## OF THE STATE OF CALIFORNIA

ADMINISTRATIVE LAW JUDGE MARIBETH A. BUSHEY, presiding

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

EVIDENTIARY HEARING

Rulemaking 11-02-019

REPORTER'S TRANSCRIPT San Francisco, California November 20, 2013 Pages 2709 - 2981 Volume - 18

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SAN FRANCISCO, CALIFORNIA

NOVEMBER 20, 2013 - 9:05 A.M.

ADMINISTRATIVE LAW JUDGE BUSHEY: The Commission will come to order.

This is the time and place set for the evidentiary hearing in Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Transmission and Distribution Pipelines and Related Ratemaking Mechanisms. This is Rulemaking 11-02-019.

Good morning. I'm Administrative
Law Judge Maribeth Bushey, the assigned
administrative law judge to this proceeding.
I am expecting the assigned commissioner
Commissioner Florio for part of the hearing
today. He will be in and out. He had some
unavoidable conflicts.

We will begin today with a summary from the parties regarding a workshop that was held yesterday. I'd like to hear what issues were resolved in the workshop and more importantly what issues remain to be resolved today in the cross-examination.

Shall we begin, I guess with the parties as opposed to the Applicant PG&E, or Mr. Malkin, would you like to begin with a

1 status report? 2 MR. MALKIN: We're happy to have Mr. 3 Singh do that. As you know, I was not there. 4 ALJ BUSHEY: That's right. 5 MR. MALKIN: But Mr. Singh was. And we also at least believe that the minutes that 6 we circulated last night are an accurate reflection of what occurred. And I guess 8 9 we'll hear from the parties whether there's 10 any disagreement about that. But I would 11 suggest we begin with Mr. Singh giving an 12 oral report. 13 ALJ BUSHEY: Okav. 14 MS. PAULL: ORA does not find the 15 minutes completely accurate, and Mr. Roberts 16 can explain how. Mr. Roberts can --17 ALJ BUSHEY: All right. The minutes 18 are not in the record. So let's start with 19 Mr. Singh's explanation of what he thought 20 happened yesterday, and then to the extent 21 the other parties disagree with his 22 explanation, we can then address those 23 disagreements. So Mr. Singh, do you want to just 24 25 come forward to the counsel table here so 26 that you can be heard. 27 MR. SINGH: Good morning, your Honor.

Good morning all. In terms of the workshop

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yesterday, there were two main objectives of the workshop that we covered. The first objective was to provide additional explanation of the RCP hydrotest report results. And the second was provide assurance that the entire length of Line 147 including all the shorts operating at or above 20 percent SMYS were tested.

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We had Mr. Larry Decker, who is the executive engineer from RCP, on the call the first two to two and a half hours. Mr. Decker walked the parties through specifically Test 43 B, which was subject to questioning the day before as part of our hearing process. The questions that he addressed and specifically discussed was why the actual pressure volume plot deviated from the predicted curve. He also talked about why there was a jig in the line at about 600 pounds of pressure. He explained that to all the parties. His discussion is accurately summarized from my perspective in the minutes that were sent out yesterday.

Mr. Decker also apologized on behalf of RCP regarding the data errors that were included which led to quite a bit of confusion in the hearing room the day before. He also confirmed that that error and that

section of the report was irrelevant when it came to establishing the MAOP of the line, given that there was no yielding as a result of that specific hydrotest that was performed.

The next objective that was discussed was did we strength test all of Line 147 and the shorts operating at or above 20 percent SMYS. We had PG&E's engineering team walk the parties through an in-depth review of the shorts, the pipeline features list for the main line and the shorts, the strength test pressure reports, all associated as-built drawings.

And at the conclusion of the review we, specifically, myself, Mr. Johnson, asked Mr. Roberts from ORA if we had confirmed that PG&E demonstrated that all of Line 147 including all the shorts operating at or above 20 percent SMYS have been strength tested. And his response was affirmative.

MS. PAULL: And Mr. Roberts will need to respond to that, have an opportunity to respond to that.

ALJ BUSHEY: Ms. Paull, I would be pleased to call on him in turn. Is it okay if I run the sequence of events here.

Thank you, Mr. Singh. We'll next

hear from ORA.

MR. ROBERTS: So I do believe that the minutes are -- pretty such describe what happened. And I would say that with regard to the RCP report I think through the course of the meeting we determined or we agreed that those curves do not show yielding. So they -- so we don't have a concern. We still have a concern with the fact that it took three revisions of that report to get it right. So we still have a recordkeeping issue on that. But from a safe operation of the line, I think ORA was convinced that we don't have an issue based on the PV curves.

The second issue about the completeness of the testing. I think the notes are very close to fully accurate. I think there's a little bit of a semantical difference in that we were taken through a guided tour of the main line drawing by drawing tied back to the PFLs. So we did look at everything that happened on the main line. And so I can say that I verified -- I feel confident that the main line has been fully tested.

With regard to the shorts, we looked in detail at two shorts, and I was taken through that and convinced that those shorts,

two shorts had been tested. Based on the course of actions during the day, I believe that PG&E has tested all the line including the shorts. I have not tested whether the 20 percent SMYS limitation on shorts that were not tested is applicable, but I trust that that -- I don't doubt that that's consistent with the record, but I have not verified that.

move forward with the assumption that the line has been hydrotested to support the 400 psi MAOP that the reports strove to provide. We do still have an issue with the recordkeeping in that my testimony raised inconsistencies within the STPR reports. Those inconsistencies are still there such that if somebody wanted to go back and do the same analysis I did, they would run into the same road blocks unless they sat down with PG&E or had access to all of PG&E's records with some guidance to truly show that. So.

ALJ BUSHEY: So in summary.

MR. ROBERTS: In summary, we're comfortable saying that the MAOP of test is as PG&E has stated, and we're comfortable going with that. The issues of recordkeeping are still open. We didn't try to address

1 those yesterday.

ALJ BUSHEY: Right. The broader issues of recordkeeping are within sort of the substantive component of the Order to Show Cause. Our focus here immediately is Line 147.

MR. ROBERTS: Correct.

ALJ BUSHEY: As I understand your presentation, all of the issues that you have been -- that the Office of Ratepayer Advocates has raised regarding the safe operation of Line 147 have been addressed, and there are no outstanding issues related to the safe operation of that line.

MR. ROBERTS: That is not correct.

ALJ BUSHEY: Okay. Please tell me what issues remain.

MR. ROBERTS: So all we looked at yesterday was hydrotest reports, the hydrotesting of the line. So to the degree that we were able to look at the documents and confirm that the line had been hydrotested, I can say that I believe the line has been hydrotested to the pressure that PG&E has stated. And so the MAOP of test is as they've stated.

What we did not discuss yesterday was what the quality control should have

1 been, what the records that were provided to 2 DRA, how well they support that assertion. And also there's also we have an issue of 3 4 what the other components of determining the MAOP would be, so for example, the MAOP of 5 design. We still have open issues with 6 regard to that that get into interpretation 8 of the federal regulations, which we agreed 9 in the meeting yesterday we couldn't go there 10 in the time we had. 11 And so we focused on the thing we 12 could do, and we did accomplish that goal, 13 but there's still an open issue about how you 14 interpret what's the safe and correct MAOP 15 for that line. And it's a legal 16 interpretation issue of the federal code 17 primarily. 18 ALJ BUSHEY: And this -- okay. 19 try and put parameters around what -- where 20 we are. PG&E put forward their hydrotest 21 results as their demonstration of the safety 22 of the line. 23 You have no objection to their 24 hydrotest results, correct? 25 MR. ROBERTS: That's correct. 26 ALJ BUSHEY: So their evidentiary 27 presentation has been made and you do not 28 dispute, correct?

MR. ROBERTS: They have made statements 1 2 in the hearings about how one would establish the MAOP that suggests the MAOP only -- can 3 4 be established based only on a hydrotest, and ORA does agrees with that point. 5 6 ALJ BUSHEY: Right. But I'm just focusing on the hydrotest. 8 MR. ROBERTS: So when you say 9 hydrotest, we resolved that yesterday. 10 ALJ BUSHEY: Okay, that's resolved. 11 MR. ROBERTS: Yes. 12 ALJ BUSHEY: Okay. So now, there's 13 this legal issue regarding the interpretation 14 of the code. 15 MR. ROBERTS: Correct. 16 ALJ BUSHEY: And tell me exactly what 17 that legal issue is. 18 MR. ROBERTS: Should I try? 19 MS. PAULL: Either way. If you would 20 like to. 21 MR. ROBERTS: I think where -- there 22 are two legal issues. One is with regard to 23 the SMYS you would apply to an unknown piece 24 of pipe. That's code section 192.107. 25 The more fundamental issue --26 ALJ BUSHEY: Back up. SMYS to an 27 unknown, that goes back to their -- forgotten 28 the name of it.

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1	MR. ROBERTS: PRUPF.
2	ALJ BUSHEY: Procedure for unknown
3	MR. MALKIN: Procedure for Resolving
4	Unknown Features Pipeline Features.
5	MS. PAULL: Pipeline Features.
6	MR. MALKIN: PRUPF as it is.
7	ALJ BUSHEY: And PRUPF was part of the
8	PSEP, not to speak in complete acronyms, but
9	that was part of the plan put forward two
10	years ago.
11	MR. MALKIN: Correct.
12	ALJ BUSHEY: And approved by the
13	Commission last year; correct?
14	MR. MALKIN: Yes. It was actually
15	I believe approved by the Commission. Not
16	the specific document but the concept was
17	approved twice, once in the decision that set
18	off the formal PSEPs. That decision also
19	approved PG&E's proposed methodology for
20	doing the MAOP validation. I
21	ALJ BUSHEY: And then the general
22	concept sort of on a conceptual level.
23	MR. MALKIN: Right.
24	ALJ BUSHEY: Then it was brought down
25	to the detail level as part of the specific
26	PSEP plan.
27	MR. MALKIN: Correct.
28	ALJ BUSHEY: Okay.

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MR. ROBERTS: I don't know that I agree 1 2 with that. The Ordering Paragraph 4 of 3 the decision said generically you can use 4 engineering assumptions on an interim basis. That's just a paraphrasing. 5 ALJ BUSHEY: I'm familiar with the 6 7 language, Mr. Roberts. MR. ROBERTS: What's that? 8 9 ALJ BUSHEY: I'm familiar with the 10 language. 11 MR. ROBERTS: Okay. What -- and I know 12 that the PRUPF was provided in the update 13 application and it's provided as 14 nonconfidential in that particular case. 15 I don't recall that the full PRUPF was 16 provided with the original PSEP application. 17 And certainly, the one that they're putting 18 forward in response to discovery now is 19 a different document than what they could 20 have possibly used for the PSEP, the original 21 PSEP filing. 22 ALJ BUSHEY: Why would it have to be --23 they had to have some sort of a protocol for 24 dealing with the unknowns. Two years ago, 25 they had to start --26 MR. ROBERTS: Correct. 2.7 ALJ BUSHEY: -- with something. 28 MR. ROBERTS: Yes.

There had to have been 1 ALJ BUSHEY: 2 some sort of a protocol. Has it been 3 updated, is that what happened? 4 MR. ROBERTS: Yes. 5 MR. MALKIN: The testimony on 6 September 6 was that it was constantly being 7 updated and improved. 8 ALJ BUSHEY: Okay. So this approach to 9 the unknowns has been approved at least twice 10 by the Commission. And sounds like it's up 11 again and the new details are up again in 12 the update proceeding. 13 MR. ROBERTS: Correct. 14 ALJ BUSHEY: So that issue has either 15 been resolved by the Commission or is before 16 the Commission in the update application. 17 MR. ROBERTS: Could we have a moment, 18 your Honor? 19 ALJ BUSHEY: Sure. We'll be off the 20 record. 21 (Off the record) 22 ALJ BUSHEY: We'll be back on 23 the record. Mr. Roberts. 24 25 MR. ROBERTS: I think what I'm trying 26 to characterize is that when we look at 27 the MAOP of the line using the design MAOP, 28 that use of the PRUPF entails more risk than

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determining that number using the federal 1 2 minimum standard value. So that is the point I'm trying to make and that DRA -- that ORA 3 has a concern about it as it's related to 4 the -- you can't say that one is safe and one 5 6 is not. It's more a question of which has greater risk. And so by using the federal minimum 8 9 standard, there is less risk to the people in San Carlos than if the PRUPF number was used. 10 11 So from our standpoint, every time 12 PG&E says we're using very conservative 13 values, it's difficult to hear that language 14 when the number they're using results in 15 a less conservative outcome than if 16 the federal minimum standard was applied. 17 ALJ BUSHEY: But this isn't anything 18 that's particular to Line 147. 19 MR. ROBERTS: It is an overarching 20 issue that does apply to 147. 21 ALJ BUSHEY: It applies to all 22 the lines that are contested pursuant to 23 the PSEP. 24 I've forgotten even what that 25 stands for. 26 MR. MALKIN: Pipeline Safety 2.7 Enhancement Plan. 28 ALJ BUSHEY: Pipeline Safety

1 | Enhancement Plan.

Everything that's been tested pursuant to the Pipeline Safety Enhancement Plan has been tested in accord with that protocol for unknowns.

MR. ROBERTS: No. This -- so maybe it will help if I mention the second legal argument.

ALJ BUSHEY: Okay.

MR. ROBERTS: Because I think that makes it a little more clear.

What we've heard, it seems to be that the perception at PG&E is that we can establish an MAOP based solely on a hydrotest outcome and that the design MAOP as provided in section 192.619 is in some way irrelevant.

So that's probably the base issue. When you -- if one assumes that per the federal regulation the design MAOP does matter, then this assumes SMYS value comes into play because that determines the design MAOP.

So it starts with, does 192.619 apply to all pipe in Line 147 or not? And then if it does, how do we assign numbers for unknown pieces of pipe or pipe with very limited information that we now know to be in the ground.

ALJ BUSHEY: But again both of these apply to the entire enhancement plan effort. This is not -- there's nothing specific to Line 147. So if this one's flawed, then all the rest of them are flawed; right?

MR. ROBERTS: Well, my understanding is our primary objective in this hearing is to come out with what the safe MAOP for that line is. Is that -- I believe I understood that correctly. That when we're finished with our hearing we can say yes, the 330 is safe or no, it is not.

And so to do that, we have to have determined does the design MAOP apply or not. And if it does, is it correct to use PG&E's PRUPF value of 33,000 psi as SMYS or is it more correct to establish a design MAOP which will drive the MAOP of the line based on the federal minimum SMYS of 24,000 psi.

ALJ BUSHEY: All right. Well, I have said enough on -- let's go back.

Mr. Malkin, what's your position on this?

MR. MALKIN: Well, your Honor, the Commission's PSEP decision, first one that your Honor authored, did away with grandfathering in the following respect.

Under 619(c), the MAOP of Line 147 and all of

the other pre-1970 pipelines was established based on the five-year high operating pressure from 1965 to 1970. And what the Commission said was in the absence of a hydrotest on those grandfathered lines, we're doing away with grandfathering, you cannot rely simply on that historical operating issue; you either have to go out and validate it through hydrotesting or replace that pipe.

So the whole purpose of the exercise has been to conduct hydrotests under modern subpart J standards with an added spike test on the segments of high consequence area pipe that had their MAOPs established solely under the grandfather clause with no hydrotest.

The Commission could have in that decision but did not say that we're changing the rules. We're not only saying you can't establish -- rely solely on the historic operating pressure, but you can't use that at all. You have to go back and apply 619(a) as if there were a brand new pipeline. And contrary to the way GO 112 has always been written and federal regulations were always written, you now have to retroactively apply those design factors including the section

that Mr. Roberts has referred to, section 192.107 which the code says were not retroactive. PHMSA specifically said it was not retroactive. The Commission specifically said was not retroactive. And the Commission has never changed that. What the Commission did change was to say you can't rely solely on historic operating pressure.

PG&E, as you've heard, has gone a step further with respect to Line 147, and to Mr. Roberts' point, in fact is making that line operate more conservatively than this Commission's decision allows. Because you heard from Mr. Rosenfeld, the hydrotest in fact validates safe operation at the historic 400 psig.

PG&E isn't asking for 400 psig.

PG&E has conservatively applied the design formula and come up with an MAOP of 330 that it's asking for.

ALJ BUSHEY: Whose design formula?

MR. MALKIN: It is the design formula set forth in the federal code, the part that wasn't retroactively applied. PG&E has retroactively applied. But pursuant to the proposal it made to the Commission, that the Commission has looked at twice, instead of arbitrarily picking a 24,000 psig value

1 for those pipe features as to which it does 2 not have complete verifiable and traceable records, what PG&E has done is where it has, 3 4 for example, with AO Smith pipe, complete traceable, verifiable historical purchasing 5 6 records that established that PG&E purchased AO Smith pipe to different pipe 8 specifications, the least of which was 33,000 9 psi, others of which are 35,000, 42,000. 10 So PG&E, where it doesn't have 11 a complete verifiable, traceable record for 12 specific AO Smith pipe conservatively assumes 13 pursuant to the guidance of the June 2011 14 decision conservatively assumes the least 15 value of 33,000. 16 ALJ BUSHEY: Now Mr. Malkin, that 17 pipeline because of the leak, a portion was 18 removed and tested. Do we have an actual 19 number for that, for the tested pipeline so 20 we know what was really there? 21 MR. MALKIN: The piece that was cut 22 out? 23 ALJ BUSHEY: Yes. 24 MR. MALKIN: Where the leak was? 25 ALJ BUSHEY: Right. 26 MR. MALKIN: We know several things. 27 And this was in the Anamet materials. 28 We know it is AO Smith pipe. 1

We know that when it was laboratory tested, the actual yield strength was over 39,000 PSI. And we know that the yield strength of the weld was over 40,000 PSI, which as Mr. Singh said on Monday, if you -- if you relied solely on that test result, you would say a joint efficiency factor of 1 is justified because the weld material is in fact slightly stronger than the pipe body.

PG&E conservatively didn't use those test results, and the Federal Code wouldn't use a one-off test to change specifications. PG&E conservatively used the 33,000. That's the lowest historical purchasing record and applied a .8 joint efficiency factor.

ALJ BUSHEY: Let me interrupt you for a minute, Mr. Malkin. It sounds to me like PG&E's assumption of 33,000 has been supported by subsequent evidence that -- that has been brought forward, and that is that all of the evidence points to a much higher number than what PG&E has been using. And you may need to turn to Mr. Singh for this, but other than on Line 147, has there been any instances where PG&E has found A.O. Smith pipe with less than 33,000?

MR. MALKIN: The answer to my knowledge

is no. I know PG&E has had Exponent do a
number of burst tests on A.O. Smith pipe,
which I'm not sure if Mr. Singh or
Mr. Harrison is the person with the most
knowledge about that. But my understanding
is those tests have uniformly shown the yield
strength of the A.O. Smith pipe to be above
33,000.

ALJ BUSHEY: Greater than 33. Do you want to confer with your clients for a moment so that we can have one of them who knows the answer to that come forward, or could the person who knows the answer to that just walk forward?

MR. MEYERS: Your Honor can I be heard for a moment while this gentleman is coming up.

ALJ BUSHEY: Certainly.

MR. MEYERS: I know Mr. Malkin is not testifying, therefore, what he's saying, even though it's in the record, is not evidence. However, I heard Mr. Singh yesterday specifically say that A.O. Smith pipe could have come from other utilities. He testified during the record that A.O. Smith pipe may be A.O. Smith pipe purchased by PG&E, but it also may be A.O. Smith pipe, quote, "from other operators."

1 So if Mr. Malkin is saying they're 2 using PG&E's least specifications of 33,000 3 PSI, how do we know that that was the least 4 specifications for pipe that they acquired from other utilities. 5 6 ALJ BUSHEY: Let's hold on that thought, and let's follow-up on the actual 8 facts that have come forward subsequently. 9 Mr. Malkin, do you have a witness 10 that is -- that will --11 MR. MALKIN: Do you want to swear him 12 early? 13 ALJ BUSHEY: Yes, let's swear him. 14 DAVID HARRISON, called as a witness by Pacific Gas and Electric Company, 15 having been sworn, testified as follows: 16 17 THE WITNESS: I do. 18 ALJ BUSHEY: Please be seated. State 19 your full name for the record and spell your 20 last name. 21 THE WITNESS: My name is David 22 Harrison. My last name is H-a-r-r-i-s-o-n. 23 ALJ BUSHEY: Okay. Mr. Malkin, we 24 don't want to get into everything. We just 25 want a narrow answer to a narrow question. 26 MR. MALKIN: I was going to seek 27 clarification of that and I appreciate that, 28 your Honor.

## 1 DIRECT EXAMINATION BY MR. MALKIN: 2 Mr. Harrison, you've been sitting 3 0 4 here and the specific question to you is are you familiar with the testing of the yield 5 6 strength of A.O. Smith pipe that PG&E has had performed? 8 Α Yes, I am. 9 And could you please describe for 10 us the nature of the tests that have been 11 done? 12 There's -- over the years, there's 13 been a variety of tensile tests, 14 vield-strength tests performed on A.O. Smith 15 There's records -- historical records 16 in, like, 1968, the 1980s of us doing tests. 17 We have -- and then we had Exponent burst 18 test the pipe this last summer. That was 7 19 to 9 pieces of pipe. I don't remember the 20 exact numbers. All of those cases, the test 21 results were all greater than 33,000 --22 clearly greater than 33,000. 23 ALJ BUSHEY: That's all we need to know 24 for the moment, Mr. Harrison. So I'll let 25 you be excused for the moment. 26 THE WITNESS: Okay. 27 MR. MALKIN: May I respond to 28 Mr. Meyers' comment?

ALJ BUSHEY: Just hang on one second. I want to get back to Mr. Roberts. So we have a protocol. They've been following the protocol. Every factor they've found in apparently the last 30 years supports the facts used in the protocol.

MR. ROBERTS: Can I respond?
ALJ BUSHEY: Sure.

MR. ROBERTS: So first of all, we have certain lengths of pipe in the ground that PG&E now says are A.O. Smith pipe that PG&E has also said they can't say where it came from. So we have this fundamental issue of long lengths of pipe in the ground where we don't have documentation saying where it came from.

In that case, the Federal Code says you can establish a minimum SMYS based on tensile testing, but it also provides an Appendix B, Section 2(d), which provides a sampling protocol such that -- I'm not disagreeing that the Anamet report says that the tensile test of that sample was greater than 24,000 or greater than 33,000 even.

But what the federal legislation has acknowledged is that when you don't know what's in the ground when it's hundreds of feet of pipe, you can't draw a sample at one

location and then carry that one piece of data to represent the whole length of all the pipe that they've now classified as A.O.

Smith pipe. And I -- I have a line of cross for today which asks them specifically about that protocol and if they followed it. Maybe the testing they've done over the years has in some way complied with that, but we haven't had a chance to ask that question.

MS. STROTTMAN: Your Honor, may I comment, please, on behalf of the City of San Carlos? It appears to me that the PRUPF if I'm saying that correctly, results in unknown pipe characteristics being given less conservative MAOP values than newer segments. And it's -- it's our position and -- and I'm going to cross-examine the witnesses on this -- that PG&E still doesn't have traceable, verifiable, and complete records for every inch of Line 147.

We don't know where the A.O. Smith pipe came from, and it's our stance that the yield strength should be 24,000 PSI, which is 24 KSI. And we will put forward that argument in our briefs but I just wanted to let you know our position.

MS. PAULL: Your Honor, I'd like to say something.

ALJ BUSHEY: Ms. Paull?

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MS. PAULL: Clearly, there's a rather complicated question of the correct interpretation of the Federal Regulations of 192.619. ORA thinks that -- based on what Mr. Malkin said and what PG&E witnesses have said that they are not interpreting correctly certain requirements of the regulation. We would be happy to brief that. Maybe it would be helpful to you if you could get -- we could do this quickly, and it would be short. But we could brief what we think is the correct interpretation of these regulations and how they apply in this case.

ALJ BUSHEY: But this isn't a new issue. We've been applying this same protocol for two years, and it's not just in a Line 147 issue. If you're right, then everything in the PSEP is wrong. So it's a much, much bigger issue than just Line 147, and that's why it's -- I don't see how we resolve it in this re-pressurization proceeding, which is the narrow issue before us at the moment.

Mr. Malkin, do you have a response to this?

MR. MALKIN: Yes, well, I think your Honor is right. This is the way the

Commission has been interpreting it.

Mr. Roberts just I think revealed the -- what is -- he is not correctly understanding in the code when he said that the code has a provision where if you've got some miles or hundreds of feet of pipe in the ground, there's a protocol for testing it. That is exactly wrong.

The Code Section 192.107, which is the pipe design section, applies to new pipelines. If you look at 192.13, it makes very clear that those pipe design requirements apply to new pipelines installed after a date in March 1971 and to replacements of pipe installed after a date in November of 1970. And so they -- they were never intended by the Department of Transportation -- Office of Pipeline Safety at that time -- to apply retroactively to pipe that was already in the ground.

As to pipe that was already in the ground, it's the grandfather clause, which this Commission has been wrestling with and done away with as the sole basis for establishing an MAOP. For two years, every gas utility in this state has been proceeding on the basis of the guidance provided by the Commission in June of 2011. What PG&E did

here, as you've just rightly pointed out, is no different from what PG&E has done through out its system and what the other utilities are doing.

Mr. Meyers didn't cite to the actual transcript of Mr. Singh's testimony, and I think his notes don't quite have it right.

What Mr. Singh said on Monday is where we acquired a pipeline from another company — and as you know, PG&E over the years have merged with and acquired companies, some of which own pipelines. Where we acquired another pipeline, we apply the federal minimum because we don't know what their purchasing standards were. Where it is our pipeline that we designed and we installed, we know what our minimum purchasing requirements were, and we apply the historic minimums.

In the case of Line 147, PG&E does not have complete, verifiable, traceable records to show which PG&E pipeline this pipe came from and when. But there is every indication that it came from Line 101 when that line was redone. The one thing that PG&E does know is it came from PG&E's system, contrary to the inference that Mr. Meyers drew that somehow this reconditioned pipe may

have come from elsewhere. The reconditioning was always done to pipe that PG&E had in the ground somewhere else and they had reused.

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So the -- yes, it is -- it is true that in terms of what Mr. Roberts is saying, this is not the most conservative assumption one could possibly make. The most conservative thing one could do would be to shutdown all the pipelines. And that would eliminate every conceivable risk except for the risk of what happens to all of us without natural gas service. And in the scheme of things where this pipeline has operated safely at 400 PSI, where it has been tested to a pressure that justifies and validates that 400, as you heard from Mr. Rosenfeld, one of the leading experts in the world, and the company proposes to operate it only at 330, there is a huge margin of safety.

And there is no conflict with the code. There is no conflict with this

Commission's decisions about how to go about validating the MAOP and hydro testing lines that have been historically grandfathered.

And given what you've already heard from the parties about them now being satisfied, about the hydro testing, I think as to Line 147 -- putting aside records issues that you may

well hear more about and -- let me say
parenthetically PG&E has always from day one
acknowledged it does not have complete,
verifiable, and traceable records of
everything in its system. That's why we do
the hydro testing. And the issue -- as far
as the issue of is this compliant with the
way this Commission has approached and
verified the safety of pipelines and was the
hydro test adequate, I don't think there's
any dispute.

MS. PAULL: Your Honor, may I respond?

ALJ BUSHEY: Yes, Ms. Paull.

MS. PAULL: Mr. Malkin spoke for a long time. I'm not going to attempt to respond to everything he said. Just three things.

One, the interpretation of the regulations, it is somewhat complicated. I think it's much easier to sort it out on the basis of looking at the text of the regulations and short written briefs, much easier than hearing very long narratives about it. So I again renew our offer for -- to brief this particular issue.

The other thing is I want to correct a misimpression that Mr. Malkin may have created when he talked about things that Mr. Roberts was saying about risk.

Mr. Roberts was not talking about lowest possible risk. He was talking about less risk if you use the values for unknown pipeline features that are required by the federal regulations as opposed to the ones PG&E is using. That is -- was I clear, or do you need to rephrase that?

ALJ BUSHEY: I understand your point.

MS. PAULL: Okay. And the final point is very simple. I think everyone understands this. But to bring it back to what really matters, there's the MAOP established by the hydro test. And that question is now resolved for this line. There's the design MAOP. There's questions about how that should be calculated because of questions of interpretation of the regulations. And the assumption -- what assumptions must be used.]

The federal regulations, as you know, require that if you have both the design MAOP and the hydrotest MAOP, the operator must use the lower of those values. And that's not retroactive application of the regulation. That is applying the regulation to an MAOP validation being done now. That is that the current criteria for establishing design MAOP, those regulations apply to MAOP validation being done now. And if PG&E

thinks otherwise, I think they're mistaken.

Again, we can brief this. We'd be happy to brief it.

ALJ BUSHEY: We can brief this. And if PG&E is mistaken, then the Commission has been mistaken for two years. And if it's mistaken, it's not just Line 147 and it's not just PG&E. It's every natural gas operator in the state.

So if you want to pursue that issue, it needs to be pursued in the sort of overall perspective in this proceeding. That's the place to make that argument and get everybody -- get every natural gas system operator's safety enhancement plan revised in accord with your perspective on the regulation, because right now all of the operators are using the rules as adopted by the Commission over the last two years.

MR. ROBERTS: Can I add something. I believe that the added -- that the requirements added by the decisions of this Commission relative to PSEP, that basically what it did is eliminate the grandfather clause and required operators to go beyond the federal standards by doing a Sub J test.

The use of engineering assumptions in that decision is said to be used on an

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interim basis for the purpose of prioritizing 1 PSEP work. I don't believe that that 2 decision in any way attempted to change the 3 4 MAOP of existing pipelines either before, during or after the PSEP-related work. 5 I mav have that wrong, but it doesn't seem in my 6 mind that we have done the PSEP 8 implementation wrong or that the Commission 9 has given the utilities direction to change 10 the way they calculate the MAOP of record on 11 their pipelines. 12 So I do agree that it's a bigger 13

So I do agree that it's a bigger scope than just Line 147 and it has serious consequences systemwide. It doesn't seem that it is quite as broad as your Honor has suggested.

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MS. STROTTMAN: Your Honor, the City of San Carlos agrees with Mr. Roberts and Ms. Paull's statements. Obviously there is a difference of opinion on this issue, and we feel like this should be briefed. And I just wanted to note too and comment on Mr. Malkin's statement that he said, you know, we have every indication that the pipe came from Line 101, but that doesn't mean that they have traceable, verifiable and complete records.

ALJ BUSHEY: They have better than

that. They have it on a yield strength test that says it's 39,000. Why are you arguing for 24 when we know as a matter of fact it's 39?

MR. ROBERTS: We know as a matter of fact that at one point in that line that's what the tensile strength of the piece of pipe that they pulled out of the ground is.

ALJ BUSHEY: There's never been any other piece in the last 20 years that they have pulled out of their system that has been below 33. You have no evidence to support your assertion.

MR. ROBERTS: We have --

ALJ BUSHEY: You have regulations that the Commission has -- we have been at this for two and a half years now. You know. And if you want to pursue this, their updated application is in. I expect it will be assigned to me. And we'll put it in the scoping memo, and we can litigate it there and brief it there.

