MEETING

STATE OF CALIFORNIA

LAHONTAN REGIONAL WATER QUALITY CONTROL BOARD

REGIONAL BOARD PUBLIC MEETING

HAMPTON INN

JACKRABBIT ROOM

2710 LENWOOD ROAD

BARSTOW, CA 92311

THURSDAY, NOVEMBER 4, 2015

6:00 P.M.

REPORTED BY:

PAMELA STEELE, DIGITAL REPORTER

APPEARANCES

Kimberly Cox, Chair

Amy Horne, Ph.D

Don Jardine, Board Member

Patty Z. Kouyoumdjian - Executive Officer

Keith Dyas, Vice Chair

Peter C. Pumphrey, Board Member

Eric Sandel, Board Member

Kimberly Niemeyer, Advisory Team

Doug Smith, Advisory Team

Richard Booth, Advisory Team

Ian Webster, IRP Manager

Kevin Sullivan, PG&E

Lauri Kemper, Prosecution Team

Anne Holden

Lisa Dernbach

Laura Drabant

Sue Genera, Executive Assistant

Gita Kapahi, Facilitator

APPEARANCES (Cont'd)

Public Forum Speakers:

Daron Banks

Roger Killian

Barbara Ray

Elizabeth Hernandez

Penney Harper

BARSTOW, CALIFORNIA - WEDNESDAY, NOVEMBER 4, 2015

6:00 P.M.

CHAIR COX: Good evening, members of public and Lahontan staff. Welcome to the regular meeting of the California Regional Water Quality Control Board, Lahontan Region.

My name is Kimberly Cox from Hollendale, and I am the Board Chair.

I want to thank the public for attending. Your comments, ideas, and participation are vital to our decision-making process. We do a better job when you give us your input.

At this time, I would like to introduce the members of the Regional Board.

To my left, we have Mr. Keith Dyas from Rosamond. To my far right, we have Dr. Amy Horne from Truckee. Next to her, we have Don Jardine from Markleeville. We have Mr. Peter Pumphrey from Bishop to my left, and at the far end is Eric Sandel from Truckee.

The Executive Officer is Patti Kouyoumdjian.

Ms. Kouyoumdjian, do you have any announcements or introductions you would like to make?

MS. KOUYOUMDJIAN: Good evening, everyone. I have an announcement. One is that we are canceling our

January 13th and 14th Board meeting in South Lake Tahoe. We had a number of enforcement items that we are postponing until March. That will be March 9th and 10th in South Lake Tahoe. So our next Board meeting will be February 10th to 11th, either in Apple Valley or Barstow, yet to be determined.

Another -- just welcome the Board. The same Board is joining us this evening; so thank you for making the trip.

And lastly, I want to make an announcement with a bit of sadness and a bit of happiness. Richard Booth, who is over here, who many of you have worked with -- this is his very last board meeting of his career. He is retiring to travel the United States and all kinds of wonderful places. So we will sadly miss Richard, and it's been a wonderful pleasure and a delight, and again, filled with sadness and happiness.

MR. BOOTH: Thank you.

CHAIR COX: Thank you, Ms. Kouyoumdjian.

This is a hearing to consider item No. 6 on the Board's agenda, Adoption of a Cleanup and Abatement Order requiring PG&E to address its historic discharges of hexavalent chromium to the groundwater of the Hinkley area.

The parties and the public have all had an

opportunity to provide comments, both oral and written, on several iterations of the CAO.

Today will be an opportunity for the parties and the public to summarize those comments and concerns for the Board and to offer any comments on changes made on this final version, which was sent out to the public on October 16th.

At the conclusion of the hearing the Board may go into closed session to deliberate on a decision based on the evidence received. We will discuss that question when we get to the end.

The Board may decide to adopt the Order as proposed, adopt it with changes, reject it, or postpone further action on the item until a later Board meeting.

I would like to recognize the collaborative process that has brought us to this point. Most importantly, I want to thank all the participants, especially the Hinkley residents, for contributing their ideas. We began working on this item last fall when we held a series of workshops and comment opportunities to encourage broad involvement. Participation and outreach has been a cornerstone for this effort, and although unique, the facilitated breakout sessions really allowed all participants to work together and share ideas.

The discussion this evening will build upon

those earlier actions, and we look forward to hearing from everyone.

The Water Board is divided into a Prosecution Team and an Advisory Team. The purpose of doing this is to provide a fair hearing by ensuring that the same individuals that are making the final decision are neutral and are not the same individuals that are prosecuting or advocating for a particular outcome. This also requires that the Water Board and its advisors not have ex parte communications with any interested persons.

With that brief description of the separation of functions that we have followed in this matter, let me introduce the members of the Advisory Team.

We have Patti Kouyoumdjian to my right Mr. Doug Smith, Rich Booth, and our counsel, Kim Niemeyer.

The Prosecution Team consists of Lauri Kemper, Lisa Dernbach, Anne Holden, and Laura Drabant.

The order of the presentation for this hearing will be as follows:

The Advisory Team will present the changes to the draft -- to the September 1st draft CAO. The IRP manager will have 20 minutes to summarize previously-submitted comments and provide oral comments on changes to the September 1st draft CAO.

PG&E will have 20 minutes to summarize

previously-submitted comments and provide oral comments on changes to the September 1st draft CAO.

The Water Board Prosecution Team will have 20 minutes to summarize previously-submitted comments and provide oral comments on changes to the September 1st draft.

Each member of the community wishing to address the Board on the CAO may have three minutes, and if you would, fill out the orange slip.

After each of the presentations -- after each of the presentations by the IRP manager, PG&E, and the Prosecution Team, everyone will have the opportunity to ask questions of the presenter.

Gita Kapahi from the State Board is here to help us facilitate with the questions and the comments.

Clarifying questions about the proposed Order or the Advisory Team's presentation should be addressed to the Board, who may then announce the advisers to weigh in as appropriate.

All persons who wish to participate and have not yet submitted a speaker's card are requested to do so now.

This hearing will not be conducted according to the technical rules of evidence. The Board will accept any testimony that is reasonably relevant to the matter under consideration.

The Chair may impose reasonable time limits and may require groups to choose a single spokesperson. We ask each person testifying to come to the lectern to speak. I ask that you begin your presentation and comments by stating your name and whom you represent.

All persons who expect to testify, please stand and raise your right hand and take the following oath.

Do you solemnly swear or affirm that the testimony which you will give in this matter is truth, the whole truth, and nothing but the truth?

(Group sworn.)

CHAIR COX: Thank you.

At this time, we received late comments to Agenda Item 6. I will ask our Counsel to outline these items and share some procedural considerations.

MS. NIEMEYER: Okay. So we received several comments after the Chair's decision on the procedural objections to the hearing procedures. In that ruling, you did accept the late comment from Dr. Izbicki so that -- that was available, and it's in the back for everyone. It was an email.

There were also written comments provided by the Prosecution Team which was sent around to everyone. I asked if there were any objections. I didn't hear if PG&E communicated they didn't have any.

There's also a late comment letter from Carmela Spasojevich.

And so are there any objections to those coming into the record?

So I would recommend that we allow both of those late comments into the record. That doesn't necessarily mean that the Board agrees or disagrees with any of the information. It just means that information is available to be considered by the Board.

There was also a late comment that came in from Sam Knott, which he asked to be read into the record. It was a reiteration of a previously-submitted comment; so I'm going to recommend that since we already have his comment in the record that we don't read his -- his email, and we have that information in that.

CHAIR COX: So we will accept those late submittals and acknowledge the one from Mr. Knott as already having its place --

MS. NIEMEYER: And I think if we want to hold on a both, Sue has those items to pass out to the Board members and make available. I think a lot of people already received those via email.

CHAIR COX: We thank you for your patience as we read through and discussed those procedural items.

At this time, I would like to turn it over to

our facilitator, Ms. Gita Kapahi, and thank you for being with us today and providing your services.

MS. KAPAHI: My pleasure. Thank you, Chair Cox, and Board members.

So a couple things, ground rules. I would ask that you all please honor time. Turn off your phones, be respectful. I, as the facilitator, may limit time. If you have made a point, I may ask you to move on. In the interest of time, we have a lot of presentations to cover tonight, and I want to make sure that we hear from everybody that wishes to speak.

And I want to bring your attention to a few things that are at the back of the room.

As mentioned earlier, there's a packet on objections. There are two change sheets. There's a pink sheet that you should be aware of. There are -- Dr. Izbicki's email is back there, Ms. Spasojevich -- I apologize, my name is hard too. Your comment letter is back there. And the Prosecution Team written comments submitted last night are also at back of the room.

There are, as we mentioned, the bright orange, yellow cards. If you wish to speak, please fill out a comment card and give it to me, and I will make sure that I cover -- I include you in our comments.

Again, I am going to ask folks to make their

presentations, and then I will make sure that at the appropriate time that we call you up.

The order that I will do them will be -- well, first -- well, first there will be a presentation from the Advisory Team followed by IRP, PG&E, and after each session, we will have comments as follows: PG&E, Prosecution Team, the public and then Board members.

So with that, I ask the Advisory Team to please make your presentation.

MR. SMITH: Thank you, Gita, thank you, Sue.

Good evening. I'm Doug Smith, Supervising Geologist in the Water Board South Lake Tahoe office, and I am presenting as part of the Water Board's Advisory Team.

First and foremost, there's a late addition enclosure 4, which was sent out like a week ago, where we inadvertently forgot to include the draft cleanup and abatement Order that was sent out September 1st. So that's been provided. There were copies, and it's -- it's replacement in its entirety.

There's also a few other late revisions which are on a single pink sheet, and I will go over those at the end of my presentation.

As I said, I'm part of the Water Board Advisory Team, and there are three other members here, and they

were introduced. The Advisory Team's (inaudible) for enforcement cases such as this one where the Water Board needs assistance in compiling the public comments on an issue and with providing neutral advice and recommendations.

For enforcement cases like this, the Water Board has a special Prosecution Team whose purpose is to take a position on an issue and put out a draft enforcement order for public review. It did.

Then, the Advisory Team steps in when all those comments come in, and our job is to help synthesize all those comments to help the Board through that. And we will suggest changes to ensure that the Order is legally defensible and supported by substantial evidence, and where possible, we will suggest ways to strike a balance between opposing viewpoints.

The Advisory Team does not communicate with the Prosecution Team, nor anyone else, on these matters to preserve the separation of function, and so the Advisory Team remains neutral in this case.

So let me dive into the presentation, if I can get it to work.

All right. Now, let me dive into the presentation. Okay.

So I have a total of 19 slides, nearly half of

which are aerial photos of maps. My presentation will briefly go through the chronology of this item, which you already heard a little bit about. Then I will spend most of my time on the comments and proposed changes, which were comments that you received on five key issues.

And for each of the five key issues, I will present viewpoints and give the Water Board Advisory Team's recommendation, and then following that, we expect the three other presentations.

Then following all the presentations, the Water Board has the chance to deliberate this item, and the Water Board could choose to either adopt the Order, adopt it with modifications, or reject it or postpone final disposition on it to a later Water Board meeting.

The development of the Cleanup and Abatement Order began more than a year ago when the Water Board's Prosecution Team held two public workshops in late 2014 at two regularly scheduled Water Board meetings. From the input received, the Prosecution Team released a draft Cleanup and Abatement Order in January of this year.

You received comments on that first draft in March, and the Advisory Team held a public workshop in May, and the Advisory Team held that it was a facilitated workshop to gather more input by seeking consensus on six key policy issues.

Following that facilitated workshop in May, the Prosecution Team and PG&E jointly submitted consensus text, which can be found in the enclosure four beginning on page 6-175.

The Advisory Team took all the consensus text submitted, and with the comments received, released draft No. 2 of the Cleanup and Abatement Order on September 1st for a 30-day comment period.

Midway through the public comment period, the Water Board held a public workshop on September 16th and received additional comment. The written comment period ended September 30th. So the Advisory Team considered all those comments, researched a few items, then put out a proposed Cleanup and Abatement Order on October 16th, which is in front of you as enclosure 1 today.

The proposed Order is a comprehensive set of requirements which streamlines requirements from 18 previous Orders into a single Order. The proposed Order ensures the safety of private drinking water wells, holds PG&E responsible for cleaning up its discharge, and establishes a cleanup time frame.

These are the five key issues which received the majority of comments from all those various comment periods. I will cover each issue in the next slides and spend most of my time talking about the last one, and that

being the requirements.

Long-term replacement water. We understand this issue is important to the community; so we wanted to make sure the advice we give to the Water Board considers the various viewpoints and is something that is supported by law and science. The comments on this issue came from community members, the IRP manager, and the Prosecution Team.

These comments opine that long-term replacement water should be provided for whole house uses, including all indoor uses such as showering and swamp coolers.

Well, the division of drinking water considered the risk from three different exposure pathways to chromium 6 related to the water -- drinking water. The first exposure pathway is the drinking water, (inaudible), the second one is inhaling the vapors or the steam, like when you are showering, and the third is contacting the chrome 6 through the skin, the dermal pathway.

And they determined the primary risk was from drinking and not from inhalation of vapors or contact with showering. This is consistent this what the California Office of Environmental Health Hazard Assessment concluded in 2011. The Water Board can only require replacement water for the uses at risk, which is for drinking and cooking and not showering or use in (inaudible).

Because no systems are currently certified or registered for Chromium 6 removal, we suggest a late revision that requires PG&E to consult with the division of drinking water before providing long-term replacement water. Fortunately, there are no private drinking water wells impacted with Chromium 6 above the drinking water standard at this time.

So this requirement will not be used currently and will be for a future "what if" scenario. With the plume capture requirements in place, the Advisory Team believes it is unlikely that private wells will be affected in the future; so there is a strong chance that these requirements will not ever be implemented.

The next issue is the lower aquifer cleanup wells. The lower aquifer is smaller in aerial extent than the overlying upper aquifer. The lower aquifer generally is (inaudible) about the Eastern two-thirds of the Southern plume area and is separated from the upper aquifer by a blue clay layer.

The blue clay disappears or pinches out to the west so there's a hydraulic connection between the upper and the lower in that area where it pinches out. This is where Chromium 6 from the upper aquifer was pulled down into the lower aquifer from agricultural well pumping.

