Docket No. SA-534

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NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

INTERVIEW OF WILLIAM MANEGOLD, PG&E
(JAN-7-2011)

(51 Pages)

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of:	*	
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PACIFIC GAS & ELECTRIC COMPANY	*	
SEPTEMBER 9, 2010 ACCIDENT	*	Docket No. DCA-10-MP-008
SAN BRUNO, CALIFORNIA	*	
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Interview of: WILLIAM MANEGOLD

Marriott Hotel
San Francisco Airport
1800 Bayshore Highway
Burlingame, California 94010

Friday,
January 7, 2011

The above-captioned matter convened, pursuant to notice.

BEFORE: RAVINDRA CHHATRE
Investigator-in-Charge

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I N D E X

P R O C E E D I N G S

MR. CHHATRE: Good morning, everyone.

(Off the record.)

(On the record.)

MR. CHHATRE: Back on the record. Good morning, everyone. Today is Friday, January 7, 2011. We are currently in Burlingame, California at the San Francisco Airport Marriott. We are meeting in regards to the investigation of pipeline rupture in San Bruno, California that occurred on September 9, 2010. The NTSB accident number for this investigation is DCA-MP -- DCA-10-MP-008.

My name is Ravi Chhatre. I'm with National Transportation Safety Board, Washington, D.C., and I'm investigator-in-charge of this accident.

I would like to start by notifying everyone present in this room that we are recording this interview for transcription at a later date. All parties will have a chance to review the transcripts when they are completed. Also, I'd like to inform Mr. Manegold that you are allowed -- you are permitted to have one person with you during this interview today. That person, your choice, a friend, a family member, a supervisor, or you can choose no one at all. So for the record, please state your full name, spelling of your name, your contact information, telephone, e-mail, and mailing address, and whom you have chosen to be with you during the interview today.

MR. MANEGOLD: My name is William Joseph Manegold, W-i-l-l-i-a-m J-o-s-e-p-h M-a-n-e-g-o-l-d. I work at and my phone number is 925- . And I've asked Dane Jaques to be with me today.

MR. CHHATRE: Thank you for that. And now let me ask everyone around the table. We'll go around and each person introduce themselves. State your name, spelling of your name, phone number, title, affiliation. Starting with the City.

MR. CALDWELL: City of San Bruno. My name is Geoff Caldwell. All my information is contained on the card provided.

MR. DAUBIN: Brian Daubin, PG&E. All the information is on the card provided.

MR. CHHATRE: Thank you.

MR. FASSETT: Bob Fassett, PG&E. All the information is on the card provided.

MS. FABRY: Klara Fabry, City of San Bruno. All of the information is on the card provided.

MR. SHORI: Sunil Shori, California Public Utilities Commission. All my information is on the card already provided.

MR. KATCHMAR: Peter Katchmar, United States Department of Transportation, Pipeline and Hazardous Material Safety Administration. And my information is on the card I provided.

MR. GUNTHER: Karl Gunther, NTSB, Operations Group Chairman, karl.gunther@ntsb.gov. Phone 202-314-6478.

MS. MAZZANTI: Debbie Mazzanti, IBEW Local 1245.

MR. NICHOLSON: Matthew Nicholson, NTSB Engineer, spelled Matthew, M-a-t-t-h-e-w, Nicholson, N-i-c-h-o-l-s-o-n, matthew.nicholson@ntsb.gov.

MR. CHHATRE: Ravindra Chhatre. I'm with the National Transportation Safety Board. My e-mail is ravindra.chhatre@ntsb.gov. Telephone is 202-314-6644.

MR. NARVELL: Rick Narvell, Human Performance Group Chairman, NTSB, Washington, D.C. Phone is 202-314-6422. E-mail is narvelr@ntsb.gov.

MR. JAQUES: Dane Jaques on behalf of the witness and you have my information.

MR. CHHATRE: Thanks everyone. You want to start, Karl?

MR. GUNTHER: Yes, please. Karl Gunther, NTSB.

