STATE OF NEW MEXICO
ENERGY, MINERALS AND NATURAL RESOURCES DEPARTMENT

IN THE MATTER OF
TECHNICAL COMMENTS ON THE AMENDMENT
TO APPLICATION FOR REVISION 20-1 AND
PROPOSED COST ESTIMATE, CLOSURE/CLOSEOUT
PLAN UPDATE, CUNNINGHAM HILL MINE,
PERMIT NO. SF002RE

LAC MINERALS (USA) LLC, Applicant

TRANSCRIPT OF PROCEEDINGS

BE IT REMEMBERED that on the 2nd day of November, 2022, this matter came on for hearing before FELICIA ORTH, Hearing Officer, at the Runnels Building Auditorium, 1190 S. St. Francis Drive, Santa Fe, New Mexico, and virtually using WebEx Event application, at the hour of 5:00 p.m.

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HEARING OFFICER ORTH: Good evening, everyone.

My name is Felicia Orth, Hearing Officer appointed by the Mining and Minerals Division of the Energy, Minerals and Natural Resources Department to conduct a public hearing on the application by LAC Minerals, the operator of the Cunningham Hill Mine, for a proposed update to the Closure/Closeout Plan, which you may hear referred to as a CCP, and a request for a waiver of the open pit.

The Cunningham Hill Mine is a gold mine located approximately six miles south of Cerrillos, New Mexico, in Santa Fe County. The permit number is SF002RE, and this particular requested revision is 20-1.

Several housekeeping items before we hear from the folks involved.

There are sign-in sheets on the table at the back of this auditorium. We're in the auditorium in the Runnels Building. Please sign in if you haven't done so already. No salesmen will call. We use the sign-in sheets for the correct spelling of your name in the transcript and as evidence of public participation. I also refer to them if there are lots of folks desiring to offer public comment as a way of calling on you in order.

The entirety of the hearing is being --

MS. ROSE: Felicia?
HEARING OFFICER ORTH: Yes.
MS. ROSE: I'm so sorry to interrupt.
It's very hard to hear you on the virtual platform.
HEARING OFFICER ORTH: Oh, okay.
Is this better?
MS. ROSE: That's better. Thank you.
HEARING OFFICER ORTH: Okay. I am going to stop moving my head.
All right. Thank you for that.
So again a number of things.
The sign-in sheets are on the back table. There's also a fact sheet which is dense with information about this matter, gives you the web addresses for all of the documents in the file on which the decision will be made and a number of bullet points as to the purpose of this hearing and the next steps in the permitting process.
The hearing is being recorded and transcribed by Cheryl Arreguin of Albuquerque Court Reporting Services. Please contact Cheryl if you'd like a copy of the transcript.
We're going to hear first from the Mining and Minerals Division and then from LAC Minerals and then

from Friends of Santa Fe County. Each of these parties have PowerPoint presentations and technical comments to offer on the proposed permit revision.

We'll also be accepting public comment this evening, and I'll invite public comment in between each of the technical presentations.

We are in a state building after hours, which brings with it a few things that we have to honor to be here.

One is you may see security in the vicinity. We needed to do that. We also need to ask you not to go anywhere else in the building -- this is the Runnels Building -- except to the bathrooms, which you'll find on either side of the elevators, women on the left, men on the right. Please don't go to any other floor, for example, or any other offices.

And the door will lock behind you if you leave the building, so we're going to have MMD staff monitoring the door to let people in and out throughout the evening. Just be aware.

MS. ROSE: I -- Felicia?

HEARING OFFICER ORTH: Yes.

MR. MYERS: It's still -- Madam Hearing Officer, it's still hard to hear.

HEARING OFFICER ORTH: I'm sorry?

MR. MYERS: It's still hard to hear.
HEARING OFFICER ORTH: It's still hard to hear?
MR. MYERS: Yeah. So you'll -- I don't know if you'll have to stay closer to it or --
HEARING OFFICER ORTH: Oh, okay. I'm --
MS. ROSE: You may need to turn up the volume on the sound system, too. It's -- I'm sorry. I wouldn't interrupt, but it -- it's really difficult to hear what you're saying.
HEARING OFFICER ORTH: I am sorry. I feel like I'm leaning my lips on the microphone.
MR. MYERS: Yeah. You need to be within one inch.
HEARING OFFICER ORTH: Okay.
Let's see.
No decisions will be made this evening. The director will be reviewing all of the documents in the file and all of the comments and documents submitted this evening.
We will leave the record open following this hearing. At the moment we're contemplating November 18th -- that's a Friday -- as the final date for comments to be submitted on this proposed revision.
Let's see. I think the transcript, the

bathrooms, the fact sheet.

There are some alcohol wipes next to the podium where folks will come up to give their comment. Because we have to speak so close to the microphone, if you'd like to take an alcohol wipe to it, if there's been someone there before you, please go ahead and do that.

And again everything related to this proposed permit revision can be found now or after this event on the EMNRD MMD Pending and Approved Mining Applications web page, all of which is set out on the fact sheet.

So perhaps we'd like to have introductions first.

Ms. Rose or Mr. Wade, would you like to make introductions for the Division.

MS. ROSE: I'm sorry. Could you repeat that, Felicia?

HEARING OFFICER ORTH: Yes.

Would you like to introduce yourself and anyone else you have with you on behalf of the Division.

MS. ROSE: Yes. I can introduce myself on behalf of the Mining and Minerals Division. I'm Carmen Rose, the permit lead.

There are several other members of the Mining and Minerals Division in the audience today, and there's

a couple online, and I can let them introduce themselves if they'd like.

MR. WADE: I -- I can start off. Gabriel Wade. I'm the attorney for the Mining and Minerals Division.

HEARING OFFICER ORTH: Hello, Mr. Wade.

And, Kevin, would you introduce yourself since you're there front and center.

MR. MYERS: Hi.

I'm Kevin Myers, and I'm with the Mining and Minerals Division.

HEARING OFFICER ORTH: Thank you.

We also have other staff in the room.

And Mr. -- Mr. Shepherd.

MR. SHEPHERD: Good evening.

I'm Holland Shepherd. I'm the program manager of the Mining Act Reclamation Program, and here working with the rest of my -- whoa. It's got to be this one.

Yeah. Here working with the rest of my staff, and happy to see the LAC folks are here and Friends of Santa Fe County.

So anyway, I'll pass it on to DJ Ennis to introduce himself.

MR. ENNIS: Hi, everyone.

I'm DJ Ennis. I'm a reclamation specialist

with the Mining and Minerals Division.

HEARING OFFICER ORTH: All right. Thank you. Thank you, all.

Mr. Indall, would you like to introduce yourself and your client.

MR. INDALL: Mike?

HEARING OFFICER ORTH: Please.

MR. INDALL: My name is Jon Indall, and I'm an attorney with Maldegen, Templeman & Indall here in Santa Fe, and I represent LAC Minerals.

And with me tonight is Elizabeth Rudolf who is an in-house counsel, and Daniel Lattin who is the project manager, and Steve Finch who is our consultant. He's with John Shomaker & Associates.

HEARING OFFICER ORTH: Thank you very much.

Mr. Jantz, would you like to introduce yourself and your clients.

MR. JANTZ: Yes. Thank you, Madam Hearing Officer.

Eric Jantz, New Mexico Environmental Law Center, senior staff attorney. I'm here on behalf of Friends of Santa Fe County.

And I'm here with co-counsel, Mara Yarbrough.

HEARING OFFICER ORTH: Thank you very much.

Let's begin, then, with Ms. Rose.

I did forget to mention testimony is taken under oath and is subject to questioning.

For those in the room, I will ask you to raise your hand if you have a question of a witness. For those participating on the virtual platform, I will ask you to indicate through chat what your question is when we get to that point.

Mr. Myers.

MR. MYERS: Would you like to turn your camera on just to --

HEARING OFFICER ORTH: Oh. Very sorry. I didn't realize.

MR. MYERS: No worries.

HEARING OFFICER ORTH: Behind a black screen.

All right. Ms. Rose.

MS. ROSE: Yes. I'm here.

HEARING OFFICER ORTH: All right. If you would raise your right hand.

Do you swear or affirm to tell the truth?

MS. ROSE: I do.

HEARING OFFICER ORTH: Thank you.

Please go ahead, and I believe Mr. Myers has your presentation to share.

MR. MYERS: Well, actually, since you're virtually, you can go ahead and control it yourself.

MS. ROSE: Okay. I will go ahead and do that. Can everyone see this okay?
MR. WADE: Yes. It's clear for me.
MR. JANTZ: Is she presenting?
MR. MYERS: No. She hasn't spoken. Are you waiting on something?
MS. ROSE: Oh, yeah. I was waiting -- I thought you had said hold on a moment, so that's why I was waiting.
MR. MYERS: No. Sorry. We did not.
MS. ROSE: Oh. My apologies.

CARMEN ROSE

having been first duly sworn or affirmed, was examined and testified as follows:

DIRECT TESTIMONY

MS. ROSE: My name is Carmen Rose. I'm with the New Mexico Mining and Minerals Division, which is a regulatory agency under the Energy, Minerals and Natural Resources Department.
I really wish I could be there in person with you all tonight, but I'm getting over a cold. I didn't want to pass that along to anyone.
So I am the permit lead for the mine site that we're talking about today, which is the Cunningham Hill Mine, Permit Revision 20-1 Application. And this

application proposes to update the Closure/Closeout Plan, and it also includes a -- includes a pit waiver request.

More information on this permitting process can be found on our web site at emnrd.nm.gov/mmd, and you can navigate directly to the Cunningham Hill web page.

My contact information is also posted on this slide, along with our director's, Jerry Schoeppner. His e-mail address is posted there, along with our mailing address.

Just a couple of housekeeping things I wanted to mention.

First is that I will try to limit the number of acronyms I use in this presentation to two. So MMD I'll use for the Mining and Minerals Division, and then I'll use CCP for the Closure/Closeout Plan.

The Closure/Closeout Plan is essentially a reclamation plan. It's a plan where the operator describes what reclamation activities will be conducted after the mining operation is -- is complete.

The Mining and Minerals Division has requirements in the New Mexico Mining Act rules to allow for public participation of permitting activities, such as this one. So LAC posted public notice twice for this

permit process. And MMD received several requests for a public hearing from the public, in addition to a few different organizations.

So MMD will consider public comments from this public hearing in its review of the Permit Revision 20-1 Application, which includes the updated CCP, the pit waiver request, in addition to a financial assurance cost estimate.

If you'd like to see more about our rules, you can go to srca.com -- .nm.gov and look under chapter 10.

There are real -- four real components of this hearing.

The first is that I am representing MMD to describe our process for reviewing the Cunningham Hill Mine Closure/Closeout Plan and pit waiver request in accordance with the New Mexico Mining Act rules.

LAC Minerals, the operator, is here to present information on the proposed update to the Closure/Closeout Plan and pit waiver request.

A representative from Friends of Santa Fe County will testify.

And then lastly, the public will have an opportunity to ask questions on the product -- process and comment on the proposed CCP.

This is a brief permitting history for the

Cunningham Hill Mine site.

The mine was initially permitted with the Mining and Minerals Division in September of 1995.

Shortly after that, in 1996, the operator submitted the original Closure/Closeout Plan, and MMD approved that original Closure/Closeout Plan in 2002.

Jumping ahead to 2018, there was a modification to release just over 200 acres of reclaimed area and related financial assurance on the mine. And I'll be showing a map in just a moment to show you which units were released in that modification and what remain under the Mining Act permit and which ones are addressed in the CCP.

In September of 2019, the Mining and Minerals Division and the New Mexico Environment Department wrote a joint agency letter requesting that LAC submit an updated CCP because the CCP had not been updated since the original Closure/Closeout Plan in 2002.

And subsequently LAC submitted that application in October of 2020 to begin the Revision 20-1 process.

So here's a map of the mine site, kind of showing which units remain in the permit and which ones have been released from the permit. This figure was taken directly out of the Closure/Closeout Plan that was

submitted by LAC.

So you can see the yellow polygons are the units that were reclaimed and released. They met all of the requirements of the Mining Act permit. And the units that remain in the permit area are the green shaded areas and the blue shaded areas. So those are areas that have been fully reclaimed or not quite reclaimed, but they are still under the Mining Act permit.

I'd like to take a moment to define what a permit revision is and describe the components of the permit revision application.

So when there's a change to a permit, a mining permit, we process that as a modification or a revision. In this case MMD determined that this was a revision because it significantly departed from the nature or scale of the original permit in the original Closure/Closeout Plan.

So the application itself includes quite a few components. There's the Closure/Closeout Plan, or reclamation plan. There is a reclamation financial assurance cost estimate. There's the pit waiver request. And then there's some administrative components such as the proof of public notices, the permit application fee, and some additional information

requested by the director.

Here's a very abbreviated permit revision application timeline.

The permit application was originally submitted in October of 2020.

And the -- the Mining and Minerals Division in consultation with other state agencies responded to that and provided technical comments in a request for additional information back to the operator in April of 2021.

In October of 2021, LAC submitted an amendment to the original application, and that included a request for a pit waiver at that time.

MMD provided more technical comments and another request for additional information, and LAC submitted supplemental technical information and two draft reclamation cost estimates in May of 2022.

The most recent correspondence with this permit application was the MMD sent MMD comments and state agency comments to the operator last week.

I know that the words on the slide are very small, but I -- I included this as a snapshot of what our web site looks like. So if you navigate to this web page, you can find all of the information, the Closure/Closeout Plans that have been submitted with

amendments, and the agency response -- comments and technical comments, requests for additional information. You can find all of that information on our web site.

I don't expect you to write down the URL that's here, but this URL is provided in the informational fact sheet that's by the sign-in sheets if you're in person, and if you're online, this should be attached to the WebEx invite.

Now that I've talked a little bit about the history of the mine permit and what the permit revision application timeline looks like, I'll talk a bit about the MMD reclamation requirements that are addressed in the CCP.

So LAC is required to reclaim the site to a self-sustaining ecosystem and/or an appropriate postmining land use. This is really the meat and potatoes of the Mining Act. It's essentially -- was written to allow for operators to reclaim hardrock mines after mining.

So a couple of definitions here.

A self-sustaining ecosystem is really the goal of reclamation. It is site-specific and life zone appropriate. Typically MMD considers vegetation communities, site stability used in human and wildlife health and safety when assessing what a self-sustaining

ecosystem is, but of course there are other factors that can be taken into consideration.