MS. STROTTMAN: But your Honor, what proof do we have that every single inch of 147 is A.O. Smith pipe? What proof do we have that they know what's in the ground, every single inch of Line 147?

ALJ BUSHEY: That's why we did the

pressure testing, because they don't. We decided that two and a half years ago. They don't know. Therefore, we're going to at great expense hydrotest or replace everything in the state. That's what we did two and a half years ago. That's why we have a hydrotest record right now that supposedly is good to 400, 400 psi.

MS. STROTTMAN: That's fine. But it's San Carlos's position that that line needs to be replaced.

ALJ BUSHEY: Well, the Commission approved a PSEP plan last year that segregated things between replacements and hydrotesting. And if you want to -- I guess you can't really relitigate the PSEP.

There's the update proceeding. You can propose recat -- reprioritizing things. But to be honest, there are lots of segments of pipeline in the state that have not been hydrotested yet. So those are the next up in priority.

MS. PAULL: Your Honor --

ALJ BUSHEY: But we can litigate that in the update proceeding if you want to change the priorities. But a year ago we set the priorities, we approved the plan, volumes of plans. And everything was all laid out in

a three-year -- a three-year series of priorities. This process is well underway, and if you want to propose changing it, we have a proceeding to do that, but this isn't the one.

MS. PAULL: Your Honor, I'd like to make you aware of some information that has been produced in this proceeding but not offered into evidence. Possibly Mr. Harrison would be able to speak to it. It's evidence that -- well, as you -- once the company found out what pipe it did have in the ground, that cha -- under the PSEP decision tree it may very well have been prioritized for replacement rather than testing. And this was a question that was discussed among the engineers. It's a discussion in some e-mails that, you know, have been produced.

Possibly Mr. Harrison could speak to this, and it was one of -- I remember that was one of the questions he raised. Now that we know what's in the ground, now that we know it has a joint -- a different kind of seam and a lower joint efficiency, and I don't remember about the SMYS, but now we know that it has -- it's a different sort of pipe, would it be prioritized under the PSEP for replacement rather than testing.

And there's at least one examination under oath with one of the engineers who works on the PSEP proceeding, has responsibilities for the PSEP plan, said yes, it would have been -- it would have been prioritized as replace rather than test.

Maybe people think that doesn't matter because it's been tested now.

Apparently that's what that engineer -- I'm thinking of Mr. Manegold, who was one of the engineers examined under oath by Mr. Shori.

Maybe engineers feel, well, it was tested.

So now it doesn't have to be replaced. But had they had correct information, it looks like it would have been replaced rather than tested. So maybe this really does matter.

ALJ BUSHEY: Well, Ms. Paull, yes, this does matter. That's why we're all here. But we can't go back in time. If they would have known then what they know now, the decision tree would have led to a different result. But it's not then. It's now. And in between those two times at great expenses and great inconvenience the line was pressure tested.

Now the information is available. We've fundamentally changed the equation.

Now we have a piece of pipeline that has been hydrotested and will come out in a very

different place in the decision tree because it's been hydrotested.

MS. PAULL: Yes.

ALJ BUSHEY: So that -- we have to work with what we know now. And what we know now based on every -- every expert who has looked at this agrees that this line is safe to operate up to 400 pounds per square inch. So.

MS. STROTTMAN: I'm sorry to interrupt, but our expert, Dr. Stevick, did not testify to that.

ALJ BUSHEY: Okay.

MS. STROTTMAN: So I just wanted to highlight that.

ALJ BUSHEY: Okay. So it sounds like ORA's objections go to the protocol for the entire PSEP plan, which we can take up in the broader proceeding.

MR. ROBERTS: I just received a note that somebody looked -- one of our team looked back at the decision and clarified that the MAO -- excuse me -- the MAOP decisions -- I'm assuming that's the decisions to raise MAOP on these lines -- did not address the interpretation of federal regulations and that PG&E's what we think mistaken interpretation of that code is being

raised here for the first time. So.

repressurization decisions would not have looked at that. They would look at the supporting evidence which was specified in a decision in 2011. We set it out, and it was basically hydrotest results. That's what we said. Bring us hydrotest results, and we will authorize repressurization. They brought us hydrotest results two years ago. Authorized repressurization. They came back with corrected ones now, and they're requesting reauthorization to 330.

That's where we are. We're in a very narrow review of a very narrow question with a very specific evidentiary requirement. And to the extent you want to challenge the way, the protocol for the PSEP, that is something that should be addressed in the update application if you don't like the interpretation there, because it goes -- it's not just to Line 147. It's everything throughout the state.

MS. BONE: Your Honor, if the Commission is using an incorrect protocol to set MAOP that is not consistent with federal regulations, that is an issue that needs to be addressed here when you decide to set the

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next MAOP for Line 147. It cannot be 1 2 ignored. It would be legal error to ignore 3 the fact that we have an improper application of the federal code to calculate the MAOP. 4 5 MAOP is not just based on hydrotest 6 records. You take the Subpart J record, and you run it through the requirements of 619, and you look at the design MAOP as well. And 8 9 that section is the one that determines what 10 MAOP does. You cannot ignore that section to 11 set MAOP. And that is what appears to be 12 happening here. 13 ALJ BUSHEY: If it's happening here, 14 then it's happened throughout this 15 proceeding. I don't agree that it is 16 happening here. 17 But we need to get started. 18 spent an hour on this now. And it appears 19 that there are no factual disputes. If there 20 are any disputes, they're legal disputes. 21 MS. BONE: That's not correct, your 22 Honor. There are a number of factual 23 disputes. 24 MS. STROTTMAN: And I agree with Ms. 25 Bone. 26 ALJ BUSHEY: Okay. What are the 27 factual disputes? Let's get down to that. 28 MS. BONE: PG&E's showing in this case

1 to support the 330 MAOP is not complete. 2 has not made that showing. It has not 3 provided data. 4 ALJ BUSHEY: Ms. Bone, that's argument. Give me a disputed issue of material fact. 5 MS. BONE: The material fact is that 6 Exhibits A and B do not contain data to support PG&E's assertion that every foot of 8 9 Line 147 has been tested. 10 ALJ BUSHEY: Mr. Roberts, this is your 11 counsel. 12 MR. ROBERTS: That's correct. 13 MS. PAULL: Traci Bone is co-counsel 14 for ORA. 15 ALJ BUSHEY: Right. I understand that. 16 But didn't you just tell us at the beginning. 17 MS. PAULL: What Ms. Bone was saying is 18 that the safety certification doesn't -- she 19 wasn't saying that the line has not been 20 tested. We now know -- we now much more 21 confident that it's been tested. What she 22 was saying is that you couldn't tell that 23 form the safety certification, which is 24 PG&E's evidentiary support for its pressure 25 restoration request. 26 ALJ BUSHEY: So what do you want them 27 to do? Do you want them to put more 28 information in the record?

MS. PAULL: Their safety certification to the Commission should, number one, be in the records because a key piece of evidence, and number two, when reviewing it one should be able to determine that's the factual confirmation of what PG&E executives are saying. PG&E executives are testifying and saying things. The information in that safety certification, you're supposed to be able to confirm what they're saying in there.

So if that doesn't -- if they don't match, something is wrong with PG&E's showing. I think that is the point that Ms. Bone was trying to make.

MS. BONE: That is exactly the point. This Commission, as we reminded in opening statements, has an obligation to look at the evidence on the record, and that the evidence should support its decisions. And in order for PG&E to sit here and assert that Line 147 has been tested, every foot of it, they should have data to back that up. The NTSB recognized this.

ALJ BUSHEY: Okay. Stop. Mr. Roberts.

MR. ROBERTS: Yes.

ALJ BUSHEY: Didn't you tell me that on the record that as part of the workshop you walked through this and that you were

satisfied that every foot has been pressure tested?

MR. ROBERTS: I clar -- so PG&E in their workshop statement said that we have -- that we have certified the entire line has been tested. What I said is that in my opinion after that workshop that I believe that the line was hydrotested.

I still stand by my testimony which says that Appendix A to their October 11th filing, which, as Ms. Bone said, is the evidence that I thought I needed to look at and analyze to determine the validity of their statement, this still does not support the assertion that every inch of pipe has been tested.

On the one hand, I now -- I believe the line was hydrotested. There is no evidence in the record that it has been. So that's the difference. We had a workshop where I think all the experts that were there for parties concurred that we don't believe -- that we believe that the MAOP of test is correct, that that is a different thing from saying that PG&E has in this -- in response to this OSC provided the evidence to support that. And I did raise that point at the end of the workshop yesterday as well.

ALJ BUSHEY: Okay. This isn't an OSC. So there's no dispute about the fact. The only dispute is about what's been presented, that they haven't presented the correct paper to the Commission?

MS. PAULL: No, your Honor. They haven't met their burden of show -- of demonstrating that they have correctly calculated the MAOP that they are requesting. It's PG&E's burden to produce that evidence.

You will recall the NTSB, when the NTSB in their accident report on San Bruno, they said, they had a number of findings where they said, PG&E says X, but our investigation when we look at the data does not confirm that.

 $\,$  ALJ BUSHEY: What does that have to do with --

MS. PAULL: That the safety certification should -- is the key piece of evidence to support the restoration of the pressure of the line.

ALJ BUSHEY: Right. I understand that. But Mr. Roberts has met with them and gone over their information, and he factually agrees that they have done it. The only dispute I'm hearing is that somehow there's some pieces of missing paperwork to make that

1 demonstration. Is that what --

MS. PAULL: No.

ALJ BUSHEY: That's not a disputed issue of material fact.

MS. PAULL: No. There is a dispute, as you know, your Honor, about how to correctly calculate the design MAOP. That is one dispute.

ALJ BUSHEY: That is a legal issue.

I'm looking for a disputed issue of material fact. I want a fact that PG&E has asserted that ORA asserts a different fact, actual fact in the real word.

MS. PAULL: Well, our assertion is that the showing they have made in their safety certification is not sufficient to support their request.

MR. ROBERTS: I can add another one. I believe it is a -- I believe this is a fact that you're looking for. PG&E is asserting that they can determine the SMYS of the line based on the sample that Anamet tested. I think it's a factual dispute whether that one piece of evidence can stand to represent the entirety of all the A.O. Smith pipe in Line 147 and other unknown -- other pieces of pipe which their PFL says are unknown.

So in essence, in the safety

certification in the hearings we have seen I believe two test reports, one within the section where 109 leaked, and the other where they tied in between two hydrotests. We have two data points that --

they can't provide complete traceable records of what's in the ground, then we have to somehow ascertain what's in the ground. And the common engineering practice is if something is unknown you sample with a formula that allows you to say that a finding in one point can be applied to the general population. And the federal standards actually account for that if you want to establish a SMYS based on tensile testing.

So I think it is a factual dispute whether the Anamet report, or I believe it's reports, can be used to establish a SMYS that is -- that accurately represents the unknown pipe in Line 147.

ALJ BUSHEY: But you've now come in a full circle back to the protocol for the unknowns. We have a protocol for dealing with that. And do you have any assertion that PG&E is not complying with that protocol that the Commission has adopted over two years ago?

MR. ROBERTS: I can -- a factual dispute that the document they provided to us is dated October -- October of 2013. The PRUPF that was provided to us as evidence was not the PRUPF that led to the PSEP filing.

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They had a protocol. The Commission adopted a very broad definition of the use of engineering assumptions. That is not the same thing as, in my mind, the Commission taking a document which had been approved by PG&E management and saying, yes, we agree that you can use this on an interim basis to establish characteristics for unknown pieces of pipe.

PG&E has been modifying that process. And I think evolution is a good idea, but you do need to start from someplace solid and change.

But I guess my central point was that protocol itself, the one that they provided in this venue, was not directly approved by this Commission and your Honor in the decisions relevant to the PSEP.

ALJ BUSHEY: Okay. So other than legal argument about the unknown protocol, I still -- what disputed --

MR. ROBERTS: I'm sorry.

ALJ BUSHEY: -- issue of material fact

is there? 1 2 MR. ROBERTS: A separate related issue is that if -- so we do have the PRUPF, and we 3 4 can now look at it because it was provided non-confidentially in the new PSEP 5 6 application. We have evidence that it was -- that 8 PG&E's own process was not applied correctly 9 for Segments 107 and -- I'm sorry -- 108 and 10 Segment 108.7. 11 So setting aside what the federal 12 government says to do, it appears that PG&E did not correctly apply their own process, 13 14 which is something we saw many times in the 15 PSEP application. 16 ALJ BUSHEY: In what way? 17 MR. ROBERTS: My testimony went into a 18 lot of detail about where PG&E's decision 19 tree was not followed in determining the 20 mitigation that was performed on individual 21 pipelines, pipeline segments. 22 ALJ BUSHEY: Decision tree. 23 MR. ROBERTS: I'm going back in time to 24 the PSEP. What I'm saying here --25 ALJ BUSHEY: I need you to get 26 focused --2.7 MR. ROBERTS: Right. 28 ALJ BUSHEY: -- on Line 147 and the

specific evidentiary requirements for
repressurization authorization. It's very
simple, and it amounts to a hydrotest.

As I hear ORA's position, they, ORA
has agreed with PG&E that the line has been

has agreed with PG&E that the line has been hydrotested. Is that an accurate statement of your position?

 $$\operatorname{MR.}$$  ROBERTS: ORA does agree that the line was hydrotested.

ALJ BUSHEY: Okay.

MR. ROBERTS: Complete, completely.

ALJ BUSHEY: And that consistent with Subpart J, the Maximum Allowable Operating Pressure of that line is 400 pounds per square inch.

MR. ROBERTS: No. The determination of an MAOP based on a test pressure determined by Subpart L, I believe, which is 192.619. So Part J just says how you do a hydrotest.

ALJ BUSHEY: Sorry. Okay. So in any event, based on the hydrotest results, does ORA dispute that PG&E has provided hydrotest results to support their request for a 330 pounds per square inch MAOP?

MR. ROBERTS: Based on the workshop yesterday, not on anything PG&E provided in response to our extensive discovery process, we are now -- I personally believe, and I

think my view represents ORA's position, that Line 147 was hydrotested consistent with Subpart J to support an MAOP of test of 330 psi.

ALJ BUSHEY: Thank you.

MS. STROTTMAN: So your Honor, then is it your position then that the hydrotest is the end-all-be-all for this determination?

ALJ BUSHEY: It's not. My position is the position of the Commission in the decision setting forth the requirements for a repressurization authorization. There are specific supporting information that the -- that PG&E must present. The essence of that is hydrotest results.

MS. STROTTMAN: Because I mean the City of San Carlos has a lot of issues. I mean we don't believe that the line even needs to be operated as a transmission line. We believe that PG&E's arguments that the upcoming winter season requires them to raise the MAOP, which is a reason why this proceeding in our opinion has been rushed. And there are several other issues that we have relating to PG&E's operational practices that relate to Line 147. So that's why I'm asking, is hydrotesting, if that's all the information you need, then this is the end of

the story? Is this --

ALJ BUSHEY: The Commission wrote the specifics for the story in Decision 11-09-006. That's where it specified what PG&E needs to show to repressurize a line. It's very specific. It's very narrow. And the process is expedited. It's been that way for two years.

MS. PAULL: But your Honor, there's a requirement that is ongoing that I'm sure you know that PG&E be in compliance with all safety requirements, state and federal.

ALJ BUSHEY: And if you think that they're not, then you should file a complaint or we should take the issue up in the broader rulemaking. The narrow issue in front of us today is Line 147 and whether PG&E has met the requirements of Decision 11-09-006. That's all.

MS. PAULL: Does that decision only require hydrotesting, nothing more? I don't have it in front of me. That's the only reason I'm asking.

ALJ BUSHEY: It requires a safety certification. It requires the concurrence of SED. There's a list of supporting information that is required. It's very specific, very well laid out, if I do say so

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1 myself, and we've applied it at least five or 2 six times. That's what's required. And once 3 they've met that, those requirements, then 4 the decision is issued in fairly straight 5 order. 6 So why don't we take a break, allow the parties to confer amongst themselves, and we'll reconvene in 10 minutes. 8 9 We'll be off the record. 10 (Recess taken) 1 11 ALJ BUSHEY: We'll be back on the record. 12 13 While we were off the record, 14 I distributed copies of Decision 11-09-006 15 that sets out the procedures and substantive 16 requirements for a repressurization 17 proceeding such as this one. I've directed 18 the parties' attention to Ordering 19 Paragraph 4 which sets forth the showing that 20 PG&E must make. 21 The parties have been reviewing 22 Ordering Paragraph 4, and it would assist us 23 in setting the schedule for cross-examination 24 if the parties would indicate which of these 25 items that they believe that PG&E has not 26 presented. 27 We'll start with ORA. 28 MS. PAULL: Your Honor, I'd just like

to note first that this is an Order to Show Cause proceeding, not a pressure restoration proceeding.

ALJ BUSHEY: No, it's not. This is not an Order to Show Cause proceeding. This component is a pressure restorization proceeding. The Order to Show Cause on the first part of that, the PDs are pending before the Commission. The substantive part of that we have cross-examination to do on. Today, the issue in front of the Commission is to restore pressure on Line 147.

MS. PAULL: Yes, I understand.

So we, ORA has already put on the record or, rather, will put on the record when you would like to move into evidence Mr. Roberts' testimony which explains in great detail the deficiencies in the safety certification and other information that PG&E has presented. Errors and so forth --

ALJ BUSHEY: Right.

MS. PAULL: -- which PG&E has acknowledged some of them on the record, I believe.

ALJ BUSHEY: Acknowledged and corrected.

Ms. Paull, Ordering Paragraph 4 sets out A through G. I'm sorry, A through

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Which of these components is it ORA's 1 2 position that PG&E has not presented? 3 MR. ROBERTS: I would say that D, the 4 Complete Pressure Test Results. If this Ordering Paragraph is intending that 5 6 the complete pressure test results be part of the showing, I think we would say that that is not in the record because of the issues we 8 9 raise with Exhibit A. 10 MS. PAULL: Exhibit A of the safety 11 certification. It's the first of two parts 12 of the safety certification. 13 ALJ BUSHEY: I'm trying to understand 14 this. 15 So is it your position that they 16 have not been done or that they are not --17 "they" being the pressure tests, is it your 18 position that the pressure tests have not 19 been done or simply that they have not 20 included all of the records? 21 MR. ROBERTS: I'm addressing the 22 completeness part of D. So --23 ALJ BUSHEY: So it's a documentation 24 problem? 25 MR. ROBERTS: Correct. 26 ALJ BUSHEY: And what documentation not 27 part of appendix A would you like to have as 28 part of appendix A?

MR. ROBERTS: First, the appendix A 1 2 would remove information that's contradictory that was raised -- that was highlighted in my 3 4 testimony. And based on our workshop yesterday of what the outcome was is that 5 6 what correctly documents the test are as-built drawings. So in some way, the STPR package as I believe it's referred to should 8 9 accurately provide drawings that show where 10 the tests were performed so that you can 11 determine the segments that were tested. 12 ALJ BUSHEY: But it's your position 13 that they were tested, it's just a matter of 14 the proper documentation not having been 15 presented. 16 MR. ROBERTS: Correct. 17 ALJ BUSHEY: Okay. So a post-decision 18 compliance requirement that they provide 19 that? 20 Actually, appendix A isn't part of 21 the record, is it? 22 MS. PAULL: Your Honor.

MS. PAULL: We, ORA feels strongly that it should be part of the record. And the confidentiality concerns really can be easily resolved. We think it's a key piece of evidence and it needs to be in the record.

MR. MALKIN: No. It's not, your Honor.

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And it has to be corrected -- either 1 2 uncorrected or corrected, that's to be 3 decided, but I don't see how the Commission can -- the Commission's record will be 4 incomplete without it. 5 6 ALJ BUSHEY: Mr. Malkin, this is the documentation that we have not --8 specifically decided not to include in 9 the record in all of our past pressure 10 restorations? 11 MR. MALKIN: That is correct, your 12 Honor. 13 ALJ BUSHEY: And the information has 14 been provided to the parties for their 15 inspection and clarification questions on, 16 but not included in the record? 17 MR. MALKIN: That is correct. 18 The materials were not filed, so they're not 19 part of the record. 20 ALJ BUSHEY: Is it a fair statement 21 that -- and you might need to confer with 22 your clients because I know you weren't there 23 yesterday at the workshop. But yesterday's 24 workshop, would that have provided the same 25 level of inspection and clarification as has 26 been offered in the previous pressure 27 restoration proceedings? 28 Yes. At least, if not MR. MALKIN:

1 substantially beyond. 2 That workshop was specifically held 3 in PG&E's offices in Walnut Creek in order to have all documentation available as 4 5 necessary. 6 ALJ BUSHEY: Okay. So then it would be accurate to say that the procedural availability of information for parties in 8 9 this proceeding has at least been as high as 10 in the Commission's previous pressure 11 restoration proceedings. MR. MALKIN: That is correct. 12 With 13 respect to the inspection in all of 14 the proceedings, the procedure has been 15 inspection but not copying and --16 ALJ BUSHEY: Thank you. 17 MR. MALKIN: So certainly consistent 18 with that. 19 ALJ BUSHEY: So the documentation 20 availability has been at least as high in 21 this pressure restoration as has been in 22 the previous five or six. 23 Is there any other component of 24 this list that you believe PG&E has not 25 provided? 26 MS. BONE: Your Honor --27 MR. MEYERS: Are you addressing that to 28 all parties --

ALJ BUSHEY: Yeah. I'm starting with ORA. But let's finish with ORA.

MS. BONE: What's concerning about this list is it actually has a very significant omission which is the issue that we're raising here today, which is that PG&E is not required to show how it calculates the MAOP based on the pressure test readings consistent with 192.619. And that is the problem that we have with PG&E's showing today, or one of them. And that is what is missing from this decision and is a very significant error.

ALJ BUSHEY: This decision was issued on September 8 of 2011.

MS. BONE: That may be. And what it sadly means is that the Commission has been doing this wrong for the last two years.

ALJ BUSHEY: Well, that is the process that the Commission has engaged in. This is the Commission's decision. And until it's changed, it's the decision that I need to apply in this proceeding.

MS. BONE: I understand that that's your position, that's it's not an issue here, that the Commission has not complied -- insured that PG&E's MAOP calculation complies with federal regulations. We understand that

that is your position, that we should not explore that issue here.

ALJ BUSHEY: Right. It is -- the Commission issued a decision two years ago. There's a list of things that are required for PG&E to present and we are -- and I'm bound to apply this decision until the Commission changes it.

MS. BONE: So --

ALJ BUSHEY: So here we have the decision. This is the evidentiary presentation they need to make. Is there any portion of this evidentiary presentation that it is ORA's position has not been presented by PG&E?

(No response)

ALJ BUSHEY: Hearing none, then I'll move on to the next parties.

MS. PAULL: I'd just like to note that the question about whether the entire line was tested was answered at the workshop yesterday, that's when that question got answered to the satisfaction of the parties.

ALJ BUSHEY: But as we sit here today the parties, or at least ORA is satisfied?

MS. PAULL: Yes.

ALJ BUSHEY: I'd like to hear from the other parties now.

1 MS. PAULL: Yes. 2 ALJ BUSHEY: Okay, San Carlos. 3 Ms. Strottman. 4 MS. STROTTMAN: Thank vou, vour Honor. I just wanted to clarify first of 5 6 all, so this not an Order to Show Cause proceeding. It's an adjudicatory proceeding. So does that mean that there is not a ban on 8 9 ex parte communications? 10 ALJ BUSHEY: That is correct. It is 11 a rulemaking proceeding though, so there is 12 an ex parte rule that applies. 13 MS. STROTTMAN: Yes. Yes. But it 14 doesn't ban the City of San Carlos from 15 making ex parte visits with commissioners, 16 correct? 17 ALJ BUSHEY: In compliance with --18 MS. STROTTMAN: Yes. 19 ALJ BUSHEY: -- with the regulations --20 MS. STROTTMAN: Under the rules. 21 ALJ BUSHEY: -- covering those, yes. 22 MS. STROTTMAN: Thank you. 23 Your Honor, the City of San Carlos, 24 we would want to -- we are requesting based 25 on due process bases to cross-examine 26 the witnesses on section C which is the 27 reason for the MAOP rejection. And then 28 subsection C, that says in the professional

judgment of the engineering officer that the system is safe to operate at the proper or at the proposed MAOP, as I stated earlier, the City of San Carlos has cross-examination questions relating to whether the line has to operate as a transmission line. We wanted to ask Mr. Johnson and Mr. Singh some questions about the weather demands issues.

And we have an e-mail that we would like to present to Mr. Singh and Mr. Johnson that states that this Line 147 issue is a serious issue. It was serious to PG&E and that they considered it a near hit from a safety perspective. And I would like the opportunity to cross-examine the witnesses on this particular e-mail because it seems now that PG&E's changing course and doesn't think that the safety implications for Line 147 are as serious that they initially thought they were.

ALJ BUSHEY: Okay, so the safety implications go to the safety certification.

MS. STROTTMAN: Yes.

ALJ BUSHEY: So that makes sense. I'm lost on the weather, though.

MS. STROTTMAN: Your Honor, I recall from the -- I think it was the October 21st prehearing conference, PG&E said that they

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1
     needed to increase the operating pressure due
2
     to weather demands because they had projects
 3
     in 2014 that needed to be completed.
 4
     I'd just like the opportunity to
     cross-examine them on that issue.
 5
               And then the last one is whether
 6
     the line can be operated at the distribution
     line versus a transmission line.
8
9
               And I know Mr. Rubens would like to
10
     make some comments to you as well, your
11
     Honor, if that's permissible. The city
     attorney for San Carlos.
12
13
           ALJ BUSHEY: I guess the weather goes
14
     to sub F, the proposed MAOP.
15
           MS. STROTTMAN:
                           Yes.
16
           ALJ BUSHEY: Okay. All right.
17
     that makes sense.
18
               All right, Mr. Meyers.
19
           MR. MEYERS: Thank you, your Honor.
20
               Did you want to allow Mr. Rubens to
21
     make a comment?
22
           ALJ BUSHEY:
                        Oh. Right now?
23
           MR. MEYERS:
                        Ahead of me.
24
           MS. STROTTMAN: Yes, please.
25
           MR. RUBENS: I can comment later.
26
           ALJ BUSHEY: I'm just trying to get
27
     organized as to what is at issue here.
28
                                   Thank you, your
           MS. STROTTMAN: Okay.
```

1 Honor. 2 MR. MEYERS: Thank you, your Honor. ALJ BUSHEY: You've made a good 3 4 presentation. I understand what's at issue 5 there. 6 Okay, Mr. Meyers. MR. MEYERS: From the perspective of San Bruno, we have extensive cross-8 9 examination of these witnesses relative to 10 the overall issues encompassed in your 11 original OSC order. I recognize as we sit 12 here today that we're not going to get into 13 that. And so if we are then permitted 14 the opportunity to bring these witnesses back 15 and cross-examine these witnesses relative to 16 the issues raised by your original OSC order 17 with the exception of the repressurization, 18 then we will -- we have substantially reduced 19 our cross-examination. 20 We do have some questions of these 21 witnesses relative to the same things that 22 Ms. Strottman indicated concerning 23 the subpart c of paragraph G as well as 24 paragraph C and E, I believe. Same sort of 25 questions that Ms. Strottman has, but from 26 a different perspective. 2.7 ALJ BUSHEY: You said sub paragraph E 28 about MAOP validation?

