.

Q. Would that be considered the best practice for the industry, semiannual monitoring?

A. Yeah, I think it is considered best practice, yeah.

COMMISSIONER PADILLA: Okay. Thank you.

EXAMINATION

BY COMMISSIONER BALCH:

Q. Mr. Carel, officially good afternoon now, I guess. Just following up on Commissioner Padilla's question on the 12 months, I mean do you establish baseline data during that period, is that what you're going to compare back to data later on?

A. Well, yeah. If there is water encountered and it can be sampled and analyzed then it will be

what we often call as background.

Another word for it is commonly referred to as baseline, uh-huh.

Q. So, do you do any sort of baseline measurements, I mean, moisture content of soil, things like that during those 12 months of monitoring?

A. No. It is anticipated here, we anticipate these wells will be dry, and so they will be inspected or we would refer to it as sounded for water, device will go down and again, you will know if there is water down there.

And then if there is, it will be sampled and analyzed. I don't know if this is part of the question, but I could see the potential for water to be in those wells, from time to time, that is not associated with leakage.

Q. Coming from the top of the well bore.

A. For instance, if a cell is being excavated just up slope and you have got a whole dug in the ground before you put your liner down it rains, there is a pond there before they can pump it out some of that water is going to infiltrate. I could see how we would get a little bit of that water into the wells. But the good thing about the

constituents, we will be able to tell, I think, that that is just leakage from an excavation and I think it will be temporary.

Q. Speaking of that aquifer, the 225-foot aquifer, is that detected in monitoring wells below the adjacent Lea County landfill, do they go that deep?

A. They did. And there is a couple of their logs they note a silty zone roughly that depth. There depth range is -- I actually don't remember the depth, but they encountered it. But they didn't observe free water, they didn't observe it being saturated.

Q. But they did detect the 225-foot settlement but no water in it?

A. That is correct.

Q. And the regulatory requirement is that the base of your facility be 100 feet above the nearest potential aquifer or source of water?

A. Yeah. The rule says fresh water, I believe. The fact of the matter is that the 225-foot zone URENCO's data has the total dissolved solids being greater than 11,000. And so I noted in the application that fresh water is typically defined as being 10,000 or below. So, now URENCO

report that I saw they only reported the maximum concentration. So, I know the maximum that they reported is 11,800, I believe, it is over 11,000. So that frankly doesn't even meet the criteria for fresh water. Regardless, I still name this as the uppermost fresh water aquifer as a conservative measure.

Q. So then 10 percent. All right. So is that water at URENCO, do you know if that well is being used in production, do they have a couple years of sampling data to come up with a good number on that?

A. Well, I don't -- I can't really answer that. I don't know the frequency that they sample that. I have read their report again last night and it was not defined in any rigorous terms like semiannually or quarterly or annually. I don't remember the term used, but it was something the equivalent of periodically. And then similarly, I don't remember a list of constituents that they analyzed for. But I would assume that they -- that they sample and analyze for the same stuff and that they would have what would be a database of their data.

It would have what we would consider some

baseline data, I would assume that. I don't know that, I haven't read it, but I would assume.

Q. Would that water be available through the Office of the State Engineer or some other public source?

A. I assume that that information should be submitted to an agency, be it the State or federal, I don't know who. And that those reports could be obtained from that agency. I don't know who they submit to.

Q. Okay. Staying on the topic of fresh water, I did a quick measurement on Figure G.7. It looked like the nearest instance of Ogallala fresh water would be approximately 5,000 feet from the west edge of the proposed site. Is that consistent with your analysis?

A. Yes.

Q. Of course, that is downdip and you mentioned that flow would occur along the top of the Chinle formation?

A. Correct.

Q. Do you feel that the beta zone monitoring well system that we have along the west edge and on the south edge of the proposed site would be protective of that Ogallala, 5,000 feet away.

A. Yes, I do. I like it. The wells are situated between the saturated portion of the Ogallala and the facility. And, again, there is 5,000 feet and it is roughly a mile, and so if there is leakage detected, contamination detected, I think there is adequate time to put some procedures in place to protect that water in the Ogallala.

Q. In your Table G.5, there is the shallow protected water was 178.83 feet. And any of the wells within the one-mile area of review.

A. I'm sorry, could you say that again.

Q. The third well down the list on Table G.5A.

A. Yes, sir.

Q. I was trying to correlate that well, the 174-foot water depth --

A. Uh-huh.

Q. -- to the wells on Figure G.2. Can you identify that well on that map? It doesn't seem to have a numbering system which is compatible with that table.

A. That is a good question, hang on just a minute here.

Okay. Yes, I can. Give me a couple of minutes here. How am I going to do that?

So the number that we have listed on Figure G.2 correspond to handwritten number in the upper right-hand corner of Appendix G.C.

The well tracking number on Table G.5A, that particular well is 376945 that ought to be the third well in Appendix G.C, and that is correct that should be Well Number 3 on Figure G.2. Where is Well 3 at? I see it, yes.

Q. Okay. Similarly the shallowest one was 2420.49 and that would be fifth or sixth up from the bottom of the list on Table G.5A. I'm sorry, it is actually 217 feet.

A. Yeah. That is correct.

Q. And that is six down, seven down from the top of the list.

A. Yeah, 6958. That would be Well 7 on Figure G.2A.

Q. Seven.

Well, let's look at Well 220.49 which is towards the bottom of the list.

A. Yes, sir. 944.

944 should be Well 20.

Q. Just for completeness let's do the two wells that are 243 and 241 also.

A. Okay. 243 is Well 949, that is the well

labeled Number 8 on G.2. The other one you wanted was a depth of 241.26. Is that correct?

Q. Yes.

A. That would be Well 952.

952 I am having a little bit of trouble here. There it is, 11.

Q. So those are all pretty much north of the proposed site. Do you know how deep the bore holes at the Lea County Landfill went?

A. They were various depths, but my memory is that the deepest was 600 feet below ground surface.

Q. Without defecting any groundwater.

A. That is correct.

Q. So you had said these wells we just identified on Figure G.2, that would be considered the 225-foot zone?

A. Yes, uh-huh.

Q. And that zones appears to disappear to the south or the zone is there but there is no water in it.

A. Well, they did not observe water in their borings, that is correct.

COMMISSIONER BALCH: Thank you.

EXAMINATION

BY CHAIRMAN CATANACH:

Q. Just a couple, Mr. Carel. When we look at the Ogallala formation, we are not talking -- this isn't the eastern edge of the Ogallala, is it? Does it extend further east from here?

A. Yes. It extends east into Texas. There is a hole in it around this Rattlesnake Ridge, Red Bed Ridge.

Q. Okay. We are talking about an area in the Ogallala that is unsaturated with fresh water at this point?

A. Yes.

Q. Is there anything that could change -- that would cause that water table to become shallower at your location? Would there ever be water in the Ogallala at your location?

A. You know, that is a question that I -- you know, in all honesty if there was torrential flooding to the extent of, you know, Biblical proportions, let's say, it would saturate it, you know, but I can't see that as a practical matter ever becoming saturated, no.

Q. So greater than a 100-year event?

A. Much more, yes.

Q. Okay. The Santa Rosa in this area does contain water. Do you know anything about the Santa Rosa formation?

A. I know a little bit about it, yes, sir.

Q. My understanding it does contain some fresh water sources.

A. Yes, sir.

Q. Okay. With regards to your monitoring, your monitoring wells, how deep are those going to be monitored? Is it right at the base of the -- where your landfill base grade is, is that going to be --

A. It is close to that. I give a table of it in H. Go over those details in Table H.1 on Page 7 of Attachment H. So the depths very from 54 is the deepest and about 38 feet is the shallowest.

Q. So if there is any migration or any leakage in the landfill you're going to defect it right below where your liner is?

A. Right below the landfill, yes, sir.

Q. So there is -- so you will be able to correct any situation that arises from that, from any leakage at that point before it gets to any fresh water sources?

A. That's correct, yeah. And I think that

actually there is some redundancy in the system that I didn't design and it maybe isn't that appropriate that I speak to it, but there is a leak detection system. So we are going to know -- I think if there is leakage of the primary liner in the -- by sampling the leak detection system before it ever shows up in our Vadose zone wells. So there is quite a bit of redundancy in this environmental protection here.

Q. So if you did have any leakage that would affect groundwater that would be -- you would be affecting the Ogallala downdip from there, if there was any contamination?

A. Well, if there is contamination we are going to detect it in the Vadose zone around the perimeter of this proposed facility. And the plan calls for an action plan or corrective action plan to be developed, and I would anticipate that there would be remediation put in place before it ever got any significant distance downdip.

CHAIRMAN CATANACH: That's all I have. Is there anything further from this witness?

MR. WOODWARD: No redirect.

CHAIRMAN CATANACH: Okay. This witness may be excused we will go ahead and break for lunch.

Be back at 2:00.

(A recess was taken.)

CHAIRMAN CATANACH: I will call the hearing back to order. And I believe I will turn it over to Mr. Woodward.

MR. WOODWARD: Thank you, Mr. Chairman. The Applicant calls Nicholas Ybarra.

THE WITNESS: Nicholas Ybarra, N-I-C-H-O-L-A-S, Y-B-A-R-R-A.

(Whereupon, the witness was previously sworn.)

NICHOLAS YBARRA,

after having been first duly sworn under oath, was questioned and testified as follows:

DIRECT EXAMINATION

BY MR. WOODWARD:

Q. Mr. Ybarra, would you please describe your educational background.

A. I have a Bachelor's and Master's in civil engineering from Texas A&M University.

MR. BROOKS: Excuse me, this witness was sworn?

Q. (By Mr. Woodward) Do you have any specialization with the Bachelor's and Master's?

A. Both hydraulics and hydrology.

Q. Please describe your professional experience.

A. I have been with Parkhill, Smith & Cooper for eight years now, mainly with the landfill design for permitting to groundwater monitoring, everything that encompasses a landfill.

Q. Have you had any involvement in construction of a landfill?

A. Yes. I have constructed liner systems, groundwater monitoring wells, vinyl cover caps and drainage systems for multiple landfills.

Q. Are you a licensed professional engineer in New Mexico?

A. Yes.

Q. On the table in front of you is a notebook that has the exhibits from C.K. Disposal. Would you turn to Tab B. Would you describe what is behind Tab B?

A. It is my resume.

Q. Did you prepare this?

A. Yes.

Q. And does this resume accurately reflect your educational and professional experience?

A. Yes.

MR. WOODWARD: I move adoption of

Exhibit B.

CHAIRMAN CATANACH: Any objections?

MR. BOHNHOFF: No objection.

MR. BROOKS: No objection.

CHAIRMAN CATANACH: Exhibit B will be admitted.

(Exhibit B admitted.)

Q (By Mr. Woodward) What is your role with the C.K. Disposal application?

A. I am the engineer of record on the permit. I oversee the entire permit and putting it together. I was also in charge of reviewing the entire permit prior to submittal.

Q. Is your seal on the permit application?

A. Yes.

Q. Does that mean that you are responsible for the entire application?

A. I am responsible for the entire application except for the subsections that were signed by different individuals.

Q. For example, the hydrogeology report?

A. Correct.

Q. That was sealed by another individual?

A. Yes.

Q. Have you reviewed the regulations of the

OCD pertaining to the permitting of surface waste management facilities?

A. Yes.

Q. Do you see any similarity with those regulations to other regulations?

A. Yes.

Q. And what other regulations are similar?

A. They are similar to Subtitle D regulations.

Q. And what are the Subtitle D regulations?

A. Subtitle D regulations are regulations used to construct and permit municipal solid waste landfills.

Q. Who -- what agency was responsible for Subtitle D regulations?

A. EPA.

Q. United States Environmental Protection Agency?

A. Yes, sir.

Q. What are some of the similarities between the two sets of regulations?

A. The similarities are on the liner system, the storm water systems, and the groundwater monitoring and leachate collection.

Q. Would you please describe the process you

went through in preparing the C.K. Disposal application?

A. Yes. I first went through the New Mexico Administrative Code, Part 36, to review all the regulations for the -- required for the permitting of the site. Once that -- once those were determined, we were able to get our subconsultants to perform their individual sections like the hydrogeology report and then we started -- we laid out the facility, the best case scenario for -- sorry, based off the survey and the site that we had, we laid it out based off of the dimensions we had on the site and then I continued to write the permit for the facility.