A postmining land use is fairly straightforward, but it's a beneficial use established for the permit area after mining.

So the approved postmining land uses for Cunningham Hill include wildlife habitat and industrial use. Industrial use is just where the office building is.

In addition to LAC's explanation of how the site will achieve a self-sustaining ecosystem in most units, LAC has applied for a pit waiver for the open pit unit.

So an application for a pit waiver is allowed under the New Mexico Mining Act rules if reclamation is considered technically or economically infeasible or is environmentally unsound.

However, LAC must demonstrate that obtaining a pit waiver will result in compliance with all federal and state laws, compliance with applicable environmental regulations and standards, and will pose no risk to human health or safety.

Another component in the CCP is the proposed surface reclamation cost estimate. So this cost is the costs based on what it would take a third-party operator

to come in and do the reclamation that's described in the reclamation plan or CCP.

Collecting financial assurance is part of MMD's regulatory responsibilities. So we take a very close look at this -- this cost estimate, and it is part of our rules in part 12.

Currently LAC is proposing to provide approximately $1.16 million in financial assurance for this operation, but this amount is subject to change, and this is specifically related to the surface reclamation components.

Next steps for this public hearing process is that MMD will consider the public comments that we receive today in the public hearing and its review of -- and our review of the Permit Revision 20-1 Application.

And written comments may be submitted until a date announced by the Hearing Officer.

We will also continue our technical review of the updated CCP and pit waiver request, and this includes consultation with other agencies.

The Closure/Closeout Plan will need to receive an environmental determination from the New Mexico Environment Department stating that the application has demonstrated that the activities to be permitted or authorized will be expected to achieve compliance with

all applicable air, water quality and other environmental standards.

So this language that's italicized here comes directly from the New Mexico Mining Act rules.

The MMD director will then determine whether the Permit Revision 20-1 Application is technically approvable.

And at that time we would request that LAC submit a financial assurance proposal.

After MMD secures that financial assurance proposal and instrument, the permit document will be drafted. And in addition to ensuring that LAC is complying with all regulatory requirements under the New Mexico Mining Act, we can condition the permit and provide contingencies to address site-specific environmental concerns, monitoring and maintenance of the reclamation, reclamation timelines, and public health and safety.

And on a final note, I just want to mention that MMD reviews permits every five years. We've reviewed the Closure/Closeout Plans and financial assurance related with those every five years. So this is an ongoing process, and we'll be continuing to look at this permit. And once this -- once this permit document is drafted, this isn't the end of the

permitting process for this mine site.

And with that, I would like to take any questions you may have.

HEARING OFFICER ORTH: All right. Let me ask Mr. Indall, do you have questions of Ms. Rose?

MR. INDALL: A couple.

HEARING OFFICER ORTH: Ms. Rose, Mr. Indall is going to the podium.

CROSS-EXAMINATION

BY MR. INDALL:

Q. Good evening, Ms. Rose.

Just to clarify, the proposed CCP and pit waiver will not alter the DP-55 and AP-27; is that correct? The abatement plan for the water remediation at the site?

A. I'm sorry, Mr. Indall. I'm having a really hard time hearing you.

Q. Oh, a little closer? Okay. I'll try it again.

A. Yes. That's better.

Q. To clarify, the proposed revision to the CCP and the pit waiver request will not alter or -- the AP-27 and Discharge Permit 55; is that correct?

A. Well, if I -- if I'm understanding your question correctly, it will not alter -- the pit waiver

request will not alter the two permits that are regulated under the Environment Department. However, the Closure/Closeout Plan is associated with -- does have a description of how some activities under the discharge permit are carried out. So NMED is reviewing those -- reviewing this application in conjunction with MMD.

Does that answer your question?

Q. Yeah. My point is that those -- those groundwater issues will still be pending after the -- after the CCP is approved or disapproved or modified.

A. Right. The New Mexico Environment Department -- they are the ones who oversee the Water Quality Act, and they -- they hold those water quality permits. So yeah. It wouldn't -- it wouldn't really affect those permits per se.

Q. Okay.

And then you mentioned there was a financial assurance for the surface reclamation.

There's also a financial assurance for the groundwater remediation; is that correct?

A. That's correct.

Q. And that will still be subject to NMED's approval?

A. Right. MMD provided technical comments on the

draft cost estimates last week, and that was in consultation with the New Mexico Environment Department.

MS. ROSE: Thank you.

That's all I have.

HEARING OFFICER ORTH: Thank you, Mr. Indall.

Mr. Jantz, do you have questions of Ms. Rose?

Ms. Rose, Mr. Jantz does.

MR. JANTZ: I do, Madam Hearing Officer.

And if it's okay with everybody, I'd like to split some of the questioning up with Ms. Yarbrough?

HEARING OFFICER ORTH: That's fine.

MR. JANTZ: That's acceptable?

Okay. Great. Thank you.

CROSS-EXAMINATION

BY MR. JANTZ:

Q. Can you hear me okay, Ms. Rose?

A. Yes, I can hear you. Thank you.

Q. Great. Thank you.

All right. So a lot of my questions are going to go to sort of this distinction between surface features and groundwater and how the financial assurance works between the two.

But I want to start with a question about the recent erosion and rilling that was discovered at the waste pile, and I was wondering what MMD's thoughts are

on whether that restarts the 12-year release period or not under the Mining Act.

Can you tell me that?

A. Yeah. That's -- that's a very good question.

We are processing that waste rock pile repair work plan as a corrective action plan, and it's a -- it is a joint agency plan with MMD and NMED to address those -- those concerns. So right now we're processing it as a corrective action, and what they have proposed currently does not reset their 12-year time clock for that, because they're doing -- they're doing spot repairs.

Q. Okay.

So could you give us a sense of what might restart the 12-year process?

A. That is a much harder question, and I -- I really don't know how to answer that.

Q. Okay.

A. We would have to review it.

Q. Okay.

A. We'd have to see what LAC is proposing, and we would have to review that and make a determination at that point.

Q. Okay. Great. Thank you.

So in terms of the -- the spot repairs, I read

in the October 25th letter from MMD and NMED about contingency requirements for eight acres worth of soil covering one foot.

Can you give us -- give me a sense of where that eight acre figure came from, how you calculated it?

A. Yeah. That's another very good question.

We calculated that because there are -- there was an isopach map that was included in one of the designs that LAC submitted, and we kind of looked at that and made a determination that approximately half of the waste rock pile may need to have some -- some financial assurance related with additional cover. So that's where that eight acres came from, because eight acres is approximately half of the base of the waste rock pile.

Q. Oh, okay. All right. I was -- I was thinking -- and please correct me if I'm wrong -- that the waste rock pile encompassed 72 acres?

A. It does. Yeah. That's correct. But the -- the waste rock pile slopes are only approximately 16 acres.

Q. Oh, okay. All right. Great.

And half is a sufficient amount, you think, to, say, handle catastrophic perhaps erosion sometime in the future?

A. At this point this is what we have asked for. You know, we can always reassess that in the future, but at this point that -- that's what we've requested from LAC.

Q. Okay. Thanks.

So in that same vein, you know, I was looking at some of the repairs or proposed repairs that LAC is doing. One is to the East Groin, the geosynthetic liner. And so this is getting into the sort of relationship between surficial features and groundwater, right, or -- or water, the hydrologic cycle.

So I guess a quest -- my question is what kind of contingencies does MMD -- will MMD require for repair of those sorts of surficial features that might impact groundwater at some point?

A. And you're talking -- you're asking specifically about the East Groin; is that correct?

Q. Yeah. We'll -- we'll start with the East Groin.

A. Right. Well, we have included in our conditional approval of the design package that LAC submitted recently -- we included a contingency that -- that LAC has to reassess the areas and the cover after two years. I believe we gave them July 1st of 2025.

Q. Okay.

A. 2024 maybe. Sorry.
Q. That's okay.
A. Yeah. It's in our comment letter that we -- we have asked them to see how -- how the waste rock pile will be performing, the cover performance of the waste rock pile after these repairs are done. So that is -- that's one contingency and one element that we're looking at.
Q. Okay.
So I guess sort of a bigger question is that -- okay. So we have like these surface features, the East Groin area, the erosion on the waste pit -- or -- yeah, the waste pile slopes. There are a lot of these sort of longer term considerations, because erosion is not going to stop, right? I mean, that's going to continue throughout the life of the minerals, the metals that are underneath the waste rock pile cover. Same with the East Groin, right?
Same with the -- the evaporation ponds. They're going to be lined presumably, and those line -- those liners will have to be monitored and repaired periodically, I assume, beyond the 12-year closure period.
So my question is who holds the financial assurance for those? Is that an NMED thing, or is that

an MMD thing, or is it a both thing?

A. Currently that -- the financial assurance held for that is -- is joint. It's joint between MMD and NMED.

Q. Okay.

And when -- and when the 12-year performance period ends, does MMD give up or release its portion of the -- the financial assurance even if those surficial features may erode, degrade, break, over the course of time?

A. Well, you know, in -- in the Mining Act permit, LAC does have to demonstrate that the site is stable.

Q. Um-hum.

A. So we would have to see that and see that they've achieved a self-sustaining ecosystem in order to release financial assurance on the site. If they do get to that point, then -- and all that remains is water quality --

Q. Um-hum.

A. -- concerns, you know, the -- the ponds, the water treatment ponds, treating the pit lake, theoretically that financial assurance would get shifted to the Environment Department.

Q. Yeah. So, I guess, let me -- let me rephrase

what I'm thinking here. I guess our worry is 30, 40 years down the road, right? Even if there's a supposedly self-sustaining ecosystem, there is the risk for erosion happening, say, on the waste pile slopes, right?

And -- and when that happens, and I think it probably will eventually, how -- how is that addressed? Who is responsible for that, or is it just left?

A. Well, I would hope at the end of the -- I would hope that the New Mexico Mining Act would not release the site if there was concerns about significant erosion remaining at the site. But, you know, like I mentioned before, if -- if all that remains on site is water treatment and all reclamation requirements under the Mining Act permit have been achieved, then we would consider an application for release of the financial assurance.

Q. Okay.

A. And that would move to the Environment Department if -- if all remaining funds are water quality related.

Q. Okay.

And so one last question -- well, let me actually follow up on Mr. Indall's question about the impact on the abatement plan and the discharge permit.

Those two documents aside, it's MMD's position that the Water Quality Act is still going to apply to the pit lake; is that right?

A. Of course, yes.

Q. Okay. Excellent. Great. Thank you --

A. Yeah.

Q. -- for that clarification.

And so sort of a last question I had is more procedural, and it has to do with the October 25th letter that NMED and MMD sent out -- or rather MMD and NMED sent out.

There are a lot of -- that letter raises a lot of really important issues in Friends of Santa Fe County's minds, and I was wondering if we'll have the opportunity and the public will have the opportunity to comment on LAC's responses when that -- when those responses come, because, like I said, those are some really important issues that -- that MMD and NMED have identified.

A. Yeah. Well, that's an excellent question.

I -- I think that is above my head. That would be a determination from the Hearing Officer and -- and MMD director. But I think we can make note of that and -- and get back to you.

Q. Excellent. Thank you.

And just for the record, Madam Hearing Officer, I would like to request that the record be held open in order to allow the public to weigh in on LAC's responses.

HEARING OFFICER ORTH: Thank you, Mr. Jantz.

MR. JANTZ: So now I'd like to turn it over to Ms. Yarbrough.

HEARING OFFICER ORTH: Thank you.

Ms. Yarbrough.

MS. YARBROUGH: Thank you, Madam Hearing Officer.

CROSS-EXAMINATION

BY MS. YARBROUGH:

Q. Can you hear me, Ms. Rose?

A. Yes. Yeah.

Q. Okay. All right.

So I'm going to shift over to the possibility of pit wall failure and slope stability.

Is it MMD's position that there is no risk of pit wall failure?

A. I -- I wouldn't go so far as to say that. I don't know if we have a position on it.

Q. Okay.

Will the pit walls be exposed to rain?

A. Yes.

Q. And wind?
A. Yes.
Q. How about runoff?
A. Sorry. Couldn't hear that one.
Q. I said how about runoff?
A. Yes.
Q. So erosion will occur, it seems.
A. Yes.
Q. Okay.

I'm going to refer to the 1994 slope stability report by Hall -- I'm sorry -- Call & Nicholas that concluded that the stope in -- slope instability in the pit is not expected to occur. However, there's a concession that analysis is not rigorous enough, would require more fieldwork to meet government's requirements.

So the question is does it make sense to require further study to ensure pit wall stability?

A. You know, this is an interesting question that has been brought up. The agencies have talked internally about -- about a pit stability report and what it would mean. And I would encourage you to put that in a written comment for consideration. But we -- you know, we have been considering that.

Q. Okay. Thank you.

Also, there's a recommendation in the report to install survey monuments to document slope movement.

Do you know if that has been done?

A. I don't know.

Q. Okay.

So I'd like to address the issue of acid rock drainage right now, ARD.

So the CCP indicates that ARD will be managed with a passive system of directing the flow to evaporation pits.

And the question is whether MMD will require long-term monitoring and maintenance -- maintenance as the pit liners degrade over time?

A. That is a great question, and actually it's probably better answered by a representative from the New Mexico Environment Department. And I know that there is a representative there. She can answer that question if she would like to.

Q. The second half of that question is whether there will be long-term monitoring and maintenance related to sludge removal.

A. I'm sorry. Could you say that one more time?

Q. Will there be monitoring and maintenance related to sludge removal?

A. That's -- again that's an excellent question,

but I -- I have not looked at that because that would be a question for the Environment Department.

MS. YARBROUGH: Okay. Thank you.

That's all we had.

Thank you, Ms. Rose.

Thank you, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. Thank you very much.

MS. ROSE: Thank you.

HEARING OFFICER ORTH: Let me ask if there's anyone on the platform who has a question of Ms. Rose based on her testimony. Please put that question in the chat.

And, Mr. Myers, please let me know if anyone does that, and we'll wait for a moment. I will scan the room in the event someone in the room has a question.

Oh, sir. Come up to the podium.

Give us your name first.

MR. PARKER: Sure. Tom Parker.

HEARING OFFICER ORTH: Go ahead.

CROSS-EXAMINATION

BY MR. PARKER:

Q. My question for Ms. Rose is whether livestock grazing has been removed from the --

HEARING OFFICER ORTH: You have to speak into

the microphone.

MR. PARKER: Okay.