```
1
           MR. MEYERS:
                         No, I'm sorry.
2
     wrong. It's F.
 3
           ALJ BUSHEY:
                         F.
                             Okay.
 4
           MR. MEYERS:
                         My apologies.
                         So C, F and, G sub c.
 5
           ALJ BUSHEY:
 6
           MR. MEYERS:
                         Correct.
 7
           ALJ BUSHEY:
                         Those are --
 8
           MR. MEYERS:
                         Just one thing further,
9
     your Honor.
10
               The issues implicated in
11
     the restoration of pressure here have to do
12
     with the adequacy, veracity of PG&E's records
13
     for their pipeline.
14
               And I recognize that in the
15
     Commission's decision that the hydrostatic
16
     testing of the line is sufficient evidence to
17
     justify an MAOP that they're requesting
18
     subject to the legal issues that ORA has
19
     presented before your Honor this morning.
20
               But those records issues go to
21
     the larger issue relative to the OSC. And
22
     I don't want to be in a position of not being
23
     able to discuss and cross-examine these
24
     witnesses prospectively on the records
25
     discrepancies with respect to Line 147 as
26
     a part of the overall issue of their
27
     recordkeeping and their obligations under
28
     both the Commission's rulings and the NTSB
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findings to maintain adequate, accurate,
1
     verifiable and traceable records.
2
 3
               So I just want to make that
 4
     statement for the record.
 5
           ALJ BUSHEY:
                         Right. As a component or
 6
     as an example --
           MR. MEYERS:
                         Correct.
 8
           ALJ BUSHEY: -- of inadequate
9
     recordkeeping.
10
           MR. MEYERS:
                         Correct.
11
           ALJ BUSHEY:
                         Okay.
                         Thank you.
12
           MR. MEYERS:
           MR. LONG: Your Honor, could I just say
13
14
     I'm completely in the same situation as
15
     Mr. Meyers just articulated for the City
16
     of San Bruno. We have questions of Mr. Singh
17
     and Mr. Johnson and also for Mr. Harrison,
18
     but they go to the larger issues of
19
     the accuracy of PG&E's records and related to
20
     OSC issues, not the Line 147 issues.
21
           ALJ BUSHEY: Right. Good. It sounds
22
     like we're getting focused.
23
               Oh, Mr. Gruen. I'm sorry.
24
           MR. GRUEN: Your Honor, SED Advocacy
25
     has a couple of points.
26
               Under Ordering Paragraph 4,
27
     subpart D, if there are any complete pressure
28
     test results -- we believe that PG&E has
```

marked the current pressure tests as confidential and so if those are to come into the record, and we believe they should, we would ask that PG&E redact those and provide a version that's available for the record.

ALJ BUSHEY: That's not how we've done it in the past. These records because of their -- the size of them and the information that they contain have been available for inspection by the parties and discussions with PG&E. And as we've made clear here, there's been substantial additional clarification from PG&E regarding those records.

So I don't anticipate taking a different procedural step here than we have in the past with the other pressure restoration proceedings.

MR. GRUEN: Understood, your Honor.

ALJ BUSHEY: So --

MR. GRUEN: In that case, one other point which is a line of cross. On paragraph 4 sub G and then section c, sub-subsection c which we have some questions for Mr. Harrison that would go to whether the professional judgment of the engineering officer considered some of his input in certifying the system as safe to operate.

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ALJ BUSHEY: Well, I don't know how --1 2 if I'm recalling correctly, Mr. Johnson is the certifying officer. 3 4 MR. GRUEN: I understand. ALJ BUSHEY: So you're going to have to 5 ask Mr. Johnson about certification because 6 he's the one who did it. MR. GRUEN: Well --8 9 ALJ BUSHEY: You can't ask Mr. Harrison 10 what Mr. Johnson was thinking. MR. GRUEN: If Mr. Johnson is familiar 11 12 with the documents that were provided by 13 Mr. Harrison. And I can lay foundation with 14 him. I'm happy to do that. 15 ALJ BUSHEY: That's entirely reasonable 16 cross-examination of Mr. Johnson. 17 MR. GRUEN: Understood. We can do 18 that, your Honor. 19 ALJ BUSHEY: All right. So it sounds 20 like we have three subparts C, F, G, and G 21 sub c, to focus on our cross-examination of 22 the witnesses; okay? 23 And the witnesses that we want to 24 cross-examine are Mr. Johnson and Mr. Singh; 25 correct? 26 MR. GRUEN: Yes, your Honor. 27 ALJ BUSHEY: All right, let's get to 28 that.

1	Mr. Malkin, could you call your
2	witnesses, please?
3	MR. MALKIN: Yes. PG&E recalls Kirk
4	Johnson and Sumeet Singh.
5	KIRK JOHNSON and SUMEET SINGH,
6	recalled as witnesses by Pacific Gas
7	and Electric Company, having been previously sworn, testified as follows:
8	
9	ALJ BUSHEY: I'll remind you both that
10	you remain under oath.
11	WITNESS JOHNSON: Okay.
12	ALJ BUSHEY: Please be seated.
13	And we will begin, let's turn it
14	around and begin with Ms. Strottman for
15	San Carlos.
16	MS. STROTTMAN: Thank you. Thank you,
17	your Honor.
18	CROSS-EXAMINATION
19	BY MS. STROTTMAN:
20	Q Good morning, Mr. Singh and
21	Mr. Johnson. I'm Britt Strottman.
22	I represent the City of San Carlos.
23	WITNESS SINGH: Good morning.
24	Q So, I know we don't want to go into
25	a lot of detail about hydrostatic testing
26	since we've since Judge Bushey has
27	somewhat seems to have decided that issue.
28	Well, not decided. But it seems like we've

1 discussed it morning. 2 But I only have a few questions 3 about hydrotesting, your Honor, if that's 4 okav. 5 ALJ BUSHEY: Ms. Strottman, I can't 6 decide things. Only the Commission can decide things. 8 MS. STROTTMAN: Okay. 9 ALJ BUSHEY: So if you have factual 10 evidence that you would like to elicit from 11 these witnesses, I suggest that you do that. 12 MS. STROTTMAN: Thank you. 13 So Mr. Johnson or Mr. Singh, are 14 you aware of any situation where a pipe has 15 failed notwithstanding the fact that the pipe 16 had been hydrostatically tested? 17 WITNESS JOHNSON: A I'm sorry. Would 18 you repeat the question. 19 Are you talking about PG&E's 20 system? 21 Yes. 0 22 Would you repeat the question? Α 23 0 Yes. 24 Α Has failed. Failed being what? 25 I don't know. Exploded. Leaked. 0 26 Let's say exploded. Are you aware of any 27 situation where a pipe has exploded 28 notwithstanding the fact that the pipe had

been hydrostatically tested?

A I am -- I can't think at this point in time, of any time in my career where I've seen a pipeline hydrostatically tested and then rupture after the fact. Not to my recollection.

 $\mbox{WITNESS SINGH:} \ \mbox{A Same for myself as} \\ \mbox{well.}$ 

Q And what about when you -- when PG&E hydrostatically tested a pipe, did -- are you aware of any situation where the pipe had ruptured when you hydrostatically tested it?

WITNESS JOHNSON: A Yes. We've had pipeline ruptures as part of our hydrostatic test program as part of the PSEP program.

Q And can you give me a ballpark figure about how many pipelines are ruptured?

A I believe -- and I believe it's in documents somewhere. I believe there's been seven. Subject to check, I believe there's been seven ruptures associated with the PSEP hydrostatic testing.

Q And subject to check, what time period would that include?

A The beginning of PSEP till today.

Q Okay. Now, I wanted to ask you about the records for Line 147. As you

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testify today under oath, can you testify that you have traceable, verifiable, and complete records for every length -- inch of Line 147?

A No. I don't believe we testified that we have traceable, verifiable, and complete records for everything on Line 147.

Q No. I'm sorry. I didn't mean to -- I didn't mean to ask that. I'm just saying as you're under oath today, would you under oath today, can you testify as to whether you have traceable, verifiable, and complete records for every inch of Line 147?

 $\label{eq:witness} \mbox{WITNESS SINGH:} \ \ \mbox{A} \ \ \mbox{Let me take that}$  question.

So we do have traceable, verifiable, and complete strength test records, and that was exhibited as part of the workshop that we conducted yesterday. As records is a broad categorization, there's different types of records for the pipelines. So we do have traceable, verifiable, and complete strength test records. That was the objective of yesterday's workshop, which I believe Mr. Roberts on record has also concurred to.

As it pertains to the pipeline specifications --

1 Q Yes.

A -- we have always claimed as part of our MAOP validation project we don't, and don't anticipate to, have traceable, verifiable, and complete records with a perfect chain of custody for pipelines that have been installed over 80, 90, hundred years ago, which is the reason why we do strength tests.

In fact, that question is specific to Line 147. For every inch of the line and every specification of the line, I can't sit here in front of you and tell you we have traceable, verifiable, and complete specification records, but that's the reason why we have a very successful hydrotest in accordance with the Commission decision.

Q So what percentage of records if you could tell me for Line 147 you do not have traceable, verifiable, and complete records for pipeline specifications?

 $\mbox{\ensuremath{\mathsf{A}}}$  I do not have that information with me here. And I --

Q What about you, Mr. Johnson.

You're the vice president of gas operations.

Do you know?

WITNESS JOHNSON: A In terms of a percentage, I don't know. You'd have to

define what you're measuring. 1 2 Okav. So vou have --3 We'd have to look at the documents. And you know, we -- if you're talking about 4 on a footage basis, we can go back through 5 those documents and calculate it. I don't 6 have it as I sit here today. But you don't know as a vice 8 9 president of gas operations what percentage 10 of records you have missing for Line 147? 11 A On a percentage basis, no. What 12 I did review as part of this file is 13 I reviewed the entire Pipeline Features List, 14 but I didn't do it on a percentage basis. 15 WITNESS SINGH: Α The one thing 16 I would like to add on to that is I believe 17 Mr. Roberts on Monday in the -- one of 18 the DRA's presented the percentage 19 calculation that ORA did in terms of 20 the number of assumed specifications. 21 where we're making assumptions in accordance 22 with the methodology that we put forward. 23 That was also approved. That's 24 consistently -- has been consistently applied 25 not just for Line 147, but all of the lines 26 as part of the MAOP validation project. 27 Okay, thank you. 0 28 So will you agree that about

1	1300 feet of the pipe was installed in
2	Line 147 in 1957; is that correct?
3	WITNESS JOHNSON: A I don't know.
4	We'd have to look at the pipeline features
5	list on Line 147 to see how much footage was
6	installed in 1957.
7	Q Well, do you know about how many
8	feet in Line 147 you can say with absolute
9	certainty is AO Smith pipe?
10	A Not without going through
11	the Pipeline Features List in its entirety
12	and looking through it again.
13	Q But you don't know that
14	A Not off the top of my head, no.
15	I don't have it memorized.
16	Q May I refer you to Exhibit I,
17	please?
18	A We don't have a copy of Exhibit I
19	up here.
20	ALJ BUSHEY: We'll be off the record.
21	(Off the record)
22	ALJ BUSHEY: We'll be back on the
23	record.
24	Ms. Strottman.
25	MS. STROTTMAN: Thank you.
26	Q And I understand that Hearing
27	Exhibit I is not obviously the whole Pipeline
28	Features List but does that refresh your

1 recollection at all? 2 WITNESS JOHNSON: Α Well, as I'm 3 looking through here, on the back table it 4 indicates 1327 feet in segment -- which is 5 Segment 109 of Line 147. 6 Q Okay. 7 So there is at least 1327 feet or thereabouts. 8 9 Okay. 10 Α Does that answer your question? 11 Well, I mean, I just -- my question 12 related to percentagewise --13 Or no, no. I'm sorry. Yes, that 14 does answer my question. Thank you. 15 I'm going to move on to a different 16 topic. I understand and I don't want to 17 18 argue with the two of you about the 19 interpretation of the federal code, but I do 20 want to give you a hypothetical relating to 21 yield strength. 22 So hypothetically speaking, if you 23 note in the database that the MAOP for 24 section 109 which is AO Smith pipe is 25 governed by the calculated design pressure; 26 is that correct? 27 WITNESS JOHNSON: A I am not following 28 your hypothetical. This is a hypothetical

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```
1
     or --
2
            0
               Yes.
                      This is a hypothetical.
 3
            Α
               -- is this a factual?
 4
            0
               This is a hypothetical.
5
               Hypothetically it could be.
            Α
 6
            Q
               Okay.
7
            Α
               But I'm not -- I'm sorry. I'm not
     following your question.
8
9
               Okay. So I'll just repeat it.
10
               So let's say hypothetically
11
     speaking in your database, in PG&E's
12
     database, the MAOP for Section 109 AO Smith
13
     pipe for Line 147 is governed by
14
     the calculated design pressure; is that
15
     correct?
16
               Hypothetical -- is this
17
     a hypothetical question?
18
               Yes.
            0
19
            Α
               Hypothetically it could be.
20
               That could be correct.
            0
21
           Α
               Hypothetically, yes.
22
               I'll rephrase. I'll rephrase it.
           Q
23
           Α
               Okay.
24
               And this is not -- this is part of
25
     the hypothetical but I do want to ask you
26
     this fact though.
27
               Is PG&E policy, it dictates that
28
     the MAOP is the lower of the hydrostatic or
```

hydrotest pressure divided by 1.5 or 1 2 the calculated design pressure; is that 3 correct? 4 Α The -- I'm getting a little confused on hypothetical, but I want to try 5 6 to answer the question. Q Okay. 8 Α In regards to hydrostatic testing 9 or pressure testing pipelines, there is 10 a factor applied in translating that into an allowable MAOP. 1.5 I believe is the 11 12 number you just stated. 13 0 Yes. 14 Α That would -- I guess that would be 15 used on Class 3 pipelines. There's different 16 factors for different class pipelines. 17 Did I --18 0 Okav. 19 Α I'm not sure I answered your 20 question, but I'll try to --21 0 No, that's --22 -- answer best I can what I think 23 you're asking. 24 Then would you agree then that 25 a design pressure -- you're stating PG&E's 26 position that the design pressure calculation 27 is based on a minimum yield strength of 28 33 ksi which is 33,000 psi?

```
1
               I'm sorry. Are you asking
2
     a hypothetical or are you asking a specific
3
     question?
 4
               I'm sorry. I'm asking for PG&E's
5
     position.
           MR. MALKIN: I'm not sure --
 6
           THE WITNESS: I'm not --
7
           MR. MALKIN: -- it's clear what we're
8
9
     talking about. Vague.
10
           ALJ BUSHEY: Mr. Malkin, I agree.
11
               We've lost our clarity here,
12
     Ms. Strottman, so let's just focus on --
13
     let's try and take this one step at a time.
14
               I think you're asking factual
15
     questions, not a hypothetical.
16
           MS. STROTTMAN: Yes. And I'm sorry for
17
     making this confusing. I was asking
18
     a factual question.
19
               I guess what I'm getting to is that
20
     if you change a yield strength from 33 ksi to
21
     24 ksi -- and we don't need to argue about
     the interpretation of the federal code -- and
22
23
     leaving all other factors the same, if you
24
     recalculate the design pressure, does it come
25
     to 240 psi?
26
               I can't do the math in my head.
27
     I can say if you change the SMYS which is
     what --
28
```

1 0 Yes. 2 Α -- I think you're talking about --3 0 Yes. 4 Α -- in a design calculation and don't change any other factors, it's going to 5 6 change. 7 0 Okay. 8 Α So the math is pretty 9 straightforward. You just have to run 10 the math. 11 0 Okay, thank you. 12 So I wanted to ask you some 13 questions about PG&E's position on replacing 14 Line 147. 15 And your Honor, may I approach? 16 I only have two exhibits. 17 MR. MALKIN: Your Honor, I'm going to 18 object to that line of questioning as being 19 irrelevant to this proceeding. 20 ALJ BUSHEY: Yeah. 21 MS. STROTTMAN: Your Honor, it is 22 the City of San Carlos' position that whether 23 PG&E intends to replace the line is relevant 24 to the proceedings, we want to hear from 25 these two witnesses what PG&E's position is 26 on replacing the line. It's important to 27 city. And they've responded to data requests 28 on this issue.

```
1
           ALJ BUSHEY: But what portion of
2
     Ordering Paragraph 4 does that go to?
 3
           MS. STROTTMAN: I'm sorry. I don't
 4
     have it in front of me.
5
           ALJ BUSHEY: How --
 6
           MS. STROTTMAN: Well, it goes to
     whether in the professional judgment of
     the engineering officer, which is
8
9
     Mr. Johnson, that the system is safe to
10
     operate at the proposed MAOP. If they think
11
     that the line shouldn't be replaced, then
12
     they think it's safe to operate.
13
           ALJ BUSHEY: How many questions do you
14
     have on this line?
15
           MS. STROTTMAN:
                           Maybe four.
                                          I can
16
     narrow it to four.
17
           ALJ BUSHEY: All right, let's move
18
     expeditiously through those four questions.
19
           MS. STROTTMAN:
                            Okay.
20
           ALJ BUSHEY: We'll be off the record.
21
               (Off the record)
                                               1
22
           ALJ BUSHEY: We'll be back on the
23
     record.
24
               While we were off the record,
25
     Ms. Strottman distributed two exhibits.
26
     Exhibit L -- it starts with the PG&E's
27
     response to SED Data Request 003-11.
28
               Exhibit M looks to be copies of
```

```
The first one is dated
1
     redacted e-mails.
2
     Saturday, November 17th, 2012, at 1:35 p.m.
 3
     That's Exhibit M.
 4
               Ms. Strottman?
5
               (Exhibit No. L was marked for
               identification.)
 6
               (Exhibit No. M was marked for
               identification.)
8
9
           MS. STROTTMAN:
                            Thank you.
10
               Mr. Johnson and Mr. Singh, looking
11
     at Hearing Exhibit L, if you could please
12
     read -- you don't need to read it out loud,
13
     but look at Question 11. It says, Does PG&E
14
     anticipate repair or replacement of the A.O.
15
     Smith pipe?"
16
               And then the answer says, "Yes,
17
     PG&E currently intends to replace the Line
18
     147 and Line 101 A.O. Smith pipe that are
19
     limiting the MAOP to 330 psig."
20
               Did I read that correctly?
21
           WITNESS JOHNSON: A I believe so.
22
               So Mr. Johnson, what is PG&E's
23
     position on replacing Line 147 in San Carlos?
24
           Α
               I think you're referring to the
25
     A.O. Smith pipe specifically?
26
               Yes.
           Q
27
               To my knowledge -- I mean, there's
28
     certainly no reason to replace it due to
```

safety issues. I'm not sure why we'd be 1 2 replacing it unless there's some other 3 driving factor there. 4 Then why did you say yes in this data response that you were going to replace 5 Line 147 with A.O. Smith pipe? 6 I would have to talk to the parties 8 who actually wrote as to why they were 9 planning on replacing it. I could only 10 speculate at this point in time. I would 11 have to make a call to folks as to why. It's 12 certainly not for safety reasons. 13 But you're the vice president of 14 gas operations and you don't know if Line 15 147 --16 I don't -- I don't know the reason Α 17 for this specific segment of pipe. We are 18 replacing hundreds of miles of pipe, hydro 19 testing hundreds of miles of pipe. I don't 20 know every piece of every project we've got 21 going, certainly not for a future year. 22 Would you recommend to upper 23 management that PG&E replace all A.O. Smith 24 pipe? 25 Α No. 26 Why? Q 27 Because if the pipe has been tested Α 28 and it's safe, there's no reason to replace

it. There may be other reasons to replace
it, but it's certainly not for safety
reasons.

O So while you're sitting here, you

Q So while you're sitting here, you don't know -- you wouldn't know, then, when PG&E plans on replacing Line 147 with A.O. Smith pipe?

A As I sit here today, I -- I don't know why PG&E would want to replace that pipe. It's not for safety reasons specific to the A.O. Smith Pipe Segment 109. So no, I don't -- I don't know why we would need to replace that pipe. There may be reasons beyond my knowledge at this point in time, plans people have, but I am not aware of it and certainly not for safety reasons.

Q Okay. But, Mr. Johnson, if you look at Answer 12, which is on the next page, it says, "Replacement of the A.O. Smith pipe is required to allow Line 147 and Line 101 to operate at an MAOP of 365 psig or higher."

Did I read that correctly?

A Correct.

Q So then can you infer that you need to have better pipe to operate at a higher pressure of 365 psig?

A I -- I can infer that if we need to raise the pressure to 365 pounds, we need to

1 replace any pipeline segments that do not 2 allow for operating at that pressure. 3 that's what I believe this indicates. There 4 have been changes made on the system to accommodate the changes we've done on Line 5 6 147, and so we have to go back and ask ourself do we still need Line 147 to operate 8 at 365 pounds. These -- these issues move as 9 decisions are made, so --10 Okay. Now -- now I'm going to take 11 your attention away from --12 MR. MALKIN: I believe Mr. Singh wanted 13 to add something. 14 MS. STROTTMAN: O Oh, I'm sorry. Go 15 ahead. 16 WITNESS SINGH: I just wanted to add Α 17 that at 330 pounds, there's no reason to 18 replace any section of Line 147. As we 19 talked about previously, we've had a strength 20 test, a spike test, traceable, verifiable, 21 and complete strength test records. There's 22 no reason to replace any section of Line 147 23 for operating the line at 330 psig. 24 believe all of these data responses are 25 consistent. 26 So to that point, what is the 27 current operating status of Line 147? 28 WITNESS JOHNSON: A Line 147, as I

understand it, is -- has got gas piped in it at approximately or below 125 pounds.

2.7

- Q And it's not in a shut-in status; correct?
- A I don't know how you define shut-in status. It's got gas in it at 125 pounds or less. But shut-in status -- what do you mean shut-in status?
- Q The way that it was described to me I believe by Mr. Malkin during the October 21st prehearing conference is that shut-in status is -- is akin to, like, gas being trapped inside of a bottle. It's not being moved. It's not dynamic.

A If what you're referring -- let me explain where I believe Line 147 is today. The block valves feeding that from the associated transmission valves Line 101, 109, Line 132 are closed. And I believe the cap valves are also closed. I don't know if that means shut-in status, but I believe that's the operational condition. I haven't checked on that in the last week or two, but that's my understanding where we are.

- Q So then the four regulator valves are not open?
- A I'm not -- I don't know -- I'm not sure what you mean by four regulator valves.

Q I thought that there were four -- I'm sorry, four distribution valves on Line 147. That's not the case?

A Are you talking about district regulator stations potentially?

Q Yes, yes, yes. Thank you.

A I believe the district regulator station valves are closed, but I'd have to check on -- on how it's operating today. It doesn't operate above 125 pounds is the operating restraints we have on it right now.

Q So what -- what are the reasons why PG&E needs to operate Line 147 as a transmission line?

A Well, Line 147 is a cross-tie between the other major transmission lines feeding the entire city of San Francisco and everybody from Milpitas north. It is an integrated system, and it allows us a great deal of flexibility of operating our system. It allows us to feed all the customer needs from Milpitas north, and it's just part of an overall integrated system.

Like any segment on that pipeline system, things need to be taken out of service occasionally, and maintenance is done or construction work is done or tie-ins are made. And it is one of the integral pieces

1 in making that happen. It is one of the --2 it is one of the major cross-ties between those two pipelines -- between those three 3 4 pipelines. Excuse me. 5 MS. STROTTMAN: Your Honor, may I have 6 a moment, please? ALJ BUSHEY: We'll be off the record. 8 (Off the record) 9 ALJ BUSHEY: We'll be back on the 10 record. 11 Ms. Strottman? 12 MS. STROTTMAN: Q So for Line 147, I 13 just want to talk about this -- this weather 14 and curtailment issue. So if -- and -- and 15 I'm sorry if I'm a little bit confused by 16 this. But if the gas is shut in or it's not 17 moving, how are you -- how are you 18 transporting gas to customers. 19 WITNESS JOHNSON: A They would be --20 if that's the exact condition it's in right 21 now, they would be fed by other district 22 regulator stations. 23 0 Where? 24 I don't have the maps in front of 25 I don't know where the exact other 26 district regulator stations are for all of 27 Redwood City and San Carlos. 28 And do you recall PG&E's position

as to the -- the two exceptions that PG&E wanted to have in place for raising the pressure at 125 psig? One was an unforeseen event, which could be a dig-in, and the second one would be safety work. Do you recall that?

A I don't know that I -- I recall the discussions, yes. I don't know the exact wording behind those but go ahead.

Q Okay. What about you, Mr. Singh?
WITNESS SINGH: A So same as
Mr. Johnson articulated. I'm aware of those
discussions. I'm aware of what you're
referring to. I don't have the exact words
in front of me of what you're referring to,
but the concept and the discussion, I'm
familiar, yes.

Q What is your understanding, then, as to why the pressure needs to be raised back to 330 because of weather conditions?

A Well, it's as Mr. Johnson articulated. There's -- Line 147 is a major cross-tie between the three lines of 109, 132, and 101. And as stated and as I believe you referenced as well, in the case of a dig-in and what's that alluding to is there's a dig-in or safety work that's going on, which would involve Line 101 -- or have

2799

done -- and 132 and 109, which we have a lot 1 2 of planned work for next year as well. Taking those lines and shutting them in 3 4 requires us to use Line 147 to insure we can 5 continue to provide supply and provide gas to 6 our customers. It's a main part of our operations and overall operational 8 flexibility. 9 And what projects are you speaking 10 of? 11 MR. MALKIN: Your Honor, we're getting 12 -- Ms. Strottman began this line of 13 questioning saying it went to safety and the 14 safety certification. We're now getting into 15 system planning issues. It seems pretty far 16 afield. 17 ALJ BUSHEY: Ms. Strottman, are we 18 going to get back to something that's listed 19 in Ordering Paragraph 4? 20 MS. STROTTMAN: Yes, but, your Honor, 21 it is relevant as to whether they really need 22 to operate this line due to weather 23 conditions. And they stated that they have 24 -- they needed to do safety work for 2014. 25 just have a few questions asking them about 26 their safety work, and then I'll move on. 2.7 ALJ BUSHEY: All right. 28 MS. STROTTMAN: Thank you.

Q So what type of safety projects or work do you have I guess in queue for -- for 2014? Because it appears that that's one of the reasons why you need to increase the operating pressure on Line 147.

WITNESS JOHNSON: A Well, in terms of the work -- and again, I don't have the entire work list in front of me -- there is actually work in 2013 that we can't complete because of our operating flexibility right now. That includes valve automation. So there's some valve automation work, and there is some work scheduled for later this year to make a segment of Line 132 piggable, which we are at risk of not being able to do if we don't have the operating flexibility that we need to remove that section of pipe from service to we can change out some segments there.

For next year on -- on the San

Francisco Peninsula, there is some -- there
is a significant amount of pipeline

replacement work on Line 109. I believe it's
approximately 10 miles worth of work to get
done. So we'll be taking clearances through
out the year to tie that work in. There is
some make-piggable work, if you will, on the
three different transmission lines. And I'm

sure there's a laundry list of -- of other activities happening in the San Francisco Peninsula. There's a lot of Pipeline Safety Enhancement Plan work that occurred under PSEP on the San Francisco Peninsula.

Q I appreciate that list, but what about projects that are queued up ready for Winter 2014?

A Well, all of them are queued up.

Q Just for the winter months.

A All of the work is queued up to be done in 2014.

Q But what -- what projects -- what immediate projects does PG&E have that they need to complete for Winter of 2014?

A Well, all the projects have to be complete by Winter 2014 other wise we can't serve gas to our customers. Is that --

Q Well, I guess I'm just trying to get at -- yeah, well, it's -- it's Winter 2013, Winter of 2014. I'm asking about what projects PG&E needs to complete in that time period as to why they need to increase the operating pressure on Line 147 to 330?

A So -- so the -- it's an integrated system. And when we take one piece of pipe out of service, we route gas around. And this is a major routing point, if you will,

between the pipelines. It is a cross-tie.

make-piggable work.

So whenever we take a segment of pipe out, whether it's on Line 101, Line 132, Line 109, we reroute gas. And we use our cross-ties to feed customers from different directions. The work that I shared with you is all work that is scheduled to be done in 2013 or if not done in 2013, 2014. And that's the pipeline replacement work, the valve automation work, the SCADA work, the

There is a significant amount of work for the San Francisco Peninsula, all of which require clearances, all of which require taking pipelines segments out of service, and all of which require us to route gas to feed different customer needs. And Line 147 is a significant link in the overall transmission system in the San Francisco Peninsula.

Q But not all of those projects don't have to be completed by Winter 2013, 2014; correct?

A When you say, "Don't have to be completed," they are Pipeline Safety
Enhancement Plan projects which we have committed to completing. These are all safety-related projects.

1 That have to be completed by Winter 20142 2 3 Well, when you say, "have to be 4 completed by, " based on what? 5 Done. You're done. You -- vou've 6 finished everything that you needed to do. There's nothing else to do. Well, there's never a time where 8 9 there's nothing else to do. We need to get 10 -- we have 10 miles of Line 109 that we hope 11 to replace as part of the Pipeline Safety 12 Enhancement Plan work that we were planning 13 on doing in 2014. We want to get all that 14 work completed, tied in for 2014. It is very 15 hard to do work in the winter time because 16 the demands are higher and we can't get 17 clearances. 18 Okav. I. Just have a few more 19 questions on this. So what's the highest 20 demand for gas for PG&E? What time period? 21 Well, you have to look at each segment differently, but for 90-plus percent 22 23 of the segments, it's the winter -- the 24 winter period. 25 And what -- what month -- what time 26 period? 27 It's probably early December 28 through late January is when you see the

1 coldest weather. It's the shortest days, so 2 I think it's pretty much common sense that winter time is colder and the coldest days 3 4 happen in the January -- December, January 5 timeframe. And isn't it true that PG&E 6 discovered the Line 147 issues in October of 2012; is that correct? 8 9 The issues being the leak you're 10 referring to? 11 Yes, yes. I'm sorry, the leak. 12 Α I believe it was October 2012. 13 And isn't it true that PG&E didn't 14 inform the CPUC of those issues until March 15 of 2013? 16 MR. MALKIN: Your Honor --17 ALJ BUSHEY: Argumentative. 18 MR. MALKIN: We're going into other 19 issues. 20 MS. STROTTMAN: Your Honor, I would 21 just like to note that PG&E didn't inform the 22 Commission nor the parties of these issues of 23 Line 147 during the highest peak of demand. 24 ALJ BUSHEY: Ms. Strottman, this is all 25 a matter of -- of record already in this 26 proceeding. I think it's all laid out in the 27 order to show cause. 28 MS. STROTTMAN: Okay. Thank you.

1 And I'm sorry. I'm going to go 2 back to some questions about accuracy in 3 PG&E's database. 4 So Mr. Johnson, vou did confirm that Segment 109 is about 1320 feet? 5 WITNESS JOHNSON: A Based on the 6 document that we were looking at earlier. 8 0 Yeah. I'm sorry. That's document 9 -- it's Hearing Exhibit I. Yes. So based on this -- based on 10 11 the exhibit I'm looking at, it states the 12 length is 1327 feet of Segment 109. 13 O Okay. And then I'm going to 14 finally give you a hypothetical. Assuming 15 that Segment 109.3, which is adjacent to 16 Segment 109, is listed as seamless. Would 17 that raise a red flag to you? Do you think 18 that that's accurate? 19 If I think anything on our system 20 is inaccurate, it's going to raise a red 21 flag. 22 But in your mind, if -- if I give 23 you the hypothetical that in this pipeline 24 features list you have Section 109, which is 25 1320 feet and it's A.O. Smith -- and let's 26 assume that the section immediately adjacent 27 to it, Section 109.3 is listed as seamless. 28 Do you think that that's accurate?

Well, if that's what's listed in 1 2 our pipeline features list, I believe it's accurate to the best of our knowledge. 3 4 But it wouldn't raise a red flag to 5 you? 6 Α No. No, if I -- if we believe it's accurate and we -- as we've laid out in our 8 pipeline features list, then no it doesn't 9 raise a red flag. 10 Okay. Then I'll give you another 11 fact in this hypothetical. 12 MR. MALKIN: I think Mr. Singh --13 MS. STROTTMAN: O Oh, I'm sorry, 14 Mr. Singh. 15 WITNESS SINGH: A Can I add on to 16 that? 17 Yes. 18 It wouldn't raise a red flag to me 19 either. And the reason for that is because 20 you could have a separate job that was done 21 for that respective segment that was 22 installed at some other point. You have to 23 look at the actual pipeline and look at the 24 actual situation. 25 It's not uncommon where -- and I 26 think I answered previously that Line 147 was 27 originally installed in 1947. And after that 28 there was work done on the pipeline in '57,

in '87, and in 1990. So it's not uncommon to find different seam types and different specifications along one length of the pipeline. It's very common not just within our system, but in the industry.

Q Okay. Where in the industry? Can you point to me some examples where is that common in the industry? I mean, I've heard you say that several times in cross-examination, but I'm asking you if you could point to an example.

A Based on all the conferences I've attended, based on my discussions with other operators, based on my discussions with industry experts such as Mr. Rosenfeld.

Q Okay. So if I added another fact to this hypothetical -- if this pipe segment, which is 109.3, which is adjacent hypothetically to 109, and it's got an install date of 1947, would that raise a flag to you that it was listed as seamless?

WITNESS JOHNSON: A Not in itself.

You would have to go through the pipeline features list and look what's on the pipeline features list. It may show a different job. It may show a different strength test pressure report. There could be a lot of reasons why it changed. Just because it's

the same year doesn't mean it wasn't done on different jobs or something else wasn't different there.

Q Okay. Thank you.

WITNESS SINGH: A And it wouldn't be a surprise to me because there was seamless pipe made around 1947. We've got a purchasing record for this. We've actually in fact done a field inspection on a segment of Line 147 installed in 1947 that was seamless. And we actually took a look at a stream of line manufacturing, which has been authored by Kiefner and Associates. It talks about manufacturing practices typically in the industry of line pipe that was manufactured. And it wasn't uncommon from my understanding and we have some in our system. The fact that it is 1947 seamless pipe does not raise any questions in my mind.

Q Okay. I'm going to ask you some questions now about safety factor. What -- what is safety factor to you when you're assuming or calculating a safety factor -- well, I'm sorry. I'll rephrase that. What does safety factor mean to you?

WITNESS JOHNSON: A Well, as a -- as a generalization, it usually means calculating some structural issue at its maximum or its

-- it's 100 percent strength point and dividing by a number. And that number would be your safety factor.

Q What factor of safety are you assuming or calculating for Line 147 after the hydro tests were conducted?

A Well, are we speaking specifically to Segment 109 or talking about the entire pipeline now?

Q Let's talk about the entire pipeline.

A Well, the safety factors I believe are probably different depending on the segment of pipe you're looking at.

Q Okay. What's the range?

A Okay. Well, we could get the pipeline features list out. But without going through that whole document -- do we have the pipeline features list here? You can walk through and see each one of them depending on the -- we have Class 1. So we're looking at the hydrostatic test and the test pressures. The lowest one is 607. Had the highest one is 1440. That's just a quick review of the pipeline features list, so I may have missed something in there.

Q Okay. If you don't have the correct pipeline specifications for a

particular segment in a line, what type of safety factor do you have for that issue?