Q. Did you review the borings that were prepared on-site before starting work on the application?

A. Yes.

Q. And what did those borings show you?

A. That there was no groundwater seen in any of the borings to the depths that they were drilled.

Q. There are two notebooks in front of you that are Applicant's Exhibit AA. Can you identify those?

A. Yes, these are Volume 1 and Volume 2 of

the permit application.

Q. And this is the permit application that you testified that you were responsible for preparing?

A. Yes.

Q. When was this application initially submitted to the OCD?

A. In November of 2015.

Q. I want to refer you to behind the transmittal letter there is a document entitled Application for Surface Waste Management Facility on the second page.

COMMISSIONER PADILLA: Is that the first volume, Mr. Woodward?

MR. WOODWARD: Volume I, yes, sir.

Q. (By Mr. Woodward) Is that your signature on the application?

A. Yes.

Q. So you signed this form when the application was initially submitted?

A. Yes.

Q. Do you have knowledge about when, and if you don't know, say, but do you have knowledge of when the OCD began review of this application?

A. I believe it happened in May after Mark --

sorry, Bryce provided the updated signature for the form.

Q. And when was the updated signature provided?

A. In, I believe, early May of 2016.

Q. Would you look under Exhibit J in that same notebook.

A. Okay.

Q. And is that the signature page you are referring to?

A. Yes.

Q. So did your office recently make six copies of the application to be submitted to the OCC?

A. Yes.

Q. What version of the application did you make a copy of?

A. The initial submittal.

Q. Were there any changes to that initial submittal?

A. Yes.

Q. So it was the initial submittal with some changes?

A. Yes.

Q. What changes did -- were included in the

version you submitted to the OCC?

A. They included the additional calculations that were requested and the H2S report.

Q. Are you sure about the H2S report?

A. Let me check. No, it just goes -- it was just the additional calculations requested.

Q. Was there also an update to the help model?

A. Yes.

Q. Is it safe to say, then, that the copies you made to submit to the OCC are copies of the application, that the tentative decision was based on?

A. Yes.

Q. With the exception of a signature page?

A. Yes.

Q. Do you certify the copies you made by your office are true and correct copies --

A. Yes.

Q. -- of that application?

A. Yes.

Q. Were you responsible for issuing notice to this application?

A. Yes.

Q. Would you please refer to Exhibits M and

N.

Hold on just a second, I think I am off my letters.

Okay. It is actually going to be a series of exhibits. There is K, L, M. K, L, and M.

Do you recognize the document that is behind Exhibit K?

A. Yes.

Q. And what is that document?

A. It is a notice of administrative completeness of the application.

Q. Received from the?

A. The OCD.

Q. And then behind Tab L?

A. Behind Tab L this is the notice that was sent out to adjacent landowners.

Q. And you were responsible for getting that notice mailed to adjacent landowners?

A. Yes.

Q. And then behind Tab M?

A. Those were the certified mail receipts that we sent out to ensure that the notices were sent and signed for, for the notice of administrative completeness.

Q. Are the adjacent landowners identified

someplace in the application?
A. Yes, they are.
Q. And where is that?
A. In the NMAC section of Volume I, I believe it is on Page 2.
Q. And that would have been the list you utilized for mailing notice of administrative completeness?
A. Yes, it is Page 2 and 3.
MR. WOODWARD: I would like to move entry of K, L and M into the record.
CHAIRMAN CATANACH: Any objection?
MR. BROOKS: No objection.
MR. BOHNHOFF: No objection.
CHAIRMAN CATANACH: Exhibits K, L, and M will be admitted.
(Exhibits K, L and M admitted.)
Q (By Mr. Woodward) Were you responsible for getting the notice published for the OCD tentative decision?
A. Yes.
Q. And did you cause publish notice to happen in this case?
A. Yes.
Q. Was the language of the notice approved by

OCD prior to publication?

A. Yes.

Q. If I could have you please refer to W, X, and Y. Would you first identify what is behind Tab W?

A. Tab W is the tentative decision sent to Mr. Karger from the OCD.

Q. And behind X?

A. Behind X is the affidavit showing that the notice was published in the Albuquerque Journal and then behind the affidavit is the actual publication that was placed in the Albuquerque Journal.

Q. And that is in English and Spanish, correct?

A. Yes.

Q. And then behind Tab Y?

A. Tab Y is the affidavit from the Hobbs Sun News or News Sun, sorry, and it also includes the notice where it was published in the newspaper in both English and Spanish.

MR. WOODWARD: So I would move approval of W, X and Y, please, or move entry.

MR. BROOKS: No objection.

MR. BOHNHOFF: No objection.

CHAIRMAN CATANACH: Exhibit W, X, and Y

will be admitted.

(Exhibits W, X and Y admitted.)

Q. (By Mr. Woodward) Were you responsible for mailing notice of the tentative decision?

A. Yes.

Q. To whom did Applicant mail notice of the tentative decision?

A. Per the list that was provided to us by the OCD.

Q. And I would like you to refer to Exhibit Z, please. What is included in the notebook behind Tab Z?

A. It is the certified letter receipts for the notices was that were sent out for tentative decision.

Q. Do you have a card for each person who is on the name of the list that the OCD instructed you to mail notice to?

A. Yes.

MR. WOODWARD: I move admission of Exhibit Z.

CHAIRMAN CATANACH: Any objection?

MR. BROOKS: No objections.

MR. BOHNHOFF: No objection.

CHAIRMAN CATANACH: Exhibit Z will be

admitted.

(Exhibit Z admitted.)

Q (By Mr. Woodward) Let's return to the application, Exhibit AA.

What I would like you to do is behind the second manila page, there is a sheet that has got November, 2015 in the upper right-hand corner.

CHAIRMAN CATANACH: Is this Volume 1 or Volume 2?

MR. WOODWARD: This is Volume 1. We are going to be in Volume 1 for a while.

CHAIRMAN CATANACH: Okay. Where are you at now?

MR. WOODWARD: I am after the application form behind the first or the second manila page there. It says -- at the bottom of the page it says TOC-i.

Q. (By Mr. Woodward) Would you please describe what is in this section of the application.

A. This is a table of contents listing the information that will be provided within the permitted application.

Q. How is it organized?

A. It is organized per section of the application or per attachment of the application.

Q. I notice there are references to NMAC 19.15.36. And it starts at eight, nine, ten. Are these listed in numeric order?

A. Yes.

Q. And what is this referring to?

A. This is referring to the NMAC section that follows the table of contents which lists all the NMAC rules that must be referenced to for permitting of a facility of this sort. And then that is what is referenced.

Q. So let's go to the tab that is titled NMAC 19.15.36. It says 38-20, or is that just a misprint on mine?

MR. BROOKS: 36.8.

Q (By Mr. Woodward) Please explain to me what is behind this tab.

A. Behind this tab is a caller for each of the rules in the Administrative Code and then we provided a writeup for each one of the rules on how we were addressing it within this writeup and then provided a location of any supplemented information that was provided within the application where it could be located.

Q. So in this particular section of the application you could go to any rule or Part 36 rule

and find where in the application that rule is addressed?

A. Yes.

Q. Just moving along here, please describe what is in Attachment A of Volume 1.

A. Attachment A is the general facility maps and site drawings. These are drawings that we provide to show the location of the landfill and the supplemental information on site specific site selection, which include the site map, site development plan, topographic map. As mentioned we also provide a site layout so people could see what the facility would be, how it is going to be laid out. We also provide an adjacent owner's map, site -- typical site signs, a liner schematic and a final closure cover schematic. Landfill traffic plan and a process flow traffic diagram. Maps also include a site evacuation route and a hospital map to provide employees on the quickest route to the neighboring hospital. We also provide a liquid processing sampling grid for when the facility is closed on which locations the site will be needed to be tested for after closer. The landfill base grading plan and final grading plan for the cover and we also provide cross sections and evaporator

pond mechanical evaporator locations. And the final few maps in the section provide aerial photography and then follow-up maps and seismic area -- impact maps to show that the landfill was placed in a region that is suitable for a landfill.

Q. In a couple of words how would you describe the maps in Attachment A? Would they be just a general overview of the facility?

A. Yes, they provide a general overview of the facility, how the facility will be laid out, testing locations for the future and monitoring locations for the site.

Q. Let's move on to Attachment B. What is in Attachment B?

A. These are the engineering -- engineered design plans for the facility. They provide a -- they provide more detail on the site layout and the processes that are going within the site. They are not a full engineered design but they provide a schematic of what the processes that will be going on, on the site.

Q. Is this typically the type of engineering drawing that is utilized for permitting purposes?

A. Yes.

Q. And there will be another layer of

engineering that goes in before construction?

A. Yes.

Q. So just referring to G.002. Could you tell the Commissioner where this proposed facility is located?

A. The proposed facility is approximately four miles east of Eunice, New Mexico, just south of Highway 176.

Q. How far from the State line is that?

A. It is approximately, I believe, half a mile.

Q. Let's refer on Attachment G.004, what -- what does this drawing depict?

A. This drawing depicts the site development plan for when the site is fully established and everything is built out. It includes on the left-hand side the surface waste management facility landfill and how each unit will be broken up. It also provides the location of the detention ponds on site, access roads throughout the site, and then on the southwest corner it shows the surface waste management facility processing area. It also provides information on where scale houses and gate houses will be at the facility.

Q. And when you say surface waste management

facility, that is the landfill, correct?

A. The landfill.

Q. On the western portion of the property?

A. Yes.

Q. There is a box in the upper middle part of this drawing that is labeled future saltwater disposal area. Is there any saltwater injection authorization being sought with this application?

A. No.

Q. Why was that put in there?

A. As a placeholder for if we were to want to permit that in the future, we wanted to keep that area clear of any activity.

Q. Would you look at Exhibit G.005. What does this drawing represent?

A. It provides the best management practices for the facility. It depicts the -- what is performed during construction management of the facility to make sure -- it provides a process to make sure that there is no soil or groundwater -- surface water leaving the site or with an excess soil and making sure that everything is contained within the site during construction.

Q. Can you describe what the liner system will be in this landfill?

A. Yes. On the floor of the landfill it will be a dual liner system with a leak detection layer from the bottom to the top. It starts with six inches of recompacted soil, that is to provide a stable base for the liner system. Then a geosynthetic clay liner which is an allowable substitute to two feet of clay, which is interchangeable with two feet of clay as part of the liner system will go on top of that stabilized floor. Then a 60-mil HDP liner will be placed on top of that. A geonet or geocomposite, depending on the floor, the side slope, there's a geonet on the floor and the geocomposite on the side slopes which will act as a leak detection layer for any leakage, if there is any leakage within the liner, and then on top of that is an additional 60-mil HDP liner. On top of the second HDP liner is another 200-mil geocomposite which acts as a leachate collection vessel and then on top of that is two feet of protective cover.

Q. Sir, I would like to refer you to Drawings C501, 502A and 503, and have you point out to the Commissioners the details that you just described for them.

A. The details provided on C501 is the layout

of the liner system within the landfill. And it also shows how the landfill liner will be anchored down for stability for the side slopes. It also provides a future connection for once the initial cell is constructed when new cells are constructed it provides details or provides a detail for how they will be connected in the future to keep one continuous liner system on the floor and the side slopes, and that is on C501.

Q. Before we get away from this, you had said that there were similarity between Subtitle D regulations and the regulations the OCD in Part 36. But is this designed consistent with Subtitle D or is it another standard?

A. This is actually consistent with Subtitle C.

Q. What is Subtitle C?

A. That is a hazardous waste liner.

Q. What is different between a hazardous waste liner and a municipal waste liner?

A. It has the additional HDP liner and the leak detection system.

Q. Which is not normally in a municipal waste landfill?

A. No.

Q. Okay. Then, what does -- I said 502A, but let's look at 502. What does this drawing show?

A. This drawing shows the leachate subs that will be located within the landfill and the -- sorry, with in the landfill. And this is where any liquid that is collected within the landfill be transported to in order for the facility managers to collect and put as part of the waste processing. It also provides location of the leak detection piping.

Q. If you could, please describe with a little more detail about what the leachate collection system does.

A. Any liquid that goes within the -- that falls within the landfill system will typically drain through the waste that is placed within landfill, in this case it would be soils and once that water is filtrated through the waste system, it will land on top of the geocomposite of the liner system, it will be transported towards the leachate subcollection areas. That water is then collected and removed for processing and treatment.