Q. My question for Mrs. Rose -- Ms. Rose is whether livestock grazing has been removed from the possible mining land uses.

A. I am really sorry, Mr. Parker. I'm -- I can't hear you.

Q. Okay.

MR. MYERS: Let me adjust the --

MS. ROSE: Sorry.

HEARING OFFICER ORTH: Hold on one second.

MR. PARKER: Sure.

(Proceedings in brief recess.)

MR. PARKER: Third time's a charm.

Q. So I'm interested to know whether livestock grazing has been removed from the PMLUs.

A. No. I believe it's still -- it's still in the PMLU. It's -- wildlife habitat is kind of the main one that lists front and center. I should have put that in the presentation.

MR. PARKER: Thanks.

HEARING OFFICER ORTH: Mr. Myers, are there any questions in chat?

MR. MYERS: There are no questions in chat.

There are two people that have spoken about

giving public comment, but not questions for Ms. Rose.

HEARING OFFICER ORTH: All right.

Ms. Rose, did you have anything to add to your statement, or can we move on?

MS. ROSE: No. Thank you. Thank you, Madam Hearing Officer.

HEARING OFFICER ORTH: Thank you very much.

I need to ask Mr. Myers a question, and I'm sorry about the likely disruption here. He and I continue to get these menacing messages about the IT department from DOH going to seize control of our laptops, the three that we're using, to update -- update it or something, and that the deadline for that update is 6:02. It's now 10 of 6:00.

Mr. Myers, how should we proceed?

MR. MYERS: I would suggest we take a break close to six o'clock and go ahead and let it update, because I don't see that it's going to give us a chance to go past that deadline.

HEARING OFFICER ORTH: Okay. Same here.

Let me ask then, will there be any other testimony from the Division?

MR. WADE: No, Madam Hearing Examiner. Thank you.

HEARING OFFICER ORTH: Thank you, Mr. Wade.

In that case, I did see in the chat that Mr. de Saillan wanted to offer comment.

Mr. Myers, would you unmute or elevate Mr. de Saillan.

MR. MYERS: Yes.

You should have control of your microphone, Mr. de Saillan.

HEARING OFFICER ORTH: I believe, Mr. de Saillan, you've unmuted yourself.

Can you hear me?

MR. DE SAILLAN: Yes, I can.

HEARING OFFICER ORTH: Oh, you're coming through loud and clear.

MR. DE SAILLAN: It's me.

HEARING OFFICER ORTH: Thank you.

MR. DE SAILLAN: Okay.

HEARING OFFICER ORTH: Do you swear or affirm to tell the truth?

MR. DE SAILLAN: I do.

HEARING OFFICER ORTH: Thank you.

Please go ahead.

MR. DE SAILLAN: Thank you very much.

CHARLES DE SAILLAN

having been first duly sworn or affirmed, gave public comment as follows:

PUBLIC COMMENT

MR. DE SAILLAN: Good evening, Madam Hearing Officer, and good evening to the staff of the Mining and Minerals Division.

Appreciate the opportunity to comment here today.

My name is Charles de Saillan, and I'm here to comment on the proposed so-called pit waiver for the open pit at the former LAC Minerals Cunningham Mine in Santa Fe County.

And, Madam Hearing Officer, I'd like -- like to ask your indulgence if I -- if I could. My comments are going to take a little bit more than five minutes, but I promise you that they will take less than 10 minutes, and I just want to make sure that's okay.

HEARING OFFICER ORTH: Yeah. It says our computers are going to shut down in about nine minutes. So if we lose you, when we come back on, you can finish, but please make the best use of this time.

MR. DE SAILLAN: I will do that. Thank you very much.

So I'm an environmental lawyer located here in

Santa Fe. And I've lived in Santa Fe County since 1993, for almost 30 years, and I've enjoyed and I continue to enjoy engaging in recreational activities in the hills and mountains around Santa Fe, and that includes hiking and bike riding and skiing. So I have a personal interest in this proceeding.

And in my practice as an environmental lawyer, I have represented clients on many proceedings involving hardrock mining operations. I worked for six years at the Office of the Attorney General where I represented the Environment Department and the Office of the Natural Resources Trustee on a number of mining proceedings. I worked for the New Mexico Environment Department for 14 years, and approximately a quarter to a third of my work at the Environment Department involved hardrock mines.

I've represented clients in proceedings involving the old Tererro mine north of Pecos, the Molycorp mine near Questa, the Tyrone, Chino and Cobre mines in Grant County, the proposed Copper Flat mine near Hillsboro, the proposed New World Cobalt mine near Pecos, and this, the Cunningham Hill Mine.

So I have considerable experience with mining issues, mostly representing regulatory agencies.

And this evening I'm commenting on my own behalf.

Now, under the New Mexico Mining Act, the owner and operator of a hardrock mine must prepare a Closure/Closeout Plan to close and reclaim the mine after mining operations cease. The mine must provide for a postmining land use and a re-establishment of a self-sustaining ecosystem at the mine site.

Now, the Mining Act does allow the Mining and Minerals Division director to approve a waiver from this requirement for an open pit or other mine unit if it's not technically or economically feasible or if it's environmentally unsound.

But there is an important caveat. The director can approve a waiver only, and I quote here from the Mining Act, if measures will be taken to ensure that the open pit or waste unit will meet all applicable federal and state laws, regulations and standards for air, surface water and groundwater protection following closure and it will not pose a current or future hazard to public health or safety.

And that is from Section 69-36-11B of the New Mexico Statutes Annotated.

Now, here LAC Minerals is seeking a waiver from these requirements to the open pit at the Cunningham Hill Mine. Now, I do not oppose the waiver, but I believe that it is absolutely essential that the

director impose appropriate conditions on his approval, assuming he approves the pit waiver. And I recommend four categories of conditions.

First, there must be continued monitoring of the site. And this -- this needs to include monitoring of water quality for the foreseeable future. Monitoring for hexavalent chromium, which is the more toxic and the more bioavailable form of chromium, should be required in addition to monitoring of total chromium. There also needs to be monitoring of the other mine features, particularly the covers on the waste rock piles.

Second, there must be treatment of contaminated water. Currently the pit lake exceeds water quality standards for sulfate and total dissolved solids. Other contaminants may become a problem over time due to evapoconcentration or due to normal erosion of the pit walls.

Third, there must be continued maintenance. Obviously, a water treatment system must be maintained, but the covers and the other reclamation components must also be maintained. The covers must be maintained to ensure that they are not thinned by erosion. The vegetation in the covers must be maintained to promote stability and evapotranspiration. And the stormwater controls must be maintained to prevent erosion.

Fourth, there must be adequate financial assurance to ensure that there is funding -- adequate funding for water treatment, monitoring, maintenance and any necessary repairs. The financial assurance needs to cover a period of at least 100 years into the future, and it must be adequate to repair or address any potential failures in the closure plan.

And I also wanted to second the request that the public be given an opportunity to comment on LAC's responses to MMD's requests.

And then a final point that I want to stress is the future effects of climate change. The climate models predict that the climate of New Mexico will become warmer and drier in the coming decades due to climate change. More of our precipitation will come in increasingly violent summer thunderstorms rather than in winter snowstorms. And the result of warmer temperatures will likely be more evaporation from the pit, and that means more evapoconcentration of contaminants.

The result of more violent summer storms will likely result in greater erosion of covers and greater erosion of the pit walls. And under the Governor's executive order on climate change, all state agencies must evaluate the impacts of climate change on their

programs and operations. They must also integrate climate change mitigation and adoption practices -- adaptation practices into their programs and operations.

This is Executive Order 2019-003, entitled Executive Order on Addressing Climate Change and Energy Waste Prevention, and it's dated January 29, 2019.

And of course, the Hearing Officer has the authority to take administrative notice of an executive order of the state just like she can take administrative notice of rules, regulations and statutes.

That concludes my comments, and again I want to thank you very much for the opportunity to speak here tonight.

HEARING OFFICER ORTH: Thank you very much, Mr. de Saillan.

At this point I would be happy to take additional public comment, but we must get off the platform in order to allow our -- these mandatory updates to the laptops we're using from the Department of Health.

So please rejoin us. I'm not sure if it will be 10 minutes. It might be 15 minutes. But we will get back on the platform as soon as we can.

Thank you.

MR. MYERS: And the WebEx will continue

because we have a co-host offsite. Even when we leave, we'll actually be able to -- participants can stay on. They will be just waiting to resume.

HEARING OFFICER ORTH: Can folks hear that you said that, or should I repeat that?

MR. MYERS: You could repeat it just to be clear.

HEARING OFFICER ORTH: Okay. I'm going to repeat what Mr. Myers just said. Because we have an offsite co-host, the WebEx session will actually continue. It's just that Mr. Myers and I won't be able to be with you while these machines are updating. So you don't have to get off the platform.

Thank you.

(Proceedings in recess from 6:04 p.m. to 6:21 p.m.)

HEARING OFFICER ORTH: Let's come back from the break, please.

All right. If you have time constraints and by virtue of those time constraints would need to offer your public comment sooner rather than later, there will be three or four opportunities this evening to offer public comment. But if you have time constraints and need to offer it sooner, please say something in the chat, and Mr. Myers will convey that to me.

In the meantime, I'm going to invite the NMED representative, Anne Maurer, to the podium to address, I believe, an earlier question or questions related to Ms. Rose's testimony.

Ms. Maurer, would you raise your right hand.

Do you swear or affirm to tell the truth?

MS. MAURER: I do.

HEARING OFFICER ORTH: Thank you.

Go ahead.

ANNE MAURER

having been first duly sworn or affirmed, was examined and testified as follows:

DIRECT TESTIMONY

MS. MAURER: Good evening, everyone, Madam Hearing Officer.

I am Anne Maurer with the New Mexico Environment Department, and I work in the Mining Environmental Compliance Section of the Ground Water Quality Bureau.

And I know pretty much everybody in here. We -- I'm the de facto groundwater permit lead for Cunningham Hill. We've had a series of staff members who have left the Department, and so I've stepped in to -- to take over and manage the groundwater discharge permit for Cunningham Hill at this point and work very

closely with Ms. Rose.

As you all know, Cunningham Hill is regulated under the Water Quality Act in addition to the Mining Act.

We have groundwater Discharge Permit 55, DP-55, which covers essentially the waste rock pile, the residue pile, and all the water management systems associated with that. It also covers abatement specific to the waste rock pile discharges and the residue pile discharges.

And we also have Abatement Plan 27, which is specific to the open pit, open pit waterbody, and groundwater that is downgradient of the open pit.

And, you know, given that this is a Mining Act hearing, I'm more than happy to -- to answer, you know, general questions as they pertain to the Closure/Closeout Plan, but any more specific questions, please just reach out to me directly to talk about the groundwater discharge permit and the abatement plan.

However, that being said, I think there were two questions specific to the ponds, and -- well, let me just back up.

So we hold joint financial assurance with MMD that cover the costs for -- that are covered under the Closure/Closeout Plan, for activities and facilities

that need to be closed under the CCP.

We also hold our own financial assurance for abatement activities under AP-27. And I think that that's really important, because we will continue to hold financial assurance specific to AP-27 until the point at which standards are met.

So, you know, we will hold financial assurance associated with the Closure/Closeout Plan until standards are met under the -- the discharge permit, and we will also continue to hold financial assurance under the abatement plan until the point at which standards are met. And I think that's really important, that, you know, the discharge permit is not going away, and the abatement plan is not going away. You know, we are not relinquishing our authority under the Water Quality Act.

So to answer specific questions in regards to the ponds, we renewed DP-55 in 2020, and there's a condition in DP-55 that required LAC to provide essentially a pond liner evaluation and also work plan to address long-term liner integrity in addition to sludge removal.

We are still in the process of reviewing that work plan. We received it in 2021 and are still in the process of reviewing that. So we have not approved that at this point. So those -- the elements of -- of the --

of pond maintenance are definitely covered under DP-55 and are also addressed under the CCP cost estimate. And we've also made a number of comments in regards to the cost estimate.

So I think -- I think that's all.

HEARING OFFICER ORTH: All right. Hold on just a minute.

If you are on the platform and you would have a question of Ms. Maurer, please put it in the chat.

In the meantime, I will scan the room and see if there's anyone in the room who has a question of Ms. Maurer.

Mr. Myers.

MR. MYERS: Ms. Rachel Conn has raised her virtual hand.

HEARING OFFICER ORTH: All right. If you would unmute her, then, and --

MR. MYERS: She's able to control her microphone, she says.

HEARING OFFICER ORTH: All right.

Ms. Conn, if you can hear me, please go ahead.

MS. CONN: Great. Thank you, Ms. Hearing Officer.

I actually don't have a question for Ms. Maurer. I just -- the chat function doesn't seem to

be working for us any longer. It was working. I was just trying to indicate I wanted to make a public comment and I do have a time constraint. Sorry to interrupt now, but I -- we can't seem to get on the chat to make that.

HEARING OFFICER ORTH: All right. We will go about figuring that out. I'm not sure what happened during our little interlude there.

So if you would just hang on one minute while I just make sure that no one has a question of Ms. Maurer.

MS. CONN: Thank you, Ms. Hearing Officer.

HEARING OFFICER ORTH: Anything, Mr. Myers?

MR. MYERS: (Shakes head.)

HEARING OFFICER ORTH: No. All right.

MR. MYERS: No, Madam Hearing Officer.

HEARING OFFICER ORTH: So thank you very much --

MS. MAURER: Thank you.

HEARING OFFICER ORTH: -- Ms. Maurer.

And, Ms. Conn, if you would raise your right hand.

Do you swear or affirm to tell the truth?

MS. CONN: I do.

HEARING OFFICER ORTH: Thank you.

Go ahead.

RACHEL CONN

having been first duly sworn or affirmed, gave public comment as follows:

PUBLIC COMMENT

MS. CONN: Good evening, Madam Hearing Officer and members of the public and agencies here tonight.

Thank you for the opportunity to comment this evening.

My name is Rachel Conn, and I'm the deputy director for Amigos Bravos. We're a statewide water conservation organization dedicated to protecting and restoring the waters of New Mexico. Amigos Bravos has been engaged in mining issues in New Mexico since our founding in 1988, and we appreciate the opportunity to engage here this evening.

One area in terms of mining oversight that we have consistently engaged in over the years is financial assurance and financial assurance requirements. Adequate financial assurance is essential to protect New Mexico's water and land and communities, as well as New Mexico's taxpayers, to protect New Mexico's taxpayers from liability risks.