INTERVIEW OF WILLIAM MANEGOLD

BY MR. GUNTHER:

Q. I'll first ask your job title and affiliation?

A. I'm the supervisor of risk management for the system integrity group at PG&E.

Q. And what are your duties?

A. I am the -- a supervisor of the risk group. I oversee implementation of RMPs, 1 through 5, parts of RMP6, RMP8, and other duties as assigned by my supervisor.

Q. Okay. And what are your credentials, training, education?

A. I have a bachelor's and a master's degree in engineering from the University of California at Berkeley. I am a registered engineer in the State of California. I have 32 years of experience in construction and engineering at PG&E in both power plants and in gas system design, and I am a member of the B31.8 Committee.

Q. Okay. Why don't you start off with the design, materials, algorithm and procedure, RMP05, and talk about pipe seam designs. Now, one of the pipe seam designs that are listed is seamless. How is seamless defined by PG&E or your group?

A. A pipe made without a seam.

Q. So, for example, would a pipe where, when they made the pipe, they start out with a solid piece of round steel, they keep run and piercing of items through it until the pipe is at the wall thickness and diameter that they want, would that be considered seamless?

A. Yes.

Q. Suppose you had a flat plate and you bend it around and you put a DSAW weld on the inside and the outside, and make the pipe, let's say, 29 inches, and then afterwards you do a hydrostatic test and cold-expand it out to 30 inches, would that be considered seamless?

A. No.

Q. Okay. What would that be considered, then?

A. DSAW.

Q. Okay. One of the real burning questions that we've had or at least we don't understand is, in the GIS system, this pipe was listed as seamless X42 and yet it seems like nobody really picked up on it despite the fact that there does not seem to be anyone who ever made seamless pipe X42 back in 1958, '56-'58. Have you any explanation?

A. For?

Q. For why somebody --

A. Why they didn't pick it up?

Q. Why somebody didn't pick it up and say, you know, gee, this is strange?

A. No.

Q. Okay. Then in that case, let's say if you had a piece of pipe and you didn't know what it was, I would assume you would go to this default value for your risk?

A. I don't have it in front of me.

Q. Oh, well. Page 6 of 10, RMP05.

UNIDENTIFIED SPEAKER: Any other pages you want him to have?

MR. GUNTHER: I want him to talk about this; the one in the back here, this material flaw, too.

BY MR. GUNTHER:

Q. Okay. In --

A. Could you repeat the question?

Q. Yeah. In Chart A --

A. Yeah.
Q. -- you have a number of pipe seam designs.
A. Yes.
Q. Now, if you weren't sure of the pipe seam design, would you use the default factors?
A. For what pipe?
Q. Let's just say any piece of pipe, say a 30-inch piece of pipe, and you're not sure what the pipe seam design was, would you use a default factor when you're developing your risk management plan?
A. For a 30-inch pipe, yes.
Q. Okay. Another is girth weld condition. I want to ask you about the pre-1947 girth welds with an area of ground acceleration. Could you explain that? That's in Chart B.
A. Yeah.
Q. Same page.
A. Our concern was that the -- I can't say why they did it initially, but I know why the committee more recently has affirmed it, and it's because there's a concern that those welds may be more brittle and in an earthquake, they are more likely to fail.
Q. Okay. So there is maybe a history of brittleness in the welds or --
A. For the joints.
Q. Pre-'47.
A. For pre-'47, for the joints. We used bell chill ring

design for pre-'47 pipes.

Q. Okay. I'd like to go to the next page and that would be Area C, material flaws or unique joints. Okay. And it lists a number of factors. Would a joint where, when they went to make a bend that they used a number of small pieces, let's say, pipe sections five feet or less, maybe made about four or five of them, welded them up together in a row, would that qualify as a unique joint?

A. As a joint that would fall under this category, one of these categories here?

Q. Yes.

A. No.

Q. Okay. Let's see. All right. I want to talk about remediation, and considering the accident that has occurred, what steps have you taken under remediation? This would be page 44.