Q. And that is during the life of the landfill and during the post-closure care period?

A. Correct.

Q. What does 502A show?

A. 502A shows how the leak detection piping will be installed within the leachate containment system, showing how you go in between the two liner systems, to have a leak detection area and it shows the boots that will be placed around the piping to ensure that there's one solid liner that sits on top of the liner in making sure there is no leakage.

Q. So the leak detection system is below the top liner?

A. Yes.

Q. And below the leachate collection system?

A. Yes.

Q. It is to be dry?

A. Yes.

Q. So if you find liquid in there then, you know, you --

A. You have got a leak.

Q. -- you have breached the first liner?

A. Yes.

Q. There is a liner beneath this leak detection system?

A. Yes.

Q. Could you describe what the liner is beneath the leak detection?

A. The liner between the leak detection

system is the 60-mil HDP liner.

Q. And then 503?

A. It provides additional details and cross sections for the leachate subplan. This shows it in greater detail, a more defined detail for the owner of the facility and for future construction.

Can I point out these two?

Q. Yes, please do.

A. On the A3 and A4 it shows how the leak detention piping sits underneath that initial liner system and is a point for determining if any leaks have been -- or any breaches have been in the liner system.

MR. WOODWARD: Thank you.

Q (By Mr. Woodward) Let's look at C-504. What is this drawing?

A. This is a drawing of the cross section of the evaporation ponds.

It provides the liner system that will be installed for the liner -- for the evaporation ponds. It consists of also a six-inch compacted soil base, a geosynthetic clay liner, a 60-mil HDP liner a 200-mil leak detection geocomposite and then the second 60-mil HDP liner on top.

Q. These are for the 12 evaporation ponds

that are proposed in the southeast portion of the facility?

A. Yes.

Q. How about drawing C-505?

A. C-505 provides the liner and the containment berm for the receiving tanks and for the tank system within the waste liquid processing area.

Q. What is this facility designed to do?

A. It is designed to be second containment in case there is any leaks with any of the tanks or any of the piping system within the tank system.

Q. Is this system designed to any -- hold any certain volume?

A. Yes.

Q. And what would that be?

A. The volume of the entirety of the tanks.

Q. And then Drawing C-506?

A. C-506 provides the location and the cross sections of the detention ponds that are located in the southwest and the southeast corner of the facility and then it provides a total storage for each of the detention ponds.

Q. And what was the storm event that the -- this design was based upon?

A. The 25-year, 24-hour storm.

Q. How did you select the 25-year, 24-hour storm?

A. The 25-year storm is called out in the regulations and the 25-year, 24-hour storm would be the standard -- the standard normal storm for waste facilities.

Q. Let's look at C-507. What does this drawing show?

A. This drawing shows the sizing of the drainage channels which run around the landfill portion of the facility and the north side of the waste processing facility. It provides a cross section for each one of the channels.

Q. What are these channels designed to do?

A. They are designed to hold the runoff and run-on calculated for the drainage calculations and transport the water to the detention ponds.

Q. Do the channels also keep water from running onto the active portions of the facility?

A. Yes.

Q. And are they designed based upon a certain storm event?

A. Yes.

Q. What is that?

A. The 25-year, 24-hour storm.

Q. Can you basically describe the drainage of this facility?

A. The drainage of the facility based off of site visits and the survey of the facility, it is broken down into two different drainage areas, initially. The existing drainage for the facility without -- before anything is being built is broken up into two drainage areas, which as shown are chief flow into a draw that is located about a mile and a half southwest of the southwest corner of the facility.

A. What we did is then we determined what additional flow will the design and the installation of the final build-out of the facility, how much that would increase the total runoff from the facility. What we did was design the detention ponds to hold the excess amount of runoff that would -- that would have increased the drainage off the facility to ensure that there was no adverse changes to the system downstream of the facility. We wanted to make sure to keep the existing drainage standards the same even though we were increasing the amount of runoff in the area.

Q. And there is a drainage study included in the application, correct?

A. Yes.

Q. But on this drawing what I was hoping you would do for me is just describe how the drainage is managed in the within the facility.

A. Within the facility, the channels that run along the surface waste management landfill are there to collect any runoff, any runoff that is drawn along the facility and any runoff from the slide slopes when rain comes in contact with the side slopes and the clean soil. And then the -- also they act as a deterrent to prevent any run-on from getting to the actual landfill area. So they would collect any water before it hits the landfill, any run-on that hits the landfill facility.

And then the detention ponds -- the detention pond in the southeast corner is there to collect drainage from east of the -- of the roadway and then there is a drainage area that runs through that portion and it acts to collect any water to ensure that none of that run-on water will affect the processes of the liquid processing area.

Q. The channels are depicted along the north side around the landfill?

A. Yes.

Q. There is little arrows in there, do those

signify anything?

A. It is the direction of flow.

Q. Okay. So starting in the northeast corner the flow is going to go --

A. Yes. Starting on the northeast corner you either head west on the north side of the landfill or you will head south on the east side of the landfill and loop around the facility and head towards Drainage Pond 1 or Detention Pond 1.

Q. And similarly on the north side of the evaporation ponds --

A. Yes.

Q. -- drainage is diverted?

A. Diverted before it can reach the area for the liquid processing.

Q. Let's go ahead, we are talking about drainage go to Attachment J, which is in Volume 2. Did you prepare what is listed as a drainage study in Attachment J?

A. Yes.

Q. And you described it earlier but what is the purpose of the drainage study?

A. The purpose of the drainage study is to ensure that post-development conditions of the landfill will not increase the runoff from the

site -- increase the runoff to the site and we want to match the existing conditions of the predevelopment of the landfill to ensure that the same -- the same or less of amount of water running from the site won't adversely effect the -- anything downstream of the facility.

Q. So how do you go about making that determination?

A. First we determine what the existing drainage areas are for the facility and then we determine what the total runoff and of those two, of since there is two here the two drainage areas are for the facility. Once we determine what the total runoff of the drainage areas are, we then determine what the post-development and I mean full development of the site will increase the amount of runoff on the facility.

From there we determine what the amount of water is that, the difference between the two amount of waters from the post-development to predevelopment the existing conditions.

We determine how to size our detention ponds on-site in order to hold that amount of water and only release the predevelopment flows from the site.

Q. So, let's look at Exhibit Figure J.1.
A. Okay.
Q. Can you describe this exhibit, please?
A. This exhibit is the existing drainage areas for the site. As you can see, C.K. Disposal is a part of Drainage Area 1 and Drainage Area 2. The Northern border of the Drainage Area 1 is capped off at the permitted boundary of C.K. Disposal because just north of the permitted boundary is a berm that lies along the north side of the permitted boundary the existing berm. And then also what is -- so that prevents water from coming on into that drainage area and then Drainage Area 2 is what is east of the facility.
Q. It is kind of like C.K. Disposal is the headwaters so that microdrainage?
A. Yes.
Q. Generally describe what the drainage study shows.
A. The drainage study shows that most of the runoff from the -- both drainage areas runs at a shallow sheet flow or shallow concentrated flow. It shows that really no channelized flow within the Boot 2 drainage areas and it flows from northeast to southwest.

Q. Did you make any calculations to determine the volume of water that would currently run through these drainage areas?
A. Yes.
Q. And you utilized the 25-year, 24-hour storm?
A. Yes.
Q. Have you done this type of facility -- type of calculation for other facilities?
A. Yes.
Q. And do you always use that storm event?
A. Yes.
Q. What volume did you calculate would come -- is current -- would currently run through these drainage areas as the site currently exists?
A. The existing hydrology produces a 576.4-acre-feet of runoff from those two drainage areas.
Q. And did you do a calculation as to what post-development runoff would be?
A. Yes.
Q. And what was that number?
A. That was 587.7-acre-feet.
Q. And what is the difference between those numbers?

A. That would be 13.3.
Q. So make sure I understand what you're saying is there will be 13.3 additional acre-feet of water that will run off of this facility after it is constructed?
A. Yes.
Q. So, what do you do about that?
A. What we did is we designed Detention Pond 1 and Detention Pond 2 to hold at least the minimum of 13.3-acre-feet of drainage from the facility. Detention Pond 1 was able to hold 12.3, and then Detention Pond 2 holds much more but we only account for 2.3 in Drainage Area 3 to ensure that we were above the 13.3.
Q. So how much storage are you accounting for totally then to control runoff from the facility?
A. 14.6.
Q. So you're capturing a little more water, there would be a little less runoff during that storm event?
A. Yes.
Q. Now to be clear, the design is not for pollution control, right?
A. No.
MR. BOHNHOFF: Object, Your Honor.

Mr. Chairman, we have had just almost nonstop leading questions here. Again, I am not -- in order to expedite the proceeding I am willing to waive the objection, but I want to make sure that we aren't facing a double standard here in that the leading can be undertaken when we present our case as well.

MR. WOODWARD: Duly noted.

CHAIRMAN CATANACH: Thank you.

COMMISSIONER BALCH: This is a little bit typical in a regulatory case instead of a trial case to try and get your information for the record.

MR. BOHNHOFF: I understand in your regulation you refer to flexible application Rules of Evidence, that is fine. I just want to make sure that I am not held to a different standard.

COMMISSIONER BALCH: We will be sure of that.

Q. (By Mr. Woodward) Are the ponds designed for any pollution control purposes?

A. No.

Q. What is their purpose?

A. The purpose is to capture -- the ponds is the purpose to capture runoff that's collected within the system and what we are talking about is the runoff or the run-on that enters the site.

Q. What is the nature of the water that is collected in these ponds?

A. The -- in the detention pond the nature of the water is usually just runoff from storm water that hits the facility or hits the ground.

Q. Is that normally referred to as noncontact storm water?

A. Yes, nonpolluted, noncontaminated water.

Q. Are there any drawings in the drainage study regarding the design of the detention ponds?

A. Yes. They are provided in Appendix C. The detention ponds are provided in Figure J.8.

Q. What is a gabion basket overflow?

A. A gabion basket is a rock-filled fence fabric and it acts as the overflow for Detention Pond 1 to ensure that the runoff is slowed down and it doesn't create a channelized flow. It maintains a sheet flow status leaving the facility.

Q. Are there any --

MR. WOODWARD: Hang on a second.

Q. (By Mr. Woodward) I apologize. What is confusing here this is Attachment J but it has appendixes within the attachment.

A. It is at the end of Attachment J.

MR. WOODWARD: In Volume 2.

Q. (By Mr. Woodward) So we were talking about what a gabion basket overflow is, would you describe that, please?

A. Yes, sir. Gabion basket overflow is a rock-filled fence fabric that acts as a -- it is -- it acts at slowing down the water so we maintain a sheet flow leaving the facility and to slow down the water as much as possible prior to leaving the facility. We do not want to create a channelized flow and alter the flow patterns that exist.

Q. Where along the Detention Pond 1 would you find the gabion basket overflow?

A. It runs along the entire west and south boundary of Detention Pond 1.

Q. Does the water come out in any one location before it comes out of the other?

A. No. It overflows as a -- it rises together and overflows altogether to create a sheet flow and over the gabion basket or through and over the gabion basket.

Q. In your study have you shown that the drainage controls will keep run-on from the 25-year, 24-hour storm onto the active portions of the waste management facility?

A. Yes.

Q. How will contact contaminated water from the active waste management areas be managed?

A. Within the landfill the water that is contacted with waste will be collected through the leachate system and disposed of at the liquid processing area. Anything that runs over clean soil and the side slopes are closed areas will be considered clean runoff and not contaminated runoff.

Q. So will contaminated water be allowed to be discharged?

A. No.

Q (By Mr. Woodward) Let's go back to Volume I, Attachment C. What is included behind the Tab Attachment C?

A. Attachment C is a quality control plan for the liner geosynthetic liners that will be installed at the facility. It provides general submittals, delivering storage and handling of the materials, manufacturer testing requirements, third-party testing requirements of the material, installation procedures of any of the liner material, and then installation procedures for the leachate protection and leak detention systems.

Q. What is the purpose of this document?

A. The purpose of this document is to ensure

that the materials placed within the facility meet the requirements of the Part 36 rules and they're installed to the highest quality.