A Well, you're -- as we've discussed here at length is we have a hydrostatic test pressure. So if it's one-and-a-half times its normal operating pressure plus a spike test, it's going to be in the range -- just on the spike test alone, just on the hydro test alone, it's -- it's -- you know, it's the .5 or the .67, depending on how high the spike went.

WITNESS SINGH: A And just to add on to that, that's at least or greater. And the reason why I make that statement is because as part of the test -- and what we reviewed at length on Monday and yesterday's workshop was the pressure volume plus. And we did not see any yielding on the 2011 test, which is a clear indication that the strength of the pipe is greater than what we tested. So it's at least that value if not greater.

Q So what -- I guess what I'm getting it at if you don't have the right records for a segment -- and records I mean the right pipeline specs -- that consideration isn't a factor for you when you're analyzing the safety factor?

WITNESS JOHNSON: A Well, I'm not sure

-- I'm not sure what you mean by that question, but in the simplest terms, we've pressure tested the pipeline. We pressure tested it well in excess of its operating pressures, plus a spike test. So just hypothetically if the test is at 600 pounds, we're very comfortable it can operate at 400 pounds. It's just a simple engineering call.

Q I guess what I'm getting at -- so the hydro test to you is just the platinum standard? It doesn't matter that you have the wrong records or the wrong pipe specs for a segment because you completed your hydro test?

A What I'm saying is -- I think I've said it's the gold standard. I'm not sure if platinum is higher or lower.

Q I think it's higher.

A That is the best standard that we have today to ensure that a pipeline can operate safety at the pressure it's at. I think for most engineers, we're very comfortable that if I pressure test at 600 pounds hypothetically, operating at 400 pounds doesn't cause my any concern.

Mr. Kiefner I think -- excuse me, Mr. Rosenfeld spoke for an hour-and-a-half,

2 hours yesterday, and Mr. Kiefner spoke at the symposium. And I believe we think that's a very large, adequate safety --

WITNESS SINGH: A The only piece I would like to add to that is I think there's a little bit of a source of confusion around that in terms of the specifications. They only lowered that value, which is the true safety margin that's established by the strength test. Those specifications have never been used to justify a higher pressure, and that's again in accordance with everything we've been doing in the last couple years as part of our pipeline safety enhancement.

Q I guess what I'm saying is if you don't know what's in the ground, the fact that you hydro tested it is good enough?

WITNESS JOHNSON: A Well, the fact that -- if you're absolutely not sure what's in the ground and you hydro tested and you check for yield and ensured a safety margin and there is no yield, you can be assured you're operating very safely under those circumstances.

Q Okay. I may come back to that, but I have just a few questions about,

Mr. Johnson -- in your verified statement --

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I don't know if you have it in front of you?
1
2
               I do have a copy in front of me.
3
           0
               It's on page 8.
 4
           Α
               Okav.
               You stated that "PG&E discovered
5
     human error in MAOP validation records for
 6
     one segment of Line 147." And specifically
     you stated, "Our MAOP validation
8
9
     documentation -- "
10
               Can you share with me where you're
     at --
11
12
               Yes. Sorry. I'm just reading from
13
     my notes. Let me get it.
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           Α
               -- what line you're at?
15
               Yeah. It's at the bottom of page
16
        But the -- the -- on page 6, it's --
17
           Α
               Page 6 or page 8?
18
               Well, on page 6 -- I'm just
19
     directing you to page 6 of your verified
20
     statement, the heading that's underlined
21
     says, "Line 147, Segment 109," and then in
     parentheses, "Human Error"?
22
23
           Α
               Correct. Okay.
24
               And then on page 8, it's at the
25
     last two sentences of the page. It's
26
     actually the last sentence. It says, "We
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     determined that our engineer had mistakenly
28
     assumed," and then you turn the page to page
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9, "DSAW pipe -- "
1
2
           Α
               Okay.
 3
               " -- when preparing the PFL in
           0
 4
     October of 2011."
5
               Does that look correct to you?
                                                   1
 6
           Α
               Well, I mean we've all got the
     document. So I didn't actually follow your
     word word for word, but the words are there.
8
9
                      So an engineer there had
               Okav.
10
     basically made a bad assumption about the
11
     pipeline features of Line 147; is that
12
     correct?
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           Α
               I believe we said he made an error,
14
     ves.
15
               And you don't have to disclose his
16
     or her name, but how many other pipeline MAOP
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     validations did this engineer work on?
18
     vou know?
19
           Α
               I don't know.
20
               Well, wouldn't all of his work be
21
     questioned based on this mistake?
           WITNESS JOHNSON: Go ahead.
22
23
           WITNESS SINGH: A So let me add on to
24
     that. I don't have the specific number of
25
     features lists that he worked on, but keep in
26
     mind that this is the work that was completed
27
     in October of 2011. And as I testified in my
28
     direct examination at the hearings for the
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Order to Show Cause for the substance part of the issues on September 6th of 2013, we stated that we actually went through and re-reviewed all of the pipeline features lists, MAOP reports as part of the enhancements that we made to the processes and the MAOP validation process starting in January and February of 2012.

And we also included a independent audit firm which provided a quality assurance with the appropriate procedure, and the procedure is a part of the filing that we have made for the PSEP updated application, which I'm also sponsoring. And there's also clear delineation in terms of as part of that QA that was done what was the sampling, the sampling rate, the population, and the associated error rate for all of that work that was done as part of the MAOP validation project. More than happy to entertain the questions as part of that proceeding.

Q Yeah, that's fine. And I don't believe that that answered my question. I'm just asking, did you pay any particular attention to the engineer's validations, MAOP validations that this particular engineer worked on where he assumed the wrong value?

WITNESS JOHNSON: Well, go ahead. Did

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you want to answer?

that we -- what we did is we found the error in November of 2012, and I believe you're going to get to this in the next exhibit that you have handed out, but what we did is we did a root cause analysis right away to identify what was the source of the discrepancy and why did that discrepancy take place and what are the corrective actions, and have the work that we have already been doing in terms of the number of corrective actions, how many of those have already been in place and implemented.

And the corrective actions that were identified, a lot of those were already incorporated as part of the enhancements that we made to our quality assurance process starting in January and February of 2012 where we went back and re-reviewed all of the PFLs and associated MAOP reports during Phase 3 of the project.

So I don't have sitting here the explicit number that this respective engineer worked on. What I can assure you is that whatever that number was and whatever work he did in 2011, that work was re-reviewed as part of the enhanced quality control and

1 quality assurance process which is 2 articulated as part of the PSEP updated 3 application. 4 So then you're testifying then that you essentially double-checked his work? 5 I believe that's what I stated. 6 Α 7 0 Okay. Thank you. And I have a few 8 questions about this. It appears that you 9 had, PG&E had some sort of additional third 10 party review for PG&E's MAOP validation; isn't that correct? 11 That is what I alluded to earlier 12 13 in terms of a independent audit firm that did 14 the quality assurance testing. It's all part 15 of the PSEP updated application. There's 16 several pages of testimony. There's several 17 additional attachments that outline the QA 18 procedure. That's all outlined as part of 19 that application. 20 Who is the independent auditor? 21 Was it the one that you mentioned yesterday? 22 Was it Bureau Veritas? 23 No, it was not Bureau Veritas. 24 Who was it then? 0 25 Α It's one of the big four auditing 26 firms. 27 Which one? 0 28 PricewaterhouseCoopers, PWC.

And how is this independent auditor 1 2 independent? Did the auditor report to you? 3 Who did the auditor report to? 4 I'm not sure -- what do you mean by 5 that question? Okav. Well, maybe I'll phrase it a 6 different way. Who directed the auditor or who gave directions to the auditor? 8 9 I can answer that question, but I'm not sure how I see it's relevant to this 10 11 proceeding, but okay. 12 MR. MALKIN: I'll object that's 13 irrelevant, your Honor. 14 (Laughter) 15 ALJ BUSHEY: I think I'll overrule both 16 of you. 17 MS. STROTTMAN: I'm just getting to the 18 fact that -- I just want to know who directed 19 PricewaterhouseCoopers to conduct this work. 20 I mean it doesn't seem like this auditor is 21 independent, but that's okay. I'll move on 22 to something else. 23 ALJ BUSHEY: Good. 24 MS. STROTTMAN: Thank you. 25 Now I will direct you to the 26 exhibit -- I'm sorry -- I think it was M? 2.7 WITNESS JOHNSON: M. Do you have M? 28 Do you need a few minutes to review

it? 1 Well, if you want 2 WITNESS JOHNSON: Ά to share with us what your question is about, 3 4 then we can just review. Otherwise this 5 thing is six, seven pages long. Yes. I'll give you some time. 6 7 WITNESS SINGH: A Did you want me to go through all the pages? 8 9 If that would make you feel 10 comfortable asking questions or answering 11 questions. I just want you to please review 12 the first page, or I'm going to ask questions 13 about the first e-mail on the first page. 14 Α Okay. 15 Which I guess is technically the 16 last e-mail in the chain. 17 Α Okay. 18 WITNESS JOHNSON: A Last e-mail in 19 the chain. 20 Are you ready? 21 WITNESS SINGH: A Yeah, go ahead. 22 So looking at Exhibit M, do you 23 recognize this e-mail? 24 Now that you've put it in front of 25 me, I recall this e-mail. I don't see my 26 name directly being included in from or to, 27 but I'll take your word that in one of the 28 redactions it may be -- my name may be in

1 here. 2 And what about you, Mr. Johnson, do you recognize this e-mail? 3 WITNESS JOHNSON: A 4 I don't. believe I have seen this e-mail. My name 5 normally wouldn't be redacted, but in some 6 capacity I've probably seen the information. Okay. And this e-mail, it looks 8 0 9 like it was sent on November 17th, 2012, at 10 1:35 p.m. And I'm going to direct you to the 11 first paragraph, last sentence. It says --12 and I'm sorry. I'll also just say that it 13 appears that this e-mail relates to the 14 issues that are -- or the issues that are at 15 hand right now during these proceedings. 16 it says, "At the executive level this 17 situation is considered a near hit from a 18 safety perspective that could have severely 19 damaged the company's credibility." 20 Do you agree with that statement, 21 Mr. Johnson? 22 Α No, not necessarily. 23 0 Why not? 24 Well, the term "near hit" is Α 25 usually actually considered a safety issue. So I've never heard it used in near hit in 26 27 terms of data or engineering terms. And I'm 28 not sure that it severely damages the

1 company's credibility. We have been very 2 clear that we don't know everything about 3 every record. And so this is one person's 4 opinion. I don't know that I necessarily 5 share this opinion. 6 So the fact that we're all sitting here in this proceeding talking about the same issues, the same issues with wrong 8 9 recordkeeping that was a proximate cause at 10 San Bruno that now occurred in San Carlos is 11 not something that you think damaged the 12 company's credibility? 13 MR. MALKIN: Objection, argumentative. 14 ALJ BUSHEY: Sustained. 15 MS. STROTTMAN: Your Honor. 16 ALJ BUSHEY: Ms. Strottman. 17 MS. STROTTMAN: I think it's important 18 to understand -- I would like to know Mr. 19 Johnson's opinion. I can rephrase it if 20 you'd like.

ALJ BUSHEY: He's not here to represent the company's public relations perspective. He's here having made a safety certification. Part of that certification is not his perspective on the company's credibility or whether it was a near hit.

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MS. STROTTMAN: But your Honor, I'm sorry. I just I feel like as a vice

president of gas operations he would have an opinion on whether the situation that happened in San Carlos hurt the company's credibility and if in turn he feels completely comfortable, a hundred percent comfortable that Line 147 is safe to operate in San Carlos.

2.7

ALJ BUSHEY: The second part of your sentence is absolutely relevant to this witness's testimony. This witness has not presented any testimony about the company's credibility. So let's focus on safety certification.

MS. STROTTMAN: Q So Mr. Johnson, as we're sitting here today you can testify under oath that you feel a hundred percent comfortable that Line 147 is safe to operate?

WITNESS JOHNSON: A I believe it's safe to operate at 330 pounds as we have requested and as I've stated in my verified statement.

Q And what about you, Mr. Singh? WITNESS SINGH: A I absolutely support that.

MS. STROTTMAN: Your Honor, may I have a few minutes, or just a minute, please?

ALJ BUSHEY: Just one minute.

We'll be off the record.

1 (Off the record) 2 ALJ BUSHEY: We'll be back on the 3 record. 4 Ms. Strottman. 5 MS. STROTTMAN: Thank you. 6 I just have one last question. I'm not really sure I got an answer or a yes 8 or no answer to this question. 9 Is it PG&E's position that the MAOP 10 is the minimum of the hydrotest determined 11 MAOP and the design MAOP? WITNESS JOHNSON: A Go ahead. 12 WITNESS SINGH: A That's how we've 13 14 applied the methodology in the MAOP 15 validation project. 16 So the answer to that is yes? 17 Α I'm not finished yet. 18 Oh, I'm sorry. 0 19 Α So let me reiterate just so that 20 I've got a continuous answer in the record. 21 So that's how we've applied the conservative 22 methodology as part of the MAOP validation 23 project. But going back to the decision that 24 the Commission articulated, stated, ordered 25 PG&E to do was to validate the MAOP using a 26 strength test. And in this case for Line 147 27 that's been shared, discussed at length, and 28 without a doubt that MAOP that's been

1 validated through that strength test record 2 for every single foot of that line and all 3 the shorts operating at or above 20 percent 4 SMYS is at least 400 psiq. But did that -- I'm asking for a 5 0 6 yes or no answer. Is it PG&E's position that the MAOP is the minimum of the hydrotest determined MAOP and the design MAOP? 8 9 MR. MALKIN: Your Honor, I'm going to 10 object. That's asked and answered. 11 fact -- Mr. Singh just explained PG&E's 12 position. 13 ALJ BUSHEY: In great detail. 14 believe your question oversimplifies the 15 actual approach that they're taking. 16 MS. STROTTMAN: O Okay. Then the 17 answer would be no then. Is that what you're 18 saying, Mr. Singh? I'm trying to 19 understand -- I'm just asking if -- it sounds 20 like then that's not PG&E's position then that the MAOP is a minimum of the hydrotest 21 22 determined MAOP and the design MAOP? 23 MR. MALKIN: Same objection, your 24 Honor. Mr. Singh can restate his answer, but 25 it's in the record. 26 ALJ BUSHEY: That question has been 27 asked and answered. 28 MS. STROTTMAN: I believe it hasn't,

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but if you -- that's fine. We'll let the
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 2
     record stand where it stands.
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            ALJ BUSHEY:
                          Okay. Further questions?
 4
            MS. STROTTMAN: No, no.
                                       Thank vou.
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            ALJ BUSHEY:
                          Thank you. And I
     understand Mr. Ruben wants to make a
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     statement at the conclusion of today's
     hearings. Is that fair?
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            MR. RUBEN: Yes, your Honor.
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            ALJ BUSHEY: All right. And the other
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     parties have at least half an hour each,
12
     right?
13
                So let's take a lunch break. I have
14
     several things I need to accomplish.
15
     let's say 1:15 we will resume. So we'll be
16
     adjourned until 1:15.
            (Whereupon, at the hour of 12:02 p.m., a recess was taken until 1:15
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18
            p.m.)
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                                    * ]
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1	AFTERNOON SESSION - 1:20 P.M.
2	
3	* * * *
4	SUMEET SINGH and KIRK JOHNSON
5	resumed the stand and testified further as
6	follows:
7	
8	ALJ BUSHEY: We'll be back on the
9	record.
10	Cross-examination continuation with
11	Mr. Meyers.
12	MR. MEYERS: Thank you, your Honor.
13	CROSS-EXAMINATION
14	BY MR. MEYERS:
15	Q And Mr. Singh, Mr. Johnson, I'm
16	Steven Meyers representing the City of San
17	Bruno. Good afternoon.
18	Mr. Johnson, when you started your
19	direct examination on Monday in response to a
20	question by Mr. Malkin you indicated that
21	your position at PG&E has changed. Could you
22	refresh my recollection of what your current
23	title is?
24	WITNESS JOHNSON: A I am responsible
25	for the project management and program
26	management of PG&E's gas operations.
27	Q And who took the position that you
28	previously held?

A Well, it was basically a restructuring. So nobody, quote, took my position. It's just we moved things around and organized differently. So there were some functions that went just in different places.

Q For purposes of this particular proceeding, the repressurization request of PG&E for Line 147, you are the gentleman at PG&E that signed the certification under penalty of perjury that Ordering Paragraph No. 4 in the decision sets forth as the criteria that must be produced and shown by PG&E to justify a repressurization; is that correct?

A I have a verified statement, and I signed the safety certificate. I didn't -- I don't have a copy of the document you're referencing right now. So I can't --

Q But when I refer to the decision of the Public Utilities Commission, Decision 11-09-006, you're familiar enough with that decision to answer my question accurately today that you are the officer to whom the company requested a verified statement for submission to CPUC?

A I am the one that signed my verified statement and the safety certificate

for this proceeding.

Q And you previously signed such a verified statement for the original repressurization decision made by the CPUC before this current proceeding took place, correct?

A You're referring to the ones for Line 101 and Line 147 previously? Is that your question?

Q Yes. This proceeding results from an Order to Show Cause why the previous order the CPUC issued allowing you to repressurize various pipelines in the peninsula, why that shouldn't be rescinded.

So you previously signed a certification under penalty of perjury that led to the first repressurization following the Executive Director's decision to lower pressure; is that correct?

A I'm not sure I'm following all of your question, but I signed the safety certificate for this proceeding, and I signed the safety certificate for what I believe was for, the title was Line 101, Line 147, and I believe it was Line 132A.

Q Thank you. And Mr. Singh, you have also signed a verified statement on behalf of PG&E. I think the copy I have is dated

1 September 13th, 2003. And that is your 2 statement relative to the request of PG&E to 3 repressurize Line 147; is that correct? 4 WITNESS SINGH: A Is that the September 13th, 2013 document? 5 That's what I said. 6 0 7 Α The declaration? Yes, it is. 8 Q I just wanted to say that --9 preparatory matter to make sure I was asking 10 the right questions to the right guy. 11 So with respect to Line 147, which 12 is all we're talking about today given the 13 quidance from Administrative Law Judge 14 Bushey, I'm looking at Exhibit I, 15 cross-examination Exhibit I, I as in India. 16 This is PG&E data response and attachment 17 that were submitted by the Office of 18 Ratepayer Advocates. Do you have that in 19 front of you? 20 WITNESS JOHNSON: Α Is it SED 003 O 21 062 22 Yes, sir. Q 23 Α Okav. 24 And on the last page, I believe 0 25 it's the last page, of that exhibit there was 26 a chart which is vertical across the page. 27 That chart purports to represent six segments 28 of Line 147 and then has various data with

respect to the October 2011 as-filed pressure 1 2 restoration, and then the next large column shows updated specifications. Do you see 3 4 that, sir? 5 Yes, we have it in front of us. 6 Okay. My questions are going to relate to that. So in the prior 8 certification that you, Mr. Johnson, said 9 that you filed on behalf of PG&E for the 10 October 2011 pressure restoration 11 application, the data that was on this document was the data that PG&E had that it 12 13 used as part of its process of validating 14 MAOP. Is that a fairly accurate statement? 15 Well, if I understand you 16 correctly, if you're talking about the 17 October 2011 section. 18 0 Yes. 19 Α As filed for the pressure 20 restoration? 21 0 Yes. 22 Α That's the document? 23 0 Yes. 24 Yes, that information would have Α 25 been in the previous filing. 26 Thank you. Now, if you go Q Okay. 27 to the next large portion of that spreadsheet 28 which is entitled Updated Specifications,

those are the updated specifications that you have now submitted as part of your verified statement in support of the MAOP validation and repressurization of Line 147? In other words, these are the corrected -- it's the corrected information in your database for this, these segments; is that correct?

A The -- I'm sorry. Would you repeat the question? It is the what now? What was your question again?

Q My question is, in the column,

Q My question is, in the column, large column that says "updated specifications."

A Okay.

2.7

Q There's a list of specifications starting with design factors, wall thickness, SMYS, long seam, things of that nature, and that data is now the corrected data that you are using for purposes of making your verified statement to the Commission to justify the MAOP validation and restoration of pressure; is that correct?

A I think these are situations for the long seam.

Do you want to try to answer that? You got to go back and make sure it matches.

WITNESS SINGH: A I can answer that. These are the updated specifications as the

1 | title states.

Q Okay. So now that I have that clear, I want to ask you a question about Segment 109, which is the last segment in that column. And I'm asking this question because I am cross-examining you with respect to your safety certification and the validation of engineering and construction data that you are using for these proceedings.

You list in this exhibit that you have just authenticated a wall thickness of .250, SMYS of 33,000, A.O. Smith SMAW, which Mr. Rosenfeld testified to yesterday, joint efficiencies, and MAOP design, MAOP test, and MAOP of record. Is that correct? You follow me?

A That's what's included in the table, that's correct.

Q And I'm sorry. This is all preparatory to a question I want to ask you.

A No problem.

Q So the MAOP of design -- let's start with MAOP of test. The MAOP of test would have been the results that you obtained based upon your hydrostatic testing for that line, correct?

A That is correct. And that number

is the same in both columns, both columns
being October 2011 and the updated
specifications.

- Q Okay. I didn't ask that question, but thank you for that editorial comment.
  - A My pleasure.

2.7

Q The MAOP of design to the immediate left of the MAOP of test, what does that number represent?

A The MAOP of design represents our conservative methodology and application as part of the MAOP project to retroactively apply the design equation for the specifications as articulated throughout the conversation we've had today.

Q And the MAOP of design that's shown in that column for Segment 109 and the MAOP of record are the identical figures 330; is that correct?

A That's correct.

Q Okay. So the MAOP is what you're asking for the Commission to authorize. My question is simply this. If the MAOP resulting from a hydrostatic testing, which is the gold standard in the industry, results in a figure of 404, why aren't you asking for a MAOP of record of 400?

WITNESS JOHNSON: A We are asking for

a very conservative number at this point in time. But we acknowledge that the MAOP of test is 404. And in theory we could be asking for 404. But also as part of the PSEP program we said we would validate the existing MAOP, which previously was 400.

Q And if you could just, summarily if you wouldn't mind, explain to me the conservative factors that you're using that results in your decision to only ask for 330 and not what your hydrotest shows this pipe is safe to run at?

conservative factors. So we have talked about Segment 109 at length here. We've talked about the fact that the SMYS that we're using for that line has actually been tested to be significantly higher than our conservative assumptions. We have talked about using a joint factor of .8, which under the federal guidelines we wouldn't normally use for calculating hoop stress. So that's another conservative assumption.

WITNESS SINGH: A And the third one I'd like to add on top of that is the point that Mr. Malkin made earlier today is the strength of the weld versus the strength of the base metal at that specific location

where the leak occurred, which we analyzed, which is part of Segment 109, validated that joint efficiency factor of 1.0. We still continue to use the conservative assumptions.

Q Mr. Singh, thank you for that. I don't think that Mr. Malkin is testifying. So could you please explain in your own words what you meant by that statement.

A Sure. So if you take a look at the -- one of the Anamet reports, one of the many documents we filed as part of this proceeding, it includes the metallurgical results for the section of the line that was removed so we could conduct the root cause analysis of the leak.

The metallurgical properties showed that the minimum yield strength for the base metal was lower than the minimum yield strength for the actual weld metal, and the weld metal is where the seam comes together for the respective pipe as it's rolled. And that's a proxy for or an indication where the weld metal has a greater strength than the base metal that the joint efficiency factor does not have to be derated.

Q So if I understand your answer, there is a difference in the yield strength between the base metal and the actual weld

itself, the longitudinal weld?

A That's correct. That's what's stated in the metallurgical report.

Q And you're using the most conservative of those two factors in doing your verification for line -- for Segment 109?

A We are actually not using the result from the metallurgical analysis, which is higher than what's used here to do the calculation. The reason we use 33,000 is the fact that it's been our historical procurement practices and we have contracts that state that the A.O. Smith pipe that we procure and have procured, minimum value is 33,000 psi. Mr. Harrison, I believe, was under oath when he did talk about that issue.

Q Okay. So just so I can make sure I understand this. You could come to the Commission with the information that you have, the testing that you've done, and in your engineering opinion you could ask based upon the hydrotest, which again is the gold standard we've all been talking about, you could have asked for an MAOP of 400 psig. Is that correct? But you chose to employ more conservative assumption, and that's why you're asking for less than 400?

witness Johnson: A As I stated earlier, I believe we have the right to ask for 400 if we chose to based on everything we've talked about previously at these hearings. And we chose to be very conservative in all of our assumptions, and that's why we're only asking for 330.

WITNESS SINGH: A And I would also actually like to reinforce that in an assessment. It's not just PG&E's position.

One of the leading experts that's been a witness and the letter that was submitted by Mr. Rosenfeld on behalf of Kiefner & Associates also speaks to this issue that the line has been validated to 400 psig.

Q Some of the reasons for your conservative assumptions are your understanding and PG&E's records showing the type of pipe that you purchased -- let me rephrase that.

Is the reason that you have employed a conservative assumption on your otherwise hydrotested MAOP the fact that you are aware of other pipeline feature characteristics which you believe warrant a more conservative approach to establishing pressure?

For example, we know that one

portion of Line 147 is A.O. Smith pipe. 1 2 yesterday's testimony Mr. Rosenfeld, excuse me, testified that he didn't know where that 3 4 pipe came from, didn't know when it was reconditioned, how it was reconditioned, 5 6 where it was purchased, who purchased it, but it is A.O. Smith pipe, probably manufactured before 1930. 8 9 Would your employment of 10 conservative assumptions take that into 11 consideration? 12 WITNESS JOHNSON: Α I think you're 13 referencing, again getting right back to this 14 PRUPF conversation again. Is that what 15 you're -- in terms of how we apply our 16 conservative assumptions? Is that your 17 question? 18 I'm sorry. I'm just asking 19 where -- what's the source of your desire to 20 employ more conservative assumptions in 21 coming before the Commission asking for an 22 MAOP certification? What is the source of

Well, just as we did in the first

that reason? Why in your engineering

chief officer of PG&E to come in with a

would otherwise permit?

certification that is below what the MAOP

judgment do you feel it's important as the

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request at 365 pounds, we came below because we agreed to use, and we believe we should be using, conservative assumptions. We talked about being conservative in our decision making, and that is the whole basis of all the discussion we had earlier today.

We said we would calculate MAOPs as an interim safety measure prior to hydrostatically testing pipelines. That is the driver for going through that calculation. And from our standpoint, we are trying to be very conservative.

Q So the 330 psi is the appropriate pressure based upon your expert engineering judgment. Is that correct, Mr. Johnson?

A At this point it is the pressure I am requesting based on everything I've seen, and it is a conservative number. I believe we still have the right to ask the 400. I'm not asking for it at this point in time.

Q Okay, let me try a hypothetical.

Hypothetically, if Segment 109 of Line 147

were seamless pipe with a joint efficiency

factor of 1.0, would you still be requesting
an MAOP of 330?

A I would have to go back through and look at any other constraints that might be on this pipeline, different segments. And

what we calculated there, and whether or not we are sticking with our conservative assumptions. It might change, it might go up.

You mentioned the seam -- it would be a seam factor of zero, I mean 1, if it didn't have a seam, quote, seamless pipe.

But I would want to look through that entire document again, and I would want to make sure I understood all of our conservative assumptions, and I would make my judgment then.

Q So in your engineering opinion, sir, as you sit here today testifying, the existence of information regarding a particular pipe segment does enter into your decision regarding whether to imply conservative factors in your overall engineering judgment. Is that a correct statement?

A Well, I'm not sure I understood. I looked at all the issues that I mentioned at the beginning of this in putting together my judgment in what we are asking for. And coming into this one, we decided to be, I decided to be very conservative.

And so I've looked at all the issues, and one piece of that is looking

through the pipeline features list. But it is also looking through a lot of the other documents that I mentioned earlier including the MAOP documents, including the leak surveys, including the patrols, including having conversations with Mr. Kiefner, looking at the shrink test pressure reports.

As I stated earlier, we are asking for 330. I'm very, very, very comfortable with that number. This pipeline has already proven itself well over 600 pounds. It can operate, in my opinion, legally at 400 pounds. I'm asking for 330.

Q Earlier today Mr. Malkin, again he was not testifying, he was offering argument. It was either on the record or off the record. I don't recall. He made a statement to the effect that PG&E employs conservative assumptions in, again, I think this goes to the pipeline, the unknown pipeline features at issue that we talked about yesterday. I have a very specific question.

Mr. Malkin referred to purchasing records of PG&E and said something to the effect that PG&E has looked through its purchasing records and never acquired AO Smith which had a SMYS of 33,000. I think that was something he said. I'm not

questioning so much Mr. Malkin, the accuracy of what he is saying, I'm asking you this question, sir.

As the chief engineer of PG&E who is responsible for this certification, do you specifically look at things such as when you have unknown pipeline features, purchasing records of the company, what type of pipe you purchased over what period of time when this particular piece of pipe was installed? And can you make general assumptions about the quality of that pipe based upon that information?

A What I have looked at, I have seen some of the purchase documents when we started the MAOP process and we started the PRUPF discussion on how to put that together. I saw some of those documentations. I didn't look at all of them.

I do have a lot of conversations with Mr. Singh, Mr. Harrison, and many other people doing that work. And so we have had dialogue about that, but I haven't personally reviewed each one of those documents.

Q But you would expect the people who report to you so that you could make a decision to have reviewed that information?

A Well, in terms of what is in the

PRUPF document?

Q Yes?

A I mean I think that Mr. Singh has clearly articulated what has gone into those documents in the past.

In terms of wanting to know the strength, and if we are talking hypothetical again about AO Smith pipe, if we are still on that line, we had conservations with Mr. Harrison. And Mr. Harrison has stated we have tested this pipe under numerous circumstances. And each and every time I believe he stated that the strength was well above 33,000 psi.

This particular test, adding again to the confidence level, is we tested this pipe and I believe it came out at 39,000, I believe it was 300, subject to check. So that is the kind of -- that is the kind of discussions I have had in preparing for signing the document and reviewing all of the -- all the information that went into this filing.

Q Mr. Singh, you looked like you wanted to add something to that answer?

WITNESS SINGH: A The only thing I wanted to add is if there is a general question about the quality of the AO Smith

pipe, how it was manufactured, how it was 1 2 developed over time, how it was tested over the mills, I think Mr. Rosenfeld spoke to 3 that on Monday, Mr. Rosenfeld is still here. 4 If there is any questions in regards to the 5 6 actual strength of the pipe, what type of testing they did, I believe he testified, and go back and look at the transcripts. 8 We can 9 also look at the October 18th letter that 10 Mr. Kiefner, or Kiefner & Associates, and Mr. 11 Rosenfeld submitted. In that it states that 12 AO Smith pipe was one of the higher quality 13 manufacturers of line pipe during their era. 14 Mr. Singh, earlier today Mr. Malkin 15 objected to a characterization of your 16 testimony that I made in an off-the-record 17 comment, I believe. I can't find the portion 18 of the transcript where you actually said 19 these words, because we just got the 20 transcripts this morning. But I believe you 21 said something to the effect that, with 22 respect to AO Smith pipe, that that pipe may 23 have been pipe that was acquired from other 24 utilities. Do you recall making that 25 statement? 26 It would be great if you can point 27 me to a specific section in my transcript. 28 I can't. To your knowledge has

PG&E acquired AO Smith pipe from other utilities?