If there's not adequate financial assurance,

the public and our environment ultimately pays the bill either in the form of impacts to our resources or in the form of a financial liability to cover reclamation and closure and cleanup costs.

We urge MMD here tonight to demand the most protective cost estimates for the Cunningham Hill financial assurance, and we believe that a protective approach is necessary because of the large amounts of uncertainties and variables associated with determining cost estimates.

Also it's my understanding that the current Closure/Closeout Plan depends on a 1994 study to determine both pit wall stability and financial assurance needs. And a lot has changed since 1994 -- sometimes it feels like we're living in a totally different world -- including the increase -- increased climate variability associated with climate change as -- as a big factor that -- that has changed since 1994, the understanding of those impacts and -- and how that could impact a mine site and the need for additional reclamation and closeout/closure requirements.

We believe that additional studies should be required to determine the risks of pit wall failure and whether the financial assurance is adequate.

Finally, we request that additional monitoring

requirements that address both groundwater and surface water impacts as well as treatment of contaminated water -- that the requirements for treatment of contaminated water must be included in the final closure/closeout plan.

And with that, I conclude my public comment.

Thank you so much for the opportunity.

HEARING OFFICER ORTH: Thank you very much, Ms. Conn.

If you are on the platform and have a time constraint and would like to offer your public comment now instead of just a little bit later, please raise your hand or put something in the chat.

Mr. Myers?

MR. MYERS: I don't see any hands raised.

HEARING OFFICER ORTH: Okay.

MR. MYERS: I'll check on the chat to see if there's still a problem.

HEARING OFFICER ORTH: Yeah. If you would please check out the privileges assigned to participants and panelists and just make sure that they can chat at least with the host, if you would, please.

In the meantime, we're going to turn to LAC Minerals and Mr. Indall.

MR. INDALL: We have -- thank you, Madam

Hearing Officer.

We have two witnesses that will testify as a panel, Mr. Lattin and Mr. Finch.

HEARING OFFICER ORTH: All right. Thank you.

Mr. Lattin and Mr. Finch, if you would raise your right hand.

Do you and each of you swear or affirm that you will tell the truth?

MR. LATTIN: I do.

MR. FINCH: I do.

HEARING OFFICER ORTH: Thank you. That was both of you.

Whoever is going to go first can come up to the podium. The auditorium isn't the best setup for panel examination, but we're going to make it work.

Mr. Lattin.

DANIEL D. LATTIN

having been first duly sworn or affirmed, was examined and testified as follows:

DIRECT TESTIMONY

MR. LATTIN: Okay. Good evening, Madam Hearing Officer and members of the audience virtual and in attendance tonight.

My name is Daniel Lattin. I'm a senior program manager for Barrick Gold of North America,

speaking on behalf of LAC Minerals.

And I'll just give it a moment for Kevin to pull up the presentation.

MR. MYERS: Sorry for the delay. It seems to have wiped our restart files off. Now they're back.

And would you like Exhibit 1?

MR. LATTIN: Yes, please.

Okay. Thank you, Kevin.

If you could please advance to the first slide.

Okay. So I'll be providing an overview tonight of the site, starting with the history, the site features that, you know, are basically the units that we manage, the regulatory oversight, the reclamation work that has been done, and then the path forward to finalize the reclamation.

So this site has a really rich history in mining. As a matter of fact, that Santa Fe County had the first western gold rush rather than California Sutter's Mill, and that occurred in the early 1920s, when gold was discovered by Mexican citizens.

By 1865 the first stamp mill was operating, along with Thomas Edison's mill constructed later in 1898.

As that is very historic, today then the focus

of our activities at the site really focuses on the modern day mining that occurred from 1979 to 1987.

So the site is located on approximately 3,000 acres of private land at an elevation of 7,000 feet. But originally the mine boundary that was permitted was around 4,350 acres of land. However, Barrick donated 1,300 acres to the Santa Fe Botanical Garden for the Ortiz Mountains Educational Preserve.

While the mine was developed and operated in 1979 through 1987, waste rock materials were placed in the Dolores Gulch, which formed the waste rock pile, which I'll be speaking to. Ore mined from the open pit was crushed and placed on an impervious asphalt leach pad where it was leached with a dilute cyanide solution to extract recoverable gold. At that time the spent ore was then rinsed with freshwater and relocated to the residue pile.

LAC Minerals was acquired by Barrick in 1994, and it's notable that was seven years after mining ceased. So since that time Barrick's involvement in this property has been solely focused on reclamation of the site.

Next slide, please.

So here's an overview of the site facilities. So moving from left to right on the photo, you can see

the open pits. Above that is the water treatment evaporation ponds which sit on top of the waste rock pile, and below the waste rock pile are the seepage collection ponds.

Next is the ore treatment unit, where the ore was leached -- the recoverable gold was leached out of. And then once it was rinsed it was moved to the residue pile down at the bottom right-hand side. Then the office, which is an industrial postmining land use, is shown there in red.

Next slide, please.

So for regulatory oversight, I understand this is a Mining Act hearing, but I think it's important to point out the regulatory oversight and then what we do to maintain compliance with those agencies.

So first we're regulated by NMED under Discharge Permit DP-55, and that's for the waste rock pile and the residue pile.

NMED Abatement Plan AP-27 regulates the open pit.

Mining and Minerals Division, as we're here tonight to talk about, is SF002RE, and that's for reclamation of surface disturbance.

But we also hold permits with the New Mexico Office of State Engineer for our water rights and the

EPA for our open pit discharge permit as well as the national stormwater discharge permit.

So each one of those regulatory agencies or oversight we do have regulatory reporting to ensure that we are compliant with the terms and conditions of those permits.

So first for NMED DP-55 we have quarterly groundwater monitoring of 27 wells and three springs, we have monthly inspections, and then we report out to the agency and the public quarterly in -- I mean in reports quarterly and annually.

For Abatement Plan Number 27 for the open pit, we perform quarterly groundwater monitoring of four wells and various open pit depth sampling, and that is reported in quarterly reports.

And last but not least, we have the New Mexico Mining and Minerals Division where we perform poststorm events inspections, where if we get heavy precipitation events, we go out and take a look for erosion or rilling. We have monthly inspections, and then lastly we have annual inspections. And all of that information is put into an annual report for the agencies and public consumption.

Next slide, please.

So for reclamation history, since we are here

for a Mining Act hearing, mining concluded in 1987 which created a total disturbance of about 363 acres.

Successful reclamation of the facility, like I said previously, occurred in the mid-1990s, after Barrick acquired LAC.

At that time reclamation was recognized by the New Mexico Mining and Minerals Division Excellence in Reclamation Awards in 1996 and 1998. And I think you're going to see the pictures that I show, it was very successful.

Thus far of the 332 acres to be reclaimed, approximately 326 acres have been reclaimed. So that represents a 98 percent completion.

So now I'm going to step through each of the major facilities and talk specifically about what was done for reclamation.

So for the open pit approximately 34 acres were disturbed from mining, and about 15 acres have been successfully reclaimed thus far.

So in accordance with the state-approved reclamation plan, reclamation activities have created a stable and steady-state condition. Those activities included but are not limited to exclusion berms and fencing, source controls reducing acid wall seeps, storm controls reducing acid wall seeps, and periodic water

treatment.

And really what this is resulted is it's resulted in a condition where the open pit is compliant with AP-27 surface water standards.

These are photos. On the left you can see in 1996 the areas that were to be reclaimed. And then on the right you can see that this year -- you can see the effects of that reclamation, and you can see the stable surface as well as the vegetation growth.

So for the open pit specifically, the previous closure plan projected a stormwater would fill the pit to an elevation of approximately 6,945 feet above sea level, which would inundate a significant portion of the pit vertical walls and the benches. This plan was based upon precipitation data of the time, which is pre-1998, which represented an annual precipitation of 17 inches and also past watershed conditions.

So what we see today, the present steady-state surface water elevation is approximately 6,795 feet, which is significantly lower than previously anticipated. Changes in the climate have been observed as the 1998 through 2021 average annual precipitation is approximately 13 inches and the watershed vegetation is significantly different.

So what does this mean really? What it means

is that the original plan -- we had to take a fresh look at it, because what -- what's become apparent is that the pit has not and is likely not to fill to the 6,945 as predicted in the previous plan. So what that leaves is an area of pit walls and benches that will not be covered by water as planned.

So as a result of this, an analysis has been performed to look at alternate reclamation for these areas.

Four reclamation options for achieving a postmining land use for self-sustaining ecosystem have been evaluated. Each option was evaluated for technical feasibility, economic feasibility, and environmental soundness in accordance with the Mining and Minerals Division regulations and the Mining Act.

The table in the bottom right-hand side of the slide shows those options.

So the first was the original plan to fill with stormwater, which now has become apparent it is not technically feasible, but it is economically and environmentally sound.

Next it would be to fill with groundwater, which is not technically feasible, not economically feasible, and not environmentally sound.

Each one of the alternatives we evaluated, as

you can see, partial backfill of the pit, backfill of the pit to the 6,945 elevation or backfill -- full backfill of the pit to the 6,990 are all not technically feasible, nor economically feasible, nor environmentally sound. So that's what led us to the pit waiver in accordance with the regulation.

So a pit waiver is necessary because a self-sustaining ecosystem is not techonomically -- technally -- excuse me -- technically or economically feasible and is environmentally unsound for water surface, vertical rock walls and benches. The area of these vertical rock walls, benches and the pit water surface is three acres and 16 acres, so a total of approximately 19 acres, as conceptually shown below.

So in the bottom right figure you can see that there's the previous closure plan projected water surface, and then the light area is the areas that have not been or will not be inundated by water. So the pit waiver only modifies the requirement for physical reclamation of surface disturbance area.

And it's important to note, as NMED spokesman here said, that water quality will continue to be regulated and maintained to meet the NMED AP-27 requirements.

So moving on to the waste rock pile,

approximately 72 acres were disturbed, and about 68 acres have been successfully reclaimed.

So in accordance with the state-approved reclamation plan, those activities have created a stable and a steady-state condition. They include the interceptor wall and treatment system to capture and treat any impacted waters, recontouring, cover placement and revegetation of the surface, which included planting approximately 15,800 tree and seed -- shrub seedlings, design and implementation of stormwater diversions and controls, and lastly the Dolores Gulch residual groundwater plume cleanup.

The result that we see from these activities is a successful revegetation and DP-55 compliant facility with diminished impacted water flows.

On this slide it shows a progression of the revegetation of the facility from 1995 through 2000, 2006, and then this year's photo on the far right. The photo on the far right does show successful revegetation, an important viewshed as the trees have come back and it's blended into the natural viewshed.

Moving on to the ore treatment unit and surface facilities, approximately 75 acres were disturbed, and 75 acres have been successfully reclaimed.

In accordance with the state-approved reclamation plan and -- reclamation activities performed have created a stable and steady-state condition. That included demolition and removal of the crushing facility, ore conveyor system, process plant, and asphalt heap leach pad, removal of impacted subsoils, recontouring and cover placement and revegetation, in addition to stormwater controls and diversions.

And the result is that this area has been released by Mining and Minerals Division.

Again you can see the progression and the time lapse photos from 1995 to 2000 and 2022.

For the residue pile approximately 49 acres were disturbed, and 49 acres have been successfully reclaimed.

In accordance with the state-approved reclamation plan, those activities included recontouring, cover placement and revegetation, stormwater diversions and controls, and an accelerated cleanup of the residual groundwater plume, which continues to be regulated under DP-55.

As a result this area is reclaimed and released by Mining and Minerals Division.

Once again you can see the progression from 1995 on the left, 2000 on the bottom in the middle, and

then this year in the upper right-hand corner.

So you can see here just looking at the site facilities again is that it should be very apparent that the site is reclaimed to about 98 percent. And so really all that's left are the ponds and the pits and some of the treatment facilities associated with the ponds.

So, you know, we need to look forward on what's left, what activities do we need to -- to complete to close this site up.

So for the open pit we're in accordance with the Mining and Minerals regulations of pit waiver for surface reclamation, water treatment, and maintenance of the source controls at the open pit as needed periodically.

And for the waste rock pile reclamation of the water treatment ponds, which are about four acres, the Dolores Gulch residual groundwater plume cleanup, maintenance of the cover as needed, and then reclamation of the ARD treatment system and associated ponds, about two-and-a-half acres.

And for the residual pile reclamation of the residual plume remediation, as well as the ponds that are associated with that plume cleanup.

I think it is worth pointing out that many of

these activities are related to NMED requirements under DP-55 and AP-27. So for the Mining Act it's important to show that approximately six acres of reclamation is required at this site.

Next slide, please.

And last but not least, I think with the fire season that New Mexico experienced this year, it's important to point out, and I'm proud to say, that the folks before me at the site had the foresight to see that the watershed and the forest had been overgrown. So we have invested voluntarily into a forest management plan, which is really there to enhance the stand composition, return the ecosystem to a functioning habitat for, you know, wildlife, and, you know, I think we're all aware of this year, to reduce the risk of uncharacteristic fire.

And I'm proud to say that over 200 acres have been thinned in the past several years, and we'll be continuing that program in the coming years.

And I think that concludes my testimony.

HEARING OFFICER ORTH: All right. Thank you, Mr. Lattin.

I'll invite questions of you after we've heard from Mr. Finch.

MR. LATTIN: Thank you.

STEVEN T. FINCH, JR.

having been first duly sworn or affirmed, was examined and testified as follows:

DIRECT TESTIMONY

MR. FINCH: Madam Hearing Officer, can you hear me?

HEARING OFFICER ORTH: Yes, I can.

MR. FINCH: Thank you.

I'm waiting for Kevin to load up my presentation.

Oh, there we go.

HEARING OFFICER ORTH: Go ahead.

MR. FINCH: Thank you.

I'm going to kind of echo some of the stuff that Daniel just testified to, but maybe in a little more technical detail on a few items.

So if we can go to the next slide, Kevin.

First I'd like to just briefly go over some of my experience or expertise. I have a bachelor of science and master of science in geology. I have two professional -- or I have a professional certification from the American Institute of Professional Geologists, and I'm a registered professional geoscientist.

My relevant experience, I've had 32 years of actually a wonderful career at John Shomaker &

Associates as a hydrogeologist-geochemist. I was on the Copper Rule Technical Advisory Committee. And at the Cunningham Hill Mine Reclamation Project, which is that acronym CHMRP, I've been working out there since 1991, so for quite a few years.