Q. Would you agree this is a quality assurance, quality control plan?

A. Yes.

Q. Let's flip to Attachment D as in dog.

What is behind this tab?

A. Attachment D is the final cover quality control plan. It provides a construction quality control plan for the final cover to be installed at the landfill facility and, all the same with the materials that will be installed and the compaction of the placement of the soils on the top cap and the side slopes.

Q. Are there any drawings in Attachment D that show the design of the final cover?

A. No, there isn't.

Q. Where would we find a drawing for the design of the final cover?

A. Those will be found in Attachment B.

Q. Attachment B?

A. And then also -- yes, on attachment B.

Q. Would you please find that.

A. The final cover sections are provided on

Sheet C-104.

Q. Could you please describe the design for the final cover?

A. The design for the final cover on the top cap which is the top of the landfill structure, it will be a combination of six-inch daily and six-inch intermediate cover placed on top of the waste and then overlaid with a 60-mil HDP liner. Then a 200-mil geocomposite and then three feet of soil on top to act as a protective infiltration for -- and vegetation layer for the -- for the cap.

Q. Can you just please generally describe what each one of -- the purpose of each one of these layers?

A. The six-inch cover is just the daily cover that is placed on top of waste at the facility. six-inch intermediate cover is placed on top of a -- on top of that as a protective of the -- when you are at your final waste elevation just as a protective on top of the daily cover. The 60-mil double sided smooth HDP liner prevents any water from infiltrating the top of the cap and ensuring that there will be no additional water entering the cap. The 200-mil geocomposite acts as a transport for the water that does hit the cap and allows it to

be transported to structures that are on the sides of the cap and then down articulated block structures.

MR. WOODWARD: Sorry to interrupt, but does the geocomposite have more permeability than the HDP liner?

A. Yes. It -- the two geotech style layers act as a collector for the water and as a filtration system for the protective soil on top. And the geonet in between acts as the transport system for the water that hits the geocomposite.

Q (By Mr. Woodward) So it allows water to runoff of the cap?

A. Yes.

Q. I'm sorry to interrupt. You were at the infiltration layer.

A. Yes. The infiltration layer and then the soil on top which acts as a -- for vegetation to be reestablished on site.

Q. The side slope performance design seems to have a little different design. What is the difference?

A. Yes. Based off of the side slopes of the final cover we were allowed and we modeled the performance side slopes and the help model so -- to

ensure that we could only use soil it is a three-foot of -- one foot of soil erosion layer and two feet infiltration layer on top of the six-inch daily cover and 16-inch infiltration layer.

Q. Let's go to Attachment E. I notice you're seal is not on Attachment E?

A. Correct.

Q. So this version was provided by another engineer?

A. Yes.

Q. And who is that?

A. Robert Holder.

Q. Do you work with Mr. Holder?

A. Yes.

Q. And he is here to describe Attachment E?

A. Yes.

Q. Okay. And then Attachment F, what is contained in Attachment F?

A. Attachment F is a -- the geosynthetic material and pipe material that will be placed in the landfill documentation which shows the characteristics of the material including tensile strength, hydraulic conductivity and just the material -- the material tested properties?

In addition, at the beginning of

Attachment F is the interface friction test to show that the material lying on one another will provide enough friction resistance to withstand the side slopes of the landfill facility.

Q. What is the importance of providing the information in Attachment F?

A. Backup documentation for the liner system that will be installed at the facility as a guide to -- for information on which liners would be chosen and not -- liners, and piping that could be chosen for the landfill.

Q. Okay. Let's go to Volume 2.

Attachment K.

Did you prepare Attachment K?

A. Yes.

Q. What is Attachment K?

A. It is the site operating plan.

Q. And what is a site operating plan?

A. The site operating plan provides site management and site operation procedures that the facility is run by in order to meet the Part 36 rules.

Q. So what type of information is contained in it?

A. Operation hours, personnel, training and

equipment, site access, noise control, odor control, landfill waste characteristics, waste acceptance, liquid processing. And then it also contains a H2S management plan as an appendix and a contingency plan.

Q. Is the operating plan required by the rules of the OCD?

A. Yes.

Q. Do the -- does the operating plan call for the operator to maintain the smallest practical area on the working face?

A. Yes.

Q. Does the operating plan provide unauthorized -- provide control of unauthorized access?

A. Yes.

Q. Does it outline what to do in case of a fire?

A. Yes.

Q. Does it spell out how to control litter and odors?

A. Yes.

Q. Is it true that the operating plan covers all of the requirements that are found at 19.15.36.14?

A. Yes.
Q. I think you said the operating plan has a contingency plan?
A. Yes.
Q. And does the contingency plan name emergency contacts?
A. Yes.
Q. Identify hospital contacts?
A. Yes.
Q. What to do in case of fire?
A. Yes.
Q. How to address spills?
A. Yes.
Q. What else does a contingency plan do?
A. It provides the emergency response coordinator, a full list of emergency equipment that will be kept on site, implementation of emergency procedures, release notification, an evacuation plan from the facility and then fire control and notification to authorities.
Q. Where will the contingency plan be kept?
A. At the landfill site.
Q. Will they have an office at the site?
A. Yes.
Q. The plan be kept in the office?

A. In each office. There will be two scale houses at the facility.

Q. Are there routine inspections of the facility?

A. Yes.

Q. What all is inspected at the facility?

A. All components of the facility, the landfill, daily cover, the leachate, the leachate system, collection systems, the drainage channels and drainage structures, the evaporation ponds and the evaporators within the ponds, the monitoring systems located around the perimeter of the ponds, roads, everything, maintained on site and inspected.

Q. Is there any documentation made of the inspections?

A. Yes.

Q. How are inspections recorded?

A. Inspections are recorded on forms provided in Attachment C of the -- sorry, Appendix C of Attachment K and we provide a form where they could do daily inspections.

On the first form we provide a daily check for different items within the facility including the HOS levels, sump levels, chemicals added, pond conditions, various items there.

On the second form is the leachate monitoring form of any leachate is collected within the facility and how much. Who has been monitoring it?

And then the last form provided is the pond integrity and leak detention inspection, too. It is a form to check the integrity of the ponds to make sure there is no leakage or any damage to the ponds during operation.

Q. Is there any description in the operating plan about the operations in the liquids process?

A. Yes.

Q. Would you describe the components of the liquids processes area.

A. The liquid processing area, when liquid waste is received on-site first it will be unloaded into the load-out tanks which are then transferred to a series of gravity separation tanks. The liquid waste will sit within the gravity separation tanks for a minimum of five days, four of those days -- sorry, one of the five days will be heat treated to assist with the separation of water and oil substances, oil substances contained in the water.

When that is completed approximately 80 percent of the water or 80 percent of the oil

components will be removed from the water in the system. From there it gets transported through an oil mechanical separator which uses a gas bubble separation system which is typical industry standards of oil -- water separators. And from there another additional 95 percent will be removed from the system. Oil will be removed from the water. And then the remaining water goes into the ponds and oil will be transported to the oil recovery tanks. This leaves the water approximately 99 percent free of the original -- of oil from the original load-out tank.

Q. What -- will there -- does only treated water go to the evaporation ponds?

A. Yes.

Q. So only water that has gone through that processing system goes to the evaporation ponds?

A. Yes.

Q. Is there a routine inspection of the ponds?

A. Yes.

Q. And maintenance of the ponds?

A. Yes.

Q. How about of the evaporative spray system?

A. Yes.

Q. What do you look for with evaporative spray system?

A. To make sure they are working and functioning as originally installed, that we are getting the amount of water going through the evaporative system to ensure that we are getting the proper evaporation and maintaining the amount of evaporation needed to keep the ponds open.

Q. And then Attachment L. Did you prepare Attachment L?

A. Yes.

Q. What is behind Attachment L?

A. It is the closure plan and the post-closure plan for the facility.

Q. What does the closure plan provide for?

A. It provides the closure activities for the liquid processing areas and for the landfill facility.

Q. And what is the goal, ultimate goal when you implement a closure plan?

A. The goal of the closure plan is to return the site to as existing conditions as possible.

Q. Is there a financial assurance estimate for accomplishing the closure?

A. Yes.

Q. And did you make that calculation?
A. Yes.
Q. And what did you base those estimates on?
A. I based those estimates off third parties performing the closure of the facility and present day dollars.
Q. And what dollar amount did you come up for the closure cost estimate?
A. The closure cost estimate is $1,149,142.
Q. Did you also prepare a post-closure plan?
A. Yes.
Q. And what does the post-closure plan provide?
A. The post-closure plan provides a maintenance and pretty much maintenance for the facility to make sure everything is still running properly like leachate collection, that vegetation is being established on site and the vegetation being established on site is being taken care of and not creating a runoff facility, and then it also provides any repair costs that are needed for the site.
Q. Is there Vadose zone monitoring during closure, post-closure care also?
A. Yes. We have calculated semi-annually to

attach both provided in the report provided by the attachment, I believe that is J.

Q. How long will this site be monitored after closure?

A. The facility will go through post-closure for 30 years.

Q. Did you prepare a cost estimate for post-closure care?

A. Yes.

Q. And what is that cost estimate?

A. That $1,162,770.

Q. In your professional opinion does the application you prepared satisfy Part 36 of the OCD regulations?

A. Yes.

Q. In your professional opinion do you believe that the design and operations will be protective of human health, fresh water and the environment?

A. Yes.

MR. WOODWARD: I pass the witness.

CHAIRMAN CATANACH: Mr. Brooks, do you have any questions?

MR. BROOKS: No questions.

MR. BOHNHOFF: Could we have a break?

CHAIRMAN CATANACH: Sure. Ten minutes.

(A recess was taken.)

CHAIRMAN CATANACH: All right. I will call the hearing back to order and turn it over to Mr. Bohnhoff.

MR. BOHNHOFF: Thank you, Mr. Catanach.

During the break we got copies made of LES Exhibit PP that was marked and admitted this morning. I put copies in front of all three Commissioners' chairs. I suggest that it could be put in the side flap of the LES exhibit book.

CROSS-EXAMINATION

BY MR. BOHNHOFF:

Q. Now, Mr. Ybarra, you testified that you are the engineer of record on this permit application. Would it be fair to state that you are generally the most knowledgeable person about the application and the facility that is proposed in it?

A. Yes.

Q. So if we want to get an understanding of the description of what the facility looks like, you are the best person to give it to us, right?

A. Yes.

Q. Turn, if you would, to Exhibit B, that is C.K. Exhibit B. That is your resume that you

identified earlier. You got your Master's from Texas A&M in 2008 and you have got now eight years of experience. When did you get professional engineers license?

A. In 2011.

Q. And as I understand your description of your background, you have got experience with solid waste landfills. How many -- prior to this project, how many oilfield waste disposal facility projects had you designed?

A. None.

Q. And, of course, the key difference between solid waste landfill and this particular facility is the fact that this particular facility also is involved with liquid processing, right?

A. No. We still have leachate collection systems and leachate collection ponds at MSW facilities.

Q. Sure. But now you're dealing with produced water coming from the oil and gas operation, right?

A. Yes.

Q. This is the first time you have ever dealt with that challenge?

A. Yes.

Q. Okay. And if we look down here at the -- on your resume, the second bullet from the bottom, you do note that you were involved in the construction or design and construction I suppose of a new entrance road and scale, do you see where I am reading from?

A. Yes.

Q. Other than that one project have you had any other experience in designing roads?

A. Yes.

Q. How much experience do you have designing roads?

A. I've had multiple projects designing roads for both landfills and other facilities.

Q. Would you call yourself a traffic engineer?

A. No.

Q. What experience have you had addressing -- well, let me ask you, first of all, there was some hydrogen sulfide modeling that was performed for this application in September of this past year. Did you perform that model?

A. No.

Q. How much experience do you have with analyzing and addressing air contaminant emissions

from landfills or other waste disposal facilities?

A. I have experience in monitoring and collection and analyzing landfill gas at other facilities.

Q. Landfill gases, are those hydrogen sulfide?

A. Typically methane.

Q. Methane. Have you engaged in modeling of methane emissions?

A. Yes.

Q. Now at the beginning of your testimony there was some discussion about the fact that this application was submitted in November of 2015, but then you testified that the OCD began its review of C.K.'s application in early May. Is that your testimony?