The Advisory Team suggests the Order to require

cleanup that is linked to PG&E's discharge or remediation activities and there is insufficient information to set a cleanup level at this time.

The comments that you had received were primarily from the Prosecution Team, which had asserted that sufficient evidence exists to establish a non-detect cleanup level and that the orders should require continuation of ongoing remediation and extraction from certain wells.

The contamination in the lower aquifer appears to be localized in a relatively small area, and extraction is ongoing to capture the chromium that has been pulled down from above. While evidence exists to show that Chromium 6 in the lower aquifer is linked to PG&E's discharge, there's insufficient information to establish a cleanup level at this time.

It is insufficient because there is little to no water quality data from the transition zone, an area between the upper and the lower. We do not know the full extent of the natural background concentrations in all parts of the lower aquifer and we do not have an evaluation of the remediation effects.

Generally, how this is addressed is following the steps specified in State Board Resolution 92-49, which applies to all cleanup and investigation, and that

requires the discharger to evaluate the required remediation and the effects the remediation is expected to have. We need this information to ensure that additional contamination from the upper aquifer is not pulled down into the lower aquifer during the remediation. Therefore, we suggest adding the Order the requirement to update the site conceptual model -- actually, we already put that in; it's not a late revision -- and we require to conduct an evaluation of the remediation.

The late revision that I have up here on the slide is to add text in the findings stating the need for those requirements, because all orders need to be supported by findings.

What the Advisory Team is suggesting is not very different from what the Prosecution Team proposed since it achieves the same end point. The only difference is that our suggested changes follow the State Board policies and procedures for conducting investigation and cleanup.

Okay. The next issue.

The word "uncertain" was used as a modifier for the northern plumes. The comments received, which were from the community and the Prosecution Team, stated that the term was not defined and the uncertainty was about the background level, not about the presence of chromium. Also, the comments indicated that the word "uncertain" may

be inappropriate since the sources disputed, but not the presence of chromium -- since chromium certainly exists in the north. Accordingly, the Advisory Team recommends change the word to "disputed" as in the northern disputed plumes to more accurately portray the situation.

We have also added text in the findings for explanation on how the term is defined and how it should be used.

Finding 10 on Bates page 6-12 in the proposed Order mentions scientific evidence submitted on March 13, 2015, which presents geochemical, geologic, and hydrogeologic hypotheses which dispute the assertion that chrome 6 in the north is linked directly to PG&E's discharge.

Resolving this dispute is a goal of the information that is hoped to be gathered from the USGS background study. PG&E submitted that evidence on March 13th as part of the comments on the original draft Order that was put out in January. This document was part of -- or that document was part of the 128-page submittal and is included in the record as a hyperlink to the PDF -- to this PDF document on the public website, and it's listed at the bottom of the enclosures listed on the green sheet, the last page of the green sheet. And I have a hard copy, if you need to look at it.

The next issue involves the word "interim" as used in interim maximum background levels of concentrations. The Prosecution Team was the only commenter on this issue and was concerned that using the word "interim" is confusing and inappropriate since it would change how the maximum background levels could be applied and enforced.

The Advisory Team considered these comments and is recommending to keep the word interim as a modifier as used in interim maximum background levels. Keeping the word "interim" echoes the commitment the community and the Water Board has in completing the USGS background study and using the word also reinforces the Water Board's intent to change the numbers to final background numbers. Because of the comments, the Advisory Team also added text to the Order to better explain how the term "interim" is to be used.

I've saved this issue for last because it is important to a lot of people, especially the community. Four years ago, when the Water Board first required the prescriptive mapping requirements, there were hundreds less of monitoring wells than exist today and much less information than we have. The prescriptive mapping was needed at that time to provide consistent expectations for the community since there was not a drinking water

standard for Chromium 6 at that time, and PG&E was implementing a whole-house water replacement program within the one-mile buffer surrounding the 3.1 line of the chrome.

Since that time, the drinking water has been set at 10 parts per billion Chromium 6. Hundreds more monitoring wells have been installed, and remediation systems have been installed and are currently operating. The mapping requirements need a change to methods that define where the chromium occurs and to show a more accurate representation of the remediation effects.

The change in mapping requirements does not change the responsibility for PG&E to capture and remediate; rather, it only requires more detailed and accurate representation of the chromium occurrences and the effects of remediation. Community members, Prosecution Team, and IRP manager submitted extensive comments upon this issue.

The concerns raised opine that the prescriptive mapping of connecting monitoring wells located a half a mile apart should continue because this is what the community expects and it will produce maps that can be compared to maps over the last four years.

The Prosecution Team asserted that requiring mapping based solely on best professional judgment will be

a step backward to a time when the Water Board staff and PG&E professionals disagreed over the mapping. Others said it would cause disagreement and give the perception the plume has disappeared from certain areas.

Those are all valid concerns. However, the original proposal for connecting wells with Chromium 6 detections above the interim max background level within half mile must change because it shows Chromium 6 in locations where it does not occur above interim background levels and it doesn't allow to show remediation effectiveness.

To address the concerns and the need to change the mapping requirements, the proposed requirements are different than the draft that was released on September 1st. That draft had simply required the plume to be mapped using best professional judgment and it went on to define the minimum factors that must be considered in using best professional judgment.

However, that draft language failed to specify the performance requirement for mapping. What is needed is the requirement to map the chromium isoconcentration contour lines, and isoconcentration contour line is a line connecting equal concentrations or values of Chromium 6. The requirement to map the isoconcentration contour lines is in effect at federal sites across the nation, and the

Water Board has required this mapping method at other sites in the region.

At PG&E's Topock compressor site in Needles -- it's not in (inaudible) region -- where there was a Chromium 6 release as being overseen by federal and state agencies, the Chromium 6 is being mapped by the isoconcentration contour line method. Just a few miles away purchase chlorate plumes are being mapped by drawing the isoconcentration contour lines. This mapping method requires that all available data be used to draw the lines.

Now, if a technical disagreement arises, we have added a dispute resolution process resolving that dispute. This process was never explicitly stated nor required previously. So here is the map of the perchlorate isoconcentration contour lines of that -- of that contamination just a few miles away. But our focus isn't about that; it's about Hinkley. So let's get back here.

So the northern part of the Hinkley area has two zones containing Chromium 6 above the interim maximum background level, which we recommended referring to them as the northern disputed plumes. This aerial map shows the approximate lateral extent of the disputed plumes where the area shaded pale green contains Chromium 6 at or above 3.1 parts per billion. This from the second quarter

2015 monitoring results. And you can see the southern plume for reference.

The Advisory Team made this map by superimposing the compliance map on an aerial photo and shading the area green that is at or above the interim maximum background level 3.1 for Chrome 6. We added the green shading to illustrate some points, which I will explain on the next few slides.

The map on the left is what I just showed you, and the map on the right is PG&E's interpretation of that northern area. No green shaded area is shown on that map because PG&E has stated that the Chrome 6 in the north is likely not from PG&E's discharge, based on scientific evidence.

At the September 16th workshop, there was a lot of concern that the September 1 draft mapping requirements could produce an interpreted map, like the one on the right, giving the impression that disputed plumes would disappear. To ensure that wouldn't happen, the Advisory Team added a requirement to map isoconcentration contour lines. Here is what the Advisory Team would expect to see meeting that mapping requirement.

The requirement to draw the isoconcentration contour lines is expected to produce maps substantially similar to what has been required in previous maps. For

the isoconcentration contour map, the Advisory Team used all the data available and drew the outline in the area containing Chromium 6 above the interim background level. We drew this map to illustrate the point that the isoconcentration maps are expected to be substantially similar to the maps required in the (inaudible). There will be some subtle differences, namely, in the southern plume. So let me zoom into an example to show you that.

Here is the compliance map showing the approximate extent of Chromium 6 in the western finger part of the southern plume. The Advisory Team uses second quarter 2015 results and followed the required mapping that was done by connecting monitoring wells located within one-half mile of each other.

The problem with this method is that it doesn't show remediation effectiveness, and it shows Chromium 6 in areas that the monitoring indicates there is no Chromium 6. I will elaborate this point over the next few slides.

I will now compare this map to PG&E's interpretation submitted for those same quarterly results.

As you can see, PG&E's interpretation is that the finger is gone because PG&E believes the chromium located in the finger is not related to its discharge and should not be part of the contiguous southern plume. PG&E's interpreted map shows their interpretation of the

southern contiguous plume, not the isoconcentration contour lines of all the chromium in the area. The requirement to draw the isoconcentration contour lines addresses the shortcomings of the two different mapping methods shown above.

Drawing the isoconcentration contour lines requires that all chromium is mapped, regardless of the source. This mapping method also requires that it accounts for all other scientific information. So for the western finger, the Advisory Team would expect a map looking like the above where the chromium is shown but has recently become detached from the main southern plume. The Advisory Team drew the 3.1 isoconcentration contour lines by using the monitoring well data and the fact that injection wells have input fresh water along that line to reverse the gradient to prevent westward migration of the southern plume.

PG&E began injecting fresh water into five of these injection wells in March 2010 and added two more injection wells in March 2014 to form a groundwater mound or barrier to groundwater flow. This detachment reflects the fact that a line of fresh water injection wells has created a freshwater barrier. Therefore, it is not scientifically supported now to connect the detached plume at the west to the main plume to the east.

This doesn't change the responsibilities for PG&E. Rather, it acknowledges that remediation is happening and the plume is being cleaned up. As the remediation activities continue, we would expect to see more and more parts of the plume becoming detached and shrinking in extent and concentration over time. The remediation is a positive action that needs to be shown and reflected in the mapping, and mapping the isoconcentration contour lines is the only method that shows that.

So that is the majority of my presentation. Now, that brings me to the late revisions, which are on the pink sheets, which you have. There are seven of them; so bear with me. I wasn't going to go over them in excruciating detail, unless you want me to, but I will just highlight a couple things.

The first one on Bates page 6-18 -- just give me a second while I get that page. I want to make sure I have that correct text.

So -- so in that paragraph on -- in finding 34 b) on that page, the words "directly" and "unequivocally" were intended originally to be taken out. Now they made it back in. It's probably my fault. So take those out. We had another comment saying, no, those should be taken out. They are all correct. It should

have been taken out. So please delete that.

Also, what id not shown on this late revision sheet, in that same paragraph, a little bit higher up, there is -- there's the words "with substantial certainty." It's about -- it's in the third sentence down, and the words "with substantial certainty," we need to take those out because that's not the -- we don't need substantial certainty to link the chrome to require cleanup. We just need it to be linked.

Okay. A couple of these -- the second one on this pink sheet was just an error, having an extra zero. I don't know how that got in there, but it did.

And then No. 3 is that one that I had mentioned, adding text to the finding.

Number 4 is removing the reference to the Division of Drinking Water. And the reason why we removed that evidence is we, unfortunately, could not find that evidence in a written record anywhere, and so it was -- it was best to remove it. It doesn't have any effect on us.

Because what we did, later on, is we had it at the bottom of this, added the requirement to "consult with the Division of Drinking Water." So it takes care of that.

Then Item 5 is adding some findings about the release of the draft on September 1, 30-day comment

period, the September 16 meeting, or workshop that you held to receive input on that. And then the 11 comments that came in on September 30th, and then the date when the proposed Order was released, which was October 16.

Number 6 doesn't really say much there. You go to No. 6, on page 6-25. It just says add Roman Numeral "IV.A.1." And what -- what is that?

Well, what that is is the requirement under IV.B., which is the requirement to submit work plans for installing wells for all that, meant to include all of the wells that may need to be installed for the northern area and for the southern plume. And in some of those drafts, we had moved some words, and we forgot to put that one back in there requiring that work plan. So putting in that, along with 4.A.2 covers it for any wells that are proposed for the northern area and any wells for the southern area.

And then, of course, the last one is adding in the requirement that PG&E consult with the Division of Drinking Water for the long-term replacement water, for the technologies.

And that concludes my presentation, except the last thing is that the Advisory Team, based on all that, our recommendation, at least on this, was to stop the Order and all nine attachments as proposed with the late

revisions at this time.

MS. KAPAHI: Thank you, Doug.

Board members, do you have any questions?

Okay. Thank you.

With that, the next presentation is the IRP manager.

MR. WEBSTER: Good evening. My name is Dr. Ian Webster. I am the independent review program manager representing the Hinkley community. I have been participating in the Hinkley project for almost four years. I have stood in front of you many times. I don't think time has been (inaudible) this.

We're going to consider adopting an Order that basically consolidates the PG&E (inaudible) the 18-plus (inaudible) into one singular document that becomes a guiding light for the next 20 years, roughly, in this remediation program so that (inaudible) from here tonight is very important task, and my role was basically to stand in front of you and give you a perspective of my own, professionally, but also the input I get from the community in trying to tell a story for you so that you can help make informed decisions, especially on (inaudible) tonight with respect for (inaudible).

I think, if I were in your shoes, I would be placing the (inaudible) array of details on a grand level

and also a small level with individual words that need to be changed, or recommended to be changed, from strikeouts -- this has been done for perhaps over a year back and forth in various documents. Even though I am close to the project, I still have trouble keeping up with which document was revised where and what strikeout redlined. So the challenge you have got, I am sure, is enormous and (inaudible) tonight is try and make the right decision.

So, again, the next 15 or 20 minutes, I want to give you a perspective that I think matches what the community wants to see embodied in the Order, especially with respect to where is the plume and where has the discharge gone.

A large fraction of the -- apart from the remedial technologies that are now in place splitting up the plume, a large, conformed (inaudible) of community's interest in this project is where has the historical -- at least from the late '50s and '60s, where has it gone, and what methodology are in there in the future to determine where it is, appropriately map it, and clean up to the background standard that we said in the future with -- and from the USGS background study.

So a lot of my talk tonight, my -- either of 19 slides (inaudible), most of my 18 slides are around the mapping of the plume and helping you with your decision.

Also, I think, the one note of congratulations I want to say that everybody gives us, this document that has been written takes the 18 other Orders, condenses them into one, sets a road map for the next 20 years, is an incredibly difficult thing to put on paper and write. I imagine 10 years from now people looking at this thing for guidance as to how basically it works (inaudible).

So the challenge actually of taking ideas and concepts and putting them into sentences, the (inaudible) of the task should not be overlooked tonight, and congratulate the group working collaboratively on that process.