More details on my experience can be found in my resume, which is in Exhibit 4, I believe.

All right. Next slide, please.

Okay. We've seen this map this evening. This is a map of the Cunningham Hill Mine Reclamation Project site showing the facilities that have been talked about for the update Closure/Closeout Plan under Mining and Minerals Division Permit SF002RE.

And I just want to point out again to show you that the areas that have been reclaimed and released are in the more gold color, and then -- but the focus of what I want to talk about are in the green and blue and then some of the other identified smaller facilities like the ponds.

Here is a table of the reclamation areas, and these areas are summarized in the updated Closure/Closeout Plan under Table 1, I believe it is. And I'm not going to go into detail here, but there is one number that we'll be discussing in more detail, and that's the acres for requested pit waiver, which is

19.37 acres. And I'll explain the areas under that 19.37 acres here in a little bit.

Next slide, please.

The key references are, obviously, the -- these are covers for various reports in the updated Closure/Closeout Plan. On the far left is the updated Closure/Closeout Plan cover, and then appended within that document is evaluation of the open pit for the Closure/Closeout Plan and Abatement 27. And then on the right is the -- the open pit waiver justification report, which is also appended in the updated Closure/Closeout Plan.

So from here on out I'll talk about four topics, the open pit reclamation, the waste rock pile reclamation, site-wide monitoring, and then the Closure/Closeout Plan update.

For the open pit, I just would like to point out there are -- we have 35 years of data, which is a really nice data set to work with, and I believe it's -- that's since mining stopped, 35 years.

Next.

So here's a map just to give you a little geographic background of -- a little bit different from the other maps provided today.

On the gold stars you'll see the local

communities of Cerrillos and Madrid, and Highway 14, which is south of us here from where we are in Santa Fe. There's County Road 55, which goes south from Cerrillos to the property, which is called -- the label is LAC property boundary. You can see the Ortiz Mountains Educational Preserve, that part that was donated to the county.

There's another little outline there you see called Upper Cunningham Gulch watershed. That is the watershed that currently flows into the open pit, which is labeled there as open pit. The box which is labeled AP-27 model area, that is the model that was used for the abatement plan and also to demonstrate that any plume from the open pit would remain within the property boundary.

Okay. Next.

Okay. A few more features for the open pit. You can see the open pit there on kind of the lower left-hand corner, and there's a dashed line running through it. That dashed line is called the Golden fault zone. This is a key feature that created the ore body there at the open pit where gold was mined out.

I'm going to also -- let's see -- go to the next slide -- have a little blow-up of this so we can look closer at the open pit.

There you go. Thank you.

And in the lower left-hand corner you can see where it's labeled Upper Cunningham Gulch, and that's stormwater that if it does flow would flow into the open pit.

There are several wells there labeled. Some are related to DP-55, and others are part of the AP-27 abatement plan.

So -- and what happened here when the mine started, there was a well in the middle where it's labeled open pit, and that well was used to dewater for mining. And then the other wells were added, particularly the one to the south labeled PW77-1. And those two wells actually had fairly good capacity because the open pit is actually a retro pipe where the ore body is fractured.

Can you go to the next dongle, it should bring something -- there you go. Thank you.

There is a coverage here I just put up over that map, and that's the fractured area of the ore body that lines up with the Golden fault zone. So when dewatering occurred, it occurred locally within that area, and rocks around that shaded gold area are low permeability, were not as affected by dewatering.

Okay.

There are two places where acid wall seeps emerged after mining.

And on the right-hand side you can see the aerial image of the open pit, and you see two red arrows. Those red arrows represent where stormwater was going in two different routes to the pit walls and then reporting at the pit wall as an acid wall seep.

On the left-hand side you can see the photos. The upper photo shows stormwater running off from the upper bench going to a lower bench and then it would seep in. That's where the small red arrow is. That's the same location as that photo.

And then the larger red arrow is a flow path that occurred subsurface. From where that little blue area is outlined at the beginning of the red arrow, that's where water used to -- stormwater used to seep in, and then it would flow underground through the fracture system and report in the wall, as shown in that photo in the lower left-hand in the green area.

So it took us a while to figure out the mechanisms for -- for acid wall seeps for those two locations.

I'd like to go to the next slide.

The original plan was to flood out those acid wall seeps to some elevation above that with stormwater

from Upper Cunningham Gulch as represented by that blue shaded area overlying the pit.

Next slide, please.

So as part of AP-27, there were source controls that need to be implemented to improve water quality, and those source controls -- I have outlined them here. There were five of them.

There were repairs to the Upper Cunningham Gulch where it was seeping -- where stormwater was seeping underground before it got to the open pit.

There were stormwater controls for the receiving runoff area west of the pit.

And there were in pit stormwater controls to keep stormwater off the benches and -- and roads.

There were repairs to access roads by installing caliche base.

And there was also a caliche cap on one of the largest remaining bench areas.

So -- pardon me. Sorry about that.

Next slide, please.

So these are photos of the reclamation areas to mitigate the acid wall seeps.

The upper left-hand photo is the stormwater grate that was installed for the pit watershed area to the west that collects stormwater, and then it directly

sends it to the pit waterbody as clean water.

And then the upper right are the Upper Cunningham Gulch diversion repairs. And you can see a nice new liner there with -- that's been properly placed to convey stormwater to the open pit.

The lower left is a photo of repairs to the diversion structure that quantifies the amount of water going to the open pit. So you see that's a rectangular weir with a V notch weir installed in it.

And then the photo on the lower right shows that northeast upper bench that was reclaimed with caliche, and a drain was put in on that, too. And in the background of that photo you can see the caliche surface on the access road going down into the pit.

Next slide, please.

So I want to kind of briefly go over open pit wall stability.

There is the Call & Nichols (verbatim) report from 1994 that basically said the rock is competent and will remain in a stable condition. That was quite some time ago, I do agree. Back to our 35 years of data, we have been -- I have been out there many times over this time period, have not seen any signs of unravelling or -- or failure of a -- of the -- of the pit walls.

So I think the reason for that is because the

initial geotechnical evaluation was -- was partly -- was correct.

But also in addition there have been reclamation efforts that have stabilized the south and west slopes.

The stormwater controls put in limit weathering and slope failure.

And we have stability even after what I call a 100-year event that happened in 2019. I believe it was more than two-and-a-half inches that occurred in -- in less than 30 minutes.

The other is sediment in the bottom of the pit that's from stormwater runoff and not from slope failure of pit walls. I just want to clarify that.

Next.

Okay. Now I'll go over the reclaimed waste rock pile.

And there -- here we have a good history of investigations that -- what I call key references. Most of these were done under DP-55. They were also provided to the Mining and Minerals Division.

So starting in 2007 all the way to 2019, we've gone through numerous iterations of evaluating the cover and the performance of the cover to protect groundwater.

Next.

So here's a photo of the site, and the black outline represents the area of the waste rock pile.

And there's a bunch of labels like A-6, B-6 and so forth. In 2011 we installed a soil moisture monitoring network to understand how the cover was performing and to determine where the source was for acid rock drainage that did -- that was occurring at the toe of the pile, which is down by that little red line up in the upper right-hand corner called the interceptor wall. The interceptor wall collects acid rock drainage that occurs from the waste rock pile and conveys it to a pond to contain it so it can be mitigated.

That soil moisture monitoring system was from 2011 to 2016, and the primary findings were that the cover was performing as designed, but there were areas somewhere else where -- where stormwater was entering the pile, more or less short-circuiting and causing these acid rock drainage events.

Next slide.

So we implemented stormwater controls. We can see there's a common theme here. And those stormwater controls included diversion berms along the West Groin to peel water off back into the natural arroyo and piping and channel repairs to the East Groin.

Additional repairs were done recently to the

East Groin, I think about two years ago, and so that has shown, I think, a very successful mitigation measure.

Next slide.

Here is a history of the acid rock drainage flow from the waste rock pile.

So starting -- this is a bar graph. Starting in 1991, which is time or years on the X axis, to current, 2022. And the Y axis on the left-hand side is annual acid rock drainage flow in gallons per minute, and then the Y axis on the right side is the precipitation in inches, the annual precipitation. So the blue line represents the annual precipitation, and then the little bars are the annual acid rock drainage flow.

And as you can see, prior to reclamation it was problematic. There was quite a bit of flow. And since the waste rock pile has been reclaimed and stormwater controls put in place, the last several years, except for a little blip in 2019, have shown almost a very negligible amount of ARD flow, something less than half a gallon a minute maybe, quarter a gallon a minute. I'm not sure. It's just a fraction.

Currently it's zero. We've been observing zero ARD flow all year long, even after the heavy rains we had this summer.

Next.

All right. I'll go over the site-wide monitoring. And this includes what we do for everything for AP-27, DP-55, and the Closure/Closeout Plan.

Here we have a map of the facilities.

So for the site-wide monitoring we do monthly visual inspections of the facilities, even the ones that have been reclaimed.

We have -- there are two weather stations on site, one on the waste rock pile and one at the -- over there by the residue pile remediation ponds, that are collecting data continuously.

We record meter readings for -- for all the stormwater diversions, groundwater pumping, anything that's required for DP-55 and for the water rights permits.

And then there's an extensive groundwater monitoring network that's not shown on this map.

So water quality constituents of concern which are covered under DP-55 and AP-27 and are summarized here.

And for AP-27, which is the open pit, it meets the -- currently meets the New Mexico Environment Department Surface Water Quality Bureau surface water standards for that.

Then there's groundwater standards. The open pit waterbody has elevated TDS and sulfate that's being treated as we speak, and then the reclaimed residue pile plume has some residual nitrate and cobalt, and it's -- it's near its final phases of cleanup. The waste rock pile/Dolores Gulch, which is below the waste rock pile, still has some pockets of elevated TDS, sulfate, suppressed pH, in a few areas aluminum, manganese, iron, cadmium.

Next.

So here is a map of the site, and the property boundary is kind of the outer limits of the map. And you can see a place where it's in the lower right-hand corner where it's identified.

All those dots with labels are monitoring wells for DP-55 and AP-27.

And I just want to point out that on the downgradient of all these facilities there's two blue circles. Those are wells that provide downgradient monitoring. When they were installed, they were clean, and they are currently clean. And so anything related to this as -- has remained where it is at the facilities where it's currently being cleaned up, not downgradient of it, not affecting any offsite properties.

Next.

Okay. Closure/Closeout Plan update. I kind of hit some points on the updated plan.

So as I opened it up, the updated plan specifically addresses the waste rock pile and the open pit and some of the ponds.

There are acreages that we've talked about, there's been quite a bit reclaimed and quite a bit released. So we're dealing with a very small area left on -- to be reclaimed and then the waste rock pile in the open pit area. So let me go over those things.

Starting with the open pit. What you see here is a map of the open pit. And the -- the white outline is the watershed for the open pit. And then the yellow kind of color is the reclaimed area within the watershed, which includes a few portions of the waste rock pile. And then the orangey kind of color or pink is the unreclaimed area of the open pit walls and benches. And then the -- obviously, the blue is where the current waterbody resides.

So the -- the pit waiver is for that -- whatever we want to call it, pink color and the blue color combined, which is -- totals 19.37 acres.

Next.

So just to kind of point out a few things. I believe Daniel showed this same cross-section. It's the

cross of the open pit.

The previous plan had a projected fill to -- of water surface elevation of about over 6,945 feet, but it's still -- even with that plan there were some unreclaimed pit walls and benches that would remain.

Under the current plan -- or for the proposed pit waiver request, the -- we believe the water level will remain where it is now, where it says Current water surface.

Next.

So this is just the regulation cited right out from the Mining and Minerals Division for a pit waiver. And so when we do this, we went through a rigorous analysis of what is -- is it technically feasible, is it economically feasible, or is it environmentally unsound when you look at options for reclaiming the pit. And -- but the main thing is no matter what you do even with a pit waiver, you still have to meet all applicable surface water and groundwater standards related to that.

Next.

So these are the main alternatives that are defined in the pit waiver requests of -- excuse me.

I'm not sure why I'm getting feedback. I'm trying to be close but not too close.

So we looked at -- reevaluated stormwater. We

reevaluated a groundwater source for onsite as well as, hey, can we get a groundwater source imported. We looked at backfilling options and with onsite material or with imported material. And even some combinations of those.

So go to the next slide, Kevin.

There's just a summary of the analysis. I'm not going to go into great detail, but is this technically feasible? Are the materials available? Can it be implemented? And will it be self-sustaining? For our economic feasibility, what are the financial implications? Does the cost outweigh the benefit? And what is the cost per unit area reclaimed?

For environmentally sound, does it impact the neighboring community? What effect does the alternative have on natural resources? And another one which is I think important, climate change impacts, what's the carbon footprint for implementing that alternative?

Next, please.

MR. MYERS: I'm getting it's hard to hear according to people online.

MR. FINCH: Okay. I'll try to do this without feedback.

So here is a summary of the open pit reclamation options, and same table that Daniel provided

earlier.

The only alternative with a yes is filling with stormwater, however it is deemed technically infeasible. We've looked at so many different ways, even extreme watershed manipulation.

The costs for backfilling is -- is pretty -- is pretty up there in costs. So it's -- it's not economically feasible either.

And then on top of that, any backfilling option would generate a lot of carbon dioxide because of trucking.

So that's a summary of the analysis for alternatives to reclaim the open pit.

And so where we landed is what I call best course of action.

And to maintain the postmining land use for wildlife and livestock.

And then for -- as far as the Mining and Minerals Division self-sustaining ecosystem requirements, we met for all the disturbed and reclaimed areas except for the 19.37 acres of open pit benches, walls, and open pit waterbody.

AP-27 permit requirements will ensure the open pit waterbody will meet surface water and groundwater protection standards.

There are no pit filling alternatives that are technically feasible, economically feasible, or environmentally sound that we found.

And a pit waiver will allow for the applicable permit requirements to be achieved and will be in the best interest of wildlife, stakeholders, adjacent communities, and land owner.

That concludes my testimony.

HEARING OFFICER ORTH: Thank you, Mr. Finch.

Kevin, do you think that the sound needs to be off on that laptop maybe?

MR. MYERS: I'm pretty sure it is, but it's good to check again.

(Proceedings in brief recess.)

HEARING OFFICER ORTH: Okay. Thank you.

So we will turn now to questions of Mr. Finch and Mr. Lattin. If you are on the platform, please put your question in the chat, and while I turn to those in the room.