A I think Mr. Harrison would be more appropriate to answer that question. Because I haven't looked at every single purchasing record associated with 6,750 miles translating to more than 4 million individual documents. I personally have not reviewed every single document to be able to make that statement.

The fact that we had a successful strength test, a spike test, does not concern me. We monitored to ensure line doesn't yield, which we also talked about at length. So it does not concern me that that is weaker pipe. And if it was weaker pipe, we would have identified that as part of strength test. That is why we strength test.

Q So I know we've talked about this quite a bit. But basically what you are saying, if I interrupt it correctly, while it is good to find the original records for the purchase of particular segments of pipe to validate the information that you have in your database with that information, ultimately it is the strength test or the hydrotest that is the standard by which PG&E uses to file its verification by you guys

1 under penalty of perjury that the pipeline in 2 question is -- can be operated at the MAOP? 3 I mean it is ultimately the strength test, 4 the hydrotest you are relying on? WITNESS JOHNSON: A So that we are 5 very clear on this, Line 147 for the segments 6 that were built before 1970, that is the information we are using. 8 Okay. So isn't it true from an 9 10 engineering point of view that all pipeline 11 features are not validated by a hydrotest? 12 Α I'm sorry, your question again? 13 0 Isn't it true from an engineering 14 perspective that not all features of a 15 pipeline are actually validated by a 16 hydrotest? 17 Α There are multiple types of tests 18 that can take place on a pipeline. So 19 hydrotest is not the only one. 20 Would you -- would a hydrotest tell 21 you the load capabilities of a miter in a 22 pipeline? 23 Would it tell you the, I'm sorry, 24 what capabilities? 25 Would a hydrostatic test provide

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sufficient information for you to validate

the integrity of a miter bend on a piece of

pipeline? In other words, is hydrotesting

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the way to test the integrity of a miter bend?

A Well, a hydrotest is a way to test the integrity of a pipeline to be capable of holding a pressure that it is operating under. So, again, 400 pounds hypothetically, you test the 600, you know that pipeline system from Point A to Point B is capable of handling that pressure. That is what a pressure test or a hydrotest in this case does.

Q I understand that. Thank you for that.

But are there structural elements in a pipeline such as a miter bend or such as a bell that -- a bell joint, where a hydrotest is not the best means of assuring the integrity of that particular feature, that you do other testing?

A When you refer to "integrity "what are you representing?

Q Integrity of the line to withstand the pressure that you are operating in?

A If you are looking to understand if the pipeline can hold pressure, you do a pressure test.

Q Did you happen to do any special tests on miter bends on Line 147?

1 A "Any special test"?

WITNESS SINGH: A So in the response that Mr. Rosenfeld also provided I believe on Monday, he did mention that we did do a structural analysis on the open span which included the miter bend. I'm not sure if that is your question.

Q It is my question. Why did you do that?

WITNESS JOHNSON: A Why did we do a structural?

O Yeah.

A Well, it is just part of the overall assessment. You have a span, right? It is aboveground. And so one of the things you do on spans, you look at the structural integrity of that span. You are aboveground. So you will take a look at that.

Q And Mr. Rosenfeld, I think as Mr. Singh pointed out, also included it in his explanation that that included the miter bend as well?

A Yeah, I would have to reference back to it. But if that is what is in Mr. Kiefner's, or Mr. Rosenfeld's statements, then that is in his statement.

Q Gentlemen, I'm not trying to trap you in debating the point here. But I'm just

trying to understand that hydrotesting may be the gold standard for the circumferential pressure within a vessel. But it is not the only test that you do to ensure the integrity of the pipeline. Is that a correct statement?

A There are other things that you do to continue to ensure the ongoing capabilities of the pipeline, leak survey, controls and inspections, monitoring for dig-ins, cathodic protection, all those type of things are the things you do on an ongoing basis.

Q Okay. In your verified statement before this Commission you are saying that you've done all those things necessary to support your conclusions?

A I am comfortable that we've done everything necessary to operate this pipeline at 330 pounds. I believe that is the essence of my verified statement.

Q Okay. Well, thank you for that.

Mr. Johnson, you are familiar with
the Decision 11-09-006 that we've been
referring here today?

A I am not familiar with decisions by decision numbers. Those aren't things I put to memory.

Q Well, it is the decision adopting procedures for lifting operating pressure restrictions. Are you familiar with that document?

A I have seen it. I don't have it in front of me. I'm not intimately familiar with it, no. I've read it, but I don't have it to memory.

Q Okay. I don't want to offend you, but you are the guy certifying under this order. I would think that you would know it. But that is okay.

MR. MALKIN: Your Honor.

ALJ BUSHEY: Mr. Meyers, can we focus on answering questions and leave the editorial comments behind.

MR. MEYERS: Q Mr. Johnson, are you aware that the City of San Bruno proposed in this proceeding, and it is referenced in the decision on page 5, the City of San Bruno proposed to the PUC that they adopt a remedy or a requirement that the operating pressure be validated by independent experts and then reviewed in a public process by the Commission?

A I recall reading that in some of the testimony. I don't remember the exact words.

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I think we've referred to the term 1 2 as "independent monitor." Have you heard 3 that term used? 4 Α I have heard the term used, ves. have not had any conversations about an 5 6 independent monitor. Do you know whether PG&E supports the concept of an independent monitor to 8 9 validate MAOP? 10 I don't believe we have any reason 11 to need an independent monitor to validate 12 the MAOP. We have the Commission, we have 13 PHMSA, we have SED as part of the Commission. 14 We have numerous parties looking over to try 15 to validate anything that PG&E does. 16 So as the chief engineer for gas 17 for Pacific Gas and Electric, if Mr. Johns 18 comes to you and asks you your opinion 19 whether you recommend that PG&E sign on to a 20 proposal to have an independent monitor, what 21 would your recommendation to him be? 22 Without understanding what the 23 independent monitor was really going to do, 24 if you are -- hypothetically, I'm going to 25 hypothetically answer that question --26 0 Please. 27 -- I would say I don't think it is 28 necessary.

Q Thank you.

A I think we have plenty of agencies that have already had the capabilities of looking at anything we want to do. We have the CPUC, we have the SED portion of the CPUC, and we have PHMSA.

Q Mr. Johnson, we made a data request of PG&E that unfortunately has not been responded to as we sit here today. So I'm going to ask you a question relevant to that that bears on this issue of certification.

Mr. Singh, you can please answer this as well, if you could.

Are you aware of any circumstances with respect to your MAOP validation where the field information is different than the records maintained by PG&E concerning that particular piece of pipe, or whatever it might be? In other words, are you aware of any circumstances where PG&E has discovered, in the course of doing its MAOP validation, a discrepancy, such as we have here on Line 147, between the data in your system and what you found out in the field? Are there any other circumstances like Line 147 that you are aware of?

A Well, I think in respect to Line 147 we found that as part of, as we termed it, a routine leak survey, somebody standing by. I'm not familiar with any other time that we have found information in that manner. I'll let Mr. Singh add to it. But we do data validation digs to exactly verify what is in the ground.

So the answer would have to be yes, we have found things that may differ from the records, and this whole purpose of those digs is to validate that. That is the purpose of a validation dig.

that, that is part of the MAOP project. That was one of the things that we were doing. We were -- performed excavations to identify specifications. And that is part of the process and the procedure that we laid out previously as well. As we do excavations to perform work on our system, safety-related work as part of the Pipeline Safety Enhancement Plan, or any other work, we validate the information that is in the field with our records. It is a process, continuous improvement process.

Again, it goes back to the same aspect that we stated in terms our methodology back in March 21st of 2011.

Nothing has changed since then.

1 Are you familiar with Line 210C, as 2 in Charlie, in Vallejo? 3 MR. MALKIN: Objection, irrelevant. 4 MR. MEYERS: Your Honor, my question is going to go to the veracity of the witnesses. 5 6 I'm going to ask a question about this particular line because what was covered with 8 respect to that. 9 ALJ BUSHEY: Mr. Meyers, you are going 10 to impeach the veracity of these witnesses? 11 MR. MEYERS: I'm going to try. 12 ALJ BUSHEY: All right. MR. MEYERS: 13 O Are you familiar with 14 line 210C, as in Charlie, in Vallejo? 15 WITNESS JOHNSON: A I am, in general, 16 familiar with the location of that line. 17 And is it correct that the -- that 18 PG&E inspected that line and determined that 19 the line interior walls were less than 20 expected and has now replaced that line? 21 I believe what you are referencing 22 is we ran a tool, if I understand your 23 question correctly, we ran an ILI tool 24 through the line looking for wall thickness, 25 looking for information on the pipeline, 26 including external and internal corrosion, 27 and a multitude of other things, including 28 dents.

And during that ILI pig run, there was some pipe found to be different than what was in the records. And that pipeline segment, I don't recall exactly how long it was, was replaced in relatively short order, as I recall. I don't have all the details to memory, but it was a project our team took on.

Q Mr. Singh, anything further on that?

WITNESS SINGH: A I have nothing else to add to that. The tool, on just a clarification point, the tool that was run as part of that was an in-line inspection tool. That is clearly a method, that is something that is part of the Integrity Management Program that we have within PG&E. And that is something that we are going to continue to do on our lines that are piggable, and we continue to make more of our lines piggable to exactly identify those types of issues.

Q Is line 147 piggable?

WITNESS JOHNSON: A At this time I don't -- well, one thing, no, Line 147 cannot be pigged today at 125 pounds with no valves open. I don't know of a tool right now that could be run through that system, and certainly not at the lower pressures that we

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1 are talking about that it is currently 2 operating at. 3 As the head of Pacific Gas and 0 4 Electric's gas projects, sir, would vou recommend to management that they reconstruct 5 6 Line 147 so it is piggable? Α We plan to get all -- in time, we will get all of our lines, certainly over 8 9 greater than 6 inch, piggable. It is simply 10 a matter of looking at which ones we make 11 piggable first. I think Line 147 would 12 ultimately be one of those lines. If there 13 is segments or things that need to be done to 14 the pipeline to make it piggable, we will go 15 about doing that work. 16 MR. MEYERS: One minute, your Honor. 17 ALJ BUSHEY: We will be off the record. 18 (Off the record.) 19 ALJ BUSHEY: Back on the record. 20 Mr. Mevers. 21 MR. MEYERS: One final set of 22 questions, if I might. 23 Mr. Johnson, you are aware of the 24 NTSB's urgent Recommendation P-10-3 issued to 25 PG&E as a result of the San Bruno disaster? 26 WITNESS JOHNSON: A They had numerous 27 recommendations to PG&E. I don't have them 28 memorized by number at this point. That was

1 quite some time ago. 2 Would it refresh your recollection if I told you that this recommendation had to 3 4 do with MAOP validation and traceable, accurate, and verifiable records? 5 6 Α I think there were several tied to that concept. 8 And do you know whether that 9 recommendation has now been cleared by the 10 NTSB?

A Which one are you specifically referring to?

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O P-10-3 MAOP validation.

WITNESS SINGH: A I can try. I am familiar with that recommendation as well as P-10-2 and 10-4. And my understanding is, subject to check, that P-10-2 and 3 have been closed by the NTSB.

Q Mr. Singh, thank you for that.

Do you recall that Chris Johns,
President of PG&E, sent a letter to the NTSB
on January 31st, 2013, requesting that
clearance? Are you aware of that fact?

A There is many letters that have been exchanged with our executives at PG&E with the NTSB. So that may be one of the letters. I'm presuming you are looking at it. I don't have it in front of me. I will

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA SAN FRANCISCO, CALIFORNIA

have to take your word for it.

Q I guess my question, gentlemen, is whether or not in retrospect now you believe that your request to clear that recommendation to NTSB was made in good faith based upon the knowledge that you had in October, the information concerning Line 147 was not accurate?

WITNESS JOHNSON: A I believe if we made that recommendation, we made it in good faith.

Q That recommendation was made in January of 2013, and yet you had information concerning the discrepancy in Line 147 in October/November of 2012?

A As Mr. Singh has stated and we stated here many times, this is an ongoing process to get records better and better. At no point does that necessarily invalidate all the work that has gone on to improve records. As we've said, we believe our records are in very good shape, but it is a continuous process to get better and better. As we dig up pipelines, we will know more and more.

Q Mr. Singh, I ask you the question whether or not you are aware of any efforts that PG&E has made either orally or by correspondence with the NTSB to correct the

1 record with respect to your MAOP validation? 2 MR. MALKIN: I'm going to object to the 3 question, your Honor, on two grounds. First, 4 it assumes facts not no evidence. Namely, the record, quote, needed to be corrected. 5 6 Secondly, we are veering further and further from Line 147 which I thought Mr. 8 Meyers committed earlier he was going to 9 limit his questions. 10 ALJ BUSHEY: Mr. Meyers, the NTSB 11 declaration is not on the list in Ordering 12 Paragraph 4. 13 MR. MEYERS: I was wondering how long 14 you would let me go. 15 ALJ BUSHEY: Thank you, Mr. Malkin, for 16 saving me. 17 Who is next? Mr. Gruen. 18 MR. GRUEN: No, we don't mind if ORA 19 goes before us, your Honor. If that is okay 20 with you. 21 MS. PAULL: Because we have very 22 limited cross. 23 ALJ BUSHEY: Okay, go ahead. 24 MS. PAULL: I have a couple of 25 questions and Mr. Roberts has a few too. 26 CROSS-EXAMINATION BY MS. PAULL: 2.7 28 Looking again, you may not need to

refer to the table in Exhibit I again, but 1 2 look at it if you need to. The table with 3 the updated specifications. 4 So looking at the table again for Segment 109 of Line 147 in your October 2011 5 6 pressure restoration filing the MAOP of design was 437. Is that right? WITNESS SINGH: A That is what is 8 9 stated here. WITNESS JOHNSON: A That is what is 10 11 stated on the document. 12 Okay. Now, the updated MAOP of 13 design is 330, correct? 14 Α Correct. 15 Now let's look at the MAOP of test 16 for October 2011. It is 404, right? 17 Α That is what is showing on this 18 table, yes. 19 And the updated has not changed, 20 right? It is the same? 21 That is correct. It wouldn't 22 change. They are based on the hydrostatic 23 test. The hydrostatic test didn't change. 24 Okay. But is it your testimony 25 that you are not now requesting 330 instead 26 of 365 because the MAOP of design is 330? 27 What I believe I stated, we are 28 asking for 330 because we are being very

conservative on our request. We believe we have the right to ask for 400 based on the previous MAOP. But based on our very conservative assumptions, at this point in time we are asking for 330 pounds.

Q If the design MAOP is lower, I thought we had covered earlier, I thought you had agreed, you can correct me if I'm wrong, that under federal regulations 619, 192.619, the operator has to choose the lower. If you have test MAOP and design MAOP and the design MAOP is lower, you choose lower. Is that not your understanding?

A I believe what we said earlier, maybe I misunderstood the question, but when you talk about design of a pipeline, that is for pipelines built after 1970 when the code went into place. So this line was built earlier than that.

 $\,$  Q  $\,$  And that is the basis for your belief that you are legally entitled to set the MAOP at 400?

A I believe we can request 400 based on the codes that are in place today.

Q I see. And just to clarify one more thing about that. The basis for your belief that you can legally set the MAOP at 400, you are not relying on the Commission

decision that ordered PG&E to go out and validate MAOP through testing or replacing, are you?

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A Well, at the federal level we have grandfather. We've already talked about that.

It is clear, I'm not going to put words into the ALJ's mouth, but it was the decision here that the State of California is getting away from grandfathering. And to validate the MAOP of the pipeline specific to Line 147, MAOP of that pipeline prior to this was 400 pounds. To validate the MAOP of that pipeline, we would conduct the hydrostatic test to verify that MAOP was safe. pipeline it would be 600 pounds or greater, which is what we've done for the pipeline segments. As an interim safety measure, we said we would go about a calculation of the MAOP as an interim safety measure prior to the hydrostatic test. That is, in essence, my understanding what we've agreed to.

We've completed the MAOP activity, and we will continue to get better at that. Now we are going through the process of pressure testing any of our pipelines that have not been previously tested.

Q Thank you. We got far afield I

1 though I think. My question is actually very 2 simple. 3 You don't interpret the Commission order to require you to validate MAOP by 4 5 strength test only --6 Α No. 7 0 -- do you? No. We have been -- we are 8 Α 9 getting rid -- the State of California wants 10 to get rid of the grandfather clause, not 11 strength test, pressure test. We've been 12 ordered to pressure test all of the pipelines 13 that have previously not undergone any 14 pressure testing. 15 Thank you for that correction, 16 pressure test. 17 But do you --18 Under that order is the process we Α 19 are going through. 20 So is it your belief that the 21 Commission ordered, directed PG&E to validate 22 MAOP on the basis of pressure test only and 23 gave PG&E permission to disregard design 24 MAOP --25 MR. MALKIN: Your Honor? 26 MS. PAULL: -- in the MAOP validation 27 process? 28 ALJ BUSHEY: Sustained.

1 Ms. Paull, we have Ordering 2 Paragraph 4. There is a list of items in there. Nowhere in that list does it say an 3 4 interpretation of Commission's previous decisions. 5 MS. PAULL: This goes to F, your Honor, 6 the MAOP validation which we've been talking 8 about. 9 I'm just trying to understand the basis for Mr. Johnson's as belief that PG&E 10 11 could, if it wanted to, set the MAOP at 400.] 12 ALJ BUSHEY: F says their proposed 13 maximum operating pressure and maximum 14 allowable operating pressure for each segment 15 in the entire line. 16 MS. PAULL: That's exactly what I'm 17 talking about. 18 ALJ BUSHEY: That's a number. We know 19 exactly what the number is. It's 330. 20 MS. PAULL: I was asking to clarify. 21 Are you proposing 330 because 22 that's a design MAOP? And I believe your

ALJ BUSHEY: Ms. Paull, it's not on the list. He told you what the answer is. 330. That's what they're proposing. That's Item F. I'm sure there are probably thousands of reasons why they propose 330. The point of

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answer is no.

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this list is what are they proposing. 330.
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           MS. PAULL: Okay. We know what they're
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     proposing.
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           ALJ BUSHEY: Good. That takes care of
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     Item F.
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           MS. PAULL: Do you really think so,
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     your Honor?
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           ALJ BUSHEY: That's what it says.
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     Proposed MOP and MAOP for each segment.
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           MS. PAULL: Doesn't what the Commission
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     need to determine what MAOP is required?
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           ALJ BUSHEY: No. We need to know what
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     their proposed is. This is what they have
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     proposed.
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           MS. PAULL: And I was asking the basis
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     for the number they're proposing just to
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     clarify because we have --
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           ALJ BUSHEY: Ms. Paull, we've been over
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     this for now we're -- well, into our third
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     day of this.
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           MS. PAULL: I actually think I got an
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     answer to my question. I actually think it's
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     very relevant, your Honor.
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           ALJ BUSHEY: Okay. Thank you for that
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     opinion. Do you have any further questions
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     for this witness?
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           MS. PAULL: No, but Mr. Roberts does.
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           ALJ BUSHEY: Okay. Mr. Roberts.
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MR. ROBERTS: I think these will go hopefully very quickly.

## CROSS-EXAMINATION

## BY MR. ROBERTS:

Q Good afternoon, gentlemen. You had just mentioned a moment ago, Mr. Johnson, that the use of assumed values was an interim measure. And the word "interim" in that case, did I understand correctly that it's of use until you hydro test. But then once you've hydro tested, that interim measure -- that's the end of the interim period? If I'm not correct, please define "interim".

WITNESS JOHNSON: A I think -- I think when we use the term, "interim," we're talking about until the pressure test is done. So I don't have the exact wording of all the rulings that have gone on, but in my words, we did the MAOP validation based on very conservative assumptions as an interim safety measure until we can pressure test every piece of pipe that previously has not undergone a pressure test. And I believe that's the essence of the requirement.

Q Okay. Thank you. Now, I just have a follow-up question on the City of San Carlos' discussion about safety factor. And I'd like to ask you to turn to page A-60 of

1 Exhibit A to PG&E's October 11th filing? 2 I don't think we have Exhibit A up 3 here. 4 MS. PAULL: It's the safety certification. 5 6 WITNESS JOHNSON: Okay. Exhibit A. Where is Exhibit A? The whole thing is 8 Exhibit A. Okay. What page was it? 9 MR. ROBERTS: Q Page A-80 -- page A-60. 10 11 WITNESS JOHNSON: A A-60. Okay. So 12 we're back to the PFL. 13 0 Correct. 14 Α MAOP report. I'm sorry. 15 MAOP report, yes. 0 16 Α Okav. 17 In the Decision that we've been 18 talking about and the specific area that the 19 ALJ asked us to look at, Item A of that asks 20 for the percent specified minimum yield 21 strength at MAOP? 22 Α I'm sorry. Item A being where now? 23 This is -- so I'm actually taking a 24 small step back. Decision 11-09-006 had 25 asked that if you want to raise -- to restore 26 pressure, you need to provide the percent 27 specified minimum yield strength at MAOP. So 28 the judge handed out a copy of the Decision.

I thought you might have that or if that sounds familiar --

A I wasn't up here when it was handed out. Go ahead. Your question.

Q So the judge asked for that. And in the page I just asked you to look at the one, two, three, fourth column from the right provides a column entitled, "Percent SMYS per R." Do you see that?

A Yeah.

Q Okay. Is the percent SMYS an indication of the factor of safety for each of these features?

A It could be.

Q Okay.

very conservative assumptions; right? So this would be a calculation, and so that would be a starting point. We're using specified minimum yield strength, that's a safety factor there. That's the minimum yield strength of the pipe. We're using joint efficiencies that are below necessary requirements, and we're using strengths below. So there's safety factors on safety factors on safety factors. This would be one indication of a specific safety factor.

Q Well, that column in particular is

summing the information to -- from the left of that, and aren't those values the overall safety factor that is provided for each of those features given your MAOP of record?

A I'm not sure I understood that question again. So we've got --

Q So all the assumptions --

A -- a joint efficiency factor.

O Correct.

A Right? So there's conservative assumptions in there.

O Yes.

A And then there's the test pressure.

O Uh-huh.

A Right? So there's conservative assumptions. We've tested well above the operating pressure. Is that your question?

Q My question is I would understand the percent SMYS per R to be a measure of the factor of safety provided by the MAOP of record that you've requested, which is 330, and that that number encompasses all of the other conservative decisions you've chosen to make. So for example, the decision to use a conservative SMYS, the decision to use a conservative joint efficiency factor, and it also incorporates the joint MAOP of test because that is the higher than the MAOP of

record.

So what I'm asking is is one measure of the overall factor of safety for the features of this line -- is the percent SMYS per R a metric to tell us what the factor of safety is?

A I guess in very rough terms you could do that. Yes, there's a hundred percent SMYS; right? So if you're at 50 percent of a hundred percent of SMYS, you've got a safety factor, if you want to use math, engineering terms -- it would be two.

Q That was actually -- yes.

A That was the conversation. What I don't think is incorporated in that the SMYS itself a conservative number. I'm going to use hypothetical numbers. If the SMYS was at 100 and we said this was operating at 50 percent, that would be 50 of a hundred, safety factor of two. That SMYS because of conservative assumptions may be 150. Does that make sense?

O Uh-huh.

A Because we've used conservative factors together. So this is one very conservative way to look at it.

Q Okay.

would like to add on to that is in this calculation -- Mr. Rosenfeld also spoke to that -- there's also an inherent conservatism built into the methodology. And that methodology includes the use of the joint efficiency factor. And the joint efficiency factor is based on seam type as you can see in this report. And this number represents the actual hoop stress of the line.

And we've been talking a lot about the federal code and the interpretation, and Mr. Rosenfeld provided that. He cited a specific letter in our workshop yesterday as well, and it's publicly available on PHMSA's website. It was a 1979 letter which PHMSA clearly stated that the hoop stress equation do not use the joint efficiency factors. The joint efficiency factors is .8 to .6.

We're still using a value of 1.0, but our conservative methodology uses the joint efficiency factor. So to the point Mr. Johnson made earlier, it's safety factors on top of safety factors on top of a conservative methodology to do the arithmetic calculation.

Q So based on what you just said, are you saying that the factor of safety for

features in the middle of this page, which 1 2 currently show -- they show a percent of SMYS at 50 percent. Do you believe that the 3 4 actual factor -- and by 50 percent, that would imply a two time safety factor. 5 Because there's conservatism built 6 into some of these other numbers, is the 8 actual factor of safety in your mind higher 9 than two? 10 WITNESS JOHNSON: A Yes, I would 11 expect it to be higher than two if you use 12 the equations as Mr. Singh just pointed 13 out --14 Uh-huh.

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-- and if you really look at what is really the strength of the material you're looking at.

> 0 Okav.

And I think we shared that on Segment 109 we're using 33000. Clearly the test showed -- 39,300 I believe is the number. So right there you've got a significant safety factor.

So now I'm -- and I'm almost done, your Honor.

Now I'm going to ask a hypothetical about a piece of pipe here that says A.O. -any of these in the middle of the page that

1 say A.O. Smith pipe. 2 Α It's not a hypothetical if you're 3 pointing to a piece of pipe. Just tell me 4 what piece of pipe you're looking at. 5 ALJ BUSHEY: Mr. Johnson. 6 THE WITNESS: I'm sorry. 7 MR. ROBERTS: Q Let's start with a 8 real set of data on your element of the PFL, 9 which is any of the ones that say A.O. Smith 10 pipe that have a design MAOP of 330 and a 11 calculated percent SMYS of 50. There's many 12 of them. You can pick any one of them. 13 WITNESS SINGH: A Okay. 14 Now we're going to go into the 15 hypothetical situation. This table shows a 16 SMYS of 33 percent. What would the 17 calculated percent SMYS be, everything 18 else --19 WITNESS JOHNSON: Α I'm sorry. This 20 table does not show 33 percent. 21 33,000 PSI, I'm sorry, for SMYS. 22 Α Okay. 23 If instead of 33,000 we used a 24 stronger pipe with a SMYS of 66,000, 25 everything else being equal, would the 26 calculated percent SMYS now go to 25 percent 27 or would that stronger pipe provide a factor 28 of safety of four?

1 At least, yes. 2 Okay. Just one other question, And now I'd ask you to turn to page 3 4 A-183, which is into the hydro test report. 5 Α Okay. 6 So we're not going to talk about the slopes of this curve today. Thank you for going over that yesterday. What I want 8 9 to look at is the relative position of the actual line relative to the calculated 10 11 expected yield curve, the straight line. 12 my question is fairly -- I hope it's simple. 13 We -- we agreed in the workshop 14 that this curve does not show yielding, that 15 the -- that the pipe did not yield during the 16 spike test on Test T43B; correct? 17 Correct. There has been no 18 yielding in any of the hydro static testing 19 that we've done. 20 Does the PV plot or any other data 21 in the test report show how close you came to 22 yielding? 23 Well, I don't -- I don't know that 24 you can say how close you came to yielding. 25 I mean, you're looking for yield. We have no 26 reason to believe we're even close to yield. 27 So I mean, if you wanted to roughly look at

it, you can probably, you know, look

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across -- and what is that? 700 and -- 740, 750 pounds.

O Uh-huh.

A And the line that was expected -that in theory would yield at; right, in
theory -- and there's a lot of issues with
that -- is the red line. So you've got -what? 200 and -- 200-plus pounds before
yield in this particular case.

Q So if all the pipe were as expected when they calculated that expected yield, you are very far from what you expected yield to be in this test?

A Oh, yes, absolutely.

O Okay.

A I mean, this is -- this is -- we only tested to 600 pounds; right? Other than -- there's some segments we tested to -- 1,200 pounds I believe was the number we saw earlier. So yeah, it's not -- it's not -- it's not anywhere close to where we expect to have yield.

Q But if -- and now I will go hypothetical. If there were a piece of cast iron or something with a very low yield strength, this curve wouldn't tell us how close we got to that. It would only tell you you did not achieve yield; is that correct?

WITNESS SINGH: A Let me answer that question. First of all we don't use cast iron pipe.

Q It's a hypothetical.

A And if we had a material like cast iron pipe, it would not be able to withstand this type of pressure. It would actually not pass the hydro test --

Q Okay.

A -- according to my understanding.

And we have to look at the material properties. And I'm not going sit here and have that engineering discussion about what the material properties are of cast iron, what the minimum yield strength is, what is the wall thickness. Maybe there's pipe manufactured that can withstand that, but we do not use cast iron pipe at they pressures.

Q Okay. So I did preface my question by saying this is a hypothetical. I was just trying to look for my data to what type of pipe would have a significantly lower yield strength. So forget about the type of material. But if there was a material in there that had a significantly lower yield strength, this plot doesn't show how close you same to that. It only shows you did not achieve yield?

WITNESS JOHNSON: A Well, if you hypothetically were looking for a lower -- a lower SMYS piece of pipe, which is what I think you're stating -- is that what you're stating?

O Correct.

A This red line would drop down. The theoretical -- based on that information, the theoretical yield on that pipe would drop. Here I said roughly it's 200-plus pounds. If that red line dropped, it would be less than 200 pounds. You would get a relative feel for it.

Q That would be if you knew what the material was and could calculate this value.

 $\ensuremath{\mathtt{A}}$  You just hypothetically told me what it was.

All I said was hypothetically if a material is in there that you don't know has a significantly lower pressure at which it would yield, this curve wouldn't tell you -- you wouldn't have a valid red line. You wouldn't know where the red line was. And this curve doesn't tell you how close you came to the actual red line. It only tells you you did not cross the red line; is that correct?

A I don't know if it's correct. I

1 didn't quite follow you. Was there a 2 question? 3 Yes. Does this yield tell you --4 does this curve tell you how close you came to actually yielding every part of the pipe 5 under test? 6 Well, so the yielding of a piece of pipe under test -- the weakest link will 8 9 vield --10 Q Correct. -- the one with the lowest SMYS in 11 12 theory. This curve clearly shows there's no 13 vield. And I think we've gotten through 14 that. 15 Yeah. 0 16

A Where you draw your red line is where you -- where you believe you have potential yield based on the information you have.

O Understood.

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A Okay. Good.

Q But what -- what you didn't address is if we don't know the material -- so in the case -- when this test was performed, you had not yet had the leak on 109 and you didn't know some of the characteristics of pipe in this test, T43B, were different than you thought.

And in that case, this -- for those segments, the red line is not applicable and you wouldn't have known during the test what the expected yield was. What I'm asking you is -- is I think pretty straightforward.

This is actually a -- a kind of elementary question -- that a PV curve -- stress strain curve if you want -- if it stops at a place before yielding, it does not tell you how close you came to yield, only that you did not yield; is that correct?

WITNESS SINGH: A That's irrelevant because you've -- because you've actually done the strength test, and you've validated that margin of safety. And how close you come to yield is -- is really irrelevant. And again, we could have Mr. Rosenfeld, who is the industry expert, talk about that.

MS. PAULL: Your Honor, could you please ask --

ALJ BUSHEY: Let me interject here.