A. Of what?

Q. Of the integrity management program, 6.1 scope.

A. Could I see the section that you're referring to?

Q. Yeah. Well, I mean, I'll -- it says, "Remediation is defined as action taken by the operator to mitigate the danger of a potential integrity concern. Remediation includes pressure reduction and/or repair and preventative measures that halt a potential integrity problems so it does not proceed to failure." This section describes repair criteria that address issues identified by integrity assessment and data analysis.

Preventative and mitigation measures are addressed in Section 9.

Now, I know, for example, the commission ordered a 20 percent rate or pressure reduction. Are there other things that you guys or that the commissioners ordered that, you know, to try to handle this possible integrity threat?

A. PG&E originally took a 10 percent pressure reduction and the commission ordered an additional 10 percent. PG&E has also done a leak survey of the pipelines that were involved. I'm not aware of other measures we've taken.

Q. Okay. I'd like to ask -- this is page 59 on automatic shutoff and remote control valves. Are you considering the use of automatic or remote control valves?

A. The company is considering their use, yes.

Q. Okay. And has a decision been made in that area yet?

A. There have been decisions made. The company's announced it as part of their 2020 -- our 2020 program.

Q. Okay. I'll go ahead and pass on to City of San Bruno.

MR. CALDWELL: City of San Bruno, Geoff Caldwell. No questions at this time.

MR. DAUBIN: No questions.

MR. FASSETT: Bob Fassett, PG&E.

BY MR. FASSETT:

Q. What's the -- Karl talked about DSAW as an example of a pipe seam. What's the joint efficiency factor of a DSAW pipe?

A. One.

Q. What's the joint efficiency factor of seamless pipe?
A. One.
Q. Thank you. Karl referred to a document that has been presented to this committee, so I believe I can discuss it because he already --
MR. GUNTHER: Sure.
MR. FASSETT: You already brought it up, right?
MR. GUNTHER: Yeah.
BY MR. FASSETT:
Q. So the document has a type description of what he said, 30-inch X42 SML. Didn't say seamless, it said SML. There's a material code column. Under the material code column there's a material code there, I don't remember the number, but when you look it up in PG&E's accounting material code description tables, which have all been presented to this committee, that information, in that material code description it says 30-inch X52 DSAW ATI5LX pipe. Does that tell you it's seamless or does that tell you it's DSAW?
A. Tells me it's DSAW.
Q. So if someone had actually taken that document, looked up that material code, they would then have said this is a DSAW pipe, is that correct?
A. I think that's a reasonable assumption, yeah.
Q. And you just stated that a joint efficiency factor for DSAW pipe is 1?

A. Correct.
Q. Thank you.
MS. FABRY: Klara Fabry. I have no question at this time.
MR. SHORI: Sunil Shori, California PUC.
BY MR. SHORI:
Q. The discussion Bob just had here, that's calling for speculation on your part, isn't that correct, in terms of what somebody would've said in regard to seeing that term, whether they would've recognized that or not?
MR. FASSETT: I asked if it was reasonable.
BY MR. SHORI:
Q. But who would've looked at it? I mean, when you're saying reasonable, reasonable for whom?
A. For whoever looked at it.
Q. Earlier there was a discussion about the commission having asked for a 20 percent reduction. Has the commission also asked for other reviews and other record searches to confirm the integrity of your lines?
A. I believe they have, but I'm not familiar with all of them.
Q. Okay. And can you describe what valves and what additional work has already taken place by PG&E in regard to addressing perhaps pipelines on the peninsula?
A. No, I can't.

Q. How does information, Bill, convey back to the risk committee in terms of any sections of lines that are identified as throughout the course of the process, the integrity process, as far as identified as maybe being out of class? How does that feed into the risk management group?

A. Whether it's in or out of class would be something that wouldn't come to our group. It's the responsibility of our pipeline engineering group.