So, Mr. Wade or Ms. Rose for MMD, do you have questions?

MS. ROSE: I do not. Thank you.

MR. WADE: And this is Mr. Wade.

I do not either.

HEARING OFFICER ORTH: Thank you very much.

Mr. Jantz, do you have questions -- or, Ms. Yarbrough, do you have questions of Mr. Finch or Mr. Lattin?

MR. JANTZ: I do.

What do you think is the best way to handle this?

HEARING OFFICER ORTH: Well, so you can throw the question out and let them decide which is the better fellow to answer that particular question.

MR. JANTZ: So I guess should I -- should I be at the microphone, then have them come to the microphone, or can they repeat the question?

HEARING OFFICER ORTH: Yeah. You know, I'm happy to give up my microphone if Kevin agrees that that would work.

Would that work, Kevin?

MR. MYERS: (Nods head.)

HEARING OFFICER ORTH: Okay. So I'm going to give you my microphone, and Mr. Finch and Mr. Lattin can share that one.

MR. JANTZ: Okay. Thank you.

Is it okay if I stand here?

HEARING OFFICER ORTH: Yeah. Go ahead.

MR. JANTZ: Okay.

DANIEL E. LATTIN and STEVEN T. FINCH, JR.

having been previously duly sworn or affirmed, were examined and testified further as follows:

CROSS-EXAMINATION

BY MR. JANTZ:

MR. JANTZ: So thank you.

This is a question for Mr. Lattin.

You mentioned that LAC was doing a forest management plan and anticipated doing it for a bit longer? Do you have a sense of how long you anticipate continuing the forest management plan?

MR. LATTIN: Good question. Thank you, Eric.

I do not, and it depends on the availability of our resources. You know, typically the resources that are used are firefighters that work in the off-season. So it would really depend on the availability of the -- those -- those folks to do the thinning.

MR. JANTZ: Okay. Great. Thank you.

And this may also be a good question for you.

Have any survey monuments been installed on the pit walls, other than the prism that I think was on the south wall?

MR. LATTIN: I would actually defer to Mr. Finch.

MR. JANTZ: Okay.

So, Mr. Finch?
And it's Mr., right, not Dr.?
MR. FINCH: That's correct. Thank you.
MR. JANTZ: Uh-huh.
MR. FINCH: I'm not aware of any survey monuments.
MR. JANTZ: Okay. Thank you.
So you talked a little bit about acid wall seeps, and I'm glad that those have been dealt with.
What I was wondering about, have you identified any additional acid wall seeps since the last time you did the reclamation for -- or the remediation for those acid wall seeps?
MR. FINCH: No. We do inspections after each major rainstorm --
MR. JANTZ: Okay.
MR. FINCH: -- and we have not identified any other areas of acid wall seeps.
MR. JANTZ: Do you see a risk for further acid wall seeps at this site?
MR. FINCH: No, I don't.
MR. JANTZ: Okay.
You've talked a lot about the stormwater control systems as part of the efforts to control acid wall seeps and to keep the -- to keep the pit wall

stable, et cetera, right?

Have -- are those stormwater control systems designed for more frequent 10- or 100- or 1,000-year storm events?

MR. FINCH: I'll defer that to Daniel.

MR. JANTZ: Okay.

MR. FINCH: He's more familiar with the engineering documents --

MR. JANTZ: Okay.

MR. FINCH: -- that went behind that.

MR. JANTZ: Okay.

MR. LATTIN: Yeah. Thank you.

So the stormwater control systems were designed by Daniel B. Stephens --

MR. JANTZ: Okay.

MR. LATTIN: -- and are a public record, and I really can't cite the design parameters from memory, but I would direct you to those -- those publicly available documents.

MR. JANTZ: Okay. Great. Yeah. We'll look at those.

And just out of curiosity, have -- has the '94 Call & Nicholas report been sort of reevaluated in light of more frequent storm events, 100-, 1,000-year storm events due to climate change?

MR. LATTIN: No, not that I'm aware of, and I understand that that's a geotechnical evaluation --

MR. JANTZ: Um-hum.

MR. LATTIN: -- not a stormwater precipitation, water balance evaluation.

MR. JANTZ: Okay.

All right. That's all I have.

Thank you.

HEARING OFFICER ORTH: Okay. Thank you.

Mr. Myers, did anyone ask in chat a question?

MR. MYERS: Yes. There is one, and just a reminder to get as close as possible to the podium microphone. There was some difficulty hearing that, some of the people online.

And I'm just trying to get back to -- Mr. Lelopath, I believe, had his hand raised, so I'm going to suggest we unmute him, if that's all right.

HEARING OFFICER ORTH: Yes. That's all right.

Mr. Lelopath, we are unmuting you so that you can ask your question of the LAC panel.

MR. MYERS: Okay. I'm told that that's not -- that's no longer a hand raise. So --

HEARING OFFICER ORTH: Ah, okay.

MR. MYERS: -- (unintelligible and/or inaudible) with that.

HEARING OFFICER ORTH: All right.

So are there any other questions from anyone of the LAC panel?

Oh, sir. Mr. Parker.

MR. PARKER: Thank you.

CROSS-EXAMINATION

BY MR. PARKER:

MR. PARKER: This question is for Steve Finch.

I'm curious where the combinations of alternatives have been reported, because as far as I recall anyway, things were evaluated pretty much one-by-one.

MR. FINCH: Thank you, Tom.

That is correct. They were evaluated one-by-one. There is some discussion between backfilling, partial backfilling, and partial pit filling with water, I believe. I'd have to dive deep into Exhibit 5.

But the numbers for what storm -- available stormwater or groundwater still wouldn't fill the pit. And that's -- that's specified in there, what the requirements are to fill the pit. And even if you combine those two numbers for groundwater on site and surface water runoff, the -- it doesn't -- both those combined do not meet the requirement of the calculated

pit volume for it to fill to a -- to the point needed for reclamation.

HEARING OFFICER ORTH: Thank you.

Any other questions of the LAC panel?

No? All right.

Thank you very much, gentlemen.

Please, if you would like to offer public comment and you have a time constraint such that you would like to offer that comment before we hear from Friends of Santa Fe County, put something in the chat or raise your hand. I'll wait a moment. Otherwise we'll take just a short break, and then we'll come back to -- to hear from Friends of Santa Fe County.

Nothing, Mr. Myers?

MR. MYERS: No.

HEARING OFFICER ORTH: All right. Let's take 10 minutes. Let's come back at 7:40, and we'll hear from Friends of Santa Fe County.

(Proceedings in recess from 7:33 p.m. to 7:43 p.m.)

HEARING OFFICER ORTH: Let's come back from the break, please.

Mr. Myers, did anyone request an opportunity at this moment to make public comment?

MR. MYERS: No, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. Thank you.

We'll turn then to the presentation of the Friends of Santa Fe County.

I see Mr. Myers has put Mr. Kuipers' presentation on the screen.

Mr. Kuipers, I think I see you there. If you would please raise your right hand.

Do you swear or affirm to tell the truth?

MR. KUIPERS: I do.

HEARING OFFICER ORTH: Thank you very much.

And I have been asked by the court reporter to ask you to keep it -- keep it slow, and as she's not amplified so I'm going to have to be the one to interrupt you if you speed up.

Thank you.

MR. KUIPERS: And I appreciate that suggestion.

JAMES R. KUIPERS

having been first duly sworn or affirmed, was examined and testified as follows:

DIRECT TESTIMONY

MR. KUIPERS: So good evening, everybody.

My name is Jim Kuipers. I'm the principal at Kuipers & Associates.

And for those of you that don't know me, I

have about 40 years experience in the mining industry. The last 25 years I've worked for public interest groups, tribes, government, primarily, and have been working with folks on the New Mexico Mining Act, with the Environment Department, and others for the past 25 years.

I have a lot of experience with pit waivers and various other things, know probably about 80 percent or 90 percent of the people in the room, including Steve Finch.

Hi, Steve.

And so it's something that, you know, I take -- it is a good opportunity in New Mexico that we oftentimes have these opportunities for hearing, and just want to mention that a lot of my comments are predicated on the experience I've had over that past 25 years working with everybody.

So here's an outline of the comments I'm going to go into. And maybe just up front let me suggest that, particularly for the LAC folks, Barrick, that one of the things that there's a great deal of interest in New Mexico is ensuring that we address these mines in a long-term way.

And the groups that I've worked with, GRIP, Amigos Bravos, Friends of Santa Fe County, now, all of

them have an interest in working with the companies, together with the agencies, and seeing if we can work these issues out. We actually have a history of reaching various points of agreement, settlement, informal and both formal. And I think it's something that, just so you know, there's a tradition of that here.

And so in the spirit of that, I would just suggest that these comments are really offered for further discussion with the company. We haven't had a good opportunity to really sit down and start to dive into some of these things yet. I -- but we do plan on and hope to do so in the near future. So really this is something more of an outline for future discussions.

These are also things we've talked with the agencies about. And we look forward to further discussion with them, together with the company, on these subjects.

I just want to start with a bit of clarification. And I think a lot of folks know this, but it seems like it's something that every time we talk about a pit waiver we have to kind of go back through this and make sure, and I think some of the discussion we've heard tonight from both the agencies as well as from the company and from their consultant, Steve, it

helps to clarify this.

What I'd mention is it's kind of hard to read it in plain language out of the Closure/Closeout Plan and the pit waiver, but what I want to emphasize here is according to the Mining Act a postmining land use or self-sustaining ecosystem essentially can be waived from that requirement, but it's that requirement only that it's waived from. And when we talk about postmining land use of grazing, wildlife habitat, vegetation relative to a self-sustaining ecosystem, it's limited to just that.

And what we want to make sure in understanding and accepting, if you will, the pit waiver, is what other measures will ultimately be taken to ensure that in fact the open pit or waste unit meets all applicable laws, regulations, standards, following closure, and will not pose a current or future hazard to public health or safety.

And when we talk about future in New Mexico, it's something that people have a very clear vision, because we've done a lot of work on the Questa Mine, Chino, Tyrone, Continental, other mines in the state, and I think there's a very acute understanding that in very rare circumstances do you actually walk away from these mines.

This mine certainly isn't a Questa or a Chino or Tyrone, but at the same time it's not a walkaway mine. And I think that's evidenced by the fact we're having this conversation 35 years after the mine closed, 25 years after reclamation was completed.

I think it was helpful the drawings that have been provided and other things. I would just mention that it was a little bit difficult to look at the different colors and explain things, but I think the explanation that was provided helps folks to understand that the pit waiver is just with respect to the difference in vegetation that you can deduct between the difference in water elevation.

I would mention that when you sit -- see the open pit water surface area in pink on the left, and then you see it in blue on the right, it's one that just makes this a little bit confusing sometimes from an apples and apples comparison standpoint.

But I do think the explanation that was given tonight is helpful and -- and is consistent with what folks understand.

So if we do have a pit waiver, there's a number of things that we think are important to be considered as conditions or otherwise for the company to perhaps consider modifying their proposal or otherwise

find a way to address.

But what we really want to do and in all cases the goal truly is elimination or minimization of the sources and of the need for long-term monitoring, maintenance, and ideally, you know, again the idea of walkaway is from an altruistic standpoint what we want to do, but it's -- may not be achievable. And in this case we have some site-specific challenges.

The number one starts with the fact that we've got engineered source controls, stormwater controls, covers intended to limit infiltration, various other aspects that are laudable, and the work that has been done is good work, but there's a need to make sure those continue to perform over the long-term, and long-term meaning hundreds if not thousands of years in the future.

We have water treatment going on at this site. It's not again the 1,500-, 2,000-gallon-per-minute treatment that we talk about and all are very familiar with for some of the other major mines in the state, but nonetheless we do have periodic treatment for the pit that will be necessary. And we really don't know how that will work out going forward in the future, and we still have seepage coming from the waste rock pile that needs to be addressed and other things.

The big thing that we've all experienced and, I think, know is -- I think everybody's done their best to predict what might happen in the future, but there's a lot of uncertainty in any of those predictions, and that needs to be assured.

Financial assurance, as you've already heard, is a significant aspect for everybody. In recognizing that there are long-term needs for monitoring, maintenance, perhaps replacement at some point, what folks want to know is that that financial assurance is in place to carry out those aspects long after the company's gone, and for as long as it's possible or probable, if you will, that the regulatory agencies in the state would be responsible for that.

And I don't think most regulatory agencies in the state, or in any state for that matter, were created with an understanding or realization that they were going to inherit and ultimately become the responsible party's foresights like this, because the reality is that we -- we know that no corporation or company can actually exist forever. So this -- this long-term aspect is very important.

When does it become time to redo monitoring and maintenance and things like that? You know, I think 25 years is really the minimum. We see sites, though,

where we talk about the prediction of pit lakes where 50 years, 100 years, 200 years in the future through evapoconcentration and other things, that's when they begin to exceed standards. And that's the kind of thing we need to discuss about here.

And really in terms of when we talk about source controls and the need to maintain -- monitor and maintain and in some cases replace those, we're talking the need to go out 100 years, even as long as 500 years.

And I'm not sure how familiar, Daniel, you are, and other Barrick folks that you work with are, but I do think there's a precedent already in Nevada with BLM where they take monitoring and maintenance long-term out to 500 years.

And that's certainly something that while it's been the norm in the State of New Mexico to go out 100 years, I think it -- it's important for you to know that the interest on behalf of the public would be in exploring and discussing something that went out further.

A couple of points on pit stability and mass wasting. And I think it's important to mention that we're -- we're talking both. There are situations where you have pit instability, where you can have large areas that are re -- you know, related to faults. Other

geologic features can cause you to lose a lot of the pit wall at once, and sources without a whole lot of warning about that, although there are ways to be forewarned, if you will.

And there's mass wasting, which is just simply the fact that gravity is acting on these sharp pit walls that you see, and over time they -- they slough and degrade. And you can actually see evidence of that in this pit. You can see evidence of it in any pit. And that does slowly but surely cause additional mass wasting over time that can be significant.

When we talk safety, it's important to talk worker and regulatory safety. And I should mention I -- you know, we're not talking about in terms of monitoring an active liner system that's operating continuously like you would see in an operating mine -- expect to see in an operating mine today. But we -- it would be good to have something that allows for an assessment of if there is the beginning of significant movement.

And I might mention that I'm not aware of any of the high wall failures that are -- you know, have been recorded in the last 20 years that resulted from a storm event. That's typically not what triggers them. It's really more typically a fault or other geologic phenomena that just simply gives away to gravity at some

point.