So my goal is perspectives, especially with respect to plume mapping. Straight out of the bag, one of the remarks that was made with respect to replacement water by the Advisory Team was let's -- a key point needs to be reminded, I think, is the Order is considered is that all sample domestic wells right now are below the MCL and PPB.

So from a protection of human health perspective, things (inaudible) going well. The plume is north of the (inaudible) .1 plume is not where the exposure points are. And as it was said before, the probability of the replacement water trigger being kicked in, the Order of victims is exceedingly (inaudible).

The (inaudible) presentation go (inaudible) might be. Respect to perspective again, I think this is -- (inaudible) this is a good factoid. You need to bear in mind you had your (inaudible).

The process did start about a year ago. It has been long, exhaustive, and detailed. I think for someone like myself who spent probably about 30 years working under orders from Water Board, DTSC, USEPA especially Gulf Coast and the California, this process has been unlike any other in terms of transparency, exhaustive, and exchange of ideas. And again, congratulations to everyone here in the room tonight for taking this end point (inaudible).

The Water Board has initiated many meetings (inaudible). Also, public -- so many meetings.

Public comments have arrived in response to these meetings, and also, the IRP manager, with my staff, we have submitted four large documents codifying what we think of the community's opinion throughout this long process. Again, with respect to such things as plume mapping, replacement water, lower aquifer, and the process, and especially the role of the USGS background study, that (inaudible) of the work will appear in my talk later on, and it's also (inaudible) Dr. Izbicki here.

Just, you know, maybe put more icing on the cake here, this has been an exceedingly long process, and this

next slide you got in front of you basically bullet (inaudible) some of these points. I will let you read them yourselves. I have it in some of the yellow ones, but I will take it as you understood how difficult and long this process has been and many years. Also, the discussion has been candid, frank, and I think to the point where there's not any hidden nuances in (inaudible) years hidden in the documentation.

So some special points I want to raise for your consideration as you deliberate on the Order and what to do here tonight. I am going to focus again on how the Order will probably map Chrome 6 going ahead. And, again, as I said, the community is exceedingly interested in knowing where is the Chrome 6 and can PG&E be held accountable with (inaudible) technologies to basically treat and continue to manage that Chrome 6 release.

One of the major components of the Order is monitoring and reporting plan. There's over roughly 500-plus monitoring points that exist around the plume, and almost a hundred domestic wells. There's a large number of data points that are collected every quarter. So well in our data gaps and where the plume may exactly exist, the plume is generally well understood in terms of education, at least the numbers above 3.1.

What we introduced and what the IRP manager

introduced, I think, to the satisfaction of the community was potentially monitoring this target becomes (inaudible). That's to say perhaps a couple wells there's no (inaudible) recorder.

There's a decision-making process that follows such as prime concentration trends where the data has been going with respect to sounding of that particular well. So the addition of these two decision trees for the northern part of the plume and the southern part of the plume become an important part of the Order and provide a roadmap for when wells should be sampled, and this is, I think, to the satisfaction of the community and a viable addition to the Order.

So the eyeball of the community has been on this process, and I think (inaudible) if I was smart enough to realize that (inaudible) marks.

This is an important slide. I'm going to talk about the process by where, as the IRP manager, we talked to the community about plume monitoring and the scope and scale of it. We first started talking about -- a slight delay in my animation. So there is a historical release data that everyone knows, late '50s, early '60s, around the compression station.

Today, you see the extremely high concentrations of Chrome 6 remaining in that area. PG&E's work is

focused, especially in the IRG technology, to try and treat the Chrome 6 aggressively in that area.

PG&E has installed, let's say, 500-plus monitoring points. One of the key things the community now understands is it's not domestic wells or private wells that have been used for monitoring. These are dedicated well monitoring points that basically collect water samples of the appropriate location in the aquifer to get the most accurate targeted Chrome 6 concentration for mapping.

So basically, you install roughly 560 of these points, and you end up with an array like this plume -- many, many data points, which they don't allow you to contour using this 3.1 number. 3.1 number is an historical number, upper conference limit. There has to be a yardstick for drawing maps, and I know most members of the Board here will recall this 3.1 number came from an older background study. It is subject to revision, obviously, with the new background study by the USGS.

But that number allows a shape like this to be drawn on the map. The key thing that I want to stress is that going ahead PG&E -- well, the 3.1 number, I think, needs to be used for contouring and a yardstick. Beyond that, further information is now available to try and shape the plume directly or to draw the right shapes in

the map, and that is (inaudible) knowledge that PG&E has collected over the past two or three years, referred to by the previous speaker. And information continues to be collected, especially through the USGS study. So it's like a continuous curve, and it would be, I think, inappropriate to not consider new information that might modify the shape of that purple line as it becomes available.

This is all in the spirit of the Order for adaptive management, was a big component. As information becomes available, it has been vetted, it's believed to be appropriate, it should be applied (inaudible) most of you plume shapes.

So, again, to reemphasize in that previous figure, both the Water Board and PG&E will have incoming themselves new information, especially from the USGS study. Dr. Izbicki is the caretaker and keeper of that information. There is an ongoing process that has been worked out and will continue to refine where that information from that study will be spat out and become available to the Water Board for further plume decision-making requirements.

I seriously hope that the order going ahead continues to have that flavor of the USGS information and be allowed to shape the plume appropriately. And so the

information that will come, obviously, is a plume (inaudible) modeling, especially information in the (inaudible) Dr. Izbicki has at his disposal.

So the concern, I think, and sometimes a little storm in a teacup here over these different competing orders is when to incorporate new information such that the 3.1 shape can be appropriately modified. You heard the previous speaker show a plume map of the northern part, and then there was a PG&E version with (inaudible) part. The question is, you know, if you start off with a base point of the prevailing 3.1, you would draw lower and upper plume. My recommendation is that you start off with that point of departure, and as the information comes in from the USGS study that we can all buy into, the plume shape will be appropriately modified. I think the Order contains that language right now.

There's a lot (inaudible) shoulders going ahead, but this information is vital. The Water Board and the PG&E and future plume shape (inaudible).

So what I -- I thought long and hard about the right words here. I think there should be a trend towards the use of professional judgment. That's to say, right now point of departure requires a yardstick, you draw a 3.1 shape, and it stops.

PG&E has taken it a little bit further by saying

but we know, using professional judgment, our belief is that the (inaudible) release is not in these areas, and so they still modify the plume.

I think that with new information coming in, the plume shape will change from the very strict 3.1 shape that exists right now. So this -- this kind of information here is important added information in terms of plume shape calculation.

So this next slide kind of (inaudible) just made. This one is important kind of (inaudible) here. So basically, you start off with a -- we are in the three point here. You collect data and you apply it, and you get basically the (inaudible) 3.1 plume shape.

From that, the community is happy with that process. It's aged, it's flawed, but it works right now. Into this process is basically being plume shaped by the Advisory Team, by the Prosecution Team, and by PG&E vary.

The dilemma that I am trying to (inaudible) over where do you take the 3.1 map plume going ahead and what information do you use, and I think it is the use of this USGS information. If you do that, the whole story evolves such as this, and you end up with a USGS data information modified plumb with a starting departure point being 3.1.

Now, I just scrolled into the bottom right. The

figure very complicated, unbeatable blue shape. That figure, actually, appears in greater detail in your slide there. It is the process that is whereby vetted information will be abstracted from the USGS study and made available to the Water Board for decision making and plume shape right sizing. Good word, right sizing.

So summing up, I think the CAO does the join-the-dots approach, I think has worked so far, that requires modification. It creates a (inaudible) in the north plume where the new information that arrives on the scene dictate whether that plume shape will stand over time. In the past, we didn't have a mechanism for basically deriving independent information; we now do. So (inaudible) here.

The USGS study, as I mentioned, is pivotal. I think in (inaudible) of right-sizing the plume. And the new -- the latest fashion of the Order, I think we're going to act on tonight doesn't, in my opinion, contain appropriate language to include consideration of the USGS background study information.

The words in the bottom left here, I think, will be agreeable to Dr. Izbicki. That's to say that fully vetted new information will be available to the Water Board definitely before 2019. That's only roughly three years from now, but I think through the process of that

diagram I showed you earlier, tons of information will become available earlier to allow both the Water Board and PG&E to reach consensus on a right-sized plume.

The key factor, I think, is the northern area. It was highlighted in the previous discussion, is it there or not, is it created by PG&E's discharge? I think that Dr. Izbicki's work will be able to allow -- put that issue to rest.

I'm not going to go through the diagram, too complicated. In fact, will be a discussion topic even tomorrow afternoon. There's a technical working group here in the background study. A lot of it is focused on when will information become available and when it can be used to basically, again, right size the plume.

So with the reminder that no one sampled domestic wells exceed the MCL, my starting slide, protection of human health, the environment, which is the main goal here, no one right now is being exposed to greater than 10 ppb MCL Chrome 6 water. An important factor, all concentrations that are high are within PG&E's own land and within the plume shape.

So my conclusions are as follows: I think it's a grand conclusion. The CAO's flexibility allows -- very much allows for change. As technology changes, as data changes, what plans can be written that the Water Board

can consider, all embody the subset of the abatement Order. The decision trees that I mentioned way back, probably 15 slides ago, allow monitoring, again, to be right-sized and appropriately done, and the community, again, is satisfied. There was great concern early on that PG&E was removing wells from the system. The decision tree process is basically, I think, I'm satisfied that concerns that wells will be sampled appropriately at the right time.

And I recommend, again, this big issue of plume contouring, I would say let the plume contouring gradually evolve from the 3.1 yardstick that has been used right now, and it gradually evolves from the use of modern newer information regarding dry water hydrogeology. Most of it, again, coming into the project through PG&E and USGS.

Again, allow, (inaudible) there is a process in place for the background study to release this information to the Water Board -- PG&E to assist in right -- right plume size right size.

So, in conclusion, one of the things I do want to end with, there's sometimes not enough thanks given in this project to a lot of hard work, tremendous amount of work, and I just want to acknowledge, I think, the hard work the Board does listening to competing opinions, trying to weigh things. And again, the task you have got

in front of you of adopting this Order tonight is a large one and hopefully this help -- my remarks help (inaudible) the picture. Thank you.

MS. KAPAHI: Thank you, Ian. You came in under your 20 minutes. Very -- very good, though.

So first up for comments? PG&E?

Prosecution Team? No?

MS. KEMPER: Water Board members, my name is Lauri Kemper. I'm the Assistant Executive Officer and Chief of the Prosecution Team. I just want to thank Dr. Webster for sharing that very complicated-looking table called actionable items.

And I just want to remind the Board that we submitted a memo from Dr. Izbicki -- Dr. Webster in our September 30th comments to the Board and, hopefully, they are in your packet. That memo describes what Dr. Webster was talking about in greater detail, and it's a really important memo because it was developed at these technical working groups on how the information, as it comes fort from the USGS study, will be brought to the Water Board for its consideration for decisions.

And we had requested that that be embodied in the Order. The Advisory Team took some of that language out in the current version that is in front of you. So there are previous versions of the Order that have that

information better laid out and clarified. So I just wanted to remind you of that, that information is in your packet in terms of a memo that represents a consensus between the community, project navigator, the CAC, the Water Board, and PG&E.

MS. KAPAHI: Thank you.

Members of the public have any comments on Dr. Webster's presentation?

Seeing none, Board members?

UNIDENTIFIED SPEAKER: (Inaudible).

MS. KAPAHI: They are at the end. Yes. So this is just on the presentation that was just presented.

MR. DYAS: Dr. Webster, I have a question regarding the recommendation you made in mapping the contour line using only 3.1 contour lines.

If I understood our Advisory Team recommendation of using isoconcentration contour lines, theoretically, a three-point line could be included in addition to other contour lines, 3.2, 3.4, and (inaudible).

Yes? What would be the advantage of using just one concentration instead of many?

MR. WEBSTER: None. I recommend that iso plats are, you know, equal concentration lines showing a bulls eye based on available information. That's an integral part of problem-solving target that our remediation approaches,

et cetera. I don't want to emphasize totally the three-point solely contouring the 3.1 number. Any chemical engineer, biomechanical engineer, would also take the data and try and find out that the true heart of the animal, you know, where is this Chrome 6 residing, especially since the goal is to remediate the plume.

So plume maps, they are created. They do have these bullseye iso plates (inaudible) concentration (inaudible).

MR. DYAS: So do you agree with the Advisory Team recommendation?

MR. WEBSTER: In terms of having more than one contour plume within the 3.1 number? Absolutely, yes.

MR. DYAS: Okay. Thank you, then.

MS. KAPAHI: Any other Board member comments?

Okay. With that, I call for the PG&E presentation, please.

MR. SULLIVAN: Sorry about that. Good evening. Members of the Board, I'm Kevin Sullivan. I'm the Director of Remediation at PG&E. It's a pleasure to address you tonight.

I have a very short presentation. Just a couple of slides.

MS. GENERA: If you would wait just one second.

MR. SULLIVAN: I'm sorry.

MS. GENERA: I'm having technical difficulties. (inaudible). Just give me a second. Thank you.

MR. SULLIVAN: It's a pleasure to be here tonight.

I wanted to just try to summarize our -- PG&E's overall view of the process and just share one or two perspectives on issues that have come up late.

Like others this evening, we are feeling, I would say, very good about the process that we have gone through. You have heard some people talk about it. It's a year -- our team looks at it as almost two because we began some of the technical analysis that became the framework for some of the initial drafts back in the spring of 2014, and as we are coming up on two years, also, working with the Prosecution Team, the Advisory Team in preparing some of the materials that were presented at the early workshops over a year ago, again, that started to give us the idea of what the topics might be that were worthy of -- worthy of discussion, worthy of consideration of any Order and for review by the Board and by the public.

We spent a lot of time in the late 2014 coming up with the technical basis for the monitoring reporting plan. There was a lot, a lot, a lot of technical work done on that, and I will note that, you know, in this last round of comments that was basically not commented on. So

I think that we're solid agreement there.