First of all, I don't think it's an elementary question. I think it's more of differential equations type question. But I think that it's a straightforward questions that if the red line isn't there, the information that you have doesn't tell you what's going to happen in the next pressure

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     segment; right?
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           WITNESS JOHNSON: Right.
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           ALJ BUSHEY: Right. That's all.
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           MR. ROBERTS: Thank you. No further
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     questions, your Honor.
           ALJ BUSHEY: Mr. Gruen?
 6
           MR. GRUEN: Yes, your Honor.
                                          Thank
8
     you.
9
                    CROSS-EXAMINATION
     BY MR. GRUEN:
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           Q Good afternoon, gentlemen. If we
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12
     could turn back to the popular Exhibit I,
13
     last page? I'll go with the crowd. And the
14
     line that -- that indicates Segment 109, do
15
     you have that in front of you?
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           WITNESS JOHNSON: A Yes, we have the
17
     same document in front of us.
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               Same document. That's right.
                                               And
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     under the second column where it says,
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     "length," the number there indicates 1,327;
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     is that correct?
               That's correct.
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           Α
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               And that's in reference to feet; is
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     that correct?
25
               Yes, that would be in reference to
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     feet.
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               Okay. So continuing over on that
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     line, I'm going to skip past the October 2011
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as filed for pressure restoration broad column and go to the updated specifications column that Mr. Meyers defined earlier. And under that broad column looking at long seam, for Segment 109, the long seam is identified as A.O. Smith SMAW; correct?

A That's correct.

Q Okay. So we see here referenced, then, that the updated specs show 1,327 feet of A.O. Smith SMAW long seam. And I want to ask you how many actual feet of pipe from 1957 job installation can you absolutely without doubt state is A.O. Smith pipe?

A Is -- I'm sorry. You want to try that question again?

Q Sure. How many feet of the job installation from 1957 can you without doubt state is A.O. Smith pipe within Segment 109?

A Say without doubt? I -- I would -- if you're asking me to go back and pull the as-built drawings out and measure -- is that what you're asking me?

Q Let's ask it this way. Based upon visual inspection, what you have seen of the pipe -- either you or your staff has seen of the pipe, how much of it can you be certain that you have seen is A.O. Smith pipe?

A Well, we have -- I think the facts

behind this particular segment is we have the job. We have the job indicating how many feet it is. We did dig up one section at the front as you very well know; right? And we've seen segments at the back, so I think we're pretty comfortable that based on our records 1,327 is -- is accurate.

 $\label{eq:witness} \mbox{WITNESS SINGH:} \ \ \mbox{A} \ \mbox{Could I add}$  something?

ALJ BUSHEY: Hold on. Mr. Gruen, what's the question?

MR. GRUEN: Q The question is actually how many feet have been observed within the section as being A.O. Smith pipe? I'm not asking about your records. I'm asking about what you've seen or your staff, the field personnel, have actually seen on the segment as being A.O. Smith pipe.

WITNESS SINGH: A So as part of the leak repair process, we would excavate a bell hole. On this particular one I don't have the actual inspection form in front of me. It's typically 8 feet by 8 feet or 10 feet by 10 feet. We have to go back and look at the actual inspection form. That also identifies what the actual length of the pipe was that was exposed as part of the repair process.

WITNESS JOHNSON: A So to answer that

question fairly, you would have to go back and pull all the jobs previously where you've specifically dug up the pipe. Is that your question? How many feet have we dug up and looked at? Because in order to do that, I would have to go pull the drawings and look and see what the size of our bell holes are for that job and the section of pipe and add it up for you.

Q So at this point though --

A We have not dug up all 1,327 feet if that's what you're asking.

Q So you cannot confirm all 1,327 feet are actually A.O. Smith SMAW pipe? WITNESS SINGH: A That goes back to

the conservative assumptions. At the point that the repair was made, we identified that this section of the pipe was A.O. Smith, had a .25 wall thickness as part of the nondestructive examination and and the inspection work that we do.

We went back, as Mr. Johnson articulated, to identify the pipe that was installed as part of that 1957 job, and for that entire section of the -- the length of that pipe, we assumed a lower SMYS value and a lower long seam value.

O I understand.

PUBLIC UTILITIES COMMISSION, STATE OF CALIFORNIA SAN FRANCISCO, CALIFORNIA

1	A And that's exactly what we do,
2	continuously apply the conservative
3	assumptions.
4	Q That was that was far more than
5	my question asked for but thank you for
6	the
7	A I apologize.
8	Q for the additional information
9	Mr. Singh.
10	At this time, your Honor, I've
11	prepared a packet of handouts so that they
12	can be referenced. We only have to circulate
13	them once, and they're provided so they can
14	be referenced in an expedited fashion.
15	ALJ BUSHEY: We'll be off the record.
16	(Off the record)
17	ALJ BUSHEY: We'll be back on the
18	record.
19	While we were off the record, we
20	identified Exhibit N. It's comprised of
21	seven different data responses from PG&E.
22	We're on the record.
23	Mr. Gruen, would you like to begin
24	asking questions?
25	(Exhibit No. N was marked for identification.)
26	
27	MR. GRUEN: Yes, your Honor. Gladly.
28	MR. MALKIN: I'm sorry. You said this

1 was N? 2 ALJ BUSHEY: N as in Nancy. 3 MR. GRUEN: Q Gentlemen, Mr. Johnson 4 and Mr. Singh, do you have a copy of Exhibit 5 N in front of you? 6 WITNESS JOHNSON: A Yes, we just received it. WITNESS SINGH: A I do as well. 8 9 And referencing the first e-mail, 10 this is a data response to Energy Division's 11 Data Request 5, Question 2, Attachment 48. 12 Do you see that? 13 WITNESS JOHNSON: A Well, I'm looking 14 at the first e-mail, so that's where I'm at 15 now. 16 Top right corner. 0 17 Top right corner. Okay. Α 18 Are you familiar with this 0 19 document? 20 I'm -- I don't know. I have to go 21 through and read it. 22 Mr. Singh, are you familiar with 23 this document? 24 WITNESS SINGH: A I have to go back 25 and read it as well. 26 MR. MALKIN: Your Honor, the question 27 is ambiguous when Mr. Gruen asks this 28 document. It is six and seven pages of

e-mails and attachments. 1 2 MR. GRUEN: Your Honor, I recognize that Mr. Malkin would like to harp on the 3 4 volume of this document, but I actually just specified that this was Energy Division's 5 Data Request 5, Question 2, Attachment 48. 6 And the witness recognized it. There's not much question here about what the 8 identification of the document is. 9 10 ALJ BUSHEY: But what part of this is 11 relevant, Mr. Gruen? If you could just ask 12 the substantive question? 13 MR. GRUEN: Yes, your Honor. 14 The -- could you read the first --15 ALJ BUSHEY: No, Mr. Gruen. Don't lead 16 them into the document. Ask them a 17 substantive question. 18 MR. GRUEN: Okav. 19 Did you know that Mr. Harrison 20 asked whether the pipe was at the Mile Post 21 2.2 was X-rayed? ] 22 WITNESS JOHNSON: A At what point? 23 At the point where the pipe was 24 excavated. 25 You're talking about when we first 26 found the weld? I don't remember the 27 exact --28 When you first found --Q.

Excuse me. First found the leak? 1 Α 2 0 Yes. 3 When we first found the leak I Ζ 4 recall there was an e-mail of some sort floating around where somebody, and it may 5 6 have been Mr. Harrison, asked, did we do any x-rays at that point in time. So I do recall 8 that issue coming up. But again, the leak 9 has been repaired and that whole segment has 10 been cut out. So it's got nothing to do with 11 the safety of the pipeline system. 12 Moving to the next document in 13 turn, it's got the next cover page. 14 Α Next cover page. 15 It says R.11-13-019 and Safety 16 Enforcement Division. After that cover page 17 it's an e-mail from Joe Medina to Bennie 18 Barnes sent September 11th, 2013. 19 ALJ BUSHEY: Again, Mr. Gruen, it's not 20 important that we read the e-mail into the 21 record. 22 MR. GRUEN: Okay. 23 ALJ BUSHEY: What substantive issue? 24 MR. GRUEN: O The substantive 25 question, note from Sumeet on the second page 26 that talks about the traceability regarding 27 the potential installation and installation 28 location of reconditioned pipe along Line

1 | 147.

And just a clarification for Mr. Singh. Does PG&E know whether it has reconditioned pipe on Line 147 in other locations beside Milepost 2.2?

WITNESS SINGH: A The only indication we have is what we've already stated through all the data requests. We don't have definitive, traceable, verifiable and complete records that it's reconditioned pipe. Based on all the testing that we have done, based on subject matter experts that have opined on this such as Mr. Rosenfeld, we believe that it is reconditioned pipe, but if you're asking, do we have traceable, verifiable, complete records that show the installation of that reconditioned pipe, the answer is no.

But do we believe now based on all the testing that we've done that it's likely reconditioned pipe? Yes. And this is the only location that we've come across on 147 with this indication. But again, we have stated this so many times, I don't have any concerns about the safety of the line. It's successfully strength tested. It's good pipe.

Q I appreciate that from both of you.

I haven't asked about the safety of the line 1 2 here or any opinions. I'm just asking very narrow focused questions here. 3 4 Α Okav. So moving to the next document 5 6 again, there's a placeholder that talked -that is labeled R.11-02-019 Safety and 8 Enforcement Division Hearing Exhibit is the 9 next cover page for the next exhibit. 10 I'm sorry. You moved on to the 11 next cover page? 12 The next document. 13 WITNESS JOHNSON: A It's 11-02-019. 14 Is that what you said? 15 They're all the same cover pages. 16 That's very helpful. 17 MR. MALKIN: It's the third stapled 18 batch. 19 WITNESS JOHNSON: A So is it the 20 e-mail from Sumeet saying Wednesday, November 21 21st at 9:24 a.m.? 22 MR. GRUEN: Q That's right. 23 WITNESS JOHNSON: A Very good. 24 Exactly. And on the first page for 25 this, the particular job file for -- related 26 to the segment where the leak was located in 27 October 2012, is there a complete job file, 28 was there a complete job file identified or

found for that particular section of pipe? 1 2 WITNESS SINGH: A How would you define 3 complete in your terms? 4 Well, here it says, "We can't find any additional job file information." And 5 6 that was provided to you from Mr. Harrison. So could you find any job file information on the line? 8 9 I think you're going to have to ask 10 Mr. Harrison that question. He did the 11 records research, and the records we 12 identified for that segment were reviewed by 13 our engineering team. And I've already 14 stated previously that, did we have 15 specifications that stated that that segment 16 was reconditioned in the job file? No, we 17 did not. 18 I'll just ask if you're familiar 19 with this document then? 20 With this, I'm sorry, this document 21 being the one? DRA 86, Question 13, Attachment 22 23 The e-mail dated November 21st, 2012, 24 at 9:24 a.m. from you to Mr. Harrison. 25 I absolutely responded to it at 26 that point in time. Now you're jogging my 27 memory in terms of the details. So I'm sure 28 I read it at that point in time before

1 responding. 2 0 Thank you. And moving to the next 3 cover page then. 4 Α Sure. 5 Moving to the third page of the 6 document. 7 MR. MALKIN: May I ask your Honor for clarification. Is that the third point 8 9 counting the cover or excluding the cover? 10 ALJ BUSHEY: Mr. Gruen, where are we 11 and why are we there? MR. GRUEN: Your Honor, it says page 3 12 13 at the bottom of the page and it is excluding 14 the cover. Your Honor, at the first page of 15 the document it stated it's an e-mail from 16 Kirk Johnson dated November 27th, 2012, 9:54 17 a.m. 18 So you're in the next ALJ BUSHEY: 19 pack. 20 Yes, the next pack. MR. GRUEN: 21 ALJ BUSHEY: All right. 22 Q Page 3 going down there MR. GRUEN: 23 are a couple of other things going on with 24 this issue. And again, this is focusing on 25 whether there is -- this is showing 26 uncertainty as to whether there is 27 reconditioned pipe on Line 147 that was --28 that came from Line 101 in 1929; isn't that

1 correct? 2 WITNESS JOHNSON: Α Where are you 3 reading that again? The top, are you on the 4 top of the page 3? 5 Q Page 3. 6 Α What do you want us to read? 7 Q Where it says, "There are a couple 8 of other things going on with this issue." 9 Α Okay. 10 And it says, the second point down, 11 "We think we have established a weak link." That's how it starts. 12 13 Α Okay. 14 Would you like me to ask the 15 question again? 16 Yes, please. Α 17 So didn't this sentence show that 18 there was uncertainty as to whether 19 reconditioned pipe was taken from Line 101 20 and put into Line 147? 21 Well, I think, as Mr. Singh has 22 pointed out numerous times, we don't have a 23 traceable, verifiable record, but we believe 24 that this is reconditioned pipe in Line 147 25 in Segment 109 based on what we have now 26 seen. 27 The date of this document was -- I 28 can't find the date, but this is now -- it's

after November 16th, right? So we would have 1 2 made the repair on or about that time. 3 Great. Thank you. And moving on to the next cover page. Let me know when 4 you're there if you would, please. 5 6 Is it the -- I got a different one. What's the page? This is the document that's a 8 9 response to DRA 86, Question 13, Attachment 475. 10 A Review of risks MAOP validation? 11 12 That's right. That's the title of 13 the document. Thank you. And going to page 14 2, the sentence right above Section 2.3. 15 I'm sorry. What section? What are 16 we reading here? 17 Let me back up. Do you know who 18 wrote this document? 19 Α I don't know specifically who wrote 20 this document. 21 WITNESS SINGH: A I don't know 22 definitively. I can --23 Are you familiar with the document? 24 I may have reviewed it at some Α 25 point. I can't attest to that. Maybe some e-mails with this attachment. I don't know 26 27 definitively. Subject to check. Do you want 28 to reread this whole document at this point

in time? 1 MR. GRUEN: Your Honor, would PG&E 2 stipulate to this going into the record since 3 the witnesses don't seem to be familiar with 4 the document. This is a PG&E --5 ALJ BUSHEY: Mr. Gruen, that makes 6 absolutely no sense. If the witnesses aren't familiar with it, then they can't 8 9 authenticate it and we can't move it into the 10 record. Why would they stipulate to 11 something they can't --MR. GRUEN: Because if Mr. Harrison 12 13 were on the stand, your Honor, I believe he 14 would recognize it. 15 ALJ BUSHEY: He's next up. 16 MR. GRUEN: I misunderstood. 17 understood that I was to cross the panel with 18 this particular set of documents. Okay. 19 ALJ BUSHEY: Not of Mr. Harrison's 20 information. 21 MR. GRUEN: No problem. I can cross 22 Mr. Harrison with it then. Thank you. 23 I'll move on to the next document. 24 Next cover page and going to -- this is a 25 document entitled L147 Seam Type Joint 26 Deficiency PFL Error. And turning to page 3 27 of this document, let me ask you again, are 28 you familiar, are either of you familiar with this document?

WITNESS SINGH: A I am familiar with the final version of this document, which I think we've previously discussed. And one of the e-mails was at my request, the MAOP validation team, I requested them to do a root cause analysis of why we had a discrepancy between our features list and what we found. This looks to be like a draft because there's several insertions in here that say, "explain, rewrite, define, explain why" on page 1.

So with this particular specific document if that's the question, I have to reread it. I have seen a final version of this document, but it didn't have some of these insertions.

Q Okay. Let me ask you, if you turn to page 3, please, are you familiar with the concept that the completed pipeline features lists and the resulting MAOP validation conclusions are not a hundred percent error free?

A I am absolutely aware of that. Not only am I aware of that, I filed a testimony as part of the PSEP updated filing, and I spoke to that earlier. And if you want to know the error rate, we can actually look at

that table, which is .9 percent. 1 2 0 Okay. Thank you, Mr. Singh. 3 Α Pleasure. 4 And I want to just direct your attention to the process of achieving a zero 5 6 error rate for PFLs just on page 3 just below the section entitled Data Quality. And it identifies several things. 8 9 So is this a complete set of steps 10 that are identified for correcting the errors on the PFL for Line 147? 11 12 Again, I have to go back and 13 compare this to the final draft or the final 14 version of this that I reviewed. I can't sit 15 here today and validate that for you. 16 want me to go through this and read it and 17 say and validate, did we apply this for Line 18 147 as part of the recertification process, I 19 could do that for you. 20 Yes, please. 21 Α Okay. 22 ALJ BUSHEY: Wait a minute. Mr. Gruen, 23 you presented a document that's obviously a 24 draft. A final version exists. So the 25 witness can't authenticate this. 26 MR. GRUEN: Let me ask it this way, 27 your Honor. 28 If all of the things that PG&E is

doing to achieve a zero error rate for the PFL on Line 147, has PG&E retroactively applied all of those measures to the PFL for Line 147?

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WITNESS SINGH: Α For Line 147, I mentioned this earlier, as part of the MAOP validation process we made enhancements to the process. And I discussed that at length at the September 6th direct hearings. what we also identified was at that point in time, that point being when we identified the discrepancy in October of 2012, the Line 147 PFL had not gone through the enhanced process. As a result of the discrepancy we identified, we did what any prudent operator would do. We identified the root cause and we went back and reevaluated and assessed the records for every foot of that pipe, every inch of that pipe.

Q So when will the process be complete for updating the PFL on Line 147?

A I'm not sure I understand your question. The process of updating the PFLs for all of our systems is ongoing. It's part of our mapping process. As we go out and make modifications to our system, what Mr. Johnson testified to earlier in terms of the valve automation work that's going on within

those stations, that's new construction. We will go and update our PFLs as we go in and make updates and physically do construction or replace certain assets or install new assets. It's an ongoing process.

Q Am I understanding correctly that PG&E is uncertain as to when it will complete the error corrections on Line 147 for the PFL?

A I'm not sure I'm following your question. What I've stated is that the PFLs are a source of our asset knowledge information on a going-forward basis. We will stop updating those PFLs once we never do any work on our system, which is impossible.

Q Just talking about correcting the errors on the existing, the existing PFL. When will PG&E complete the error corrections on the existing PFL for Line 147? That's all I'm asking.

MR. MALKIN: Objection, assumes facts.

ALJ BUSHEY: Sustained. Mr. Gruen, you know, they've been telling us for three days now that it's an ongoing process. They don't know everything that's in the ground. If they find out more things, they'll update their records.

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MR. GRUEN: Understood, your Honor, 1 2 I'll move on. Moving to the next document, the 3 0 4 next cover page, and this is the last, the last one. And if you -- this is data 5 6 response DRA 086, Question 13, Attachment 548 entitled Line 147 October 15th Leak Repair 8 Summary. Are you familiar with this 9 document? 10 WITNESS JOHNSON: A Assuming it's the 11 final one, yes. 12 WITNESS SINGH: A Are you alluding to 13 this, okay, October 15th leak repair summary, 14 and that's got the date of 21 November 2012? 15 Yes. 16 Okay. We've got that in front of Α 17 us. 18 And you're familiar with this 0 19 document? 20 Α I'm absolutely familiar with this 21 document. 22 WITNESS JOHNSON: A Seen it. 23 If you turn to page 2 under the 24 Recommended Next Steps, point No. 4 that PG&E 25 retroactively reviewed all PFLs completed as 26 part of the MAOP validation project to 27 identify and address any similar instances. 28 I'm assuming that means similar

instances to the leak repair that PG&E did on Line 147; is that correct?

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WITNESS SINGH: A In this context it was instances where we have PFLs that have not gone through our enhanced quality control process, the revisions that we made. So keep in mind, this document was dated 21st November 2012. You also provided a draft version of the root cause analysis. There's a final version of the root cause analysis report. There were concrete recommendations within that root cause analysis report in terms of what the cause was of the error. Wе validated that, does -- and asked the question, does our enhanced process address those errors?

MR. GRUEN: So am I understanding correctly that you are still -- strike that.

That's fine. Your Honor, I have one or two more questions.

ALJ BUSHEY: All right.

MR. GRUEN: Q Did you have any records showing that the October 2012 leak identified in approximately Post Mile 2.2 on Line 147, did you have any records showing that that leak existed prior to when it was discovered?

WITNESS JOHNSON: A We wouldn't have any notification of a leak existing prior

1	until we discovered a leak.
2	Q But once you discovered it, you
3	went back and looked at the records; isn't
4	that right, to see if there were if there
5	was a leak in the location that the records
6	showed prior to that time?
7	A Well, we would go back and look at
8	the records, but if there was a leak prior,
9	we would have fixed it prior.
10	Q But were you able to identify any
11	records that showed a leak in the location
12	prior to the October 2012?
13	A In that exact location?
14	Q Yes.
15	A No. There were no records
16	indicating a leak in that exact location
17	prior.
18	MR. GRUEN: Thank you, your Honor. No
19	further questions at this time.
20	ALJ BUSHEY: Thank you. Final
21	questions from any party?
22	(No response)
23	ALJ BUSHEY: Mr. Malkin, redirect.
24	MR. MALKIN: Can we take a personal
25	convenience break?
26	ALJ BUSHEY: Yes. Ten minutes, 5
27	minutes after 3.
28	(Recess taken)

1 ALJ BUSHEY: We'll be back on the 2 record. 3 Mr. Malkin, redirect. Thank you, your Honor. 4 MR. MALKIN: REDIRECT EXAMINATION 5 BY MR. MALKIN: 6 7 Mr. Singh, I want to clear up a 8 point of confusion. The transcript at page 9 2691 through 2692 quotes you as saying the 10 following: In those circumstances where 11 12 we have acquired pipe from 13 third party operators and we 14 didn't have that 15 information, absolutely we used the federal minimum 16 17 standard. 18 What did you mean in what's quoted 19 there as saying "where we have acquired pipe 20 from third party operators"? 21 WITNESS SINGH: A It should be 22 acquired pipelines, not acquired pipe, and 23 that would have been corrected as I would 24 have reviewed my transcript and had the 25 opportunity to submit the errors that are 26 included in that transcript. 27 MR. MALKIN: Thank you. I have nothing 28 further.

1 ALJ BUSHEY: Thank you. Questions for 2 the witness? 3 (No response) 4 ALJ BUSHEY: Hearing none then, the witnesses are excused. 5 6 Mr. Malkin, would you like to call your next witness. MR. MALKIN: I would, your Honor. PG&E 8 9 calls David Harrison. ALJ BUSHEY: Mr. Harrison was called 10 11 earlier today and sworn earlier today. He remains under oath. 12 13 DAVID HARRISON 14 resumed the stand and testified further as 15 follows: 16 17 ALJ BUSHEY: Mr. Malkin. 18 MR. MALKIN: Thank you, your Honor. 19 Just have a few questions for Mr. Harrison. 20 REDIRECT EXAMINATION 21 BY MR. MALKIN: 22 Q For the sake of time, Mr. Harrison, 23 I'm not going to ask you about your current 24 position, responsibilities, educational and 25 work background. Somebody else may want to, 26 and if so, that's fine. 27 I want to ask you directly --28 MR. MEYERS: Pardon me, your Honor.

Point of order. Has Mr. Harrison been sworn?

ALJ BUSHEY: Yes. We did that this
morning.

MR. MALKIN: Q I want to ask you directly about an e-mail that you wrote, everybody here has read because it was on the front page of the newspaper. It's a November 17th, 2012 e-mail in which you wrote in part, quote, "Could the recent hydrotest contributed to additional cracking in this pipe and essentially activated a threat? Are we sitting on a San Bruno situation?"

When you wrote that e-mail on November 17th, did you think that there was a then existing safety hazard on Line 147?

A No.

Q Then what was your purpose in writing the e-mail?

A The purpose in the e-mail was sort of due diligence. I wanted to make sure that we had thought of all the issues and any possible concerns with the pipeline at the time. And I was trying to get the other people to think about those possibilities.

My reference to San Bruno is not in the sense of a failed pipeline. It's what we learned from an engineering point of view, from an MAOP point of view from San Bruno, and that is that the pipe wasn't what we expected it to be. So it was thinking about it from that point of view, that if this pipe wasn't what we expected it to be, then could it be something that would be a problem for us.

Q Now, this and other e-mails that you will probably be shown on cross-examination, you raised a number of questions and issues with respect to Line 147. Were those issues resolved?

A Yes, they were. So the e-mail went out like the 17th, and then soon after, you know, within days of that we had some conference calls and calls among the groups. And there's a variety of e-mails around. And we basically came to the conclusion that we were going to keep the pipeline at 300 pounds until we had the leak -- piece of pipe for the leak removed and examined to make sure that we didn't have any potential problems on it. And that was perfectly safe as far as I was concerned. That was the right decision to make.

Q Who were the groups that were involved in these conference calls?

A It was all the major groups. There was integrity management, the pipeline

engineers, gas control, MAOP validation. 1 2 those were all the major groups. Was the PSEP, Pipeline Safety 3 4 Enhancement Plan group also involved? 5 Α I believe so, yes. Yeah. 6 Do you have any regrets about writing that e-mail? 8 It made it to the papers. So 9 that's one I regret heavily. If I had to do 10 it over again, I would have worded it 11 differently, especially if I knew it was 12 going to end up in the papers. It created a 13 lot of swirl, a lot of work that's been 14 unnecessary. 15 But the idea again behind it was to 16 make sure that we were doing the right thing. 17 That's what I was trying to get across. 18 so that I don't regret asking the question 19 that we want to make sure we do the right 20 thing to the pipeline. 21 Among other things, at one point in 22 the dialog about this you asked whether the 23 pipe where the leak had occurred had been 24 x-rayed. Do you recall that? 25 Right. Α 26 And that wasn't done, was it? Q 27 No, it wasn't. Α 28 Are you concerned about the fact

that it wasn't done?

A I mean at the time we were talking about taking the pressure back up, so that is why I was asking the question. And the end result, again there within days, we decided no, we are going to maintain the pressure at the lower pressure. So, no, I wasn't concerned if we were maintaining the pressure until we got the piece cut out and examined.

Q You mentioned getting the piece cut out and examined. There has been prior discussion about that. To your mind, was cutting the piece out and examining it in the laboratory, as Anamet and Exponent have done, as good as, not as good as, better than x-raying the pipe?

A Way better than x-ray. So, yes, cutting the piece of pipe out and examining the laboratory is much more informative than doing the x-ray.

Q Let's talk briefly about AO Smith pipe. You gave some testimony earlier this morning about testing that pipe. And I want to ask you: Generally, do you have a safety concern about the presence of AO Smith pipe in PG&E's system?

A No, the AO Smith pipe has been very reliable for us. It has been, you know, good

pipe for us. It is older pipe, but it has been very good. We've done the test. In the historical documents I've seen tests over the years of it. We reexamined it every 10 to 20 years. All the tests are consistent. We had it retested again this summer, like I stated earlier. So I think AO Smith pipe is good pipe for us.

Q Mr. Singh mentioned earlier that you were the person who would know most about whether -- what PG&E's purchase records showed with respect to the minimum, specified minimum yield strength of AO Smith pipe. Was he right about that?

A That is right. So the minimum, specified minimum yield strength that we show in contracts with AO Smith dating from '29, they show -- some of the contracts show 33,000, some of them show 35,000, and some of them show 42,000. So we bought a variety of pipe from AO Smith, and the lowest value is 33,000. So that is why we sort of automatically go back to 33,000.

Q Independent of whatever PG&E's
Integrity Management Program does or the
Pipeline Safety Enhancement Plan does, do you
believe that PG&E needs to dig up all
reconditioned AO Smith pipe in its system?

1 Α No. 2 0 Why is that? 3 The reconditioned pipe is, like I Α 4 said, is fine pipe. Actually, the 5 reconditioned pipe is better pipe, in a way, 6 because the earlier pipe had different girth welds on it. This pipe has the girth -- the original girth welds are gone now. So this 8 9 is actually better pipe, because those 10 original girth welds are gone. It has been 11 reconditioned. It has been looked at again, 12 and put back in the ground. 13 Thank you. I want to ask you a few 14 questions about hydrotesting. 15 First, do you consider yourself to 16 be an expert in hydrotesting? 17 Α No. 18 Who would you consider to be a 0 19 hydrotesting expert? 20 Α Mr. Rosenfeld. 21 So do you have any concerns today 22 about the hydrotesting that was done on Line 23 147? 24 No, I don't. I think hydrotesting Α 25 was done correctly. Again, my point of my 26 e-mails and the communication was to make 27 sure that Mr. Rosenfeld or somebody of his 28 caliber did review it.

I mean the time when I wrote the 1 2 e-mail, I had just come off testimony in the records OII. And so I knew people would be 3 4 interested in what we found out, and they would be interested in this. And I wanted to 5 make sure we gathered all the information 6 that we could and answered all the questions 8 before other people started asking them. 9 Do you have an opinion about 10 whether Line 147 is safe to operate today at 11 330 psi? 12 Α Yeah, I think the line is fine at 13 330. The pipeline is tested to twice that. 14 We've never -- you know, the documentation 15 that I've seen doesn't show any kind of a 16 problem with those kind of pressure test 17 ratios. Mr. Rosenfeld testified to all that. 18 He is really the expert on it. Everything 19 that I know is consistent with that. 20 And so, yeah, I think it is 21 perfectly safe at 330 pounds. 22 MR. MALKIN: I have nothing further, 23 your Honor. Mr. Harrison is available for 24 cross-examination. 25 ALJ BUSHEY: Thank you, Mr. Malkin. 26 Who would like to go first? 27 MS. PAULL: I have just a few 28 questions.

1 ALJ BUSHEY: Ms. Paull, okay. 2 CROSS-EXAMINATION 3 BY MS. PAULL: 4 Mr. Harrison, I'm Karen Paull for the Office of Ratepayer Advocates. I have 5 6 just a few questions. You said earlier you don't regret raising the questions you've raised when you 8 9 found out about Line 147, right? 10 Α That is correct. 11 So do you feel that the concerns 12 that you've raised then were valid concerns? 13 Α At the time, yes. I think so, yes. 14 And one of those concerns was that the -- if the pipe is different from what 15 16 PG&E thought, it could -- that could affect 17 how it was prioritized for purposes of the 18 PSEP program. Is that true? 19 Well, yes. Yes, it could affect 20 the PSEP priority potentially. That is why I 21 was asking the question about the PSEP 22 priority. 23 I am not that familiar with their 24 decision tree. I know they have a decision 25 tree. I know it considers AO Smith pipe, I 26 believe, somewhere in it, but I don't know 27 the logic of it exactly. So that is why I 28 was asking that question.

1 Yes, but you knew enough to know it 2 could affect whether the pipe was slated for 3 testing or replacing? 4 That is right, yes. Do you know if in fact -- if PG&E 5 0 6 had known what the pipe -- the true characteristics of the pipe, if it would have 8 been slated for testing as opposed to 9 replacement, do you know? 10 I mean I got the answer back from 11 my e-mail that given it was tested, it would 12 not be slated for replacement. But beyond 13 that, you know, it is a better question for 14 PSEP. I don't know the decision tree that 15 well. 16 But it is your understanding --17 now, we know that 147 has been hydrotested, 18 so that is done. But if we are talking about 19 pipes that have not yet been tested or 20 replaced. 21 MR. MALKIN: Objection, irrelevant. 22 ALJ BUSHEY: That isn't within the 23 scope of our hearing. We are talking about 24 Line 147. 25 MS. PAULL: Okay then, I'm done. 26 ALJ BUSHEY: Thank you. 27 Mr. Gruen. 28 MR. GRUEN: Yes, your Honor.