Sometimes it is groundwater as the pit lake rises does help in lubricating some of these, and certainly stormwater doesn't -- can help in that. But most are actually geologically and otherwise a triggered set of stormwater events.

The biggest concerns we -- we have -- and I think worker and regular -- regulatory safety, public safety can be addressed, but ultimately as your pit becomes unstable, as you have mass wasting occur, your stormwater diversions and source controls are impacted. Those are important from a water quality standpoint, and maintaining pit water quality that's -- that's with the predictions that you are based upon, is maintenance of those source controls.

So it's important that those are also included in -- in, you know, the designs and financial assurance, et cetera.

When you see all these things happen, they impact water quality. So it's important again the waiver is understood not to waive the need to address water quality, not to meet the standards in AP-27, but to address vegetation, because we can expect in the future that there will be some exposure to mineralized material. I'm not suggesting how significant that will

be.

And there will be changes in the pit capacity and level over time. And that's, I think, something that we have a present condition that's predicted, although I think, from what I read at least, it's gaining in elevation, still continuing to go up pretty -- go up maybe another 40 feet.

I think it's important to go beyond that and try to predict what's going to happen, for example, if we get into a dry period, impacted more severely by climate change, or a wet period, what's going to happen over even the next year or two as we see what results from this last year.

I should change the slide -- okay. There we go.

This is a -- I'm going to say a most extreme case in terms of what can happen from a pit stability and mass wasting standpoint. This is Montana Tunnels mine in Montana, where it's a lead/zinc mine that was mined about 20 years ago, shut down around 10 to 15 years ago. And it's one of the more rapid degrading mine sites that I or other people I work with from BLM, Forest Service -- we've had discussions about this -- have seen.

This is an example of what can happen quickly.

This can also happen over time. And you simply see that the high walls, roads, other aspects start to degrade.

I want to make sure I -- I'm very clear that I'm not suggesting that this kind of scenario will happen in this case at Cunningham Hill, but this is the kind of thing that happens, does need to be considered.

This is actually another set of pictures of Cunningham Hill, and I think all the different photos and other things have been very helpful.

You know, in terms of the Call & Nicholas report, I'm not saying that it's not a valuable report, but there's a different -- I'm going to say for a -- suggest a better understanding of pit wall failures, the importance in terms of how we estimate them, how we look at those.

A good example that I would point out is the Questa Mine. There was a point in time in which there was a suggestion made that there was no chance of mass instability and/or pit instability at that mine site. That suggestion was made by a very credible professional engineer, geotechnical engineer.

But that assumption was challenged, and today everybody recognizes at the Questa Mine there are several places where there are major faults and other things and actual parts of the pit wall that are failing

and that have had to be addressed and needed to be accounted for in the Closure/Closeout Plan, and in the Superfund cleanup plan there, as well.

So it's something where I do think it's worth further discussion, consideration as to what that would involve, what the costs would be, the timing. Perhaps it's something that could be done over the next five years as conditioned. And also again I want to make sure we're not overshooting on the scope of what we're suggesting needs to be done.

Talk about pit lake water quality. And, you know, again I think it's important to note the expectation of the public, others is that the requirements of AP-27, they are continued to be enforced, continuing to be looked at, is something that you can't walk away from. And I haven't heard that suggestion in what I've heard tonight or otherwise.

And I think it's just important to note that when you look, for example, at the results from the January, 2020 lab analysis -- and I would just point out copper as one example here, the aquatic life standard is .05, and the January, 2020 lab analysis was .04. I believe these are milligram per liter. And with evapoconcentration, other impacts, other things, it doesn't take much for that .04 to reach up to .05, the

aquatic life standard.

And so there is reason to be concerned about water quality. Again the expectation is that there would be plans, financial assurance in place to do additional treatment for as long as necessary.

And I'd suggest that really none of us can accurately predict how long that may be necessary or even at this point how frequent that may be. That's really something that as the -- I like to say the Zen master says, we're all going to have to wait and see, and time will tell as to how frequent and what nature of additional treatment needs to be done.

This is just demonstrating and, you know, making more the point that we have a pit level. I understood the pit level presently is 6,800, rising to 6,840. You know, that's the kind of thing we really need to make sure we all understand and -- and have a common expectation on.

And then also that the predictions and other parts of -- in terms of tasks, financial assurance are all predicated around not just one assumption today, but understanding where we think this is going to the best of our ability in the future.

Some of our comments and things we -- we definitely want to discuss further are the waste rock

covers. And, you know, I think it's -- you know, it's that the idea initially was to provide a waste rock cover that limited infiltration while at the same time providing for vegetation.

And that, you know, has been effective, as pointed out by the decrease in the amount of leachate or acid rock drainage coming out of the pile. But that still continues even at a low rate, and if those source controls aren't maintained, one would expect that that rate could turn the other direction.

It's notable that the reclamation was completed in '96, and then when you look through the record, all the way through present, there has been a need for ongoing repairs, maintenance, monitoring and other things that have gone over. We've had the more recent approval of a maintenance program to take care of some of the more severe erosion that's shown up over time.

That's the kind of activity that I think will be required for as long as we think there's still material in the pile that -- that is going to result in exceedances of standards if those engineered controls aren't maintained. And I expect that to be hundreds of years in the future, but that requirement will still exist.

And this is just some of the examples from the recent report by MMD of what's being observed. And again I'd point out that we're not talking major mass failures of rock piles, the covers, things of that nature, but we are talking the kind of erosion and other things that are going to happen over time can be expected.

This also isn't to take away from the success of the reclamation at the site. I want to make sure I make that clear. All sites I -- I'm involved in reclamation sites in New Mexico. All of them, I believe, need a certain degree of monitoring, maintenance, and other aspects over time. None of us are going to be so successful or good at what we do to avoid that entirely.

So one of the things that our comments would emphasize is using a preventative main approach -- maintenance approach to how you look at the waste rock covers and other things. My own experience and history with this -- and I should mention I'm working with the Tohono O'odham Nation in Arizona at the Mission mine, where I think it's been a more difficult reclamation I've worked on given some characteristics.

But this idea of a preventative maintenance approach is one of not waiting for things to get so bad

that we start to be concerned about whether water quality or other aspects are being threatened, but rather one where we get ahead of it, stay ahead of it. And, you know, I think the mining industry folks are very familiar with this approach from the standpoint of how they work with their mining fleets, how you address maintenance in a mill so you have high availability, those various aspects.

But really it's the same idea but applied more specifically to how you ensure that the covers are operating as intended, as engineered controls continuously over time.

And one of the other reasons I think it's important to look at this approach and -- and adopt it is this is how you need to structure financial assurance. Financial assurance, if it ends up being trying to figure out how to approach it from an episodic standpoint, is very challenging. So to avoid that, an approach that makes sense in terms of how you calculate monetarily and otherwise, that's also an important aspect of why I push preventative maintenance as an approach.

We've heard a few comments and other things on ARD treatment this evening, and this is just some pictures again from the recent inspection of the

evaporation ponds.

And, you know, again I think this site's very fortunate in that we're talking low ARD leachate rates coming out of the pile. We can actually treat those effectively using evaporation. In this case we don't even need to use mechanical evaporation. We can just let nature do most of the work for us.

But it does require long-term monitoring, maintenance, and, in fact, replacement. These things don't last forever. They fill up with sludge. The sun deteriorates them. You need to make sure things like bird netting are maintained.

And Nevada actually has a very interesting similar history of approaching similar leachate coming from leach piles and other things into wetlands systems that are very small, similar to this. But that's also where Nevada looks at 500-year financial assurance and puts in replacement costs, that sometimes they're 20 years. I've seen replacement costs taken out once every 50 years in those 500-year estimates. It really shows that over time it needs to be something considered.

You also heard folks talk about climate change, and -- and I would also suggest the same discussion applies to use of average data in models and things of that like nature, because it really -- really

is problematic in a similar way.

But we've -- we've had a lot of discussions at all of the different mine sites and -- and hearings and things over the years, more intently over the past 10 years in particular, though, about anthropogenic climate change, essentially that caused by us humans here on this planet, and the changes that are occurring. And certainly there -- there are still sceptics out there, but I think, you know, certainly by now most of us understand that it's something that is happening, and we need to start to at least look at it very seriously in -- in what we do.

The predictions are for the Southwest that heavier rainfall events and periodic annual precipitation may become more intense. And that's a -- that's a pretty large generalization. But I think in what at least I've observed -- we saw one of those events here in Montana with the Yellowstone floods and the work I do with Stillwater Mining as part of the agreement there that's existed for over 20 years now.

We saw the impact in how these things can happen. You're seeing that in various other ways in New Mexico for certain.

But the point I would make is when you go to the NOAA Atlas, right now in describing the climate for

the site in the CCP, it discusses average data. But what we're talking about is recognizing that 100-year events are going to be more common, 200-, 500-, and 1,000-year events are going to be more common, as well.

The event that occurred in the Yellowstone basin area, 1,000-year event, in various different parts. And it was very interesting because literally one part of one drainage would get a 1,000-year event, while the next drainage might only have seen a more typical 100-year event. And so it's something that even, you know, where it occurs and how it occurs is very important to consider.

But this just shows the variability of what can happen in the entire sequence. You know, more -- most commonly we talk about 100-year events, and you can see that that 24-hour, 100-year event is 3.37 inches of moisture in that 24-hour period. A 1,000-year event is 4.51.

So you -- you know, it's -- when we talk about designing and thinking about these higher events, we're not talking about something where it -- the number is 10 times the 100-year, but really when you look it's maybe an additional 25, 30, 40 percent.

This is where as an engineer I push, recommend very hard that it's a good idea for any corporation, any

entity responsible for these things to think about this from a standpoint of robustness, resiliency, and what is the real cost of increasing what we do from 100 years to 1,000 years, and is that something we really should consider, particularly when we have these long-term liabilities involved.

The other thing is just to recognize that, you know, like this year this looks like it may be a -- one of the wettest years in many in New Mexico. This is actually a climate change graph that you can obtain that shows the Santa Fe County municipal area and what's happened just this past year.

And I might mention the normal year is below the gray here, and then this present year is being shown by what is happening here with this difference. So you can see that this has been a very wet year. Not as wet as 2006, though, when you look over here at this small graph over in the left-hand corner, but more significant apparently than 1999.

So it's -- it's interesting to look at these. And again I point out that we need to look not only at periods of extreme dryness, drought, but we also need to consider these wet periods, because in particular when you look at things like the waste rock pile, this is what drives the drainage from that pile.

So just a bit more on storm events is -- one of the things I noted is we don't get a lot of information about the designed storm events that are used for the various stormwater channels and other things on the site. Really the only thing mentioned was the open pit outflow channel, which isn't really relevant anymore given the fact that the pit lake is not likely to rise to that level. And it would be nice to -- to understand it more as well as talk about the thought of increasing the capacity of those channels.

And again my recommendation is that at a minimum everybody should be going to 200-year, 24-hour designed storm events. That's the standard in Canada. And preferably I would recommend we all would use a 20 -- or 500-year, 24-hour designed storm event as an additional measure of conservatism.

And again I would just point out that increasing the size of our ditches, containment, other aspects to this, we're not talking about a huge amount of money doubling or tripling the size of these as I showed.

Two more slides.

Long-term monitoring, maintenance, replacement. So at the end of the day, that's really the discussion that we want to have, that the public, I

think, recognizes are the key issues, that are going to really consider and address what folks are concerned about in terms of water quality and other aspects.

Key parts of that discussion are recognizing that ultimately, because of the way the process works, because MMD after 12 years is, at least as they've done elsewhere, going to go ahead and release the site, really no longer be involved despite what may happen in one form or another. Therefore, this all becomes NMED's responsibility.

And this is something that those of us that have worked, trying to figure out the Mining Act and how it interacts with the Water Quality Act, other aspects -- this is something we're coming to realize.

The tasks that are involved in this long-term monitoring, maintenance, replacement, they need to be clearly articulated. Without that articulation we can't really figure out what to do with them in financial assurance and other things. So that's something that I think further in terms of what's been described needs to be described further, needs to be perfected better, if you will, for the CCP purpose.

Again we need to make sure all the tasks, all the aspects of both AP-27 and DP-55 -- at least we would recommend they're combined and included in the CCP.

Understand that AP-27 isn't necessarily part of the CCP process, financial assurance, if you will, also, but one of the things that I think is very difficult, not only as a -- as a technical person, but also somebody who works with lay people, the public a lot, is the idea of kind of having two separate permits being renewed at different times in different ways, that's something that's very difficult to kind of manage and -- and other parts.

If we could put this whole process, which is bifurcated actually in MMD AP and DP separately right now into one basket, that I think would be advantageous for all parties to try to do so rather than in the way it's set up to do now. Be good to be having the DP renewal process at the same time as MMD reviews it, as well.

Again I want to emphasize a conservative approach, assume reasonable worst case. We're not talking that -- you know, when we talk reasonable worst case, we're not talking predicting a catastrophic failure, that type of thing. But we do want to consider those things that we know from history we can reasonably predict to happen.

And things like failure of the pit walls over time which results in mass waste and the other things,

that will happen. It will take a long time, be something that can be dealt with, but it is the kind of thing that rather than to say, well, we just don't think it will happen, we think it needs to be considered, and it can be considered and dealt with in a -- in a reasonable way.

We need to address all the factors potentially impacting water quality as has been mentioned, you know, things like long-term vegetation, what happens if we have a fire, drought, disease, various things that could impact the vegetation upstream in the gulch.

Preventative maintenance of the cover for the same reasons and because we know that -- I know particularly that over time what looks like a good result after 10 or 20 years can actually after 30 years turn the other way on you. And it's just the kind of thing that if you're depending on vegetation as an important aspect needs to be considered.

Stormwater features that always require maintenance, monitoring, replacement.

And then as we suggested, the ARD pond.

And, you know, the difficulty in addressing all of these, again there's a lot of uncertainty, and the only way you can really address uncertainty is to have a contingency plan in place, not only for what you

anticipate, but for those things that are unanticipated, and something that always needs to be out there considering the fact that we haven't considered everything that might occur in the future.

So finish up with just a few comments on financial assurance.

Again NMED -- we're looking for them really to carry the ball as this goes forward in the future. Realize a lot of this hearing discussion tonight is about MMD's requirements, but you can see it really is going to be NMED that we're looking to in the AP permit and DP permits to address the site long-term.