A. Yes.

Q. Turn, if you would, to C.K. Exhibit K. This is a copy of Mr. Griswold's May 4, 2016 letter to Mr. Karger informing him that the C.K. application was administratively complete. You aren't suggesting that the OCD completed its review of C.K.'s application in three days, are you, possibly less to account for mailing?

A. No.

MR. BROOKS: I'm sorry, did you say Exhibit -- oh, C.K. Exhibit.

MR. WOODWARD: C.K. Exhibit K.

MR. McGUFFEY: Okay. Thank you.

Q. (By Mr. Bohnhoff) In fact, look at Exhibit H. You recognize that as a copy of professor -- I believe it is Professor Richardson's March 25, 2016 letter to Mr. Griswold summarizing the results of his review of the C.K. application. You understand that Mr. Richardson was involved only because he was asked by Mr. Griswold to start reviewing your application, correct?

A. Yes.

Q. So, in fact, the OCD had been reviewing the C.K. application since at least March of 2016, right?

A. Yes.

Q. You had signed the original November 6, 2015 application, correct?

A. Yes.

Q. And that is at the very beginning of Volume 1 of the two application notebooks. And then Mr. Karger signs a May 1 application and we have that as Exhibit J. Why don't you turn to that.

Well, let me just make sure, it is your

understanding what happened was that the OCD informed either your firm or Mr. Karger or both that the application had to be signed by an owner of the company as opposed to its engineer, and that is why the new application form needed to be signed by Mr. Karger, correct?

A. I assume that is what happened, I wasn't privy to the information.

Q. But the application had really been pending and was being reviewed since November of 2015?

A. Yes.

Q. And then turn to Exhibit I which is in your notebook. This is your colleague's, colleague Mr. Holder's April 1, 2016 submission to Mr. Richardson of additional information about the application. This was an updating of the application to respond to the concerns he had raised in his March 25 letter, right?

A. This is the additional information he requested.

Q. If you will look at Attachment E in Volume I of the application, on the first page there in the upper right-hand corner is help model apparently was revised or supplemented in the

following month sometime in May 2016, right?
A. Yes.
MR. BROOKS: What exhibit did you say?
MR. BOHNHOFF: This is -- I believe we've labeled this Exhibit 8A, Volume I.
MR. BROOKS: Oh, this is your exhibits?
MR. BOHNHOFF: No, the two volumes, C.K.'s application.
MR. BROOKS: Exhibit E to the application?
MR. BOHNHOFF: Attachment E, within Volume 1, the application.
MR. BROOKS: Okay. Thank you. I appreciate the clarification.
MR. BOHNHOFF: Sure.
Q. (By Mr. Bohnhoff) I'm going to restate your testimony, Mr. Ybarra, sometime in May additional supplementation was provided and accepted by the OCD on C.K.'s application?
A. Yes.
Q. Lastly, I will ask you to turn to the LES exhibit notebook, Exhibit C. Do you recognize that as a copy of the September, 2016 hydrogen sulfide modeling report that your firm provided to OCD?
A. Yes.
Q. And that was also accepted by OCD, right?

A. Yes.
Q. I want to talk some about traffic. You told us that you're most knowledgeable about this proposed facility. How many trucks carrying oilfield waste do you assume will come to the facility every day?
A. From what I was told of information provided to me by Bryce Karger, it would be one per half hour so there would be approximately 48 trucks a day.
Q. When did Mr. Karger give you that information?
A. It was stated at the public meeting in Eunice.
Q. Had you made any assumptions prior to early January of this year about the volume of traffic, truck traffic in making the design, coming up with the design in the application and plan?
A. We gave different levels of service depending on the amount of waste that would be accepted at the facility.
Q. Let me ask you this: Did Mr. Karger tell you that if you got more than one truck every half hour he would turn them away?
A. No.

Q. In other words, Mr. Karger isn't telling you that he is going to decline business if the trucks show up at his facility, is he?
A. No.
Q. I am going to ask you to turn to Attachment K.
Rather than review the copy that is in the LES exhibit notebook, I will ask you to turn to Volume 2 of the application, C.K. Exhibit K. This is your site operation plan?
A. Yes.
Q. Turn, if you would, to Page 11. You write there in the first paragraph of Section 5.0, Liquids Processing, "that the facility has been designed to process roughly 12,000 barrels a day." Do you see where I am reading?
A. Yes.
Q. Can we translate 12,000 barrels per day into trucks per day?
A. You can, but it could vary.
Q. And what is the range, typical range of how many barrels a truck can carry?
A. I don't have that information with me.
Q. So as we sit here you can't give me a range of how many trucks per day that would -- the

12,000 barrels a day figure would translate into?

A. No.

Q. Turn back to Page 8 in the same attachment. If we look at Section 4.5, Waste Capacity, there is a Table K.3, Estimated Site Life, and you estimate the life of the site is between 38 and 115 years depending on how many cubic yards you get per day, either 500 as a minimum or 1,500 cubic yards per day. Now is this cubic yards of solid waste, is this in addition to the 12,000 barrels of liquid waste coming to the facility?

A. This is cubic yards of solid waste that go to the landfill.

Q. And that would be in addition to the 12,000 barrels of liquid waste, correct?

A. To the capacity, yes.

Q. All right. So can you give me a translation into trucks per day of 500 to 1,500 cubic yards of solid waste per day?

A. The variations of the amount of waste that a truck can carry could vary. It could be anywhere from 20 tons, ten to 20 tons per vehicle.

Q. Ten to 20 tons. So that would be between 25 and 50 trucks per day carrying solid waste. And that is only if you are in on the low end of your

estimate here of how many cubic yards you're going to be getting per day. Do I have that right?

A. These aren't estimates of cubic yards we'll be getting per day, this is just to provide an estimate of the site life of the facility.

Q. Let's go back to Page 11, that 12,000 barrels per day figure. Are you assuming that if the facility gets enough tanker trucks coming in during any one 24-hour period to bring in 12,000 barrels that the site is going to shut down and won't take any more tanker trucks?

A. No.

Q. Have you made any assumption about what the peak traffic would be at the facility at any one 24-hour period?

A. No.

Q. Do you have any understanding of the experience of the nearby Sundance facility in terms of their traffic levels?

A. Yes.

Q. What is your understanding?

A. There is usually many vehicles attempting to go to the Sundance facility.

Q. Would you expect the traffic at the C.K. facility to be similar to the traffic at the

Sundance facility?

A. Yes.

Q. Can we agree that oil drilling activity in the Permian basin has been relatively depressed over the past year as compared to the level of activity say in 2014?

A. Yes.

Q. Now the site is going to be open 24/7, right?

A. Yes.

Q. Do you have any understanding when the bulk of the traffic is going to come in the course of a 24-hour period?

A. No.

Q. Do you know whether at these kinds of facilities traffic tends to get bunched up in the afternoon, evening hours?

A. No.

Q. Have you investigated how quickly trucks would be processed through the C.K. facility?

A. No.

Q. You understand that after a tanker truck unloads its liquids, the truck driver is going to want to wash out the tank?

A. Yes.

Q. Do you know typically how long that takes, the process?

A. No.

Q. Do you know what the capacity of the proposed access road within the C.K. facility would be as far as being able to handle trucks backed up?

A. Yes.

Q. How many?

A. On the solid waste side 20, and on the liquid waste side 17.

Q. And what happens if you go past those numbers 20 and 17, what happens to the trucks?

A. There is no capacity for them on site.

Q. Are they going to --

A. Well, before the scale house.

Q. Are they going to start stacking up on the highway?

A. I don't know. I don't know what they would do if there is no capacity on site.

Q. I wrote down G.4 as the figure. Is that in Volume I? It is the figure I want to look at next.

Figure G.4, Attachment D is what I am going to ask you to turn to, your site development plan.

You were here at the hearing this morning when I was asking questions of Mr. Karger, were you?

A. Yes.

Q. All right. What we have here is a diagram that shows the road at the far northeast corner of the facility. That is the entrance and exit onto Highway 176, correct?

A. The top corner?

Q. The top right corner, yes.

A. That is the entrance and exit to the facility.

Q. Okay. You understand that the -- well, the line that has X and bars, that is the boundary for C.K.'s property?

A. Yes.

Q. And then north of that, again in that upper right-hand corner, that would be, on that side, anyway, a short distance to go across the State Trust Land to get to Highway 176?

A. Yes.

MR. BROOKS: Which figure are you looking at?

MR. BOHNHOFF: G.4.

MR. BROOKS: G.4. Okay. That's what I was looking at.

MR. BOHNHOFF: Attachment B.
MR. BROOKS: I thought you said Attachment G. Sorry.
Q (By Mr. Bohnhoff) As you understand the access road and where it would be intersecting with Highway 176, would the access road there at that upper right corner just continue in a due northerly direction, in other words, straight up on this diagram to get to the intersection with Highway 176?
A. Yes.
Q. If we -- if we assume we are in a truck and we are coming into the facility and we cross the State Trust Land and then we get onto the C.K. property, I guess if you are entering, you're going to go to the right to where the road kind of flairs out into multiple lanes. Is that right?
A. Yes.
Q. So exiting trucks will be going north around the bottom of the evaporative ponds you will go past the gatehouse and then they will continue north on this diagram?
A. If they are coming from the processing facility, yes.
Q. Let's call it the exit gatehouse here that is shown. Is that portion of the exit road roughly

at the same location as the existing dirt road that is on the property?

A. I am unsure of that.

Q. But in any event, your exit road makes a veer to the right or to the northeast so that it ends up right on the eastern boundary of the C.K. property before it continues onto the State Trust Land, correct?

A. Yes.

Q. Why did you draw or why did you design the exit road and the entrance road to go across the far eastern edge of the State Trust Land and have an intersection with the State Highway at that point?

A. I designed the facility to provide as much room on outside for access and that is the way it was designed.

Q. Have you performed in the course of preparing this application any traffic studies?

A. No.

Q. For example, have you performed a level of service analysis for this intersection that you would propose that the facility have with Highway 176?

A. No.

Q. Any traffic counts?

A. No.

Q. Have you made any evaluation of whether trucks entering and exiting from the C.K. facility at that point could do so safely without creating a traffic hazard for, one, through traffic on Highway 176.

Two, traffic entering and exiting the LES facility to the west.

And, three, traffic entering and exiting the County landfill property to the east?

A. No.

Q. I will ask you to turn to Attachment K. That is your site operation plan in Notebook 2, the application.

I want you to help me understand the processing of this facility. In particular we are going to focus on the liquid processing. Let's start by talking a little bit about separating solids and liquids.

Would I be correct in understanding that some of the trucks coming into the facility will contain only solids or mostly solids?

A. Yes.

Q. And those trucks wouldn't be tanker trucks they would be trucks that would be open on the top?

A. I am not sure what kind of trucks they would be.

Q. I told you to turn to Attachment K. I guess we are also going to have to look at -- let's go back to Figure G.4 in Attachment B, Volume I. That is as good a diagram to look at.

If a truck is going -- if a truck has only solids or mostly solids, whatever the truck looks like, that is what it has, where is it going to go and you can describe on G.4 that might be helpful.

A. If the solids pass the paint filter test, meaning there is no liquids within the solids, they will go to the landfill portion of the facility. If they have -- if it is more of a liquid phase, they would go down to the waste processing facility on the south.

Q. Do you have drying pads?

A. Drying pads?

Q. Do you have any drying pads designed? I mean, tell me what happens, the solids get separated from the liquids at some point, right?

A. Yes.

Q. And once the solids or liquids are separated from the liquids, they have to dry to a point at which they can pass this paint filter test

that you have mentioned, right?

A. Yes.

Q. All right. Where do the solids go to dry out?

A. To the stabilization and solidification area.

Q. That is located on this diagram below the future saltwater disposal area?

A. Yes.

Q. What is that going to look like?

A. It is a lined pit where semisolid liquid waste can go there and just get mixed with a soil on site to solidify it, remove the liquids from the waste.

Q. And the way the liquids are removed from the waste, is it just air dries, right?

A. Yes.

Q. So at least on the stabilization and solidification area, the semisolid material is open to the air and if there is any -- any gases, for example, volatile organic compounds in the solids it will just escape into the atmosphere, right?

A. Yes.

Q. This concept of spreading six inches of cover, that is not going to be done to the solids

that are in this stabilization or semisolids that are in the stabilization and solidification area?