1 CROSS-EXAMINATION BY MR. GRUEN: 2 Mr. Harrison, do you have in front 3 0 4 of you Exhibit N as in Nancy? 5 Α Yes. 6 And during the break I approached counsel and just asked them to provide you a 8 copy for purposes of review. And I just 9 wanted to ask you if there is any document in 10 this exhibit that you are not familiar with? I believe that I'm familiar. I've 11 Α 12 seen them all before, yes. 13 Okay, thank you. And just 14 regarding a couple of -- one of the 15 documents. Can -- have you found the job 16 file related to the piece of pipe that was --17 that where the October 2012 leak was found? 18 Well, we had a job file but it only 19 had about 6 to 8 documents in it. It had the 20 most critical stuff. It had the strength 21 test pressure report. It had a drawing in 22 It was obviously not the full job file. 23 So that is what we went on the hunt for. 24 That is where we found there was a 1963 25 lawsuit and pulled the job file for the 26 lawsuit, and the job file never made it back 27 to us. 28 And of the job file that was

remaining that you did seek, were the 1 2 as-builts left in that particular --3 Yes. As I remember, there were Α 4 as-builts in there for the job, ves. Turning to, it is the 5 Okav. document that is DRA-86 Question 13A 6 Attachment 475. I believe it is the second, no, third to last in the set. It is entitled 8 Review of Risks MAOP Validation. 9 10 Α Okay. 11 Are you there? 0 12 Α Yes. 13 On the second page above Section 0 14 2.3 that says leak on recently tested pipe, 15 it says: If we cannot show the reconditioned 16 pipe is indicated in the job files, we may 17 want to say that all unknown long seam pipe 18 installed prior to 1965 must be excavated to 19 determine the long seam. 20 Do you still agree with that 21 statement? 22 Well, I didn't agree with it at the 23 time that I wrote it necessarily. These 24 are -- you are looking at a very draft 25 document. And I prepare these, and they get 26 edited. 27 So the -- sort of my job in 28 preparing them is to make sure that I include

everything in there. So anything that might possibly need to be done, somebody want to do, somebody would order us to do, all those get included in the documents so that they can then get edited and evaluated.

And it is sort of like my e-mail to begin with, that is why I sort of think in those modes, making sure that everything is covered. And so this document was written in that sense.

Q Thank you. And just -- I can refer you back to Exhibit I, but I don't think it is necessary. There was a spreadsheet on the last page where we were identifying the 1300 or so feet of pipe in Segment 109.

Just regarding that, are you comfortable with the assumption that all approximately 1300 feet of pipe in Segment 109 are AO Smith?

A I'm comfortable with it, yes. I think that is a valid assumption.

It is sort of like Kirk and Sumeet referenced. Until we replace it or dig it up or something else, we can't be absolutely sure what that is. But based on all the job files we've gone through, all the information, the documentation and the field work that, you know, that people have done

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1
     digging those things up, a given job is
2
     typically the same type of pipe. And so we
3
     would expect to be that same pipe for the
 4
     1300 feet.
5
           MR. GRUEN: No further questions at
 6
     this time.
           ALJ BUSHEY: Thank you, Mr. Gruen.
8
               Ms. Strottman.
9
                    CROSS-EXAMINATION
10
     BY MS. STROTTMAN:
11
              Mr. Harrison, good afternoon. I'm
12
     Brit Strottman on behalf of the City of San
13
     Carlos.
14
               Do you have Exhibit N in front of
15
     you?
16
               Which one?
           Α
17
               That is the large packet of
18
     e-mails.
19
           Α
               Right.
20
               In looking at the e-mail at issue
21
     which is the Saturday, November 17th, 2012,
22
     e-mail.
23
               First document?
           Α
24
           Q
               First page, yes.
25
               So when you drafted this e-mail --
26
               Just to be sure, you are talking
           Α
27
     about?
28
               Where it starts with: I'm guessing
```

that you didn't x-ray anything on this pipe? 1 2 Bottom of the first page? 3 0 Yes. 4 Α Okav. So when you drafted this e-mail on 5 0 November 17th, 2012, did you know that a 2011 6 7 hydrotest had been completed? 8 Α Yes. 9 And you still raised these issues 10 listed in this e-mail, even though you knew 11 that the 2011 hydrotest had been completed? 12 That is right. My concern, again, 13 was to make sure that somebody like Rosenfeld 14 evaluated it. We had a hydrotest. We had a 15 leak two years later. It is unusual. 16 pipe is something that we didn't expect. 17 I felt that it was safe, but I'm 18 not the expert. So I wanted somebody like 19 Rosenfeld or Zach Halbert to evaluate what we 20 found and have them make a judgment about 21 whether they thought there was a problem 22 there, or not. 23 But you still raised all these 24 concerns even though you knew a 2011 25 hydrotest had been completed? 26 Yes. Again, I wanted to be sure. 27 And I just wanted to break down a 28 few things from this e-mail. You raised a

concern about the X -- that the pipe had not been x-rayed?

A Right.

- O Is that correct?
- A That is correct.
- Q And now that is not a concern for you?

A No, because the issue would be that you've got this small area of a leak. And so you could potentially x-ray the area around the leak to see if there was additional wall thickness loss, or other problems around there that were interior to the pipe that you couldn't see from the outside. That would be what my concern was.

And at this point in time, you know, we basically have cut out that piece and completely removed it and examined it.

There was no internal kind of damage. And so, no, at this point there is not a concern about that.

Q And so you also raised a concern about cracks in any other way other than visual, which is your second question. Now you don't have any concerns about that issue?

A Right. Same thing again, because now the piece has been taken out, it has been examined. People have looked at it and

1 determined there was no crack growth. know, there was no crack, active crack or anything in the area that wasn't related. There wasn't any cracks related to the leak.

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And so, again, that is what I wanted to -- that is what I was asking about, and we have those answers now.

Then you asked another -- you raised another concern is this whole backfill. Now you don't have any concerns about that issue?

Well, no, that is just reference to whether they backfilled the hole, or not. basically if the pipe was still -- if the hole was still open and the pipe was still exposed, it would be relatively easy for them to x-ray. But if the hole is already backfilled, then you would have to go get, pull a permit again and get the hole dug up. That is all I was referring to.

And then you flagged another issue that this was a 1929 pipe that was recently tested to 1.5 time the MAOP in 2011.

So you no longer have a concern about that issue?

The -- I mean that kind of goes into the AO Smith discussion in that it is 1929 pipe. We've had good luck with 1929

pipe, but I still wanted to make sure that 1 2 somebody like Rosenfeld didn't know of anything else that we don't know about. 3 4 But, no, at this point I don't have any more concerns about that. 5 6 Then you also flagged a concern that it is a thin wall pipe, and now we found external corrosion. 8 9 Now you don't have concern about 10 that issue? 11 Α Right. Because, again, the pipe 12 was dug up. We evaluated it. There is no 13 unusual corrosion. There is no internal 14 corrosion at all virtually on this pipeline. 15 And the reference to thinner wall 16 pipe, people have asked me about that. 17 is just that this is .250 wall pipe. 18 other pipe around it was .281 wall and .312 19 wall. So all the surrounding pipe was 20 heavier wall than this pipe. That is what my 21 reference to thinner wall pipe is. 22 And then you raised another 23 concern, could the recent hydrotest 24 contributed to additional cracking in this 25 pipe, and essentially activated a threat. 26 And that is no longer a concern to 27 you? 28 That is the whole issue with Α

bringing in Rosenfeld and having the piece cut out, Anamet and Exponent examination of it. It is sort of due diligence. We checked it all out. There is no cracks. There is no issues there. And we ran that to the ground. That was what I wanted to get done, see done.

Q And then the statement are we sitting on a San Bruno situation. Now you are saying that you didn't mean a potential rupture. So you are backtracking on that statement?

A No, I'm not backtracking. Because what I'm saying is that -- I'm referring to it as an engineer. I wrote the e-mail to two other engineers. So I'm talking about it from an engineering perspective.

Again, what did we learn on San Bruno? What we learned there from an MAOP evaluation and engineer point of view, is that the pipe is not always what we think it is. And so is there a possibility that the pipe is different in any way?

And the way that really comes out is, you know, how to prove that to yourself is, again, the things we've been talking about with the yield. We took the pipe. We tested it to yield. We didn't test it to yield, we tested it and it didn't yield. And

so, you know, at the pressures we tested it at we are talking about running it at 330 pounds. So we tested it to more than twice what we were going to be operating at and that is a substantial test margin.

know, you are doing a strength test. You are testing it. So you want to try and make the pipe fail. So could -- the question you have to ask yourself is could anything have survived this strength test that would then be a problem at the operating pressure? And this operating pressure, like I said, we tested it at two times ratio.

And so, no, I don't believe anything would be a problem. But I wanted, again, industry experts to take a look at it because -- to make sure that there wasn't a problem, there wasn't anything going on.

Q Okay. I'm going to have you, please, it is 16 pages after the first page, if you wouldn't mind. These e-mails aren't numbered. There are no page numbers on here, so I apologize you have to count. The 16th page after the cover page.

A Which package is that?

Q I'm sorry, Exhibit N, the one that is in front of you.

MR. MALKIN: Your Honor, could I ask 1 2 Ms. Strottman to identify which of the stapled groups it is in? 3 4 ALJ BUSHEY: We will be off the record. (Off the record.) 5 ALJ BUSHEY: We will be back on the 6 record. Ms. Strottman. 8 9 MS. STROTTMAN: Thank you. 10 Mr. Harrison, I'm going to have you 11 please look at, it is -- like I said, it is 12 16 pages after the title page. And the 13 e-mail is from Jane Yura to Francis Yee. Ιt 14 is at 8:55 e-mail at the middle of this page. 15 Yes. 16 It says: Francis, I'm concerned 17 with, it says David's 11/17 note raising 18 integrity issues. Particularly since he was 19 our key engineering witness on the records 20 OII and answered multiple questions related 21 to pipe. Can you please call, and it is 22 redacted, and speak to him. Then we need to 23 have our recommendation. 24 Have you seen that e-mail before? 25 I've seen it here. I don't believe Α 26 I ever saw it prior to the last month or so. 27 And did Ms. Yee call you to let you 28 know that -- or did Ms. Yee call you about

the issues that you raised in the e-mail? 1 2 I believe so, yes. I don't have 3 specific recollection of it, but... 4 You don't have any specific recollection of that conversation with 5 Ms. Yee? 6 Α No. Anyone else call you and ask you 8 0 9 about that -- the November 17th e-mail? Well, like Sumeet and I had several 10 conversations back and forth about it and a 11 12 variety of other people. I talked to the 13 pipeline engineers involved. You know, there 14 is definitely a lot of phone calls that don't show up in the e-mail streams. 15 16 Okay. Then can I have you then 17 please refer to Exhibit M. I'm not sure if 18 that is in front of vou. 19 Α No. 20 M as in Mary. 21 All I have is the packet, the N 22 packet. 23 Mr. Harrison, before I ask you 24 questions about Exhibit M, did any executives 25 at PG&E call you in response to e-mail that 26 you drafted on November 17th, 2012, to 27 discuss your concerns about Line 147? 28 Well, like I stated, I talked to

Sumeet. So I'm not sure whether you consider
Sumeet an executive, or not. Maybe he is.

Kirk definitely is.

I would not expect a call from an

I would not expect a call from an executive. This stuff should be going up through Sumeet, pretty much, yeah. That is the chain of command. And so I'm following the chain of command as far as who I would expect to talk to about these issues.

 $\ensuremath{\mathtt{Q}}$  Looking at Exhibit M, do you recognize the first e-mail where it says Jim Tong?

A Right, I do.

Q And the second, sorry, the last sentence of the first paragraph says: At the executive level, this situation is considered a near hit from a safety perspective that could have severely damaged the company's credibility.

Did you draft that statement?

A I did.

Q So what did you mean by that if you didn't speak to any executives other than Mr. Singh?

A Well, the executive level is just a -- you know, it is not capitalized. It is generally referring to the higher levels in the company.

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And the "near hit," was, this is going to some guys that are working on the MAOP validation. So this is focused on the MAOP validation. I'm trying to kick them in the fanny to get them to give us a good thorough root cause write-up on this. So I'm trying to spur them on.

The "near hit," the point there is that we had a mistake on the MAOP validation. And I get accused of being too much of a perfectionist. But, by God, I want the records right. I want them as good as we can get them. In this case, we had a mistake on the MAOP validation. At this time, you know, it didn't cause a reduction in MAOP, but it could have very well caused a reduction the MAOP.

And so that is what I was referring to as a "near hit." It is, you know, it is a phrase that we use at the company. Usually it relates to an automobile accident, or something. In this case, it is the same kind of thing where, you know, this is a mistake we made. It could have been a problem, and so we need to make sure that it doesn't happen again.

Q But at that point, even though you said this is a near hit from a safety

perspective, no one at the CPUC knew about this issue on November 17th. Isn't that correct?

A That is right.

Q You drafted this e-mail it looks like 2-1/2 hours after you drafted the are we sitting on a San Bruno situation e-mail?

A Right.

Q And I just wanted to ask you a few questions about your root cause analysis. So did the thought ever cross your mind that the winter season is coming up so you should keep the line in service and then wait, or do the root cause analysis and not take this line out of service because of the winter months?

A So when you say "root cause analysis," there have been some write-ups.

Can you refer to exactly what you are talking about?

Q Well, you state here in your e-mail Exhibit M on November 17th at 1:35 p.m. that the formal root cause, you said a "formal root cause analysis." I'm assuming that you were requesting that a formal root cause analysis be conducted, correct?

A Yes, I understand. There is a couple of root causes here that, you know, some of it had to physically do with the

pipe. So if we are focused on the root cause of the mistakes in the MAOP validation.

So I understand that that is what your question was in regards to, so now can you reask your question? Sorry.

Q Yeah. No, I'm sorry.

But I guess what I'm asking you is:
Did you think it was okay to keep this line
in service, Line 147, because of the winter
months? Instead of saying, hey, you know,
what, we need to -- we need to flag this to
the CPUC and have them determine what to do
with this line?

A Well, the -- I felt it was okay to leave it in service. Because we -- well, at this date it wasn't -- it hadn't been decided. But within a week we decided to leave it at 300 pounds through the winter which, again, is fine.

As far as the CPUC goes, those are things sort of out of my purview. I mean that would be some lawyers decide that, somebody else. As far as sending information to the CPUC, those are all things that I would not be making a decision on.

Q Did you ever recommend to Mr. Singh that the CPUC be advised of this situation?

A No, I would expect him to make

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those decisions. It wouldn't be something
1
     that I would be involved in.
2
 3
               I just have a few more questions,
     then I'm done.
 4
5
           Α
               Okay.
 6
               So you are a technical consultant
     for PG&E, correct?
8
           Α
               That is right.
9
               So you are not an employee of PG&E?
10
           Α
               That is right.
11
               And how much do you make an hour as
12
     a consultant?
13
           A
               200.
14
               And then do you have a consulting
15
     agreement with PG&E?
16
            Α
               I do have a contract.
17
               So PG&E could call you up and say
18
     your services are no longer needing, correct?
19
           Α
               That is right.
20
               Your contract is subject to
21
     termination at any time?
22
               Yeah, generally.
                                                    ]
           Α
23
               And how many hours a week let's
24
     just say in the last year have you dedicated
25
     to working for PG&E?
26
               I don't know if Sumeet really wants
27
     to know. I typically work 12 to 14 hours a
28
     day.
```

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1
               So -- I'm sorry. And that's all
     for PG&E?
2
 3
           Α
               That is all for PG&E.
 4
               Okay. Did the thought ever cross
     your mind that if you testified adversely to
 5
 6
     PG&E, that that could result in the
     termination of your contract?
 8
               Yes, it's crossed my mind. Yes.
 9
           MS. STROTTMAN: Thank you, I have
10
     nothing further -- I'm sorry.
11
               You do still work for PG&E;
12
     correct?
13
           Α
               I do still work for PG&E.
14
               Thank you?
           0
15
               The only piece I can add on there
16
     is they can get rid of me, and I can get rid
17
     of them.
               If they were doing something that I
18
     feel is really unsafe, to me that is a
19
     personal, ethical dilemma. And I would
20
     leave. I don't need a job that bad.
21
           MS. STROTTMAN: Okay. Thank you.
22
           ALJ BUSHEY: Thank you, Ms. Strottman.
23
               Mr. Meyers?
24
           MR. MEYERS: Thank you, Judge Bushey.
25
                    CROSS-EXAMINATION
26
     BY MR. MEYERS:
27
               Mr. Harrison, I'm Steven Meyers.
28
     think we met previously on the OIIs for San
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Bruno. Good afternoon, and thank you for your candor.

Can you briefly tell me what exactly your role is with respect to the MAOP validation process at PG&E?

time. So initially with MAOP validation, I basically designed the original process. I designed the PFL spreadsheet. I was -- I was the chief engineer responsible for the MAOP validation, did a lot of the technical pieces -- did almost all of the technical pieces. I was -- served and I still pretty much serve in this capacity where I'm sort of the final judge on MAOP-related questions. So policy, you know, gets decided by the higher-ups at PG&E, but then if we have questions that come up, they basically bubble up to me. And I'll make a final decision on how it goes within the policy.

- Q Thank you. To whom do you report?
- A Right now I report to Joe Medina.
- Q Okay. And are you in a position where you can direct PG&E employees to undertake certain studies or analyses related to the scope of your services?
- A Yes, somewhat. I -- in reality, the group is almost entirely contractors, so

there's only, like, one employee in the entire group. So --

Q What is your relationship with Mr. Singh?

A Sumeet, as he alluded to earlier, has now moved on to another position. So I used to work directly for Sumeet, and Joe used to work directly for Sumeet. And now positions have shifted around, so Joe is now responsible for MAOP validation.

Q Thank you, Mr. Harrison.

Mr. Malkin asked you a number of questions about A.O. Smith pipe, and in response to those questions -- and I'm characterizing your testimony here, so if I'm inaccurate please correct me. But you basically said you don't have particular safety concerns about A.O. Smith pipe. It's generally good pipe, and it's reliable; is that a fair statement?

A That's fair.

Q In making that statement, you did not mention anything with respect to A.O.

Smith pipe that is reconditioned pipe though.

Do you have the same position about A.O.

Smith pipe if it's reconditioned pipe?

A Yes, I do. Usually reconditioned pipe is actually better because it has been

reconditioned and reexamined and the girth welds have been replaced on it.

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you, sir.

Q And when was the reconditioned A.O. Smith pipe that exists in Line 147 actually reconditioned?

Α Well, I can't really tell you because we -- we have a weak link to potentially reconditioned pipe. And so I don't have anything that I can really put my finger on and tell you when it was reconditioned. Reconditioning of pipe was very common during the 1950s. Pipe was in huge demand. We have records in the file that shows 60 truckloads of pipe a day being shipped out of plant to PG&E, which is just a huge amount of pipe coming out of the pipe plant. So they were running out of pipe. They reconditioned a lot of pipe, and -- I don't know if that got your question, but --That's very close to it.

So it would be an assumption on your part -- perhaps an educated assumption, but an assumption nonetheless that this piece of A.O. Smith pipe that is of 1929 vintage, as you stated in your e-mail, was in fact reconditioned by PG&E?

A Technically it is an assumption,

yes. An educated assumption is a fair evaluation of it, yes.

Q And it would also be your assumption, again, a -- a -- an assumption based upon your expertise as an engineer and as a consultant to PG&E, that the reconditioning of that pipe by PG&E at the time of this significant amount of construction work in their system was consistent with the reconditioning regulations that were applicable at that time?

A That's right.

O So that's an assumption as well.

You also answered some questions from Mr. Malkin concerning contracts that PG&E entered into to purchase A.O. Smith pipe. And you referenced various SMYS values of that pipe in those purchase records being 33,000, 35,000, 42,000 SMYS. And you indicated as well that the default, if you will, in the valuation that you as an engineer makes and that the MAOP validation team makes is you default back to the 33,000 figure because that's the more conservative value.