We don't have really any new technical information to present tonight. We gave you a very lengthy comment letter back in March. I believe Doug counted better than I did, 128 pages or something like that. I mean, we feel good that the information has being considered. I won't say that we are happy with all the outcomes, but we felt like at least the information was considered. Where the information wasn't clear, we felt that there had some good dialogue around what did this mean, what did those terms mean, some good discussion on that. We participated in the two workshops. We tried to be responsive where we came with technical information. And then through the summer we worked with the Prosecution Team to develop consensus language on a lot of the topics that were addressed.

There has been a tremendous, tremendous amount of work -- work done, and we think -- we think the document shows that. It has a lot of things that, I think, the collective group here should feel proud of. It consolidates a lot of orders that are already out there, which we think improves understanding, improves transparency, lets us see what we are accountable for, lets the community see what we are being held to. I think that's a good thing.

We have got stringent cleanup requirements. There are some of the times that we are not very crazy about, frankly, but we think we have also got the right balance of flexibility over time, adaptive management so that as things go in the field, we think we can manage that, and, again, in an open process where we submit, we propose, the Board reviews, the Board decides. That's how it ought to go.

We have talked a lot about best professional judgment to assess the site conditions. I think the current language land on something that balances professional judgment as well as the practices of mapping the plume the way that the community is familiar with. We think that the language as written now threads that needle pretty well.

Very importantly, we think that the Order does a good job of looking at the science around drinking water and what other agencies have told us in the last few years since earlier Orders were adopted. We think it does a good job of rather than responding to alarm, responding to science, responding to technical facts and coming down with good programs that are protective of the (inaudible) and our response to guidance have been issued by other agencies.

Importantly, this CAO, unlike earlier additions,

recognize the importance of the value of the USGS background study. I do want to take issue with one thing that was presented in Dr. Webster's presentation. There has been a lot of work towards what I would describe as a very prescriptive "when will the data be available," and I would not -- well, I would not say that that is a consensus language. It's a draft, it's a good working discussion. You saw comments from Dr. Izbicki in this process.

I feel very confident, given the process that we have been through in the last -- last year that if and when that data becomes actionable, it will be brought up and discussed in a public forum because most science data is not black and white. And I think Dr. Izbicki made comments to that effect. I mean, hey, he's going to give you his impression as to is this absolutely certain, absolutely uncertain, some shade of gray, and between that I don't want to speculate on what adjectives he might use if and when it's time to use those adjectives.

And then we're going to do that in a public forum. People from the public are going to get to tell you their take, people from the Advisory Team and the Prosecution Team and our technical experts will be there, and you will get that information, and you will be able to decide, you know, when that information is actionable.

So from our perspective, the intent here was to try to provide space for the science. And that's a commitment that we made a long time ago that we're going to continue to try to live up to. We're not going to be trying to grab random facts that serve one end or another. Should others try to do so, we'll be here to, you know, rebut, and you'll get a chance to decide. But the need for a highly prescriptive "when is the data" we just don't think is really necessary, and we feel confident in the public participation process and the open process that we have had and the dialogue that the last two years has brought out.

And then lastly, we think, you know, importantly, we think that the CAOs provide a good framework to keep the community informed about the data that comes available, progress on the cleanup, and so we think that that's an improvement over the current situation.

The one figure that I want to show just to kind of frame the discussion, you have seen a lot of discussion about the lower aquifer, and we submitted some technical comments back in September that the Advisory Team, you know, considered. There's been a little more discussion about that, but I offer just one graphical representation of this for you to frame this.

The blue outline is what I would say is the fairly well shared and I think the plume map in the south that we have all been looking at, various versions of that, the yellow figures on here are land that PG&E currently owns.

The green figure is the current extent of the 3.1 in the lower aquifer. And so the high level point that I would like to convey to you is, number one, we take the lower aquifer extremely, extremely seriously. We have a series of actions going back multiple years before we even began pumping. Once we realized what was happening in the lower aquifer, that farmers were pumping and some of the farmers, some of our -- renting our land, were pumping and exacerbating the situation in the lower aquifer, I shared with you in the past graphs showing how we worked to wean them off that, and we built pipelines up from the south to get those farmers alternate water supply. That was done without any Water Board Order. That was done because we realized what was going on, and we could take some steps to fix it.

We have been very aggressive in pumping. We are working our way through the challenge. The thing that I would ask you to consider, we think that the current language accurately reflects both the current level of what we understand as well as, importantly, a process to

getting us to a scientifically and technically defensible background level, cleanup level, and cleanup plan. We are committed to that, and I want to make sure that there's no ambiguity about the commitment that we have to this.

When we look at that green circle entirely contained on our property, not near to any domestic well and within the footprint of the larger plume, we feel like we have got a good grip on what is happening, and we are working hard to treat it and working hard to get a plan that checks all -- dots all the I's, crosses all the T's, gets us a good background number, and accurately depicts the complex geology out there.

Should the Board be interested, if this is a good use, you know, we -- our technical experts are here. We are happy to talk through figures we have presented in the past. We don't feel that that is necessary, but we are happy to engage in that discussion. We think that the process that is laid out in the current draft is a good one and will get us where we need to go, and importantly, does not put any public at risk or delay any cleanup that would be happening. So I felt like it was important to say that because I feel like there is a lot of discussion, but we're happy to engage in further discussion tonight.

So that's all I have.

MS. KAPAHI: Thank you, Kevin.

Questions?

MR. SULLIVAN: Actually, I just want to share, we did have a letter to submit to you. It had several errata, and your staff picked up all of them. So it rendered this moot. So we had -- we had three errata that were all addressed and things; so we are not submitting any last minute.

MS. KAPAHI: Thank you.

Comments? IRP manager? No?

Prosecution Team?

Members of the public?

Board members?

Thank you. Next, I call for the Prosecution Team's presentation.

MS. KEMPER: Good evening, Chair, and members of the Board. My name is Lauri Kemper. I'm the Assistant Executive Officer and Chief of the Prosecution Team, and tonight I want to first -- as all the other speakers before me have thanked the Board and all the individuals that have been involved in this process, it has been -- it has afforded a lot of robust discussion, and I do think that, in many cases, we have got improved findings and, you know, better clarity. I appreciate this opportunity to have one more chance at trying to improve some of that clarity and accuracy.

Kevin's description -- so some of the topics we're going to talk -- I want to share tonight are things that represent three key areas that we fundamentally disagree with the Advisory Team on, and then about twelve specific language changes that are just about improving clarity or understanding, and we're coming at it from a constructive approach because we know other people besides us may be implementing this Order.

I don't -- I'm not as optimistic as Dr. Webster about this Order being in place for twenty years, but even if it's in place for five, until the background study is finalized, it's important that there is language that anyone who picks it up can understand and know how to implement it. So that's -- that's in the spirit of the written comments that are before you that actually outline the total of nineteen areas with suggested changes for language; so I apologize for the length of the document, but we provided the exact excerpts from the Orders so that it would be easy for you to see the changes we're asking you to consider tonight.

Kevin Sullivan talked about the lower aquifer, and much of what he said I do agree with. The Board has the ability to postpone a decision about background concentrations in the lower aquifer and clean-up levels until a future time, but I want the Board to be aware that

that means that we may be here a year from now talking about it. And I believe, and our Prosecution Team, and I'm going to show you this tonight, but there's sufficient evidence in the record for you to make that decision tonight, or even in February, and not have to revisit this in a year and potentially save Kevin some time and money by not having to go into as great detail as maybe this Order probably requires. So I'm going to talk about that. That will probably be the longest part of my presentation.

Then I will briefly talk about the mapping and request that a new finding that was added in the version before you tonight be deleted as it relates to monitoring well density, just -- it's just a finding that it's not needed and not relevant, and I'm afraid that poses a very dangerous precedent for many of your other Orders that you have on region.

So, again, these are our topics. And as part of the clarifications, I'm mostly going to talk a little bit about the dispute resolution process and the background study. So for the lower aquifer, the Advisory Team is recommending that PG&E develop the site conceptual model and a feasibility study assessment to look at feasibility -- has to be the timing for cleanup in the lower aquifer.

The Water Board's Prosecution Team believes that there has already been information submitted in the past

that lays out a conceptual site model; so we don't believe that's actually needed, and we do support the requirement to do a feasibility assessment. So originally, the Prosecution Team, in its first Order in January, had established an actual date for cleanup to occur, and we are okay with having PG&E take another look at how long it will take to do that. So that's maybe one we want to keep in place.

And then -- but we feel that there is enough information in the record about background concentrations in the lower aquifer, and I'm going to share two figures. This one and this one (indicating), and I'm going to go over them in a little bit of detail.

So in your packet, these are available both as attachments to the written comments and the slides. This map shows the lower aquifer concentrations in 2011.

And just a little bit of chronology. In 2000 -- December of 2010, Carmela, at the time, was not married, had a different last name, she came to the Board -- talking avoid -- trying to pronounce either one of them -- but anyway, Carmela was here in the summer of 2010 and alerted the Board to a number of things that were of concern to her. And one of the things she brought up was that PG&E was beginning to find chromium contamination in the lower aquifer, and that contamination was

increasing over time. And she asked the Board to do something about it and do to it -- do so in a very transparent way. After that hearing -- after that meeting -- I think it was an item that she requested to be placed on the agenda -- the Water Board Executive Officer issued an investigative Order, and these are the results of that investigation in 2011.

And you can see this -- this little purple dash line is the extents of the blue clay. So in the area to the right of that line is where the aquifer has both an upper aquifer and a lower aquifer separated by the blue clay. And then on this side it's all one aquifer.

So as the Advisory Team has mentioned, along this transition zone, there is mixing, you know, because if you move over where the blue clay is, there's obviously the ability for upper aquifer water to kind of diffuse underneath that blue clay because that's where it's all the same on this side. So over here, you have got separation.

Okay. So we know that that can occur, but what I want to talk about is what are the concentrations -- what we would think of as background, the monitoring wells that are in this location are all non-detect so here is a monitoring well right next to this blue clay. It's non-detect and .34, but it's also close to where this

contamination is being seen.

And as Kevin mentioned, the farmers pumping wells, in 2011, Riken -- and this is the (inaudible) dairy in this area, and Riken was the operator of the dairy. He had supply wells installed along this road here, and these two green wells would be -- would pump it -- pumping was going on at this time. These wells were screened in both the upper and lower aquifer. So they were pulling and they were pumping at great rates; so they were pulling groundwater in this direction, because the general groundwater flow from the compressor station goes northward. So this action here was forcing lower aquifer water in this direction, which was forcing upper aquifer water to either go through cracks along this transition zone or to come over the lip of this blue clay and contaminate this area.

And as you can see, this monitoring well up here is non-detect. Again, in the lower aquifer, basically, downgrading of the contaminated area, but also close to the transition zone. So we have these two wells in 2011, and this one on here, non-detect, this well down here, non-detect, this well, .4. So we -- and there are some more monitoring wells non-detect.

So we think that this represents sufficient data to establish that the lower aquifer has non-detect.

That's how it was. That's how it is down here by the compressor station and, in fact, we have many wells, even in the upper aquifer, that were non-detect chromium. Remember, the background number that the Board adopted, the 3.1, that's the maximum, and even when the Board established that background concentration, they recognized in the upper aquifer that chromium ranged from non-detect at 3.1, and it was 1.2 was the average.

Nowhere during that original background study was 3.1 even measured. It was just statistically derived. So just keep that in mind when thinking about the lower aquifer, because I don't think anybody has ever asserted that there's chromium in the lower aquifer, and even along this transition zone, it doesn't appear by these two monitoring wells that there was ever chromium. You know, that would mean that there was sufficient amount of chromium in the upper aquifer to have an effect on the lower aquifer. We don't have that kind of information in the record.

And then four years later, this slide shows -- it's interesting because this scale, we're looking a little closer in now. We're actually closer, and the remaining contamination of the lower aquifer is quite small because it's not -- it's even smaller than if we were to overlay these two maps. So the area represents a

very small area, and that's because PG&E, as Kevin had mentioned, has been successful at remediating the lower aquifer.

And if you see the -- these monitoring wells here, they had previously had chromium in them. They are now non-detect four years later and that's because, as Kevin said, they required that Riken close off these wells that were screened in both the upper and lower aquifer and only install wells that are now just in the upper aquifer only.

So they are no longer drawing water in this direction of the lower aquifer, and the ground water gradient has re-established more normally in the lower aquifer to be heading north and not be pulled in this direction. That effort alone helped shrink this plume so it was not being pulled, and then PG&E installed extraction wells in the lower -- in the upper aquifer. This extraction well 29, and I believe there's another one, extraction well 30, where they are pumping from the upper aquifer which is essentially forcing this contamination around the clay and out of the lower aquifer.

So this demonstrates -- these red circles are all non-detect. These are monitoring wells that are now all non-detect. This demonstrates it's feasible to clean

up the lower aquifer to non-detect. The background number is non-detect. It's non-defect in all these wells, it's non-defect here. The only place it's not non-detect is where the contamination came over from the upper aquifer.

So I would assert that you have -- this is the information. We don't -- if PG&E submits a new site conceptual model, we don't expect to learn much -- I didn't learn anything new. I imagine they'll submit the information they submitted in 2011, they'll update it, and then, like I said, we do want to see a more thorough evaluation of how best to clean this up and how long it will take. But we -- we believe today you can say the goal is non-detect for the lower aquifer. That is the background in the lower aquifer. That's not going to change. So we would ask the Board to consider that.

Now, and I recognize that your choice is to say we don't want to do that right now. We just want to get out from under it and we'll deal with this a year from now. But I just want you to be aware, these are the facts you have today. And you have the ability to make that decision today, or we can postpone the decision.

There has been a lot of talk about plume mapping tonight. And the other thing I want to say before I go on to plume mapping, in the lower aquifers, the wells that we were looking with contamination, the maximum we saw in the

lower aquifer was 42 parts per billion. That number in that same well is now 26 parts per billion, but last quarter it was 19. So again, the concentrations aren't that high, and we are seeing progress and it is getting cleaned up. So it is reasonable to assume they can get to non-detect in a fairly short period of time.

In terms of plume mapping, the best professional judgment, we appreciate that the Water Board Advisory Team came up with a creative way to not judge the chromium by calling it isoconcentration and that's essentially what they are saying is -- well PG&E is required to map wherever the chrome is, kind of whether it belongs to them or not, and by taking out plume contaminant or contamination plume, especially for the northern area, they don't have to judge that. They just have to map where the chromium is.