A. Well, the amount of soil that will be mixed within the material in the solidification area will be decided on-site by staff to determine how much material is needed to stabilize and solidify the material.

Q. Tell us what the six-inch cover is, what is the point of that?

A. The six-inch cover is a cover for the landfill to prevent any vectors or gases from being created at the landfill and to provide a stabilized base for the next day's worker for the working phase.

Q. So, once the solids are in the landfill on the west side of the property, the plan is to put six inches of cover on them every day and that keeps gases from escaping from the landfill?

A. Yes.

Q. But you won't have that protection in the solidification and stabilization area, correct?

A. Correct.

Q. Now describe for me where liquids go once they come into the facility.

A. Liquids will go to the south side of the

property and be unloaded at the produced water load-out manifold.

Q. Is that next to where those blue dots are on the south side of the facility kind of way --

A. Yes, yes.

Q. And initially once the tanker trucks unload the liquids, where do they go into?

A. They go into the tanks, the produced water settling tanks.

Q. If I made accurate notes there is first a set of gravity separation tanks that the water goes into?

A. Yes.

Q. Well, let me back up, I said water. Can we agree that most oilfield waste is produced water?

A. No. There could be frac and fluid and there could be just wastewater from the facility.

Q. Can we agree that most of the oilfield waste that is going to come into this facility is going to be liquids?

A. No.

Q. What is your expectation about what the ratio of solids versus liquids is?

A. I haven't come up with a ratio with the difference of the two.

Q. What you have described is liquids go into gravity separation tanks that separate oil from water and then there is a mechanical oil separator that further separates oil from the water and then the remaining water goes to ponds.

In this process will there also be a sedimentation tank?

A. Sedimentation tank?

Q. Yes. For sediments to settle out of the water solids?

A. The solids would be settled within the gravity separation tanks.

Q. So in addition to separating oil from water it is going to separate solids from water?

A. Yes.

Q. And what you told us is that between the two stages of separating the oil from the water, first stage will get removed 80 percent of the oil and then the second stage will remove 95 percent of the 25, 20 percent that is left, is that what you're saying?

A. Yes.

Q. And what is going to be left is water that goes to the ponds that is 99 percent free of the oil?

A. Yes.
Q. If in the OCD's tentative decision granting the permit, the requirement was set out that water that goes into the evaporation ponds has to be oil free, is it your testimony therefore that C.K. can't comply with that requirement?
A. No.
Q. Well, you just told us that water that goes into the evaporation bonds is not going to be 100 percent free of oil, it is going to be 99 percent free.
A. Correct. The remaining oil we remove in the ponds and it is listed in the tentative permit that any oil will be removed by C.K. personnel.
Q. So there is still going to be some skimming of oil off the tops of the evaporation ponds?
A. If there is any oil remaining in the water, yes.
Q. Well, you have already told us that there is 1 percent of the oil is going to remain going into the evaporation ponds, right?
A. Yes.
Q. Now, this water that in addition is going to have some oil going into the ponds, it is also

going to have other constituents as well, won't it?
A. Yes.
Q. It is going to have metals?
A. Yes.
Q. It will have chlorides?
A. I am not sure of all the constituents that will be in the water. It depends on what is provided to the site.
Q. If there is produced water coming into the site that has a heavy chloride concentration, that heavy chloride concentration is going to continue on into the evaporation ponds, right?
A. That is possible.
Q. Well, where is it going to go if not into the evaporation ponds?
A. Then, yes.
Q. And it will have some VOCs dissolved in it, right?
A. Yes.
Q. Have you distinguished between free phase oil and dissolved oil in making your calculations about how much oil is going to be removed in the gravity separation tanks and the mechanical oil separator?
A. Yes. The process you forgot to include is

the heat treatment within the tanks that provides a -- changes in viscosity in the oil and the water where there is increased separation that allows that to happen.

Q. I believe you testified that that was in the mechanical oil separator?

A. No. I stated it as part of one of the days of the five-day process within the tank.

Q. Okay. So the heat processing is in the gravity separation tank?

A. Yes.

Q. All right. And if I am understanding you correctly what you are telling me is you think the both free phase oil and dissolved oil will be removed in the gravity separation tanks because of this heat treatment?

A. Yes.

Q. Would you agree that the VOCs that are going to be included in the water that goes into the evaporation ponds will have among other VOCs, BTEX, butane -- benzine, toluene, ethylbenzene and xylene?

A. Yes.

Q. Would it be correct that you really haven't investigated what kind of BTEX concentrations will be in the water that is going

into the evaporation ponds?

A. Yes.

Q. And similarly you really haven't investigated how much chloride is going to be in water going into the evaporation ponds?

A. Yes.

Q. Look at exhibit -- we are still on Attachment K in one of two of the application. Turn to Page 7.

I apologize I got mixed up. What I want to ask you to turn to is -- no, I was right, I apologize. Again, still on Attachment K, Page 7. Section 4.2 there it is labeled Waste Characteristics.

In the second sentence of that paragraph you write, "Neither hazardous nor nonexempt oilfield waste will not be accepted for processing or disposal." Do we have a double negative there that shouldn't be the case just so we got our grammar correct?

A. It should be "or" and not "nor."

Q. Right, hazardous and nonexempt oilfield waste will not be accepted for processing in the disposal." That is what you intended to say, right?

A. Yes.

Q. All right. What you are referring to there is solid waste that is prohibited under RCRA, correct?

A. Yes.

Q. And just so we are clear, for example, the BTEX that is going to be part of the VOCs that are going to be coming into the site, BTEX is classified as hazardous air pollutants by the EPA, right. Do you know that?

A. No.

Q. Assuming it is, to whatever extent BTEX is classified as hazardous, C.K. will be accepting water that has BTEX in it, right?

MR. BROOKS: Mr. Chairman, I don't usually make this exception, but it seems to me this assumes facts not in evidence because we have not gotten qualification of the difference between exempt and waste that is hazardous by characterization and waste that is hazardous that is excluded from that category because it is exempt. So, I think it is unfair to ask the witness to make this to answer that question without that being explained or incorporated into the question.

MR. BOHNHOFF: Let me see if I can rephrase the question to unmake the objection but

get the point across that I am trying to get across.

Q. (By Mr. Bohnhoff) When you made that statement in Section 4.2, Mr. Ybarra, you didn't intend to be stating that water containing VOCs would not be accepted by the facility, correct?

A. Can you repeat that.

Q. Sure. I will try. It is your understanding that water containing VOCs is going to be accepted by the facility, right?

A. If it is part of the nonexempt oil waste, yes.

Q. But as we sit here right now you are saying you don't know whether one way or the other whether water with VOCs in it including BTEX is nonexempt waste?

A. No.

Q. Turn, if you would, to Page 12, again, still on Attachment K.

I am looking at Section 6.0 Water Treatment and Reuse, did you write this section?

A. Yes.

Q. And if I understand generally what is being said here, if C.K. can recycle the water and resell it, it will try to do so?

A. Yes.

Q. And is that an alternative path, let's call it, for dealing with water to what you described earlier the water that ends up in the evaporation pond?

A. Yes.

Q. So to the extent, recycle it, it is not going into the evaporation pond?

A. Yes.

Q. And by recycling, the water is going to be run through each of these processes, stripping tower, the green sand filters and the reverse osmosis?

A. Yes.

Q. Describe for us how a stripping tower operates.

A. Sorry.

Q. Sure.

A. Okay. I'm sorry, I was trying to find the best way to explain it. Pretty much water is pressurized into this tank and allowed to mist into the system where it allows as much contact with the air as possible allowing the constituents to be removed from the water and come in contact with the -- with the packing material within the vessel. Once that water is passed through it will be

collected and taken to a separate -- to the second stage of the filtration.

Q. Would it be correct that effectively what is going on is you have a tower and air is forced up and water is going down and the air that is being forced up frees from the water these constituents that you are trying to get rid of?

A. No. It is part of the pressurization in creating a mist of the liquid with the air within the system.

Q. All right. The end result is volatiles -- well, let's look about six or seven lines down. The first paragraph at the top of the page refer to volatiles remaining after oil/water separation, solids aren't in manganese, biological including algae dissolves total dissolve solid in chlorides. Do you see that language?

A. Yes.

Q. Those are the constituents that you are trying to remove from the water with this stripping tower, right?

A. Yes.

Q. And the goal is to get those constituents out of the water and into the air?

A. Well, yeah, it would be gassed off into

the ambient atmosphere.

Q. And if I understand you correctly, the reason you are doing that is because if you're going to recycle it and resell the water the companies that are going to buy the water don't want that in the water?

A. They want it where they could use it for their site.

Q. Putting the water in the evaporation pond, the other path, the end result is pretty much the same, isn't it, those constituents are evaporated into the air?

A. Yes.

Q. At the January 9 public meeting there was a reference to a closed loop system. Do you recall that reference?

A. Yes.

Q. In particular this C.K. facility was described as a closed loop system?

A. Yes.

Q. You have got constituents evaporating into the air out of these semisolids in the solidification and stabilization area and now we have constituents evaporating into the air and the evaporation ponds, in the stripper tower, this

facility certainly isn't going to be a closed loop system in terms of there being no constituents as we have just described being evaporated and otherwise released into the ambient air -- atmosphere, correct?

A. I believe the closed loop system we were talking about was based off the hydrogen sulfate, but you are correct that there will be constituents evaporating off of the ponds.

Q. Would it be accurate that the application hasn't attempted to quantify or model the VOC admissions that will be coming out of this facility?

A. Yes.

Q. Can we agree, Mr. Ybarra, that the prevailing wind at this location is going to be generally from the south?

A. I believe it is from the southwest.

Q. Wind down there is near constant, isn't it?

A. I am unsure.

Q. You don't know one way or the other?

A. I don't know if it is a constant.

Q. From time to time the wind will below from the west, do you know that?

A. Yes.

Q. And from time to time the wind will below from the north?

A. Yes.

Q. Go to LES's exhibit notebook, at last we will turn to Exhibit BB. AA, I'm sorry. Do you recognize that particular wind rows?

A. Yes.

Q. That is a wind rows that your firm used in connection with the hydrogen sulfide modeling, right?

A. Yes.

MR. BOHNHOFF: Mr. Chairman, I would move the admission of LES Exhibit AA.

MR. WOODWARD: I think we might ought to get some clarification on this. This has a URENCO-USA label on it and I think Mr. Bohnhoff's characterization of this as used by Parkhill Smith & Cooper, all due respect to his agreement with it, I don't think this was part of our hydrogen sulfide model.

MR. BOHNHOFF: Well, we can put Mr. Woodward on the stand. I am taking the witness at his word.

MR. WOODWARD: Well, I don't want to get a wrong exhibit introduced into the record if it's

been mischaracterized by counsel.

MR. BOHNHOFF: Mr. Chairman, I just asked the question and I think I laid the foundation with the witness.

CHAIRMAN CATANACH: We will allow it.

MR. BOHNHOFF: I'm sorry, it is admitted?

CHAIRMAN CATANACH: Yes.

MR. BOHNHOFF: Thank you.

(Exhibit LES AA admitted.)

Q. (By Mr. Bohnhoff) Let's talk about chlorides that are in the C.K. evaporation ponds. Do you have any basis, Mr. Ybarra, for disputing the proposition that the chlorides in the evaporation ponds will be in a concentration that will be multiple tens of thousands of milligrams per liter?

A. I am unsure of the concentrations.

Q. Look at Exhibit DD.

In particular turn to the numbered Page 82 on page numbers at the upper left-hand corner. It is easier to see the Page Number 81 before it.

If you will look at that table, Table 2, about six lines down you see the line for chlorides.

A. Yes.

Q. And if you will look there is concentrations for various sites in the Permian

basin?

MR. WOODWARD: Mr. Chairman, I am going to object at this time. There has been no foundation laid for what this data is or where it is coming from or what this report is, so, for him to ask this witness about it, it is just assuming a lot of information that I don't think has been established.

MR. BOHNHOFF: I am not asking -- I will be laying the foundation during the testimony of my witnesses. But for present purposes, I am asking Mr. Ybarra only if he would have any basis for disputing that chloride concentration in produced water coming out of the Permian basin can be between 20,000 and 177,000 milligrams per liter.