So that is basically where we have records of A.O. Smith pipe purchased but we

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don't have a specific record for the A.O.
1
2
     Smith pipe that exists in 147, we will assume
     a value of 33,000. Is that a fair statement?
3
 4
               That's a fair statement.
5
               Okay. So you're using the most
     conservative values of documents that are
 6
     relevant to that type of pipe but not
8
     necessarily particular to that pipe?
9
           Α
               That is right.
10
               Okay. So do you recall the segment
11
     of pipe referred to as Segment 180 in Line
     132 in San Bruno?
12
13
           Α
               I do.
14
               And what did the purchase records
15
     show regarding that piece of pipe?
16
           MR. MALKIN: Objection, relevance.
17
           ALJ BUSHEY: Purchase records for
18
     Line --
19
           MR. MALKIN: For Segment 180 in Line
20
     132 is what he's asking about.
           MR. MEYERS:
21
                         I'm trying to reach a
22
     conclusion here.
23
           ALJ BUSHEY: Okay. But it better
24
     include something that is relevant to Line
25
     147.
26
           MR. MEYERS: Q Do you recall that
27
     piece of pipe?
28
               I do. I recall the segment, yes.
```

1 And did that piece of pipe have 2 purchase records? 3 I do not recall right off the top Α 4 of my head today. I -- I really can't remember right now. I don't believe we did, 5 6 but I'm not really sure. So if there were no purchase records, what -- what conservative value 8 9 would you assume for that piece of pipe? 10 Yes, I know, Mr. Malkin, you have a 11 concern about relevancy. But what I'm trying 12 to get to here is that an assumption that is 13 made by a witness who is testifying under 14 penalty of perjury should be validated. And 15 we're making an assumption here about pipe 16 for which we have no purchase records. I'm 17 trying to make a comparison between the 18 absence of purchase records for Line 132, 19 Segment 180 that exploded and killed eight 20 people and the lack of purchase records for 21 this piece of pipe. 22 MR. MALKIN: Very dramatic, very 23 irrelevant, particularly in light of the 24 hydro test that everybody agrees validates 25 the 330 psiq. 26 Well, it completely ALJ BUSHEY: 27 changes the factual scenario. 28 MR. MALKIN: That too.

ALJ BUSHEY: So your comparison doesn't work, Mr. Meyers. I'm wondering if you're testing me again, so I'm going to sustain Mr. Malkin's objection.

MR. MEYERS: Very good. I'll move on.

Q Mr. Harrison, you said in your testimony that -- that you had regrets concerning your November 17th, 2012, e-mail. And I understood you to say that your regrets were about the consternation, if you will, that that e-mail had as opposed to the actual regrets of the factual points that you made in that e-mail. Is that a correct statement?

MR. MALKIN: Objection, mischaracterizes the testimony.

MR. MEYERS: Q Can you characterize your testimony for me with respect to the issue of regrets?

A Again, I regret writing the e-mail with those words because it's generated a lot of consternation and -- and work that wasn't necessary. The point of the items that I brought up in that e-mail was to just ask those questions and make sure that we had dealt with those questions and performed due diligence on what we found.

Q As you sit here today and as you read your e-mail of November 17th, which is

Exhibit N, do you feel that the issues you raised were legitimate issues at that time?

A They were legitimate issues in that we needed to make sure that we had answers to those questions, yes. I think the pipeline was safe then, and I still think it's safe, but I wanted to make sure there were no issues that -- that we could find out that somebody like Rosenfeld would know of that we were not aware of.

Q In the body of the e-mail you make the statement, "Could the recent hydro test contributed to additional cracking in this pipe and essentially activated a threat?" In your testimony thus far, you have referred to the cracking of the pipe in relationship to the leak site and the segment of pipe that was been removed by PG&E for further testing from the system; is that correct?

A That's right.

Q In your e-mail, were you referring to any other cracking within that pipeline, which is about 1,400 -- that section of pipe that's about 1,400 feet that has not been removed?

A I mean, I don't have any knowledge of any other damage or cracking or any of that kind of information. And again, the

hydro test should have flushed out anything that was a problem on the rest of the pipeline.

Q So you're satisfied based upon your review of the hydrostatic testing that there is not a likelihood that the hydro test contributed to additional cracking or activating a threat within the remainder of the pipeline that has not been removed for destructive testing?

here, you're asking me for my opinion, but my opinion is also based on what -- what the experts have said. I'm not an integrity management engineer. I asked about the threats. I know integrity management has nine different categories of threats, but I don't know all the details. So again, that's why I was raising the question, so the other people who are experts, such as the integrity management engineers, can -- can weigh in on what they feel.

Q The next sentence is actually a partial sentence. "Are we sitting on a San Bruno situation?" Again, I understood your explanation of that to be not so much a question of the failure of Line -- of 132 and the resulting fire that caused damages, but

rather the absence of records. Is that what you meant by that, "Are we sitting on another San Bruno situation?"

A Yeah. Again, I believe what we learned from an engineering MAOP perspective in San Bruno is a pipe is not always what we think it is. If it's not what we think it is, then what is it and have we done what we need to do to ensure it's safe.

Q Well, why do we care if we do a hydro test?

test did make it safe, but I wanted to make sure that we still felt -- somebody like Rosenfeld felt that the hydro test was still safe. That was the point of the e-mail. There's the things that I brought up in the e-mail, pressure reversals, those kind of issues are unusual phenomenon that have occurred, very rare under certain circumstances, and I'm not the expert on them. I want the expert to weigh in on them.

Q So when you said, "Are we sitting on another San Bruno," you were not referring to the possibility that the original hydro test of Line 132 caused a fatigue crack which grew over time? You were not referring to that?

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No, I was not referring to that. 1 2 0 Your final statement in this e-mail -- I'm sorry, the final statement of that 3 4 paragraph of the e-mail says, "I don't want to panic people, but it seems like we should 5 6 consider this and possibly possible -- and probably move this pipe up the PSEP priority for replacement." 8 9 If MAOP validation process operated 10 as you thought it was operating and if PG&E 11 was testing to 1.5 MAOP and that hydro test 12 was satisfactory, why would you suggest in 13 your e-mail that this piece of pipe be 14 replaced? 15 Because at the time we were 16 considering -- operating it at 365 pounds 17 and/or higher. And so depending on what we 18 were going to do with that pipeline, we might 19 want to consider replacing it. 20 You were here in the hearing room 21 when Mr. Johnson testified that this pipe 22 could be operated at 400 psig; correct? 23 Α Right. 24 If the pipe is operated on 400 0 25 psig, would you recommend that it be 26 replaced? 27 I would have to evaluate it, go 28 back and look more closely at it. But again,

I would rely on people like Rosenfeld and the 1 2 integrity management people and what their views were on it. And they're saying that 3 4 it's safe at 400 pounds. 5 MR. MEYERS: Mr. Harrison, thank you 6 very much. 7 ALJ BUSHEY: Thank you very much. 8 MR. LONG: Your Honor, can I just ask a 9 follow-up question on one of Mr. Harrison's 10 answers to Ms. Strottman? 11 ALJ BUSHEY: Sure. 12 CROSS-EXAMINATION 13 BY MR. LONG: 14 Mr. Harrison, Tom Long with TURN. 15 Exhibit M, Ms. Strottman asked you 16 a question about that. Do you have that in 17 front of you? 18 Α I do. 19 And it's the -- it's the "near hit" 20 sentence that I wanted to ask you about. 21 if I -- if I jotted down your answer 22 correctly, you said that what you meant by --23 words to the effect that what you meant by 24 near hit was there was a mistake in MAOP 25 validation for this segment, 109, but at the 26 time it didn't cause a reduction in the MAOP, 27 and that's why it was a near hit? 28 Α Right.

Q So does that mean that if it had caused a reduction in the MAOP, that would be a hit?

A I would have termed it that way, yes, in comparison. Yes.

Q Okay. So now you remember this exhibit. I think you were asked questions about this earlier today, Exhibit I, with the chart about the changes in MA -- various MAOP parameters from October 2011 to the current?

A Right.

Q Okay. In fact, the -- for Segment 109, the MAOP of design in October 2011 was 437, and the MAOP of record was 396. And now by virtue of the mistake in MAOP that was discovered, the MAOP design has gone down to 330. And as a result the MAOP of record has gone down to 330.

A That's correct.

Q So in fact, isn't this a hit?

A That is correct, yeah. So at the time -- again, you're asking about when I wrote this e-mail, and the time I wrote the e-mail, that's why I wrote it that way. And in effect, we have taken that into consideration. And as we've discussed, we've taken a conservative value for the line, including the joint factor, so you arrive at

a 330-pound MAOP. 1 2 If you remove the joint factor 3 impact, you end up with a design pressure I 4 believe at 412. So you're back over 400 pounds. And so that, again, is -- you 5 know, that's what we've been discussing here 6 that we've been taking a conservative joint factor. We don't really think it needs to be 8 9 applied, but --10 So from your perspective, this is 11 exactly what you don't want to happen in an MAOP validation. You don't want to find out 12 13 that a supposedly validated MAOP needs to be 14 corrected to a lower MAOP; isn't that right? 15 That's right. Absolutely. 16 MR. LONG: That's all I have. Thank 17 you. 18 Thank you, Mr. Long. ALJ BUSHEY: 19 EXAMINATION 20 BY ALJ BUSHEY: 21 Mr. Harrison, I have a couple of 22 questions for you on a completely different 23 topic. How are you? 24 Α All right. 25 You've been -- you've been through 26 a lot, and I wanted to know about morale and 27 about how this ensuing controversy has 28 settled among the working-level engineers at

PG&E. I'm very concerned that it may have undermined your -- I think you call it your questioning culture. Could you -- could you talk to me about how you've experienced this in the last couple of months?

A Well, it does get challenging in that I -- I -- I talked to Sunil in the interview with Sunil about it a bit. And yeah, the biggest comment that I get that I can say is, you know, the other engineers talk about me and say, "Oh, I'm not writing any e-mails."

And I think that's a bad thing.

It's definitely a bad thing because the people are much more wary of e-mails, and it's going to be harder for them to share safety-related concerns. I think the company does support them, though, and are trying to encourage people to bring them up. And they are bringing up issues. But it does get more challenging I think as we -- you know, because my e-mails made it into the newspaper and then, you know, I have to testify. And nobody wants to go through the grilling.

O Right. And is there anything that

Q Right. And is there anything that we can do to make the grilling less grill-like?

A I don't -- I don't know right now

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off the top of my head. I can't think of
1
2
     anything, but --
 3
               But you're aware of all the
           0
     whistleblower protections and you felt like
 4
     your management was supporting you?
 5
 6
           Α
               Right. Yeah.
               And so other than enabling you to
 8
     survive the process and go back and say that
9
     it's --
10
           Α
               Survivable.
11
               -- survivable, that's all we can
     do?
12
13
           Α
               Yeah, I think so. I mean, the
14
     management did respond. There was debate
15
     about the issues. We got a variety of groups
16
     together. So I mean, I think the process did
17
     work, and so I -- I think that's -- that's
18
     good.
19
           ALJ BUSHEY:
                         All right.
                                     Thank you.
20
               Redirect, Mr. Malkin?
21
           MR. MALKIN: May I have a moment, your
22
     Honor.
23
                         We'll be off the record.
           ALJ BUSHEY:
24
               (Off the record)
25
           ALJ BUSHEY: We'll be back on the
26
     record.
27
               Mr. Malkin, redirect?
28
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REDIRECT EXAMINATION 1 BY MR. MALKIN: 2 3 Okay. Mr. Harrison, I just have a 0 4 few questions for you on two points. 5 One, in response to a question from Ms. Strottman, you testified that if you 6 testified adverse to PG&E, PG&E could 8 terminate your contract. Do you recall that? 9 Do -- has that fact that your contract is 10 currently terminable at will in any way 11 influences your testimony today? 12 Α No. 13 Has anyone from PG&E threatened you 14 in any way about either your e-mail, your 15 testimony, or anything having to do with Line 16 147? 17 No. They tease me about taking 18 away my e-mail, but they're just teasing me. 19 Do you as you sit here today have 20 any concerns about any retaliatory action 21 being taken against you either for the 22 e-mail, the questions you've raised or your 23 testimony, or anything related to Line 147? 24 Α No, I don't. 25 You've mentioned in connection with 26 that that the termination right goes both 27 ways? 28 That's right. Α

1 Do I understand correctly that if 2 you felt there was a safety issue with respect to Line 147 that you raised that PG&E 3 4 refused to address, that would you exercise that right and stop working for PG&E? 5 That's right. 6 Α 0 Okav. The last thing I want to ask you about is the questions from Mr. Long 8 9 about your e-mail talking about a near hit. 10 And then you went on to testify that when the 11 MAOP changes, as Exhibit I reflects for 12 Segment 109, in your terminology, that's a 13 hit. Do you recall that testimony? 14 Α That's right. And as I recall, you explained also 15 16 that if -- even with the changed 17 specifications on Line 109 that if you did 18 the MAOP calculation literally according to 19 the code without the joint efficiency factor, 20 the MAOP of design would be 412; is that 21 right? 22 MR. LONG: Objection, vague. I didn't 23 hear that testimony. That is a leading 24 question. It would be better if it were 25 phrased in a less leading fashion. 26 ALJ BUSHEY: Try and tie it back to 27 something that he said previously. 28 Q Did you testify to what MR. MALKIN:

the MAOP of design for Segment 109 would be 1 2 if you literally followed the code and didn't include the joint efficiency factor the way 3 4 PG&E does? And yes, I did it on the telephone, 5 so I'm not sure I got it exact. But I 6 believe it's 412. 412 pounds would be without the joint efficiency factor. 8 9 Last question. Despite the fact 10 that you consider a change of MAOP on Segment 11 109 to be a hit in your terminology, do you 12 have any doubt in your mind about the safety 13 of that line over the past two years? 14 No, I think the line is fine. 15 330 pounds is perfectly safe operating 16 pressure for the pipeline, and so the line I 17 think is fine. 18 No further questions, your MR. MALKIN: 19 Honor. 20 Thank you, Mr. Malkin. ALJ BUSHEY: 21 MR. LONG: Your Honor, could I just ask 22 about that 412 calculation? I must have 23 missed that. 24 RECROSS-EXAMINATION 25 BY MR. LONG: 26 So Mr. Harrison, tell me what 412 27 represents? 28 So if you calculate the -- the SMYS

-- the pressure that you could operate the 1 2 pipeline at, not operating it out of class, but ignore the 0.8 joint efficiency factor, 3 4 taking what the code says at 1.0, then you get a 412 pressure I believe. 5 Okay. And that was earlier today 6 that you said that? Well --8 Α 9 MR. LONG: Anyway. Okay. I understand 10 what you're talking about. Thank you. That 11 answers my question. 12 CROSS-EXAMINATION BY MS. BONE: 13 14 O A clarification. Which code 15 section are you referring to? 16 Well, we're talking about the 17 design formula essentially without the joint 18 efficiency factor in it, so it's two times 19 the SMYS times the wall thickness divided by 20 the diameter and then take 50 percent of 21 that. 22 So that's 192.105? 23 Yeah, in effect. But again, 24 without the joint efficiency factor in it. 25 MS. BONE: Understood. Thank you very 26 much. 27 ALJ BUSHEY: Any final questions for 28 the witness?

1 Ms. Strottman. 2 MS. STROTTMAN: I just have one. 3 RECROSS-EXAMINATION BY MS. STROTTMAN: 4 5 Thank you, Mr. Harrison. You -- it 0 6 seems like -- and please let me know if I'm mischaracterizing this -- your testimony --8 that you feel badly because you think you've 9 generated a lot of work that's not necessary 10 as a fallout from your e-mail; is that 11 correct? 12 Α That's right. 13 So if PG&E reported these issues of 0 14 Line 147 and 101 right away to the CPUC, we 15 wouldn't all be sitting here; is that 16 correct? 17 MR. MALKIN: Objection. 18 ALJ BUSHEY: Speculation. Try again. 19 MR. MALKIN: It's also outside the 20 scope or redirect. 21 ALJ BUSHEY: We just need one reason. 22 MS. STROTTMAN: I don't think that is 23 outside the scope but --24 So Mr. Harrison, we are all here, 25 isn't that correct, because PG&E waited four 26 months to tell the CPUC of these issues and 27 nine months to tell the parties involved; 28 isn't that correct?

1 MR. MALKIN: Objection, argumentative, 2 speculative. MS. STROTTMAN: I don't think that's 3 4 argumentative, and I'm not sure that's 5 speculative. I mean, we all know why we're 6 here. ALJ BUSHEY: Well, then why do we need 8 to ask? 9 MS. STROTTMAN: It would be nice for 10 him to answer but --11 ALJ BUSHEY: Yes, we're here because of 12 some rulings I wrote. 13 MS. STROTTMAN: My point is that if 14 PG&E had been forthcoming -- it's not 15 Mr. Harrison's fault that he thinks he generated a lot of work. PG&E should have 16 17 reported these issues to the Commission and 18 then to the parties, and then we wouldn't all 19 be sitting here. 20 Thank you for your ALJ BUSHEY: 21 perspective on that, Ms. Strottman. 22 MS. STROTTMAN: Thank you. 23 ALJ BUSHEY: Anything final for the 24 witness? 25 (No response) 26 ALJ BUSHEY: Hearing none, then the 2.7 witness is excused. 28 Ms. Strottman, your client wanted to make a statement.

MS. STROTTMAN: Yes. Thank you.

## STATEMENT OF MR. RUBENS

MR. RUBENS: Your Honor, I suppose I have a unique role here as representing a party, and I'm the city attorney for the city. I've been the city attorney for five years. It's not really in the record, but I was the interim city attorney for the City of San Bruno when the disaster happened there. So I'm intimately involved in what can happen when a pipeline fails. It's catastrophic.

The City of San Carlos didn't seek this process. It was imposed upon us when we were presented with an e-mail on October 3rd of this year. Your Honor reacted to that and issued an order which resulted in this proceeding. And it's an expedited proceeding. We have asked for time to have our expert further evaluate, and that hasn't been granted. Perhaps there is still time depending on when the CPUC considers it. Special counsel mention that request for further review on that.

The public is very concerned about the safety of Line 147 in San Carlos. It runs through the heart of the town. It passes thousands of residences past. I've

walked the line. Many of the places where
the line is it's less than 25 feet from the
front doors of homes. Sometimes it goes
between people's yards. Sometimes it's right
behind their house depending on where it is
in the line. It passes a city park. It goes
through a city park. It goes through a
nature preserve. It passes over the Hetch
Hetchy Aqueduct. It's a very serious line.
Its safety must be assured.

I think the credibility of PG&E is relevant, with all due respect to your Honor, and that's because the reason we're here, and I know this is argument, but the reason we're here is because it was 11 months until the City of San Carlos was given the e-mails that we consider red flag e-mails. They may be able to be explained after the fact, and there are sworn statements that try to explain that, but the fact is when you look at the e-mails and you see them, there were serious concerns raised.

And PG&E, instead of reporting it to the CPUC and taking immediate action to communicate it to the City of San Carlos, which might have created a different procedure here, they decided to hide it. And they decided to hide it because the winter

season. That's all the sworn statements.

And because of this rushed proceeding I spent the whole weekend reading them all. They all say from PG&E employees the winter season was a major factor in their decisionmaking process.

So what I see when I look at these sworn statements is that PG&E decided, rather than go through a safety process because of what they discovered about the type of pipe there and the leak, they decided, we're just going to go with system rather than safety. That's what I see. Because that's what they were -- that's why they delayed. There can be only one explanation why they delayed, and that's it.

The city -- the one point that I saw today in these hearings that I think needs to be underlined is PG&E is relying on a standard that doesn't make any sense.

They're saying because it's pre-1970 pipe that was operated before 1970 that it can have a higher standard than known pipe that's in the ground. And that makes no sense to me at all. Unknown pipe has -- can run at a higher operating pressure than known pipe.

That just doesn't make any sense. I think that's part of why the public is so upset

about this because PG&E does not know what's in the ground there, and they still don't.

None of the testimony in these hearings have shown that they know what's in the ground.

In fact, they admit they don't know what's in the ground.

So in conclusion, we have requested this hearing that we want safe pipeline through San Carlos. If that includes replacing the pipe, if it includes proper -- applying the proper standard until PG&E can get the resources and mobilize to get the pipe repaired, that's what we're after in this proceeding.

So I wanted to say that for the record. I know that I'm not testimony. I'm fully aware that I'm argument, but because I'm the city attorney and, you know, local government is closest to the people, I think I need to make that statement for the record. Thank you.

ALJ BUSHEY: All right. Thank you.

MR. MALKIN: Your Honor, if we may. I

don't want as a lawyer to take on Mr. Rubens'

statements, but the point that he makes that

is really important is the concern of the

public. And we would appreciate it if you

would allow Mr. Rosenfeld to briefly address

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that question to put the mind of the public 1 2 at ease as to the safety of this pipeline. ALJ BUSHEY: Mr. Rosenfeld, are you 3 4 prepared to make such a statement? 5 MR. ROSENFELD: Yes, I am. 6 ALJ BUSHEY: Yes. Let's do that. Mr. 7 Rosenfeld, please come forward. MS. STROTTMAN: Your Honor, I'm sorry. 8 9 I'm going to object to this. He's already 10 testified. I don't know. It's like --11 ALJ BUSHEY: No. I let Mr. Ruben make a speech about the interest of the public. 12 13 I'm going to ask Mr. Rosenfeld to come back 14 here and address the public. Don't address 15 Address the public and tell them what 16 his response as a nationwide expert is on 17 these issues. I think that's exactly to the 18 point of what we're doing. And Mr. Rosenfeld 19 is uniquely in a position to address the 20 public. So please come forward, Mr. 21 Rosenfeld. 22 MR. MALKIN: Would you like him to take 23 a seat up there? 24 ALJ BUSHEY: Yes. Please be seated. 25 MR. MALKIN: Or have my seat? 26 ALJ BUSHEY: Mostly for the convenience 27 of the court reporters. 28 You remain under oath. You have

heard the statement. And I'd like you to conceptually address your comments to the members of the public who live near Line 147. MICHAEL ROSENFELD resumed the stand and testified further as follows: THE WITNESS: Sure. You know, the concerns are understandable, but, and I think it's reasonable that, for example, that David Harrison was asking the questions he was asking. I think the kinds of -- there are no

it's reasonable that, for example, that David Harrison was asking the questions he was asking. I think the kinds of -- there are no bad questions. The issue is, you know, what's -- how do we know that it's safe. How do we -- you know, is PG&E being prudent in the way they're approaching things?

I think that, well, I've tried to look at the safety aspects of this pipeline from a number of different angles including what was provided for in the regulations historically and currently. What do I interpret the CPUC's expectations to be in terms of re-verifying the integrity of the pipeline. You know, certainly a lot of questions have come up about is the hydrostatic test effective because there was a leak afterwards.

And so I tried to look at it from

the standpoint of what do we know about -what can we say about the safety of the pipeline having been hydrostatically tested to essentially twice what PG&E proposes to operate it at. And this is not, you know, a hydrostatic test. It's a proof test. It's called a proof test because it proves the ability of the pipe to do what it's supposed to do. You know, conceptually it's like saying if the bridge can hold an 80-ton truck, it's logical that it can hold up a 40-ton truck, and it doesn't matter what the bridge is made out of. Whether it's wood, stone, wrought iron or, you know, high test steel, it can do that job.

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So the hydrotest, and this is -this is not radical new science. It's pretty
well -- well trod ground in terms of
understanding how something like a pipeline
or a pressure vessel or things like that can
be safe. So we know it works. It's been
done, practiced for decades. So, and a
successful test can make up for or can help
compensate for some things that aren't known
such as every -- the complete description of
every piece of pipe. And that relies on the
fact that the hydrotest was performed to a
pretty high level over and above what the

pipeline operates.

So taking -- you know, I know that the City of San Carlos has asked for a fracture, fracture mechanics or fracture control approach to this. Well, the explanation for why what happened in San Bruno would not happen here as a result of due to damage caused by the test or due to some fairly -- fairly uncommon sorts of metallurgical concerns such as pressure reversals comes -- the assurance of that actually comes from a fracture mechanics analysis of what you get out of a hydrostatic test. And that's very well documented in the technical literature as well if you wanted to do your own research.

So I feel very comfortable about what the hydrotest proves. The fact that a leak occurred sometime afterwards is interesting, but you know, it is not proof that the hydrostatic test doesn't demonstrate the strength of the pipe.

So, and then the other -- another approach that I took here was that I know that the hydrostatic test is not a -- it's not a silver bullet. I mean it does not deal with every possible concern that could happen with the pipeline over time. There are

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things that it doesn't address. So I tried to look at it from the standpoint of what -- what are the integrity threats or integrity concerns that do affect natural gas pipelines as demonstrated through cumulative industry experience, through reportable incidents that are presented or that are reported to PHMSA and what industry guidelines say about dealing with that and just tried to work through each one of those.

Do we have evidence that there's a problem, or do we have evidence that any condition has worsened in the last two years with respect to those particular things. And I don't -- I don't see evidence that there's -- that there are other problems affecting the pipeline.

So you know, and then finally, I think I alluded to this on Monday, I thought, well, knowing what I know about A.O. Smith pipe or about hydrotesting or pipelines in general or risk assessment, how would I feel if I were living near this pipeline? There's a pipeline that goes through my neighborhood. It's not next to my house. It's a propane pipeline, but if it failed it would be -- certainly be a bad thing. I'm conscious of its presence. So I certainly am able to I

think put myself in the point of view of how
would I feel about living next to this
particular pipeline.

I think all of the evidence points to it being a safe pipeline. I don't think I would feel terribly concerned about that. In fact, there are many, many, many other things that pretty much everybody here in this room is exposed to in terms of risk, whether it's traffic accidents or food poisoning or, you know, poor medical treatment or things of that nature that are much more likely, present much higher risks I think than this particular pipeline. So that's my take on it.

ALJ BUSHEY: Thank you. Thank you, Mr. Rosenfeld. All right. Is there anything else to come before the Commission on this matter? You have your objection on Line 147.

MS. BONE: We need to enter documents into the record, and if possible we'd like a few minutes off the record with PG&E to see if we can stipulate to most of them and make this easier.

ALJ BUSHEY: Okay. We'll be off the record.

(Off the record)

ALJ BUSHEY: We will be back on the

record.
While we were off the record we
identified Exhibit O. That is going to be
the Felts testimony. SED advocacy is going
to provide me a copy of that.
(Exhibit O was marked for identification.)
identification.)
ALJ BUSHEY: Exhibit P is the Roberts
testimony.
(Exhibit P was marked for identification.)
identification.)
ALJ BUSHEY: And Exhibit Q is the
Roberts support.
(Exhibit Q was marked for identification.)
ruciitiitation. )
ALJ BUSHEY: Are there any objections
to Exhibits A through N? Any objections to
receiving A through N into the record?
MS. BONE: We are still working on
that.
MR. MALKIN: I believe we may have some
objections. I'm trying to I have no
objection to A. Although, we are talking
about whether we need to redact.
MR. VALLEJO: No, I was thinking
Exhibit A to the safety
MR. MALKIN: Oh.
MS. BONE: Oh.

1	ALJ BUSHEY: Hearing Exhibit A through
2	N.
3	MR. MALKIN: No objection to A. No
4	objection to
5	MS. BONE: Can I fill in, Joe, are you
6	working on that?
7	MR. MALKIN: Yes.
8	MS. BONE: On K?
9	So PG&E has stipulated to the entry
10	of K into the record, the ones you are asking
11	about, but we are going to need to redact it.
12	So we will do a late filing to get that copy
13	to you. And we've agreed that it can be
14	filed with the redaction of the second and
15	third columns.
16	ALJ BUSHEY: So the version of K that I
17	have should be removed?
18	MS. BONE: Correct, and we will get you
19	a new one.
20	ALJ BUSHEY: Any objection to any
21	others?
22	MR. MALKIN: We are going through.
23	We've gotten up to F, and we have no
24	problems.
25	ALJ BUSHEY: Okay.
26	MR. MALKIN: G is good.
27	ALJ BUSHEY: We will be off the record.
28	(Off the record.)

ALJ BUSHEY: Back on the record. 1 2 While we were off the record 3 Exhibits A through J which have been 4 previously identified have been received into 5 evidence. 6 (Exhibits A thru J were received into evidence.) We will be off the record. 8 ALJ BUSHEY: 9 (Off the record.) 10 ALJ BUSHEY: We will be back on the 11 record. While we were off record we 12 13 addressed Exhibit K. It has been removed 14 from the documents offered in hearing. 15 MS. BONE: That is not exactly right. 16 The K that we talked about earlier is still 17 there. The one on the marine standards. 18 MR. MALKIN: That was my error. It had 19 originally been marked as K, but then it was 20 withdrawn and K was used for this other 21 exhibit that we have no objection to with the 22 agreed redaction of two columns. That would 23 allow one to precisely identify locations of 24 the pipe. 25 That is what I understood. ALJ BUSHEY: 26 So Exhibit K that has been provided to me has 27 been removed from the record. A late-filed 28 revised Exhibit K with two columns redacted

1 will be provided to me. 2 We will be off the record. (Off the record.) 3 4 ALJ BUSHEY: We will be back on the 5 record. While we were off the record we 6 discussed Exhibit N. The only portion of Exhibit N that was used as a 8 9 cross-examination exhibit was the first page. 10 I'm removing the other pages from Exhibit N. 11 We will receive the first page only into the 12 record. 13 (Exhibit N was received into evidence.) 14 15 MS. BONE: Your Honor, there's an 16 additional exhibit that we don't have that 17 needs to be given a -- a letter. 18 ALJ BUSHEY: Okay. Can we do that when 19 we get to the end of the letters because 20 we've got things that have a letter that 21 aren't in the record? 22 Exhibit N? 23 MR. MALKIN: Exhibit N we object to. 24 It's a mishmash of things, very little of 25 which was the subject of any questioning. Ιf 26 it gets boiled down to the things that were 27 actually used in the hearing, then -- and I 28 -- I don't include the one where the witness

1 said, "I don't recognize it," then we
2 wouldn't object.

MR. LONG: Your Honor, I don't understand this principle that PG&E is using. They're e-mails. Is there something that they're worried about?

MR. GRUEN: Your Honor, in addition to that, I asked Mr. Harrison explicitly if there was any document in here with which he was not familiar.

ALJ BUSHEY: That's not the basis for getting something in the record as a cross-examination exhibit. You have to ask cross-examination on it.

MR. GRUEN: And I did ask cross-examination on each and every document in this exhibit, your Honor. And I asked Mr. Harrison. I asked extensive questions of both Mr. Johnson and Mr. Singh. I'm not following the exact grounds of the objection — the basis for Mr. Malkin's objection on this.

ALJ BUSHEY: So Mr. Malkin, you're disputing counsel's assertion that questions were asked regarding each one of these seven packets.

MR. MALKIN: Yes. I think the record will accurately reflect that there were

1 questions about some of these. There was the 2 blanket question, which as you said doesn't 3 establish the basis for admission. 4 were some questions about certain of these documents, and as I said, if this gets boiled 5 down to those, we would not have an 6 objection. 8 ALJ BUSHEY: And who would you envision 9 doing this boiling-down process? 10 MR. MALKIN: I would envision SED 11 advocacy doing it in the first instance, and 12 our looking at it and concurring. 13 ALJ BUSHEY: Okay. How soon can you do 14 that, Mr. Gruen? 15 MR. GRUEN: Your Honor, I'm not clear. 16 I explicitly -- and the record will reflect 17 that I asked questions about every document. 18 ALJ BUSHEY: Then it will be very 19 quick. And you'll just go through the -- the 20 transcript with page citations for each one 21 and you'll send it into them and the whole

MR. GRUEN: Understood, your Honor. I will work to turn that around by the end of the week.

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thing will come in.

ALJ BUSHEY: Okay. All right. So that will take care of Exhibit N.

And O is the Felts testimony. P is

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1
     Roberts' testimony. Q is the Roberts
2
     support. That brings us to an unallocated
 3
     letter, which would be R. Ms. Bone?
 4
           MS. BONE: R. And PG&E has now
     stipulated that the exhibit Mr. Roberts
 5
 6
     sought to put in on Monday, which had an
     excerpt from the PRUPF can now be admitted
     because the entire document was included in
 8
9
     the recent PSEP update proceeding.
10
           ALJ BUSHEY: So that's going to be
11
     Exhibit R.
12
               (Exhibit No. R was marked for
               identification.)
13
14
               (Exhibit No. R [late-filed] was
               received into evidence.)
15
16
           MS. BONE: Yes.
17
           ALJ BUSHEY: Can I have a copy of it?
18
           MS. BONE: I don't have it now so it
19
     will be late-filed.
20
           ALJ BUSHEY: Okay. Any other
21
     documents?
22
           MR. GRUEN: Your Honor, may I just
23
     clarify that in the case of Exhibit O, it
24
     includes both Ms. Felts's testimony as well
25
     as the exhibits that are referenced by her
26
     testimony?
27
           ALJ BUSHEY:
                         Okay.
28
           MS. STROTTMAN: And your Honor we want
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to late-file Dr. Stevick's testimony.
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     Apparently there is some confidential
 3
     information in there.
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           ALJ BUSHEY: What are you going to do
     about that confidential information?
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           MS. STROTTMAN: Give it to PG&E to
 6
     redact it. Although we don't think it is
     confidential, but apparently just two lines
 8
9
     need to be redacted.
           ALJ BUSHEY: So Dr. Stevick's
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11
     testimony.
           MS. STROTTMAN: Mr. Malkin did
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13
     stipulate to us entering it into testimony,
14
     but I just want to make sure you see it and
15
     make sure all the redactions are in there.
16
           ALJ BUSHEY: You've got five days to do
17
     that. It will be late-filed Exhibit S.
18
           MS. STROTTMAN:
                            S?
19
           ALJ BUSHEY: File it as redacted I
20
     don't want it under seal. Just everything
21
     redacted.
22
               (Exhibit No. S was marked for
               identification.)
23
24
               (Exhibit No. S [late-filed] was
               received into evidence.)
25
26
           MS. BONE: Your Honor, I had an
27
     oversight. With regard to Mr. Roberts'
28
     testimony, which is now marked as Exhibit P
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1 and entered into the record, there is one 2 very minor errata that I wanted to bring to parties's attention. I'm not going to do a 3 4 formal filing on it. It's Footnote 75 should be the same as Footnote 74. 5 6 ALJ BUSHEY: What page is that on? MS. BONE: Towards the end on page 19. ALJ BUSHEY: So Footnote 75 should be 8 9 ibid. 10 MS. BONE: Yeah, ibid. 11 ALJ BUSHEY: All right. I made that 12 correction in the official record. 13 Any further exhibits? 14 MR. MALKIN: Yes, your Honor. We have 15 We would like to mark the workshop 16 summary that we sent out that was commented 17 on by both Mr. Roberts and Mr. Singh in the 18 discussion this morning given that they both 19 talked about it. 20 ALJ BUSHEY: Okav. Exhibit T. 21 anybody going to object to that? 22 We object and if it's going MS. PAULL: 23 to come in we've prepared a version --24 ALJ BUSHEY: We'll be off the record. 25 (Off the record) 26 ALJ BUSHEY: We'll be back on the 27 record. 28 While we were off the record, we

1 agreed to mark as Exhibit T the workshop 2 summary presented by PG&E. It will only be 3 marked for identification and not moved into 4 the evidentiary record. 5 (Exhibit No. T was marked for identification.) 6 ALJ BUSHEY: We'll be off the record. 8 (Off the record) 9 ALJ BUSHEY: We'll be back on the 10 record. 11 Exhibit U is ORA's version of the 12 workshop summary. It's identified for the 13 record, but not received into evidence. 14 Is there anything further to add 15 into the record? 16 (Exhibit No. U was marked for identification.) 17 18 MS. BONE: Your Honor, if there are no 19 further exhibits to add to the record, I 20 thought it would be helpful to get some 21 confirmation about certain other things just 22 to ensure that we all agree that they are on 23 the record, that there might be some open 24 issues here. Is PG&E's verified statement 25 26 considered to be on the record of this 27 proceeding? 28 It's been filed and ALJ BUSHEY:

1 served. 2 MS. BONE: So the answer is yes? 3 ALJ BUSHEY: Yes. 4 MS. BONE: And the same with SED's concurrents? 5 6 ALJ BUSHEY: Yes. MS. BONE: Okay. And all of the 8 documents that Mr. Singh also filed following 9 up on PG&E's verified statements? Mr. 10 Singh's documents --11 ALJ BUSHEY: His supplements that were filed and served. 12 13 MS. BONE: Supplements, et cetera. 14 ALJ BUSHEY: Yes. 15 MS. BONE: And lastly with regard to 16 the documents that are generally in the PSEP 17 proceeding, this rulemaking, are they 18 considered to be part of the record of this 19 proceeding? Or do you separate -- do you 20 designate the OSCs as something different? 21 ALJ BUSHEY: This is not an OSC. This 22 is a re-pressurization. 23 MS. BONE: So you believe that all the 24 records that are in the PSEP proceeding are 25 part of the records of this proceeding? 26 ALJ BUSHEY: I don't see why not. 27 MS. BONE: Wonderful. Thank you. 28 Well, that -- that opens MR. MALKIN:

1 up two-and-a-half years worth of things that 2 -- whatever. ALJ BUSHEY: We can't ignore them. 3 4 They're here. 5 Anything further? 6 MS. PAULL: Yes, your Honor I would like the record to reflect that while we were off the record, I renewed my request to have 8 9 the safety certification -- PG&E's safety 10 certification consisting of Exhibit A and B, 11 the two exhibits that were filed October 11th and -- rather, served October 11th and 12 13 16th -- that they be made part of the record 14 and that you denied that request. 15 ALJ BUSHEY: Yes, consistent with our 16 past practice in dealing with pressurization, that information is not included in the 17 18 formal record. 19 Is there anything further to come 20 before the Commission? 21 MS. STROTTMAN: Yes. 22 MR. GRUEN: Your Honor, may SED do a 23 late-served -- late service of Exhibit O, 24 which is Ms. Felts' testimony. 25 ALJ BUSHEY: Yes, I already indicated 26 that. 2.7 MS. STROTTMAN: Your Honor, I'm sorry. 28 Are you going to outline a briefing schedule?

ALJ BUSHEY: No, there's no briefing. 1 2 MS. STROTTMAN: Oh, that's right. 3 You're going to issue your Proposed Decision. 4 ALJ BUSHEY: Right. MS. STROTTMAN: And then we can file 5 6 comments --7 ALJ BUSHEY: Comments on it. 8 MS. STROTTMAN: -- on the Proposed 9 Decision. 10 ALJ BUSHEY: At this point, I don't 11 know how realistic hitting the December 5th 12 agenda will be. 13 MS. STROTTMAN: Okav. 14 ALJ BUSHEY: But certainly no later 15 than December 19th. When the proposed 16 decision comes out, you will have -- our practice has been a few days. And by a few, 17 18 I mean between three and five days to file 19 one round of comments on it. 20 MS. STROTTMAN: And, your Honor, I have 21 a procedural question. The City of San 22 Carlos is interested in some sort of order 23 that if PG&E discovers some sort of leak on 24 Line 47 that PG&E report it to San Carlos. 25 Do you suggest a way --26 ALJ BUSHEY: I suggest that the Mayor 27 of San Carlos Carl Kirk Johnson and make that 28 request.

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           MS. STROTTMAN: So that order cannot
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     come from the CPUC?
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           ALJ BUSHEY: Well, it could, but
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     they'll almost certainly voluntarily tell you
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     that.
           MS. STROTTMAN: I don't know about
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     that, but --
           ALJ BUSHEY: Well, why, don't you start
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9
     with --
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           MS. STROTTMAN: Especially after --
11
           ALJ BUSHEY: Why don't you start with a
12
     simple request to their executives, and if
13
     they turn you down, then you can file a
14
     motion in this docket.
15
           MS. STROTTMAN: Okay.
                                   Thank you.
16
           ALJ BUSHEY: Anything further?
17
               Hearing none then, the record is
18
     closed on the Commission's consideration of
     Line 1 --
19
20
           MS. PAULL: No. Aren't there
21
     late-filed exhibits scheduled to come in?
22
           ALJ BUSHEY: We just went over that.
23
     With the late-filed exhibits, the record is
24
     closed.
25
           MS. PAULL: Oh, with the late filed
26
     exhibits.
27
           ALJ BUSHEY: With the late-filed
28
     exhibits, the record is closed on the
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re-pressurization of Line 147.
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 2
             THE REPORTER: I'm sorry. We're on the
 3
      record.
             ALJ BUSHEY: And this matter is
 4
 5
      submitted for Commission consideration.
                  Is there anything further to come
 6
      before the Commission today? Hearing none,
      then this evidentiary hearing is concluded,
 8
 9
      and the Commission is adjourned. Thank you.
             (Whereupon, at the hour of 4:57 p.m., this matter having been concluded, the Commission then
10
11
             adjourned.)
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Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

Rulemaking 11-02-019

# CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, Alejandrina E. Shori, Certified Shorthand Reporter No. 8856, in and for the State of California do hereby certify that the pages of this transcript prepared by me comprise a full, true and correct transcript of the testimony and proceedings held in the above-captioned matter on November 20, 2013.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 20th day of November, 2013.

ATejandrina E. Shori CSR No. 8856

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

Rulemaking 11-02-019

# CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, Ana M. Gonzalez, Certified Shorthand Reporter No. 11320, in and for the State of California do hereby certify that the pages of this transcript prepared by me comprise a full, true and correct transcript of the testimony and proceedings held in the above-captioned matter on November 20, 2013.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 20th day of November, 2013.

Ana M. Gonzalez CSR No. 11320

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

Rulemaking 11-02-019

# CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, Thomas C. Brenneman, Certified Shorthand Reporter No. 9554, in and for the State of California do hereby certify that the pages of this transcript prepared by me comprise a full, true and correct transcript of the testimony and proceedings held in the above-captioned matter on November 20, 2013.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 20th day of November, 2013.

Thomas C. Brenneman CSR No. 9554

Order Instituting Rulemaking on the Commission's Own Motion to Adopt New Safety and Reliability Regulations for Natural Gas Transmission and Distribution Pipelines and Related Ratemaking Mechanisms.

Rulemaking 11-02-019

# CERTIFICATION OF TRANSCRIPT OF PROCEEDING

I, Wendy M. Pun, Certified Shorthand Reporter No. 12891, in and for the State of California do hereby certify that the pages of this transcript prepared by me comprise a full, true and correct transcript of the testimony and proceedings held in the above-captioned matter on November 20, 2013.

I further certify that I have no interest in the events of the matter or the outcome of the proceeding.

EXECUTED this 20th day of November, 2013.

Wendy M. Pun CSR No. 12891