The problem with words like isoconcentration is that, as Doug said, well, they should only have to map where the chrome is, and that could result in a map that just has circles around 500 monitoring wells, tiny little circles, because we don't really have the information. Unless you have actually sampled the groundwater, how do you know where the 3.1 concentration is, where is the 12 or 50 or -- so you could end up with a map. And you have seen some of the maps PG&E has presented on cleanup,

because I agree. I think it's great to be able to look at progress of cleanup, and I think Kevin has done a number of presentations before you in the past that has shown cleanup to non-detect. We know there are many places in the plume today that have been cleaned up to non-detect. PG&E has presented that information. They do it in a map with a lot of streaking, which shows those clean areas. And so there are ways to depict that.

My concern is that if we open this up now in terms of the quarterly plume mapping, we may see very different maps than we have seen in the past, and they will be very difficult to compare because we, right now, have a set -- a series of four consistent years, 16 quarters of mapping under the same type of prescriptive requirements. And we believe that continuing that practice until we have some of the background study results is the best way to move forward in the interim, just so that we don't -- there isn't a lot of confusion. I mean I do think there is still an opportunity for PG&E to share the progress when they have zones of clean -- clean water, but it's going to add to confusion. So we are recommending that you continue to continue the existing mapping requirements until such time that you are willing to change those.

And as much as I appreciate the notion that we

want an adaptive Order and we want to be able to be flexible, one of the concerns we have in not being prescriptive about, you know, actionable items, like what level of data is the Board going to be asked to consider is that anyone at any time can request Patti or you, at the Board, to make changes, and it is a difficult thing to try to balance, you know, not -- to try to be flexible and adaptive and yet not every quarter be discussing it or, you know, people asking for modifications or changes based on some new information.

And so as much as Kevin, in terms of will there be a public discussion, is that going to happen here, is that going to happen, you know, hopefully, we can do it at technical working groups) so that if people don't agree with the Water Board staff, then they may be petitioning the Board for changes more frequently.

So that was our -- that was the reason why, as Kevin said, there was a lot of time put into that memo that he may not want to follow. I mean, I said it was consensus. Maybe it represented in our staff's mind a ton of time and work to get agreement about what types of information will be used for changes, when to consider changes and not to react or overreact or act on new information as it trickles in, but to wait for these times when basically, to wait for Dr. Izbicki to say there's

sufficient evidence, not just one line of evidence, maybe multiple lines of evidence -- to -- to make a change.

So those are some of the fears that staff has is that this current Order is written, produced, essentially conflict and things that need to be, you know, disputes that need to be resolved. So that is our intent in trying to maintain the (inaudible). And I think right now the Order, as written, just expresses an intent to have comparable maps from the past, it doesn't require it, and that's whether or not we are really sure how that will work out.

And then my last main point is something that was added. And Finding 34b, page 10, in your packet -- it's page 6-18, it's a finding describing the northern disputed plumes, and it talks about data from nearly 100 monitoring wells. It basically contrasts the northern plume with the southern plume by stating that there's data from nearly a hundred monitoring wells to define the extent of the chromium in the southern areas.

Actually, the exhibit, it says for the northern -- this is confusing. It says for the northern disputed plumes data from nearly a hundred monitoring wells (inaudible) finding (inaudible) chromium in excess of background levels.

Oh, yes. So there -- okay. So there's a

hundred wells in the northern area, but it covers an area five miles long and one mile wide. And then the next sentence is the one that is disturbing for me is that this well density is much less compared to the well density in the southern plume, and it does not give sufficient evidence for the Water Board to link. And now Doug requested that the words "with substantial certainty" be removed which is -- which I like, except I want the whole sentence gone.

The well density is much less compared to the well density in the southern plume, and it does not give sufficient evidence for the Water Board to link the chrome to PG&E's historical discharge at this time. That's not the reason -- you know, it's not the number of wells that has anything to do with why PG&E is disputing the northern plume. It's not the density of wells. There's a lot of other factors.

They are looking at some of the early data that Dr. Izbicki is sharing. They are looking at geochemistry and geology and flow direction, and I don't even want to conjecture what all they are looking at. But they are not -- it's not the number of wells, and it's not the well density that has anything to do with sufficient evidence. And this sentence is very dangerous because, as we have entered into the record, two cleanup orders, this Board

has issued recently in the Hinkley area for diaries where we, the Water Board, have asserted that there is a pile of manure, a lot of dairy cows, next to somebody's domestic supply well, and that well has contamination of the drinking water standard, and they are required to provide replacement water to those individuals.

And there is no need to have monitoring wells in the ground and there's no need to have a particular well density to establish sufficient evidence. We do not want this kind of sentence going forward in an Order, because it will be used against all of us. So I urge you to get rid of that before proceeding tonight.

And then, finally, we have, as I mentioned, about twelve more suggestions that are in the written comments, and I'm not going to have time to go through them, but I'm happy to answer any questions about them. The one other important one is the dispute resolution process that was added in this version, and I don't think it represents a process. A dispute resolution process requires specific time frames and roles and responsibilities, and there's more details about who does what and that hasn't been provided.

And we offered a dispute resolution process that we used for Cal-Fire, who is a sister agency. We will work on collaborative basis to arrive at a final timber

harvest plan and that seems like a similar type process that will make sense, only two pages long. It's part of your handouts and that would be something that you'd want to have a process that something like that in this Order, or we recommend that you do not and deleted that paragraph. And that's all I have.

MS. KAPAHI: Thank you, Lauri.

IRP manager, any comments? No?

PG&E?

Members of the public? Yes?

MR. BANKS: Board members, Daron Banks, Hinkley resident.

I just want to iterate that the community agrees 100 percent with what Lauri just said. There are issues, you know, that we have, you know, as to even how they want to move forward with the Order, but -- but we agree with what she said tonight. Everybody that I have talked to, that I have addressed, agrees. Thank you.

MS. KAPAHI: Thank you.

Board members?

Okay. That conclude the presentations. I have about five comment cards, which we'll take one at a time.

UNIDENTIFIED SPEAKER: Want to do a break?

MS. KAPAHI: You know, that would be great. I personally would like a five-minute break. I have been

caffeinating and I -- I -- need a five-minute break. So with that, is five minutes sufficient, or do you want to make it ten? Ten-minute break? We will resume at five to the hour. Thank you.

(A recess was taken.)

MS. KAPAHI: Okay. We are going to resume with public comments. First speaker card I have is Daron Banks.

MR. BANKS: Madam Chairperson, Board members, I thank you for allowing me -- my name is Daron Banks. I'm a Hinkley resident.

I will just address -- I gave you a copy of the Orders that I'm discussing. So page, 13, 14, 44, people should have the right -- people should have the right to whole house water replacement for showering and other uses. When people -- when people shower, they sometimes ingest the water they are showering. They sometimes ingest the water they are showering in or brush their teeth through the shower. People should have the right to feel secure about not worrying about these issues.

When PG&E provided water -- whole house water replacement system, they were -- they were the whole-house system. These systems included water for showering.

What is the difference now? Why can't they be required to provide the whole house replacement systems

for domestic wells above the MCL?

The above statement uses the public health goals, and I'm referring to the Order. Uses the Public Health goal and the requirement for the water replacement is the Chromium 6 MCL set at 10 parts per billion. That is 500 times greater than the public health goal. Please keep the whole house water replacement as-is.

My second statement, Bates 359, the language is vague, and this is regarding plume map -- language is vague regarding how the plume should look.

PG -- this is a quote: PG&E to map chromium concentration contour lines is expected to produce a map that is substantially similar to the (inaudible) report plume maps that have been created since 2013, unquote.

PG&E will not be required to draw the finger in the northwest freshwater injection barrier using the wording as it is now. There are also something that has been disregarded by the Board. There are also three monitoring wells on or east of Dixie above the current background level.

Monitoring well 145 D1 on Dixie, monitoring well 182 S/D east of Dixie, monitoring well on Dixie, monitoring well dash 115 D is on Dixie.

This CAO will take out the eastern wells that PG&E has continued to disregard. At the minimum, the

community continues to advocate plume should be drawn using criteria established by the Prosecution Team until results or actionable information from the USGS background study is generated.

In the case of any disputes, the CAO gives final judgment to the Executive Officer for plume delineation. This would be a bad decision, giving one person the final say upon how the plume map is drawn, especially in the circumstance the Executive Officer disregards Counsel from her most experienced and qualified staff.

The pro-CAO gives PG&E the ability to -- the ability to use their best professional judgment. Why would anyone give the power to a company that did not report that they had contaminated the lower aquifer, a company that did not report the plume escaping and the Board levied a $2.5 million fine, a company that recently caught doing inappropriate activities and have improper relationships with utility commissioner. Why would the Board allow -- allow the Executive Officer to be so lenient on the discharger?

I'm hoping that the Board will not allow this behavior to continue. Even Board member Peter Pumphrey -- I'm sorry if I messed up the name -- mentioned in the last Board meeting why don't we have one plume map and include inserts with PG&E's interpretation.

Lauri Kemper answered that question by saying that is how the plume is currently shown. At worse, we should have the same requirements to draw the plume maps.

The best alternative for the community would be for the Board to require PG&E to produce two plume maps, one with the Board's requirements and another with PG&E's interpretations. The USGS is currently conducting a background study. Actionable information from the background study, which we all agreed on, will be issued by the technical working group and that information may affect how the plume will be contoured in the future.

The background study will also provide an independent plume interpretation based upon several lines of evidence. I continue to advocate indicate that we should wait until we get actionable information from the background study to incorporate interpretation of the plume since we might end up with a different professional judgment.

If the proposed CAO was adopted, it will set a dangerous precedent for leniency that other entities will certainly use as a leverage to make the Board staff amend their CAOs or ensure they get more lenient CAOs in the future.

Finally, the enforcement staff does not agree with the proposed CAO. I would like to formally request

e-mails and other documents that provide some insight into the enforcement staff recommended to the Executive Officer. If I cannot get copies of these documents, I formally request the Board to investigate and request this documentation to ensure that the proposed CAO be supported by best practices and most experienced expert (inaudible). The most -- the vote on the CAO should be delayed until we get the facts.

I wanted to direct the final comment to the Advisory Team member that made the presentation earlier. It was stated that, you know, there was no collaboration of any of the entities, but that's not true. If you go back to Draft CAO No. 1, it clearly states that they collaborated and met with PG&E several times. It states that in that draft. I read it. Black and white.

Members of the community that fully understand what's going on are floored by this draft CAO. I mean, this takes us back four years when essentially PG&E ran the show unadulterated. And that's why we are at this point today.

You can't be mean. You can't -- you can't give them slack. We have to continue on our course and yes, we have the background study coming, but it doesn't mean the lifestyles today. We have to be diligent. And that's all I have. Thank you very much.

MS. KAPAHI: Thank you, Daron.

Next, I have Roger Killian.

MR. KILLIAN: Good evening. My name is Roger Killian. I'm a member of the community.

The reason I just wanted to address the Board is if we look at this plume mapping that they wanted to do, and it really floors me that we do this, as a manager, and I have been a manager, and as you all know, as managers when you come up and you face some facts that you want to do it based on facts, there's a lot of information that is here, a lot of scientific information.

We have got a background study that's going on and that is going to open up a whole new realm of information that is really going to tell us what is going on here, but without that information, how can we -- how can you make a decision on what's going to be done or where the stuff is going to be? I know you have professionals that are going to look at that, and they have got a great professional opinion, and I agree with that.

But any good manager will know that you want to base your decisions that you make based on all the information that you can get. If we have only got part of the information, you are not going to make a good decision because you are only using a portion of that information.

But until the background study is finished, I think the way the plume map is being drawn on a point-to-point basis should continue until this study is done, and we know whose chromium, where it went, and where exactly it is, you know. We need all that information so that you can make a professional judgment, and without that, you are only getting half the information.

You know, PG&E does a good job of bringing the information to you so that you can look at this, but we need to get all the information. If you are doing it on only partial information, you are not going to make a good decision. And I understand everybody wants it, but as a community member, I would like to know where the plume is exactly and whose it is.

You know, I keep looking at the slides that are coming up here in the presentations that they are getting ready -- the stuff that's in the north, PG&E says it's not their chrome that is up there. How do we know that? The study is not done yet. We all -- I think from what I have heard, is everybody agrees that the original study that is done is flawed. Now we have a study going on, and right in the middle of that study going on, we don't have the information yet. So how can you make a judgment as to where it is and whose it is until that study is done?

When the study is done, there's going to be

disagreement on it. It's not going to make everybody happy, just like this CAO is not making everybody happy, but we need to kind of stay the course that the community feels comfortable with. The way that the plume is drawn now, we can connect the dots and we can feel comfortable with that in the community right now. When the study is finished, that may all change, and I'm sure it's going to change and I'm sure these Orders are going to change.

This is not a final Order. And I am sure once this study is done and we look at all that information, put everything together, there's going to be a big change. And I think you all understand that, you know. This is not the end of the road. This is just the start of the road, but we need -- we need to look at that and have all the information so we can make a proper judgment.

Thank you.

MS. KAPAHI: Thank you, sir.

Next, I have Elizabeth Hernandez.

MS. HERNANDEZ: Hello, Board. My name is Elizabeth Hernandez. You can call me Betty. I am a resident of Hinkley and have been so for 30-something years.

When I first heard about this proposed new CAO, excuse me, it was presented to me as a consolidation, and in my dictionary, in law, that was the combining of two (inaudible) in one. That is (inaudible) is anything

contributing to an improvement in condition.

Meaning, in this case, the original CAO and a newer version, excluding any revisions implemented up to the present.

The definition for edit, however, is to prepare for publication by selection, arrangement, and intonation -- sorry about that. To revise and make ready for publication and to govern the policy of the publication, decide what is to be printed, et cetera.

The existing CAO is an Order and cannot be edited by a select member of same minds of people and change by that same minded group.

The proposed CAO that we are looking at today was edited, not consolidated. The parts that were not complimentary to the group attempting to implement a new CAO were left out in their entirety. Charges -- excuse me. Changes were made by personal elimination, not by evidence and facts, but by simple exclusion. This document is bogus and not within the boundaries of transparency.

I am requesting the CAO document, which is attempting to replace the original CAO, be thrown out. If there is hesitancy in taking that action, then I request a six-month stay so better examination can be had. It is a lengthy document and will take at least that amount of

time to determine fact from fantasy and fiction in its pages.