A. Based off of this report, yes.

Q (By Mr. Bohnhoff) If there were concentrations of chlorides in the liquids in the evaporation ponds at the C.K. facility at that level, you have got the aerator pumps in the evaporation ponds, right?

A. Yes.

Q. And those pumps would be pumping water up into the air and some of those chlorides would be expected to evaporate into the wind, correct?

A. It is possible.

Q. Well, it is likely, isn't it?
A. It is possible.
Q. You think it is only possible?
A. It depends on the makeup of the water.
Q. Meaning if there is water that doesn't have the levels of chlorides that are shown in this report and instead it is very low levels of chlorides, under those circumstances you wouldn't have evaporation of chlorides into the air?
A. I can't give that answer without calculating providing a significant answer there.
Q. Assuming there are substantial levels of chloride in the evaporation ponds aeration of the ponds and the wind blowing from the southerly direction, the combination of that is likely to carry some chlorides over to LES, isn't it?
A. No.
Q. Have you done any analysis?
A. No.
Q. Can we agree that metals and semi-volatile organic compounds will also be in the C.K. evaporation ponds?
A. Depending on the makeup of the water, yes.
Q. Under ordinary operations would you expect metals and semi-volatile organic compounds to be in

the evaporation ponds?

A. Yes.

Q. And those materials could be expected to precipitate out of the water and be deposited at the bottom of the evaporation ponds, right?

A. Metals, yes.

Q. How about the semi-volatile organic compounds?

A. Yes.

Q. Or alternatively they might be through wave action washed up against the sides of the evaporation ponds and dried there on the sides of the evaporation ponds, right?

A. It is possible, yes.

Q. At such point in time that the ponds dry out, to whatever extent there is semi-volatile organic compounds and metals either at the bottom or on the sides of the evaporation ponds, you would expect some of them to be carried in the air and dispersed, right?

A. No.

Q. Why not?

A. Because on daily inspections the ponds will be cleaned off and maintained on a daily basis.

Q. Tell me what the workers are going to do

on a daily basis to clean off the sides of the ponds.

A. I am unsure of exactly what procedures they would be using.

Q. You didn't prepare the modeling, the hydrogen sulfide modeling report, but if I understand correctly you prepared the hydrogen sulfide management plan?

A. Yes.

Q. All right. I want to talk about hydrogen sulfide here then in the next few minutes. Can we agree that hydrogen sulfide is a poisonous and highly dangerous gas?

A. Yes.

Q. It can and does kill people in the oil and gas industry?

A. At high enough concentrations, yes.

Q. And even at nonlethal concentrations it can seriously injure people, right?

A. Yes.

Q. And it is particularly dangerous because at certain concentrations humans quickly lose the ability to smell it, right?

A. To smell it?

Q. Correct. They lose their ability to

detect that rotten egg smell?

A. Yes.

Q. The hydrogen sulfide management plan that C.K. has adopted relies on monitoring tanker truck loads at the discharge points and then also monitoring at the evaporation ponds, correct?

A. Yes.

Q. With respect to the evaporative at the tanker truck loads, the procedure is you measure the hydrogen sulfide level of the air space within the tanker truck when it comes on site?

A. The measuring techniques will be decided on site but they will be measuring the ambient air leaving the tanker trucks.

Q. Okay. And if hydrogen sulfide level is detected at ten parts per million or greater, the truckload will be treated with calcium hypochlorite before offloading in order to reduce hydrogen sulfide level down to one part per million?

A. Yes.

Q. What that tells us, though, is that if the hydrogen sulfide level is at nine parts per million, it won't be treated, correct?

A. Correct.

Q. And then similarly with respect to the

evaporation ponds employees will check monitoring gauges, monitoring devices that are located around the evaporation ponds twice a day?

A. Yes.

Q. And, again, if they detect a level of ten parts per million or greater, they will respond this time by taking another reading at a downwind fence line?

A. Yes.

Q. But only if it is safe to do so?

A. Yes.

Q. And then if that second fence line reading is over ten parts per million, at that point the employees will notify the OCD in Hobbs?

A. Yes.

Q. So, again, you're going to do nothing if the level of the reading at the evaporation ponds nine parts per million?

A. That is correct.

Q. So if a statement was made at that January 9 public meeting in Eunice that C.K. will keep the hydrogen sulfide levels at one part per million, that is not really correct, is it?

A. I wasn't sure of that statement.

Q. You weren't sure --

A. I wasn't sure if that statement was made that it would be kept at one part per million.

Q. We have a transcript so we can tell whether or not the statement was made, but if the statement was made, that wouldn't be correct, would it?

A. It is a possibility it would be above one part per million.

Q. It could be up to nine parts per million, right?

A. Yes.

Q. The point -- well, if you detect at 20 parts per million or greater at a downwind fence line, once you detect more than ten parts per million at the evaporation pond, at that point the facility gets evacuated, right?

A. Let me check evacuation. Yes.

Q. And in addition to notifying the OCD C.K. will notify the sheriff, the state police, and the County emergency management, right?

A. Yes.

Q. You would agree that this notification of all of these different first responders is not just an empty exercise, right?

A. The notification is not an empty exercise?

Q. Right?
A. Yes.
Q. The point is to allow all of those first responders to notify and evacuate neighbors, right?
A. That could be, yes.
Q. Because the prevailing wind is from the south, if hydrogen sulfide is going blow anywhere from the C.K. facility, the most likely place it is going to blow onto is the LES premises, right?
A. Based off of the wind row you provided, yes.
Q. That appears accurate, doesn't it?
A. Yes.
Q. So, if a hydrogen sulfide evacuation beyond the C.K. facility was determined to be necessary, the most likely persons that would be needed to be evacuated would be LES personnel, right?
A. Yes.
Q. You understand that because of the presence of nuclear material at the LES facility it can't be evacuated?
A. I wasn't aware of that.
Q. What is the basis of these ten part per million and 20 part per million thresholds?

A. The ten part per million was the eight-hour standard OSHA -- OSHA limit that they provide.

Q. The 10 part per million, how about the 20 part per million?

A. The 20 part per million was per the -- was per the API Recommended Practice 55.

Q. Those ten part per million and 20 part per million thresholds, those are applicable to workers, correct?

A. Yes.

Q. In particular workers who are aware of and voluntarily agree to work in the presence of hydrogen sulfide?

A. Yes.

Q. And one of the justifications or rash anals for setting the hydrogen sulfide threshold at those levels that workers, as opposed to the general public, are trained on how to respond to elevated hydrogen sulfide levels, right?

A. Yes.

Q. Similarly in addition to being trained workers, as opposed to the general public, are less likely to have respiratory conditions or other sensitivity to hydrogen sulfide?

A. I am unsure of that, what their health requirements would be to work at the facility.

Q. You are aware that other stricter concentration levels for hydrogen sulfide are applicable to the general public?

A. I wasn't aware of that.

Q. The levels applicable to the general public, to the extent they are different than the concentration levels applicable to workers, those would be the levels that logically would be applicable outside the C.K. fence line, would you agree with that?

A. If they were different levels of limits, yes.

Q. Are you aware that the applicable New Mexico Ambient Air Quality Standard for hydrogen sulfide in the Permian basin is .1 EPM?

A. I was unaware of that.

Q. Let me ask you, as part of your work to prepare this application, I take it you didn't investigate what the threshold concentration levels or the maximum concentration levels for the general public were, correct?

A. We based the hydrogen sulfide management plan per the New Mexico AC, the Administrative Code.

Q. Let's see if we can wrap up the discussion about hydrogen sulfide. I guess the regulation term for this facility is a solid -- solid waste management facility, SWMF, right?
A. No.
Q. Surface waste disposal?
A. Surface waste disposal facility.
Q. It is also known as an oilfield waste disposal facility, right?
A. I don't know what the other acronyms are, the other titles for this facility are.
Q. It is a disposal facility, at least that is what it is called, but with respect hydrogen sulfide you won't really be disposing of it so much as just accepting it and then dispersing it, right?
A. Well, can you repeat that.
Q. Sure. With respect to the hydrogen sulfide that comes into the facility on the trucks --
A. Yes.
Q. -- you won't really be disposing of it so much as just dispersing it, right?
A. Yes, that is part of the byproduct of disposal.
Q. And in particular you are going to be

dispersing it onto the neighbors' property?
A. No.
Q. Where else are you going to disperse it?
A. It should stay within the levels, the manageable levels should stay within the property.
Q. You got wind blowing, ultimately the hydrogen sulfide that comes into the facility and is released into the atmosphere is going to be blown off of the facility, right?
A. No.
Q. If it is going to stay in the facility, the hydrogen sulfide concentrations are just going to build up and up and up, right?
A. No.
Q. Where else is the hydrogen sulfide that gets released from the evaporation ponds going to, Mr. Ybarra?
A. Mixture with the ambient air would reduce the limits and the concentration of the hydrogen sulfide.
Q. Sure. You disperse it or dilute it, but eventually it is going to leave the property, right?
A. Yes.
MR. BOHNHOFF: Mr. Catanach, may I have five minutes to wrap up my questions?

CHAIRMAN CATANACH: Yes.

(A recess was taken.)

CHAIRMAN CATANACH: I will call the hearing back to order.

Mr. Bohnhoff.

MR. BOHNHOFF: Thank you.

Q. (By Mr. Bohnhoff) Mr. Ybarra, do you understand what the calcium hypochlorite that was mixed into the tanker trucks does chemically?

A. No.

Q. So you don't know that whether it -- there is actually a chemical reaction as opposed to perhaps binding the hydrogen sulfide?

A. No, I don't know.

Q. Lastly let's talk about storm water drainage. I will ask you to turn to Attachment J, which is in Volume 2 and let's look first at Figure 6J which is in Appendix C with Attachment J.

A. J6?

Q. J6, yes. Thank you.

I think we looked at this figure earlier this afternoon. What this shows us, does it not, that most of the drainage on the site is going to be ending up in Detention Pond Number 1, correct?

A. Yes.

Q. The only drainage that ends up in Detention Pond Number 2 is just drainage in the southeast corner of the property to the east of the service road?

A. Yes, and then also that includes some drainage will come on from Drainage Area 10.

Q. If there is a heavy rainstorm, let's say it is your 25-year rainstorm. Rain that falls onto the service road within the facility, that rain is going to ultimately end up flowing into the detention ponds, right?

A. Yes.

Q. Will the service roads be cleaned every day?

A. They will be maintained, I would have to check the maintenance schedule to let you know how often they would be cleaned, maintained.

Q. You understand that dirt and oil from the tanker trucks is going to end up on the service roads and they are going to be dirty, right?

A. They can -- it can end up on the road, yes.

Q. They are going to have oilfield waste on them and the trucks are going to track that oilfield waste, at least in some measure, onto the roads?

A. It is possible.
Q. And so when it rains, when you have a heavy storm and it rains, that oilfield waste is going to end up in detention ponds, right?
A. If it comes in contact with the waste.
Q. Turn to J5. A couple of pages earlier.
If I understand this schematic, this is showing that there are several drainage areas DA1 through DA8 or ten, I suppose, and it shows -- this diagram shows which drainage area flows into which detention pond?
A. Yes.
Q. So it is only DA3 that flows into the Detention Pond 2?
A. Yes.
Q. And DA1 through 8 flow into Detention Pond 1?
A. Yes, with the exclusion of DA3.
Q. Right. Thank you.
So you then if we go to Page 6 of Attachment J, we will look at Table 2, this gives us the calculated acre-feet that would run into each of these drainage areas in a 25-year storm?
A. Yes.
Q. So if we look at DA3 that is the

2.6-acre-feet that is going to flow into Drainage Pond 2?

A. Yes.

Q. And the balance of DA1, 2, 4 through 8 is going to run into Drainage Pond 1?

A. Yes.

Q. Can we agree that if you add that up it adds up to 33.7-acre-feet?

A. Let me calculate it really quick. Yes.

Q. So Pond 1 needs to be able to hold 34-acre-feet?

A. No.

Q. That is because it is your contention that Pond 1 only needs to hold the delta, the difference between predevelopment flow and post-development flow?

A. Yes.

Q. And the rest of that 33.4-acre-feet that flows into Pond 1 is just going to flow over the south boundary of Pond 1?

A. South and west, yes.

Q. And that would include whatever oilfield waste is tracked onto the service roads by the trucks and flows into the pond in that 25-year storm, right?