One of the concerns we have is just simply that NMED doesn't do financial assurance nearly as frequently. They don't have requirements and guidance in the same way that MMD does.

I would note, however, that they do have provisions in AP-27, some part of those provisions, which are particularly provisions that I think are very positive or good in terms of ensuring protection of liability, but they do have provisions in AP-27, created some 20-plus years ago, that I think are a good place to start, but it would be one aspect to consider and -- and whether ED just continues to use perhaps some of MMD's rules and guidance.

Again a conservative approach is very important in terms of reasonable worst cause case, maintenance and replacement schedules, for example, ensuring that those are part of the financial assurance.

Would suggest we would like to see a net discount rate of something around 2 percent. 3 percent or so has not been far, 3.3 percent, from what has been looked at by the state and agreed to by other parties. But when you consider the kind of inflation rate that we're seeing now, inflationary period and other aspects, I think it would be wise to further consider that rate and drop it down to 2 percent.

And then as I mentioned previously -- and this is something that I'm not necessarily expecting myself that the agencies require, but I certainly would like the company to consider, and as part of what we would want to discuss with the company, the idea of 500 years of financial assurance instead of 100 years.

And I mention that particular because I don't think this aspect is entirely foreign to Barrick given the fact that they do business in Nevada with the BLM, where this is a requirement that they have for mines such as heap leach and other mines that have longer term requirements.

As I mentioned, we need to include funding for

contingencies.

And then the suggestions that I mentioned earlier in terms of how long we need to show that we're in compliance. I've suggested here 25 years for water quality. As I said, when we look at predictions, other aspects that we've seen in other mines, 25 years really may not be enough. It may be that we see water quality start to change 75, 100, 200 years in the future. That's part of what we need to discuss.

And then the idea is we need at least 100 years of maintenance in the future. Again I'd carry that out even further, but as a minimum we need to look at maintenance of the site as part of the furtherance of financial assurance for the next 100 years.

Appreciate everybody's time and patience and lateness of the meeting, and that's it. If I can answer any questions, I'll be glad to do so.

HEARING OFFICER ORTH: Thank you, Mr. Kuipers. Your pace was just right.

Mr. Wade or Ms. Rose, do you have questions of Mr. Kuipers?

MR. WADE: This is Gabe.

I do not have any questions.

HEARING OFFICER ORTH: Thank you very much.

Mr. Indall, do you have questions of

Mr. Kuipers?

MR. INDALL: No questions.

HEARING OFFICER ORTH: All right. Thank you.

If you're on the platform and you have a question of Mr. Kuipers, please raise your hand or indicate that you have a question through the chat.

Anything, Mr. Myers?

MR. MYERS: No, Madam --

HEARING OFFICER ORTH: No? All right.

Well, thank you very much, Mr. Kuipers.

MR. KUIPERS: Thank you.

HEARING OFFICER ORTH: Mr. Jantz, was there anything further you wanted from Mr. Kuipers, I should ask.

MR. JANTZ: No, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. Thank you very much.

We will move -- do we move then to Mr. Parker, or is there someone else?

MR. JANTZ: We don't have any other witnesses, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. Thank you, Mr. Jantz.

Mr. Parker, I see you indicated on the sign-in sheet that you wish to offer comment.

Would you like to do that now?

MR. PARKER: Sure, Madam Hearing Officer.

HEARING OFFICER ORTH: All right. I have to swear you in.

Would you raise your right hand.

Do you swear or affirm to tell the truth?

MR. PARKER: I do.

HEARING OFFICER ORTH: Thank you.

TOM PARKER

having been first duly sworn or affirmed, gave public comment as follows:

PUBLIC COMMENT

MR. PARKER: So it's pretty late, and I certainly apologize in advance for reading this. So I'll try to leave out things that have already been touched on by others or can just be relegated to comments.

I would like to thank the Mining and Minerals Division for the compilation of all of the pertinent information for this matter on its web site. My hope is that the New Mexico Environment Department can manage the same when the AP-27 revision process begins.

And I want to thank Daniel Lattin of LAC for making himself and Steve Finch of John Shomaker & Associates available to me last week for the tour and

for his follow-up e-mails. As I understand it, Mr. Lattin has committed to keeping Friends of Santa Fe County and its attorneys in New Mexico Environmental Law Center in the loop going forward.

And thanks especially to Steve Finch for his explanations and for riding on the floor in the back of the pickup club cab with all the gear.

I don't oppose the issuance of a pit waiver. The suggestions for appropriate conditions have been made by others or can be incorporated in the written stuff.

The sort of meat of things from my perspective is that the level of detail in the information presented by LAC is insufficient to disqualify the surface water diversions as technically infeasible. LAC concedes, as Daniel stated, that it would be both economically feasible and environmentally sound.

So this takes us to the series of slides.

Are you ready, Kevin? We'll see if we can manage this.

So this slide, I believe -- well, okay. I'm sorry. I did these -- what we really want, Kevin, is the side -- slide that, I think, Steve Finch showed of the drainage basin. That -- that slide. Okay. Great.

All right. So -- okay.

So the point is that LAC owns only a fraction of the watershed that contributes to the pit. That's the Upper Cunningham Gulch watershed. The majority is owned by Santa Fe County and the Lone Mountain Ranch.

The next slide reproduces page 14 of Appendix H as revised in May of 2020. So more reading, I fear. No. Sorry.

Page 14. I put -- okay. One I think -- one more maybe.

No. That's a summary. Oh, okay.

Basically the slide says that the effect -- here we go. I think I finally got it. Sorry.

LAC has invested in -- invested in a watershed restoration program -- program that involves selective thinning. However, it is unknown how much additional yield can be generated by watershed restoration and management. In addition, LAC property only includes a portion of the Upper Cunningham Gulch watershed.

And so that fact means that it's technically not feasible to fully implement restoration programs for increasing watershed yield. I don't believe that MMD nor NMED can require LAC to cooperate with its neighbors in the watershed, but I do believe that LAC can voluntarily and publicly commit to doing so. That's what I'm asking for.

If cooperative efforts to thin the watershed are successful, technically not feasible may be accurate in the context of MMD regulations, but possible may be the correct word in the real world.

Okay. So the next slide is from Table 2 of Appendix H. That's -- that's the table that's got the red and the green on it. Red and green. Yeah. No.

Okay. We're going to get there. Apologies.

Okay. So my point here is -- and the red and the green are my additions. They're not in the original. The biggest takeaway is that on the most superficial level, which is what this is, and I admit it, there appears to be a lot of effect from thinning of trees in the watershed. LAC thinned approximately 90 acres in its portion of the watershed in 2017 and 2018. My understanding is that it intends to thin more in 2023.

In 2016, before the thinning, about 13 inches of total precipitation produced only 0.15 acre-feet of flow at the measurement weir. After the thinning approximately the same amount of rainfall in 2021 produced 5.24 acre-feet of flow. So there is some kind of leverage in that.

As a retired employee of an environmental consultant, I know things are not that simple. A

certain size rainfall event is required to produce measurable flow. Required size of that event can change with watershed con -- watershed condition, as can the relationship between event size and flow produced. The probability of any particular size event can change over time.

And this is basically -- dovetails into what Jim Kuipers said.

LAC has extensive data available to it. They have chosen not to present it. I asked them to do so and to provide their detailed analysis of what the implications are of the data in terms of effectiveness of tree thinning, and, depending on how long they stick around, which we really haven't talked about -- I suspect it will be for quite a while -- any observable trends in the distribution of the intensity of storm events with climate change.

So I'm not saying that I know what's going on. I'm saying that LAC hasn't presented the information in enough detail, in my opinion.

Okay. The next slide reproduces page 21 of Appendix H, again with additions from me.

And it simply says that onsite stormwater would be economically feasible if there were adequate quantity for pit filling. LAC has implemented the 90

acres at a cost of about $1,500 per acre. Restoration of the entire watershed would cost 1. -- well, 2 million, roughly, which may be economically feasible if enough stormwater was generated.

So what I'm getting at is it seems to me in cooperation with its watershed neighbors that additional sources of funding could be found, and this is orders of magnitude better than any of the other alternatives.

Okay. The next slide is page 26 of Appendix H, again with additions.

I've put the green question marks at what I regard as the key undocumented point at this part. I would like to say in parentheses that I'm doubtful that the environmental community would unanimously agree that the stormwater alternative is environmentally sound, but I do believe it's an idea worthy of additional consideration.

And finally, Figure 8 is another map from the CCP of October in 2021. And the only point of this is the pit happens to be fortuitously situated between two drainages, Cunningham Gulch and Dolores Gulch, and there -- there is a pos -- a possibility of reducing the effects of tree thinning on the watershed and the environment by doing it on both of these watersheds, but more lively.

So we don't necessarily have to get all of it out of the Cunningham Hill Gulch drainage. The -- a 500-acre-foot storm event in Dolores Gulch watershed has been reported by LAC. Depending on the details, it may be possible to physically arrange things so that from more damaging extraordinary flows those are the only flows captured at the lower, especially after the pit full -- fills it does.

So finally, the bottom line to me is if it -- even if it proves impossible to fill the pit by thinning the watersheds, that activity is in itself environmentally beneficial and should be cooperatively undertaken by LAC and its neighbors in the watershed. A catastrophic fire in the watershed will not be beneficial to the quality of the water in the pit lake, nor to the recreational value of the Ortiz Mountains Educational Preserve.

Thanks.

HEARING OFFICER ORTH: Thank you, Mr. Parker.

While I'm checking with folks in the room if they have questions of Mr. Parker, if you are on the platform and you have a question, please raise your hand or indicate something in the chat.

Is there anyone in the room -- oops. I don't have my video on.

Is there anyone in the room who has a question of Mr. Parker based on his testimony?

No. All right.

Mr. Myers, anything in the chat?

MR. MYERS: (Shakes head.)

HEARING OFFICER ORTH: No.

All right. Thank you very much, Mr. Parker.

Let me ask if there is anyone else on the platform who would like to offer public comment before we adjourn this hearing. You will have a chance to offer written public comment after this hearing, and we're going to discuss that date next. Please raise your hand or indicate in the chat that you'd like to offer comment.

Anyone at all.

I believe all of the folks in the room now are affiliated with a party or have already commented.

Anyone in the room that I've missed?

No.

Mr. Myers, anything?

MR. MYERS: No.

HEARING OFFICER ORTH: No. All right.

So thank you, all, for that.

We have just a few things to talk about.

First I'd like to clarify the documents that

will become part of the record as a result of having been submitted in connection with this hearing.

I have LAC Exhibits 1 through 5.

Mr. Myers has all of the PowerPoint presentations. All of this, the exhibits and all of the PowerPoints that were displayed tonight, will be put on the MMD web page.

Mr. Jantz, is there anything else from friends?

MR. JANTZ: No, Madam Hearing Officer.

HEARING OFFICER ORTH: All right.

Mr. Indall, anything else besides this binder?

MR. INDALL: No. No -- none.

HEARING OFFICER ORTH: Okay. So thank you for that.

We also have a sign-in sheet.

Now, I looked at the letter that Mr. Jantz referenced earlier.

Let me speak into the microphone.

October 25th, I believe, was the -- the letter you mentioned, Mr. Jantz, right?

MR. JANTZ: Correct, yes.

HEARING OFFICER ORTH: I did see a fair amount of correspondence between and among LAC and actually several state agencies reflecting their review.

Mr. Indall, you may need to consult with your consultants, but if I were to ask you when you would expect that LAC would have its responses to that October 25th correspondence.

MR. INDALL: I believe we were given 45 days, Madam Hearing Officer. So I think --

HEARING OFFICER ORTH: Okay.

MR. INDALL: -- schedules being what they are, that would probably be --

HEARING OFFICER ORTH: All right. Forty-five days.

So as I understand it, Mr. Jantz, the request is that Friends be able -- and others be able to submit some comment after that.

MR. JANTZ: Precisely.

HEARING OFFICER ORTH: Okay.

So now I have to ask the Division. We may -- if you want to have this conversation offline, we can have it offline. You may need to reflect on it tomorrow, for example, among yourselves.

But is it -- then knowing that there's 45 days for the company's response, is it appropriate to leave this hearing record open for that period of time plus -- plus something for others to comment on it, or is it appropriate to do the usual two-week, for example,

period following this evening in which public comments could be submitted and for the Division to handle others' comments on the company's response to the October 25th correspondence outside of this hearing record and as part of -- of the larger review?

MR. SHEPHERD: Yeah. Madam Hearing Officer, Holland Shepherd here.

I think -- I think we'd like some time to reflect on that. I would like to do that.

HEARING OFFICER ORTH: Okay.

MR. SHEPHERD: Typically it's a shorter time frame after the hearing is over, and we're asking here for 45 days plus some. So I'd like to talk to staff about that, get back to you.

HEARING OFFICER ORTH: All right. So for those who might -- on the platform who might not have heard the answer from the Division, Mr. Shepherd indicated that he'd like to reflect on the question with staff. So we won't have an answer tonight.

Let me just say that the deadline as it currently stands for written comment following this hearing that will be made part of this hearing record currently stands at November 18th. That's a Friday, a little more than two weeks from now. That's our typical deadline following these hearings.

After I hear from Mr. Shepherd about this October 25th correspondence request, I will send an e-mail to the folks involved tonight, Mr. Jantz, Ms. Yarbrough, Mr. Wade, Mr. Indall, and we'll get this -- we'll get this question resolved. It's just not going to be tonight.

So let me ask if there's anything else we can do while we're together tonight collectively.

No?

Well, thank you, all, very much.

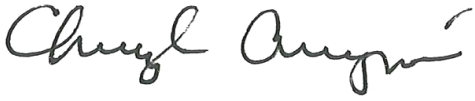
We'll adjourn, then, and have a safe trip home. Good night.

MR. INDALL: Thank you.

(Proceedings adjourned at 8:46 p.m.)

STATE OF NEW MEXICO)
) ss.
COUNTY OF BERNALILLO)

I, CHERYL ARREGUIN, the officer before whom the foregoing proceeding was taken, do hereby certify that the witnesses whose testimony appears in the foregoing transcript were duly sworn or affirmed; that I personally recorded the testimony by machine shorthand; that said transcript is a true record of the testimony given by said witnesses; that I am neither attorney nor counsel for, nor related to or employed by any of the parties to the action in which this proceeding is taken, and that I am not a relative or employee of any attorney or counsel employed by the parties hereto or financially interested in the action.



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