In the meantime, Dr. Izbicki's study, which was approved by the Water Board, will continue. This study was to be the one factual study upon which PG&E's involvement was to be measured, not like this new document which is based on personal opinions. We were going to wait until the study is finished before any major changes were implemented. This study is costing millions. Why would the Water Board condone a major change now after approving a $5 million contract before it was finished?

Thank you.

MS. KAPAHI: Thank you.

Next up, I have Barbara Ray.

MS. RAY: Good evening. My name is Barbara Ray, and I'm a resident of Hinkley, and I would like to thank you for allowing me to address you this evening.

This current draft is not a consolidation as we were initially told it would be. I strongly feel that the CAO needs to be tied to the USGS background study. The study needs to progress as outlined by Dr. Izbicki. As it progresses, then actual items will arise, and until this time, I really feel that the plume contouring should remain the same.

I am one of the few in this room tonight who

will be going home to Hinkley, and I am going to have to live with this on a day-to-day basis. I will be the one showering, and I will be the one using this water for my daily needs, as are the other members of this community who we still choose to call Hinkley our home.

Thank you.

MS. KAPAHI: Thank you.

And lastly, I have Penny Harper.

Any (inaudible) that wishes to speak, if you can please fill out a form. Thank you.

MS. HARPER: Good evening. Thanks for driving down here to Barstow. It seems to be a long trip for a lot of you.

I'm Penny Harper. I have been a Hinkley resident consistently over the last 20 years and part time since 1974 when I bought property in the Hinkley Valley. And I am also a member of the Citizens Advisory Committee, as were the other three people ahead of me, and they didn't mention that for some reason.

Daron Banks started out mentioning the whole house water treatment system, and I just have to say that I really miss having PG&E maintaining it since the MCL was established a year ago. It was really nice. It gave us confidence when we were bathing and drinking in the Hinkley water.

I just want to give you an idea of what it's like living in Hinkley. We had this confidence when we had the whole house water treatment systems that, you know, what we are breathing from the swamp coolers and any mist from out, you know, in the garden and just bathing and drinking it, we were confident when the water was being treated we weren't being poisoned.

But now that PG&E is no longer maintaining those systems, we have got this uncertainty living with this water, and we also get conflicting information whether the Chromium 6 is absorbed through our skin while we are bathing in it, and if it is absorbed, is it harmful to our health and also, if we are breathing the swamp cooler water or the mist in the shower, is that hurting us or, you know, maybe we are not absorbing it. We live in this, you know, this environment of uncertainty.

Getting back to the issue at hand tonight, about the CAO, I believe that the plume should be contoured to include the two areas in the north, especially since I live in the north end of the Hinkley Valley. The Advisory Team calls those northern plume areas being disputed, as does PG&E, but USGS background studies will settle this dispute as they will be conducting tests to determine whether Chromium 6 found in the northern area is naturally occurring Chromium 6 or it's Chromium 6 discharge from the

PG&E compressor station. And I do agree with statements made by the Prosecution Team.

Thank you.

MS. KAPAHI: Are there any other members of the public that wish to speak at this time?

MR. BANKS: I apologize. Daron Banks. I just have a quick statement.

One thing that isn't addressed is -- I forget to mention is that we need to maintain the 2600 feet, and the Order actions (inaudible) more -- less vague, because when you give PG&E rope, they'll take it.

So, I mean, we have incidents where there's a well a couple hundred feet -- monitoring wells a couple hundred feet from that distance so PG&E doesn't have to connect those lines.

Lisa tried to address that issue and it was shot down, you know. She gave them the timeline to either put a monitoring well in between to connect the lines or they have to -- they have to accept that and move the plume line.

I mean, the number that we have been living with, the number that the Water Board committed is 3.1. We have had to deal with that number. We had to live with it. I believe that it is much lower, and so at least please enforce 3.1.

The western area, there's questions about the western area. That's going to be considered a separate scope. The Water Board hasn't addressed that or hasn't at least investigated it. We requested that (inaudible) office be more involved into it because there is -- there is reasonable questions in that western area.

And the final thing is I mentioned in the last (inaudible) the original site, that original site has still not been cleaned up; okay? So if we have -- I mean, there could be normal seepage, just with the water flow coming from the dirt.

If we have a high water level come through, we could see more Chromium 6 coming out than normal. I mean, you are saying here is the time we want this cleaned up, but we have not addressed the original site. So if you don't clean it up here, it's going to continue to flow north.

So that is all. Thank you.

MS. KAPAHI: Thank you, Daron.

With that, that concludes the presentations and the public comment on Item 6, and I turn it back to you, Chair.

CHAIR COX: Thank you very much, Gita.

We have had -- I heard a couple of comments from that the public may not be happy with whatever decision is

made by the Board and make sure putting that decision off.

Kim, could you perhaps explain the process, if anyone is displeased or wishes to dispute the decision?

MS. NIEMEYER: Sure. Within 30 days of the Board making a decision, people who are displeased with that decision have the opportunity to submit a petition with the State Water Board. And if you go to the State Water Board's site, which is www.waterboards.ca.gov, there is a link that would provide you the information that you need on how to -- how to submit that petition. And if you have any questions, anyone at the Water Board can help you also in terms of directing you to that -- to that site, the information that you need to provide.

It is a requirement if you, you know, wanted to challenge the Order in court that you first go through that process. So if that's something that you are thinking about you need to go through those steps of the petition process first.

CHAIR COX: Kim, one of the speakers said they would like copies of emails. Is there a process for that?

MS. NIEMEYER: Yeah. I would say to follow up with Daron, perhaps via email and better understand what -- what he's looking for. But essentially -- but essentially, that's a public records act request and we -- once that request is made, we'll follow up with him and

give him those emails that he's looking for as long as they are not privileged or some other reason we can't give them to him, but generally, all of our emails are accessible to the public.

CHAIR COX: Right. Thank you for that explanation.

We've heard quite a few comments tonight. I would like to ask the Board's Advisory Team if you have any recommended changes based upon the presentations you have seen tonight that you would like to share with the Board.

MR. SMITH: Thank you, Board, Chair.

There's two things that I want to do. One, I want to mention something that I didn't -- I missed. It was one of those errors where I added an extra zero, and it should have been on this sheet of the late revisions, and it's related to Item 2 on that sheet.

That -- that same change it is needed to be made in attachment A of the monitoring and reporting program and that is found on page 6-62 in (inaudible) number three, which is III b. And so make the same change, take out that extra zero; so it should be zero .2, not .02.

Then the second thing that I want to do before I go over some things here, I want to mention that the late -- the submittal of that -- you received last night

from the Prosecution Team had quite a number of suggested changes, and the Advisory Team has gone through all of those and there are quite a number of great suggestions that we think should be incorporated. So I want to thank the Prosecution Team for pointing those things out.

Before I go into those, the Advisory Team did have a question for the Prosecution Team and the parties, actually, on this matter, and it's in the submittal that the Prosecution Team submitted, and it is page -- thank you -- so thank you. So it is page 12, midway in there, there's some strikeouts, underlined, recommended language change in there.

And the question that the Advisory Team has is concerning the deleted text, which is the last two sentences of that, and we want to know is if that is acceptable to all the parties because this was -- it would conflict with some of the consensus text that the parties submitted, and having it in there just -- you didn't feel was right, and so if the parties who submitted the consensus text that they all felt that that should go away then it was (inaudible). And we'll find that.

CHAIR COX: We want to take a moment and see if the parties agree, or do you want to finish your presentation?

MR. SMITH: I can finish my presentation while they take a look at it and see.

So all right. So bear with me on this. I'm just going to be two documents that I want to take you through.

The most important document, obviously, is the proposed Order in front of you, and so I'm going to be referencing those items. So the first change that we feel is appropriate is found on Bates page 6-10, and make sure we're on the same page here, in Finding 8, and that corresponds to the Prosecution Team's submittal, which they are labeled page 1, but it's actually the third page in there. It has a number one at the bottom. And it's page 8, and those changes were updating some of the information, and the Advisory Team feels that that is appropriate and will recommend to include that.

MS. NIEMEYER: You are talking about Finding 8?

CHAIR COX: Okay. So you are recommending that we change out Finding 8 in the CAO for what was --

MR. SMITH: For the strikeout underlined that is shown here in the Prosecution Team's submittal. So we have a full list, yeah. And I can go over these, yeah. So I can go over them quickly, and then if you have questions on them, as I'm going over, please stop me. Okay?

So the next one is on page 6-14, Finding 20. And what it is, and then it's on the Prosecution Team

submittal, they are labeled page --

MS. HORNE: Maybe, before you jump to that, could you describe this, rather than just pointing us to the text, tell us what the significance is? I mean, I can see monitoring well, but the stuff -- the sentence -- the last sentence --

MR. SMITH: Sure. Okay.

So the significance of this is to accurately portray, at least in the -- up above the monitoring wells, the sentence in the bottom, a significant of that is referencing the document that was produced talking about the pathway, and pathways, and we felt it was -- it was appropriate to recognize that in this finding; okay?

So the next one -- and I have 12 of these, okay, because there were a lot of great suggestions; okay?

MS. HORNE: I just want to understand what --

MR. SMITH: That's fine. No problem. So thanks for bearing with me on this.

So the next one is on your Order, Bates page 6-14, Finding 20, and it is on the Prosecution Team, page 4, near the bottom there is the last phrase that is underlined, which states including retaining the requirement for minimum wells facing 1320 feet or less from the southern plume area.

the Advisory Team feels that that is appropriate

to add in because that is actually what is happening. It's clarifying the situation that the Board -- that the proposed Order is retaining the requirement for minimum well spacing of that. So it is appropriate.

So then the next one is on Bates page 6-15, and it is Finding 21. Just that last phrase of that -- that is underlined. And the other -- the Advisory Team believes that the other suggested strikeout and underlined contradicts what some of the -- the Advisory Team's recommendations.

In fact, there's -- there's -- the Prosecution Team recommended lots of changes, and I'm presenting the ones that the Advisory Team feels does not conflict with the recommended changes that the Advisory Team (inaudible). Okay.

So the next one was Finding 21, and that is found on the Prosecution Team's next page, page 5, and the Advisory Team believes that the sentence and that -- at the bottom is appropriate and clarifies. It adds some important specificity, if the situations do arise where PG&E gains access and the Advisory Team believes it is appropriate to act. Okay.

So the next one is on Bates page 6-18 and is Finding 34. First of all, the Advisory Team agrees with the Prosecution Team's assertion that the well spacing has

a potential -- the well density -- has -- someone could interpret that as being -- setting a precedent. So to alleviate that, let -- the Advisory Team is recommending on page -- so on Bates page 6-18, it is going to be different -- sightly different than what the Prosecution Team recommended.

On Finding 34 a), that second sentence should be deleted, and that sentence is plume is roughly three miles long by two miles wide, giving an average monitoring well density of one well per 10 acres. Just delete that.

Then, in the next Finding, 34 b), a similar sentence is -- in sentence two, and sentence two should also be deleted in its entirety.

In addition to that, the first part of the third sentence should be deleted, and that sentence reads -- or that part that should be deleted reads: This well density is much less compared to the well density in the southern plume and it does not give sufficient evidence.

The part up through "sufficient" should be deleted and replaced with "there is insufficient evidence for the Water Board to make substantial --

Excuse me. Yes. We took out "substantial" (inaudible). Thank you.

So okay. Another one, still on Finding 34 b), kind of it's a hot item, there is the Prosecution Team

recommended some -- some edits, and its edits in the last sentence of 34 b), and that last sentence begins as of third quarter 2014, the monitoring results.

And they propose to strike out the last part of that, which we agree with, and replace it with there are six domestic -- six domestic wells in the north having chromium concentrations in excess of the interim maximum background (inaudible).

So their proposals on their submittal on page 7, and they are adding the word "interim."

We add the word "interim" to that.

And then the other sentence on that that the Advisory Team is recommending is the second to the last of theirs, which says "According to PG&E's domestic well owners, have them provide reverse osmosis systems or refuse such systems."

And then not include the last sentence because the Advisory Team feels that it's not appropriate to talk about (inaudible) issues for concentrations that are right around 3.1.

Okay. Moving on, next one is on Bates page 6-21, and that is on Finding 43. The Prosecution Team -- that's found on -- Prosecution Team's page 8, and the Advisory Team agrees with all of the recommended changes in that.

CHAIR COX: Does this have to do with the third line placement water issue -- there were appropriate changes --

MR. SMITH: Okay. The next one is found on Bates page 6-25. And it's found on the Prosecution Team's page 9 near the top. And they recommend to add to clarify that the technical information is to be provided by the USGS, which the Advisory Team agrees with that.

So that -- accept that change.

The next one is on that same page, the Prosecution Team, just down a little bit, which is actually -- and then which is on Bates page 6-26 -- this is a lot, thank you for bearing with me. Getting down there.

So it's border provision IV.e, excuse me -- or V.b. Sorry.

Did I get that wrong? No. It is IV.b. Sorry. Yes. It is IV.b. So it is at the top.

And what they suggest is at the bottom of IV.b; so before Item C, at the top, add a paragraph. And the Advisory Team recommends to add all of what is there and -- but retain the last sentence that the Prosecution Team is striking out.

But retain that. Retaining that -- not deleting that last sentence.

Okay. Two more.

Bates page 6-26, we are at provision five. I got ahead of myself.

Insert the change from V.a, which is on Bates, which is on Prosecution Team page 9 at the very bottom.

So the Advisory Team believes that it's appropriate to put -- to insert that statement of Order, 5, Roman Numeral V.a.

All right. One more.

Last one -- before I ask the parties on there, the question they may have, the last one is found on the Prosecution Team page 13, and it's Bates page -- it's Bates page 6-64. There it is. I was looking at the wrong one.

So it is in the MPR; it's making that same change. Clarifying that the technical information as provided by the USGS Advisory Team feels that that is appropriate.

So now, hopefully, that is given time for the parties to respond to your question.

CHAIR COX: So we have a question of consensus?

Did you have an opportunity to look at that section and --

MR. SULLIVAN: We've been rapidly following along. Could you --

CHAIR COX: Oh, I'm sorry.