A. If there were waste on the roads and it came in contact, yes.

Q. We can both agree that there is a pretty high likelihood that there is going to be waste on the roads, can't we?

A. It is a possibility.

Q. You won't agree that it is a probability?

A. Not with best management practices and maintenance.

Q. The roads are going to be swept on a daily basis?

A. It is part of the maintenance plan to keep up the roads.

MR. BOHNHOFF: That's all I have. Thank you, Mr. Ybarra.

MR. BROOKS: Mr. Chairman, Honorable Commissioners, I would like to ask the witness a couple of questions on one small point after hearing the cross-examination.

CHAIRMAN CATANACH: Go ahead, Mr. Brooks.

CROSS-EXAMINATION

BY MR. BROOKS:

Q. I call your attention to Attachment K in Volume 2 with the permit application of Page 7.

4.2 under Waste Characteristics, the

statement is made, "Neither hazardous nor nonexempt oilfield waste will not be accepted for processing or disposal."

Now, you were asked about the double negative in there and I believe you testified that it was intended -- well, first of all, did you write this portion of the --

A. Yes.

Q. Okay. You testified that it was intended to say, "Neither -- that hazardous or nonexempt waste will not be accepted." Was that your testimony?

A. Yes.

Q. Now, was it your understanding that nonhazardous exempt -- waste that is nonhazardous and exempt would be excluded?

Nonhazardous -- I'm sorry. Was it your understanding -- you said -- you testified that hazardous or nonexempt waste would be -- would be excluded from the facility, right?

A. Yes.

Q. Now, was it your intention to say that waste that is hazardous by characterization but exempt would be excluded from the facility?

A. Can you repeat that last part? I'm sorry,

I am trying to put it together with the clarification on that.

Q. Well, let me ask you to look at the following page, Page 8.

4.4. It reads, "Only exempt oilfield waste as stated in NMAC 15 -- 19.15.36.13F will be accepted at the C.K. facility. The following waste are prohibited: Regulated nonexempt hazardous waste." So if it is nonexempt and it is hazardous by characterization, it is excluded from the facility, right?

A. Yes.

Q. But if it is hazardous by characterization and it is exempt, it is not a prohibited waste under 4.4, right?

A. Correct.

Q. So wasn't your intention in 4.2 to say that hazardous and nonexempt waste will not be accepted for processing or disposal, in other words, waste that is both hazardors and nonexempt will not be accepted. Wasn't that what you intended?

A. Yes, correct.

MR. BROOKS: Okay. Thank you. That's all I have.

CHAIRMAN CATANACH: Thank you, Mr. Brooks.

I just have a couple of questions.

EXAMINATION

BY CHAIRMAN CATANACH:

Q. Mr. Ybarra, is there any chance that the evaporation ponds, that there will be any kind of a breach in the evaporation ponds that those might leak off site.

A. The actual containment of the water? There is always a possibility but they get inspected daily to make sure that their integrity to hold up will -- is there on a daily basis.

Q. So if you have a 25-year storm, is it possible that water could flow into those ponds and overflow those ponds?

A. No. That is -- the roads located around the ponds are to push the water away from the ponds and then the channel on the north side is to collect the water from getting there. Any water that falls within the ponds, it was taken into account with the three and a half feet of freeboard that we have in each pond.

Q. Within the evaporation ponds you don't plan to do any kind of misting to spray any of that liquid into the air, correct?

A. Yes. Those are part of the evaporators

that will go --

Q. That mist will be sprayed into the air?

A. Yes.

Q. You mentioned that you did -- there is a possibility in the future that you might use a produced water disposal well or disposal well to dispose of some of these liquids.

A. Yes.

Q. Would installation of a disposal well, would that eliminate the need to have any of these ponds?

A. No. We would still have the ponds but when that gets permitted into a separate process, that would be separately from what we are doing at the ponds.

Q. You will still be using the ponds even though you had a disposal?

A. Yes.

Q. Why is that?

A. It depends on the amount of volume we could dispose in the well, what would the limitations would be.

Q. So within the produced water ponds are you going to utilize any kind of odor control for that for anything that is coming off of those ponds?

A. Over control, like overflow?
Q. Odor control.
A. Odor control. Other than treatment with the calcium hypochlorite, no, there is no other treatment for the odor.
Q. But that is for basically for hydrogen sulfide?
A. Yes.
CHAIRMAN CATANACH: That is all.

EXAMINATION

BY COMMISSIONER BALCH:
Q. Good afternoon or almost good evening. Just following up a little bit the Chair Catanach's questions. If there is some regulatory limit on the amount of VOCs or H2S that can leave your site, you have the chance to remediate it at your separation facility before the you vent it to the atmosphere, flaring or some other remediation. I think that is even in your document that that is a possibility.
A. Yes. And that will be performed when we get -- perform the air permit for the facility.
Q. Okay. That is what I thought might be the case.
Following up on counsel's question on the fact that the chance of contaminated runoff making

it into the detention ponds, I think there is a couple of vectors there that could happen in a major storm event. So your drying and solidification area --

A. Yes.

Q. -- what is the overflow capacity that that has engendered into it?

A. We also have a three and a half foot free board on topo of that.

Q. That is sufficient for your 25-year, 24-hour storm?

A. Yes.

Q. And your ponds?

A. Yes.

Q. So those are the two major potential vectors. A good portion of the fluid that would land in that area would land in the -- in the solid waste pit itself also?

A. Yes.

Q. There is no intent to drain that fluid --

A. No.

Q. -- to those detention ponds.

A. No.

Q. Only the very end of the lifespan of the pit would you have a chance for overtopping that?

A. Lifespan of the?
Q. The pit would have to be pretty full of solid waste, yes.
A. No. Because they would go in a way where they would be able to contain the water within the working face area.
Q. There is a berm and there is also a catch around the edge of that?
A. Yes.
Q. That would be sufficient for your 25-year, 24-hour event?
A. Yes.
Q. The only real vector is stuff that is on the roads?
A. Yes.
Q. The water that does land in the landfill itself is going to end up in the water catching system there?
A. The leachate containment system.
Q. Leachate containment system.
The volume of that leachate containment system is sufficient to handle a 25-year, 24-hour storm?
A. Yes.
Q. And then you would probably have to shut

down all of your other water intake for a while until you process through that leachate?

A. Depending on the volume we had in the ponds previously and where we were on our free board, we may or we may not have to shut down processes.

Q. But the volume is sufficient for that event?

A. Yes.

Q. So I'm a curious person. What is the difference between a hundred-year event and the 25-year event?

A. I don't actually have the rainfall number, but the 25-year event is 4.88 inches.

Q. I have lived through a couple of those in New Mexico.

The sediments that will come out to the bottom of the drying ponds, the evaporation ponds --

A. Yes.

Q. -- ultimately that will end up being sent to the dehydration and stabilization area and then into the landfill?

A. Yes.

Q. That is on -- how regular of a basis is that?

A. It depends on how much sediment we end up and if we get sediment within the basin and that would be a field decision.
Q. So you would close down a pond and scrape out the stuff?
A. Yes.
Q. Put it back in-service?
A. Yes.
Q. And your stabilization facility is big enough to handle the normal workload coming in plus having to remediate a couple of ponds at the same time?
A. Yes.
Q. Sundance facility, I know we haven't talked a whole lot about that, but there is certainly a potential for an H2S emission from that site as well?
A. Yes.
Q. And the rows diagram shows that the wind can happen in the south as well as to the north?
A. Yes.
Q. Has there ever been an event like that, that you know of --
A. Not that I --
Q. -- that would require an evacuation at the

LES facility?

A. I don't know of any events.

Q. Will there be any witnesses on your side that will be able to address that?

A. There might be. I am not sure. It is not a question that I have asked of our team before.

COMMISSIONER BALCH: Thank you very much.

EXAMINATION

BY COMMISSIONER PADILLA:

Q. Mr. Ybarra, I just want to follow up on something that Dr. Balch mentioned. I guess the rotational nature of these ponds and then the landfill itself, so do you intend or is the intent to I guess kind of rotate through and keep one or two of these on a dry basis to be able to scrape that out or is that something that you have to decide operationally going forward?

A. It is an operational decision.

Q. Okay. But do you have the capability to be able to do that and still hold enough water --

A. Yes.

Q. -- in those ponds. I am looking at Attachment B and it is G.4. And I guess any other, a lot of the other ones will have the same thing, but really looking at the landfill I see six units.

Is it the intent of C.K. to start a Unit 1 and then, as you mentioned, be able to add on with that underlying layer going forward?

A. Yes.

Q. So you would be going from Unit 1 marching to the west with Unit 6?

A. Yes.

Q. And what, if any, sort of downtime would you need or transition time to go from Unit 1 to Unit 2? Can you explain that process to us?

A. Usually dependent on how much waste they are receiving in the overall volume of the landfill, it will be determined on a yearly basis when they should start the next design for the new cell. Typically it takes six to nine months to construct a new cell. So, when they determine that they're close to capacity or they are going to reach that limit based off of the time frame on an annual volume, they will start construction or design a construction for the new cell.

Q. How quickly after the new cell is operational does the former cell get closed?

A. As soon as it -- when it reaches its final cover limits, the closure -- intermediate cover will be placed and then the closure.

Q. So you have got to have Unit 2 ready to go well before Unit 1 is getting to that capacity?
A. Yes, yes.
Q. Talking a little bit more about the six inches of daily cover. So, I am assuming you are starting in stages at the top or bottom or wherever in Unit 1 and, you know, moving north or south, you're covering the entirety of the whole thing again or just the working portion?
A. Just the working portion on a daily basis to make sure you're getting clean soil with clean soil contact with one another and providing a barrier on top of the waste that was placed that day.
Q. So there is an operation plan as far as the waste that is coming in and how much soil you need to cover and how you are --
A. Yes. And that will typically come from the waste that is excavated from the original cell and then from the future cells.
Q. You don't need any fill dirt because you can just keep recycling generally what you are excavating for future cells?
A. Yes.
Q. The inspections you talked about, daily

inspections. I notice that to me the -- I am not going to dig through and try and find it, but the inspection pages you had looked a lot like a skater report or something that we would normally see on the oil side of the industry. Is that automated inspection or is that manual inspection by personnel?

A. Manual inspection by personnel.

Q. So there were a lot of -- there were a lot of parameters in there. Is this going to be a pretty heavily staffed facility to be able to check all of those boxes daily?

A. It would be required per the site operating plant. So I am not sure -- I am not sure how many staff would be on site, but it would have to be something that they manually collect on a daily basis.

Q. Okay.

COMMISSIONER PADILLA: Thanks for your time.

THE WITNESS: Thank you.

MR. WOODWARD: No redirect.

CHAIRMAN CATANACH: Okay. This witness may be excused.

So you, Mr. Woodward, you've got two more,

three more.

MR. WOODWARD: We have three more.

CHAIRMAN CATANACH: So I guess what I would suggest is that --

MR. WOODWARD: I think, though, that that is going to be our longest witness by far.

MR. BOHNHOFF: That is my expectation but, of course, I don't know what the other witnesses are going to say. But I will tell the Commission that Mr. Ybarra, since he was the point man on the application, I expected to focus most of my questioning to be with that person.

CHAIRMAN CATANACH: So based on how things went today, what do you guys think?

MR. WOODWARD: I think we are on schedule.

CHAIRMAN CATANACH: Is that a fair statement, Mr. Bohnhoff?

MR. BOHNHOFF: Well, if -- the one concern I have is what Mr. Woodward intends to reserve significant amount of time for rebuttal. We have got -- I mean, if his three witnesses are going to take half a day, that would get us through a day and a half. We got Dr. Richardson who I understand is not going to testify until Friday.

MR. WOODWARD: I thought he was at 2:00

tomorrow.

MR. BOHNHOFF: 2:00 tomorrow. That is part of the afternoon is Dr. Richardson. Is Dr. Richardson one of your three?

MR. WOODWARD: No.

MR. BOHNHOFF: Okay. So we got four.

(Proceedings concluded at 5:33 p.m.)

I certify that the foregoing is a correct transcript from the record of proceedings in the above-entitled matter. I further certify that the transcript fees and format comply with those prescribed by the Court and the Judicial Conference of the United States.

Date: February 8, 2017

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PAUL BACA, RPR, CCR
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