MR. SULLIVAN: -- restate the question. I'm sorry.

MR. SMITH: Okay. So it is the Prosecution Team, page 12, and it's midway.

MR. SULLIVAN: Yes.

MR. SMITH: Down in there.

MR. SULLIVAN: Got it.

Kevin Sullivan, PG&E.

Just to confirm, in the middle of the Prosecution Team's submission, page 12, there is language struck in the quarterly samples of the paragraph dealing with quarterly sampling of all monitoring wells, et cetera. And we agree that that -- that should be struck.

MR. SMITH: So the Advisory Team recommends that that language is stricken also. So we agree. That is appropriate.

As far as which Bates page it is, I can -- I think we can turn to the MPR.

MR. SULLIVAN: 6-58.

MR. SMITH: So Bates page 6-58.

MR. SULLIVAN: The last paragraph.

MR. SMITH: Yeah. There it is.

CHAIR COX: So that concludes the recommended changes from the Advisory Team with consensus from the interested parties. So I will bring it back to the Board for questions or comments.

I'm going to start with our two engineers.

Start with you, Mr. Dyas. Do you have any questions or comments?

MR. DYAS: I don't -- I don't have any --

MS. GENERA: I'm sorry. Everyone on the dais needs to use their microphone so the court reporter can hear.

MR. SANDEL: I have no questions. I'm glad to see that the Advisory Team made the changes that they did. I was concerned about reference to well density myself. I was going to ask that that be eliminated. Since it was, I have no (inaudible).

I have one comment, which is that there has been a concern about the mapping, the new mapping, and I think we could resolve that rather easily by continuing with people way and doing the isograph as well delineated with dashed or different colored lines so we can show both on the same page but just show one of the presentation.

We expect that it will reveal some conflicts in our understanding but it will still show all the drains on this -- everybody is informed about what they are looking at, and we have an audience. Everything is looking at all these things and how vastly experienced these -- these technical presentations. I don't think anybody will be confused. But (inaudible) takes that off the table it would be (inaudible).

CHAIR COX: If I could jump here -- in here on the mapping, I did have a question on that. And I think my question would be who, from the staff, would be ones that will -- if we go with the isoconcentrations, who will be monitoring those maps on the part of the Lahontan staff?

MR. SMITH: So if the Board were to adopt this Order, then there is no longer a separation of function for this item. And so then that means that instead of currently the maps coming in solely to the Prosecution Team, they will actually come in to the staff; okay? And the benefit of that is that all of the staff have the ability to weigh in all of their expertise, and believe me, we have a lot of folks with a lot of expertise here; okay. And -- and so that is the benefit.

MS. KOUYOUMDJIAN: If I could answer that question, after the, hypothetically, Order is adopted, we are no longer separated. It would go to Mr. Monk, who is lead project manager on the Hinkley site with the assistance of Ann (inaudible) who reports to Lauri Kemper. So they will review the information --

CHAIR COX: Another question.

The isoconcentration maps seem to be more the standard for this kind of mapping, but it appears the community has a comfort level, familiarity with the way we have been mapping the (inaudible).

Is there a way to meld the two so they can see both, because what I would like with the isoconcentration maps is it shows the density of the contamination in the variation of shaded colors. So I think it would actually provide more definition for the community to see oh, over here, it's a five, over here, it's a 50, over here it's, you know, two, based upon the shade.

Could we marry those two so the community is comfortable with seeing, you know, familiar mapping techniques for incorporating the code variations with the isoconcentration?

MR. SMITH: The Advisory Team struggled with that very question, and what the Advisory Team came up with was the requirement to map the isoconcentration contour lines but also added in, which that has been in the last couple of drafts, very specific factors that must be considered.

So it is not just best professional judgment. It is a specified best professional judgment, and all the factors that must be considered when drawing the isoconcentration contour lines.

The benefits of the isoconcentration contour lines, as I pointed out in my presentation, is that it depicts accurately what concentrations are out there, regardless of the source. And it is the only method that you can use to show remediation effectiveness on one map.

As it is today, the quarterly monitoring reports that are submitted, there are five or six different maps. This is very confusing for everybody; okay? And the mapping by connecting the wells within a half mile of each other is not scientifically supported. It shows chromium in places where the scientific evidence says chromium is not.

So the Advisory Team is recommending that that also not a scientifically defensible method to use, and so came up looking at all the different viewpoints, came up with the specified best professional judgment isoconcentration contour lines.

CHAIR COX: Thank you for that. With that, we'll move on with Board comments.

Mr. Jardine?

Dr. Horne?

MS. HORNE: I have a number of questions. So get comfortable in your seats.

So Ms. Kouyoumdjian, could you describe how the dispute resolution in the proposed Order will work?

MS. KOUYOUMDJIAN: Thank you, Dr. Horne. I would be happy to.

Most of the technical justifications that we work on come out of reports or documents that are submitted for consideration. So they would come in, they would be loaded into GeoTracker for an access where an IRP

manager and Arlene (inaudible) with Lisa Dernbach be looking at that information. They would then communicate back and forth between PG&E and the IRP manager about that information and then come to some agreement.

If there is a disagreement or a dispute, they would still try to work out, and if they couldn't, sometimes they will put out a draft document as they have, as we would do for public comment to get input on that. And on some of those, it will come to me for signature after public comment or input. And as appropriate, it would go to the Board for consideration, as you heard many people say when Dr. Izbicki's information comes through that certainly an example would go to the Board for consideration.

MS. HORNE: Thank you.

Now, I have a few questions relating to the northern disputed plumes. So -- so when, in those areas in the northern -- where the northern disputed plumes are, what must -- so let's see. I guess I'm asking the question to the Advisory Team; is that (inaudible).

So can you explain what -- what the Order requires for those areas in the north where the Chromium 6 concentrations are above 10 parts per --

MR. SMITH: So let me just make sure I have your question. So you want to know what the Order requires,

what actions the Order requires for those areas that are at or above 10 parts per billion?

MS. HORNE: Those green blots on your presentation.

MR. SMITH: The green blots. So on my presentation, the vast majority of the green blots were below 3.1. -- were below 10.

MS. HORNE: Yes.

MR. SMITH: Yes. Below 10. There were a couple of little areas that didn't show up down those green blots, didn't show very well. I think I picked the wrong color. And that -- that would have been darker green. Mapping the 10 or above. And so there -- there are a couple of requirements on Bates page 6-31, in the -- there's the northern disputed plumes, and this is in the cleanup requirements, PG&E shall cleanup and abate hot spots in the northern disputed plumes area.

And then it defines what those hot spots are, which that refers to those areas, which are not very large.

MS. HORNE: So when there are hot spots that are above 10 parts per billion, then PG&E is required to clean them up; is that correct?

MR. SMITH: Yes.

MS. HORNE: So now, it also says in here that when it is found -- so when the chromium -- so if the chromium 6

is found in a well a half mile upgradient from a domestic well, if PG&E did not treat the hot spot -- and how long would it take that Chromium 6 to affect the domestic well?

MR. SMITH: So half a mile is a little more than 2600 feet. Groundwater flow velocity in that northern area is conservatively estimated at roughly two feet a day.

MS. HORNE: So that's the fastest (inaudible).

MR. SMITH: Two feet a year. Sorry. Two feet a day. A day. So then it would take three and a half years, roughly.

MS. HORNE: It would take about three and a half years to move that half mile?

MR. SMITH: Yes. But -- but roughly, but to move for chromium above a certain level, for it to move, you typically you to have a source, continued source, continued pressures on it to move. There's no dispersion. So it likely would take a lot longer.

MS. HORNE: So given that if it's above 10 parts per billion, PG&E has to clean up that hot spot. It's how -- is there enough safety margin in there -- is it -- is it probable that PG&E would be able to clean up the hot spot and protect that domestic well within that 3.6 years that it would take?

MR. SMITH: According to the requirements that have

been in the proposed Order, it is highly likely that that would be clean up before the three and a half years.

MS. HORNE: Are there enough monitoring wells upgradient of every domestic well in the northern area so that any risk to a domestic well would be identified?

MR. SMITH: There is one area in the north that the Order has identified, and it's on the northern -- on the -- it's in the northern area, not in the -- in the lower northern area, but in the upper northern area on the western side. There is a domestic well where there is insufficient resolution at the Order, already pointed out -- and give me a minute. I can tell you exactly where that requirement is in here.

That requires additional information. It's on Bates page 6-25. It is Order Roman Numeral 4-A2.

MS. HORNE: So how is that going to be fixed, the lack of sufficient resolution in that area?

MR. SMITH: So then further down on the page, on the page 6-25, there's item B. So it's 4-B, and then it lists the actions that are requiring PG&E to submit a work plan for that area.

MS. HORNE: Thank you. That helps.

So in one of the comment letters we received, it was asked -- the question of the need for a half mile buffer around the PG&E plume was raised. So why don't we

require a half mile buffer around the PG&E --

MS. NIEMEYER: Well, I think, in part, there was no purpose for the buffer, but there are sufficient monitoring wells. In the past, the buffer, when there wasn't sufficient monitoring wells, provided information and also was used in part to look at who was getting buyout for their houses and replacement water, but it doesn't have that same purpose now. It's not providing protection for -- for the public, for the drinking water. And it's not being used to monitor its replacement water. So it doesn't have any purpose.

MS. HORNE: Thank you.

A number of -- I will just make a comment and then I have a few more questions.

But a number of Hinkley residents have asked that we continue to provide full house replacement water. And I went and read the -- under page -- it is very well documented that we had -- there's a link on our website, and they did a very thorough study.

And I mean, I know in -- back in 1987, when this plume was first discovered, the concern was about breathing in the -- breathing in the spray irrigation from agriculture, but the study that was just done within the last two or three years, or whenever the public health goal came out, reviewed all the recent data and they -- it

convinced me that really the main risk is through ingestion and that they said when people take showers they don't ingest enough water for it to be a risk, and swamp coolers, they also dismissed that as being, they said that wasn't an issue either. So I hope everybody -- I hope other people take advantage of the information that is on the public website because it's very informative, and I think it might allay some concerns.

More questions about the plume map, of course. So in this Order, we are asking the isoconcentration lines to be drawn at be drawn at 3.1 parts per billion; is that correct? I mean, some of the people and the public have said we're not doing 3.1, but my understanding was we are doing 3.1; isn't that right?

MR. SMITH: Yes. The requirement would be to map 3.1 for Chromium 6, 3.2 for total chromium, and then there is other ones the concentrations increase and that the --

MS. HORNE: So why would it be arbitrary and capricious to require PG&E to draw the plume map by connecting the wellheads?

It's probably a question for Kim.

MS. NIEMEYER: When something is considered arbitrary and capricious, that there's no basis for it, in fact, or law, and we don't have any -- the number 2600 connecting those wells that are above or within that distance,

there's nothing magic about that number. It could have been another number. There's nothing about that number that is protective of public health. So it's -- it's a number that was basically arbitrarily picked without having any sort of real basis in science or law, or even looking at what other agencies do or looking at the industry standard. So that's why we -- we consider it arbitrary and capricious.

MS. HORNE: So why is arbi- -- so why is having an Order that might be considered arbitrary and capricious not in the best interest of the Hinkley community?

MS. NIEMEYER: Well, I guess a couple reasons. One is that it makes the Order susceptible to legal challenge, and I think at this point having an Order that is able to move forward and get a lot of the cleanup done is in everybody's best interest. But I think it is also perhaps not in the best interest of the community because it's not really showing all of the things that I think Doug emphasized, such as how the radiation is doing. It's, I think, giving a false sense of insecurity I when it shows that there is chromium in areas that potentially or likely there is not.

MS. HORNE: And, once again, I don't know if this might be for either Doug or Rich, how are they drawing the plumes at Topock, the PG&E Chromium 6 plume at Topock

that's being managed? The cleanup is being managed by EPA; correct?

MR. BOOTH: PG&E is the (inaudible) agency for cleanup. Topock, is my understanding, through a brief injection on Topock (inaudible) the maps that they had on their website indicated that they are mapping 32 part billion isoconcentration (inaudible).

There was not -- that's all that was called. The isoconcentration line (inaudible). Understand more the (inaudible) as to resource, but as far as mapping showing where the Chromium 6 was, it was -- the map was isoconcentration.

Since it's mapped at 32 parts per billion, one may argue that is a definitive plume and has, you know, a source, but again, as a map, contouring, that's all they called it, isoconcentration.

MS. HORNE: And that technique of drawing plumes according to isoconcentration lines isn't really standard method of drawing plumes?

MR. BOOTH: It is a standard method of drawing plumes, and it is particularly standard when you are dealing with landfills and waste line releases under our land disposal program, because releases from landfill tend to be naturally occurring compounds, just like Chrome 6 is. So there is a very strong precedent for mapping

isoconcentration lines from the other suspected release from landfill, something like PDS or chloride, something that is naturally occurring. So that's quite a bit (inaudible) for that.

MS. HORNE: Believe it or not, I think we got through all my questions.

CHAIR COX: Last but not least, we'll go to Mr. Pumphrey.

MR. PUMPHREY: I hope it will be -- I'm not sure that I understand the answer to Chairman Cox's question, and was it the question asked by Mr. Sandel?

I think that the Chairperson asked could you create a map that showed both of the recommended methodologies. The question wasn't which one do you think is better. We know the answer to that already.

The question is could you do it, and that is sort of my question as well. How burdensome would it be, and let me back up.

And, say, one of the reasons I'm asking this question is that I was very impressed by the presentation from the IRP because it made an incredible amount of sense to me on a variety of levels. And one of the things that made sense to me was that it seemed to it add, not adequately, more than adequately capture the notion that this is a process, not a check off of a box on your bucket

list and walk away from an action.

And so he talks, in one of his slides, about trending from one way of depicting things or making decisions to another based on the results of looking at the second way. So, in my mind, that tells me maybe you could start by creating a map that showed both the method that is being used now and the method used in the concentration contours so that people could get used to the idea of looking at the map that is based on a concentration and contours, see whether or not that in fact as predicted shows the same kind of information it has is coming toward now and make a transition.

I think a lot of the things that we could have talked about and have talked about in watching some more of this kind of collaborative, you have a good idea, let's see if we can incorporate it process, has been let's see, let's start this, let's see how it tracks, let's see if it does what we are hoping that it does, and it fills our needs, and I'm just wondering if we can't look at this mapping in that fashion.

MR. SMITH: So thank you, Mr. Pumphrey, and I think I didn't answer the previous questions because I obviously misunderstood them.

So -- so now after you restated it, and I talked to my fellow technical advisor, I think that both maps

could be done, and they could either be done on one map or you could have two maps, can have a compliance map of the isoconcentration contour lines as proposed and could show -- could also require the other map to show how it's been in the past, exactly how -- how you stated that, and -- and then that could show the differences in those mapping methods.

MR. PUMPHREY: If any.

MR. SMITH: If any. Well, there will be some. As I pointed out, there will be some small differences.

CHAIR COX: I would, for one, would certainly appreciate that. The community has aimed a level of comfort from looking at these -- these maps over time, but I also think we should gravitate to the scientific norm of the isoconcentration. So if we could write into the Order that both types of maps will be produced in the future, whether they are two separate or an overlay of each, but just so the community can continue to see what they have seen for years, but yet, we can insert that, you know, degree of scientific standard into the mapping as well.

MS. HORNE: Could I modify that to suggest that we propose the two-mapping methods be done for four quarters and then we revisit and work Orders let people in the community look at how the maps are different, and I just -- or eight quarters. I don't know. I mean, some --

some limit to not have two maps, two ways, methods of reducing the map go on for 20 years.

MS. NIEMEYER: I would personally like to hear from PG&E, their input on that, because, as I said, I do think that this is an arbitrary and capricious requirement that I think does make us legally susceptible. So as PG&E is willing to buy in, that would make at least me more comfortable in terms of that recommendation.

CHAIR COX: Let me turn it over to PG&E and see if you have agreement on that point.

MR. SULLIVAN: Kevin Sullivan, PG&E.

Could I ask that Doug's pictures of the map depictions be shown, because I feel, in some ways, we are talking past the point.

During Mr. Smith's presentation, I thought he was very clear and I personally, based on my knowledge of the data, was agreeing, but the way he phrased this was under the old requirements, which I believe he (inaudible) plume and the like, you get PG&E's interpretation on the right.

The new requirement as proposed by the Advisory Team talks about an isoconcentration contour; okay? That, I would suggest, is neutral as to source. It is simply a depiction I believe that is the intent. I believe his words were the Advisory Team's expectation would be to get

something like what showed up in the middle box there, and I agree that if that Order is issued as the Advisory Team wrote it that it would not be arbitrary and capricious and that we would produce a map that looked a lot like that one in the center.

So to the extent we are talking past each other that PG&E is not going to show stuff in the north, I would like to put that to bed, because I agree with Mr. Smith's interpretation that the wording, as written, an isoconcentration contour of 3.1 would generate something that looks a lot like that in the middle.

If you go to the next slide, or I could go to the next slide, in, you know, full disclosure, we may have a discussion about this, and I frankly think that would be a healthy one, you know, around this situation, where the current rules for (inaudible) depiction like this that I think very reasonable people could say probably looks something more like that, and I, for one, would not be -- I would welcome those kind of discussions under what does the isoconcentration contour data say. It is neutral as to source. That is an important thing until we get Dr. Izbicki's work, but I bet it would still depict that, and I think give a lot of comfort to folks that you can still see what is out there. You can still see what is above 3.1 and what is below 3.1. I think that's the distinction

that perhaps is getting lost.

So, again, I will use Mr. Smith's words. The Advisory Team's expectation would be that those words would yield a map like that and I, again, based on what my knowledge is, I would agree. We would produce something like that. And we may have a discussion, and I would think that would be legitimate as to the effect of the purple triangles or whatnot, but -- but it's not going to be something that is a la PG&E's interpretation. It is slightly different, but I think a very important question that gets the data out there, gets the information out there, and avoids that allocation of what it is or wasn't, as Dr. Izbicki said. So I it's scientifically --

CHAIR COX: If I could, what I believe we are asking you to do is do the isoconcentrations, but also continue with a separate map that gives the community something that they are used to looking at while we show them both maps for the four quarters that Dr. Horne recommended, and that would be the one in the upper left-hand corner as well as the map in the center (inaudible).

Would PG&E agree to continue with those mapping because it is the one in the upper left-hand corner that counsel is describing is capricious and arbitrary. And that's where we are looking for agreement with you on.

MR. SULLIVAN: And I -- and I -- I guess I would have

to agree with your Advisory Team that I think that drives a decision that is not scientifically defensible. Again, if -- and I think that is the issue that we are trying to cut through.

CHAIR COX: We are asking for your indulgence for fourth quarters to continue the mapping the way it has been done. Are you in agreement with doing that?

MR. SULLIVAN: If that is what the Order says, I will try to comply.

MS. NIEMEYER: And just to clarify what slides we are referring to, these are from the Advisory Team's slides. This is slide No. 14? (Inaudible) what number slide --

MR. SMITH: No, that is not. That is slide No. 17.

MS. NIEMEYER: Seventeen. You know, we do have the opportunity also, if -- what the Board would like to do, is to require the previous mapping. We may get a challenge. If it's for four quarters, it's likely that that petition could be put into abeyance, and if there was an issue, then it could be taken out of abeyance. So there, you know, there are ways to work with the petition process. I would assume that we would get a petition, but it could be that it would be PG&E would put that into abeyance as we saw how this worked out.

I don't know if they are willing to agree to that or not, and I wouldn't put them on the spot to do

that now, but just so, you know, that is something that has happened in the past, and four quarters also is a pretty short time period and it may not come up before that.

Yes, Dr. Horne.

MS. HORNE: I -- I think I want to withdraw my proposal to (inaudible).

UNIDENTIFIED SPEAKER: Somebody need needs to turn off their microphone.

MS. HORNE: I am satisfied with these maps that, if we draw -- if we require PG&E to draw maps according to the isoconcentration lines, they are going to look substantially similar to the maps we have been seeing -- we have grown accustomed to seeing. And I am concerned that if we also require them to produce maps that are not supported by the science and are not supported by the law that we are exposing ourselves to litigation or (inaudible) and that only slows the process down, and I would prefer that we go forward.

CHAIR COX: We have had some great discussion tonight. If we are at a point where a motion is in Order (inaudible).

MR. SANDEL: I move to (inaudible) recommendation (inaudible).

UNIDENTIFIED SPEAKER: I'm sorry.

MR. SANDEL: I will move the staff recommendation (inaudible) myriad of changes.

UNIDENTIFIED SPEAKER: I would second that motion.

CHAIR COX: But just to clarify, those late changes were --

UNIDENTIFIED SPEAKER: No, no. Don't.

MS. NIEMEYER: I'm not going to go through all the details, but it's this pink sheet which included deletion of with substantial certainty, and then we also had the changes that Doug went through, and there were it 12 of them.

MR. SMITH: Yes.

CHAIR COX: With that, I will turn it over to the Board further.

MS. GENERA: I'm going to do a full role. I'm sorry. Keith Dyas.

MR. DYAS: Yes.

MS. GENERA: Dr. Amy Horne?

MS. HORNE: Yes.

MS. GENERA: Dr. -- Don Jardine?

MR. JARDINE: Yes.

MS. GENERA: Peter Pumphrey?

MR. PUMPHREY: Yes.

MS. GENERA: Eric Sandel?

MR. SANDEL: Yes.

MS. GENERA: Kimberly Cox?

CHAIR COX: Yes.

MS. GENERA: It's unanimous.

CHAIR COX: Dr. Horne, I believe you wanted to make some wrap-up comments on this item.

DR. HORNE: If you all will indulge me a few minutes more. A lot of you don't know this about me, but a few years ago I wrote a book about economic development in world communities, and I covered a lot of the usual subjects, jobs, healthcare, housing and education. The purpose about thinking about all these factors was to develop a framework for healthy world communities. And when I came to the end of writing this book, I came to the conclusion that the very most important thing about communities to be healthy in the long run was the people in those communities. A community is not a collection of buildings, it is not a bunch of jobs. A community is a place where adults volunteer to coach softball teams, a community is a place where people bring food to those who are housebound. A community is a place where people get together as a group and face and solve their challenges together.

But when I was writing this book, I was thinking about how a community would heal from something like a major employer going bankrupt or a general economic

recession. If you were to analogize it to a human body, it was how would a person recover from a broken leg. I never thought about a community like Hinkley which has -- which just, for the record, one month from this coming Saturday on December 7th, it will be 28 years since Lahontan became aware that PG&E had polluted the groundwater with Chromium 6 -- 28 years.

That is hard to get my brain around. And it's -- so this is -- this is the kind of stress, this is not like a broken leg, this is more like cancer. So for those of you in the Hinkley community who stay here, you show remarkable courage and fortitude.

So the best I can figure, before the Chromium 6 pollution was discovered, Hinkley numbered about 8,000 souls. The town had an elementary school, of which it was justifiably proud. It had a store, a post office, and a gas station. Today, Hinkley has only about a thousand people, one-eighth -- it's one-eighth the size it was 28 years ago. The school has closed, it has no store and no gas station. Hundreds of homes have been wiped off the face of the earth.

Where families once lived it, now PG&E owns land and PG&E also owns a lot of water rights. I am sure there are many other changes, significant changes, that I'm not aware of. A lot has happened in the intervening 28 years.

Many people bear many scars.

The movie had -- it was both a plus and a minus. On the one hand, it focused attention and resources on the problem. But it also had a downside because it caused a kind of hysteria about Chromium 6, and it also, unfortunately, portrayed PG&E as the epitome of corporate evil. And that has made it hard for people to assess PG&E's behavior rationally.

In addition, over 28 years, the plume has spread. We learned the original background report was flawed. The people of Hinkley have suffered all kinds of hardships, health, financial, and loss of their community. But we have also made a lot of progress.

The most important thing today, as Dr. Webster pointed out several times, is that no one in Hinkley today is drinking water with chromium concentrations above the maximum contaminant level. A lot of people have worked very hard to find a solution.

The environmental impact report was a significant body of work. The independent technical review of that EIR agreed with the general cleanup technologies that PG&E proposed to use and suggested refinements that improved the clean-up strategy.

PG&E -- PG&E has spent a lot of money in Hinkley on clean-up activities, on studies, on lawsuits and a

$3.6 million penalty. I have no idea how much money PG&E has spent here.

California has adopted a maximum contaminant level for Chromium 6, which gave Lahontan more power to protect the drinking water here. We had appearing on our scene Dr. Ian Webster and the rest of his project navigator staff, who have done a great deal to help Hinkley residents understand all the technical gobbledygook, and Dr. Izbicki is also a wealth of addition to the scene, conducting a study that will help resolve disputes over where Chromium 6 in the water came from and what may not be the result of PG&E's activities.

The staff began working on this cleanup and abatement Order over a year ago. We have held several workshops. The Board has received hundreds of pages of comments and listened to hours of debate on many issues. We have thought deeply about all that we have read and heard, and I believe we have tried to devise a cleanup and abatement Order that is in the best interest of the community.

By adopting this cleanup and abatement Order, we are at a significant turning point. For the first time in 28 years, a comprehensive cleanup Order is in place, and now PG&E is responsible to do the work and now Lahontan is responsible for ensuring PG&E does the work.

What we know about the plume will change as it gets cleaned up, as technology improves, and as we learn more from studies such as Dr. Izbicki's.

Today, my hope is that we start to write a new story for Hinkley. Up to this point, we have all had our particular roles to play. But now, the success of this Order depends on whether we all pull together to help Hinkley heal. This calls for each one of us, each one of us to think about what we can do to promote that healing. It might involve examining assumptions about what you think is true. It might involve being willing to let go of old baggage. It might involve giving other people the benefit of the doubt, and it might involve being careful about what we say about each other.

In my opinion, PG&E owes Hinkley more than (inaudible) chromium. It also needs to help the people of Hinkley rebuild their community. Of course, Lahontan has no authority to tell PG&E what to do other than to clean up the pollution. But in my opinion, PG&E must consider more than its shareholders and the corporate bottom line when it decides what to do with all the land and the water rights it acquired here. It must consider the welfare of Hinkley residents too.

But one of the things the rest of us can do is allow PG&E to take off the black hat. Hinkley will not be

healed until PG&E is once again viewed as a positive member of the community, a good neighbor, and a good source of jobs. This will take time, of course, to rebuilds the trust in PG&E. But that is something to work toward to. The choice PG&E makes over the next few years will affect how quickly that goal is reached.

In law school, you learn about theories of justice. The purpose of -- I can never say this word -- retributive justice is to publish the offender. That is putting people in jail. That is what retributive is.

The purpose of procedural justice is to treat affected parties fairly. The purpose of distributive justice to allocate resources fairly, and the purpose of restorative justice is to repair relationships and undo the harm.

When I look at the history of Hinkley over the last 28 years, I can easily point to examples of retributive, procedural, and distributive justice. Maybe not going exactly the way we want, but I can point to examples of those things.

I have a harder time seeing examples of restorative justice, and going forward my hope is that we can all focus more on restorative justice. How do we heal the harm that has been done here? How do we mend the frayed relationships and rebuild trust? Now is the time

to let the healing work begin.

CHAIR COX: Thank you for sharing those thoughts.

Are there any members of the Board that have anything else you want to add?

With that, we are on Item 7, public forum.

Sue, do we have any public speaker cards?

MS. GENERA: No.

CHAIR COX: Okay. With that, we will adjourn until tomorrow morning in these chambers at 8:30.

(HEARING CONCLUDED AT 10:30 P.M.)

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STATE OF CALIFORNIA)
) ss.
COUNTY OF LOS ANGELES)

I, PAMELA STEELE, DIGITAL REPORTER AND NOTARY PUBLIC, do hereby certify:

That the foregoing meeting of the Lahontan Regional Board Public Meeting was taken before me at the time and place therein set forth and was taken down by me in electronic reporting method and transcribed into computer-generated text under my direction and supervision; and I hereby certify the foregoing transcript of my shorthand notes so taken.

I further certify that I am neither counsel for nor related to any party to said meeting nor in any way interested in the outcome thereof.

IN WITNESS WHEREOF, I have hereunto subscribed my name this 17th day of November, 2015.

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PAMELA STEELE
DIGITAL REPORTER
NOTARY PUBLIC

WORD INDEX