Q. And they're expected to handle it but not notify you folks?

A. Well, information, whether it was in or out of class, would ultimately wind up in GIS. We might see it but it's not our responsibility to determine whether it's in or out of class.

Q. I'm done for now. Thank you.

MR. KATCHMAR: Peter Katchmar, Department of Transportation, PHMSA.

BY MR. KATCHMAR:

Q. William, did you do any data mining with respect to Line 132 in San Bruno?

A. Could you define data mining?

Q. We understood, from the integrity management director, that the --

MR. FASSETT: Manager.

MR. KATCHMAR: Manager.

MR. FASSETT: I'm the director.

BY MR. KATCHMAR:

Q. From Sara (ph.), yesterday, that --

MS. FABRY: You already determined (indiscernible).

BY MR. KATCHMAR:

Q. From Sara, yesterday, that there was some data mining to populate the risk management profile for all of your line segments to calculate their priority and the relative risk ranking process. And she said that the pre-assessment step for that required data mining.

A. That would've all been before I joined the group.

Q. Okay.

MR. FASSETT: Bob Fassett. To clarify what she was saying is when a project comes in to either go through a DA or ILI, more specifically, DA, the field engineers look through the data that's assigned to the segment and whenever they see assumed values, they then go out into the field, grab the job folders from wherever of the 27 yards that may be across the system, bring that back and then if there's information to update, they provide that information to mapping for update.

MR. KATCHMAR: But I was talking even before that.

MR. FASSETT: But that's what she was referring to. She was referring to --

MR. KATCHMAR: No, I don't think so.

MR. FASSETT: -- the project level.

MR. KATCHMAR: Right. But I don't think so because she

talked about pre-assessment for determination of assessment method.

MR. FASSETT: No, she didn't.

MR. KATCHMAR: All right, we'll have to go back and look, but that's what I --

MR. FASSETT: Because we don't have that process.

MR. KATCHMAR: Okay.

MR. FASSETT: So she couldn't speak to a process we don't have.

BY MR. KATCHMAR:

Q. Okay. Are you aware of how an assessment method is picked for a chunk of pipe, a pipe segment?

A. We use RMP6.

Q. RP6?

A. RMP.

Q. Determination of assessment method?

A. Yes.

Q. All righty. Do you have, in your tenure at PG&E, have you had any opportunity to look back at the way pipe may have been constructed at a mill in 1948?

A. No.

Q. Okay, thank you. That's all.

MR. GUNTHER: Okay. Let me ask you a question.

MR. CHHATRE: Identify yourself.

MR. GUNTHER: Oh, I'm sorry. Karl Gunther, NTSB.

BY MR. GUNTHER:

Q. In the process that I described earlier where you would start out with a piece of plate, you know, you'd bring it around, you'd put a DSAW weld on it, and then you would expand it out, in a cold expansion out, to whatever the final diameter you wanted it to be using hydrostatic pressure, is it possible that that would make the seam, let's say, harder to see or you know, I wouldn't say remove it but make it to where it would appear maybe it didn't have a seam?

A. I don't know the answer to that question.

Q. Okay. And thus someone may call it seamless. All right. One thing, in your integrity management plan, under page 44 -- and I'll go ahead and read this because, you know -- it's called Discovery of Condition.

"Discovery of a Condition is defined as that date when an operator has adequate information about the condition to determine that the condition presents a potential threat to the integrity of the pipeline. An operator must obtain sufficient information about a condition no later than 180 days after an integrity assessment unless the operator can demonstrate that a 180-day period is impractical." In this particular case, has that period started?

A. I'm sorry, Karl. What RMP is that from?

Q. That is RP -- let's see, Revision 5, page 144. It's Section 6.

A. Of RMP --

Q. Of the integrity -- it's also 192.933(b).

A. Right.

Q. I would, you know -- I mean, obviously the threat's been identified. I'm just wondering if the 180-day period has started and that you, you know, started to, you know, to figure out how to change your plan to, you know, meet this threat.

UNIDENTIFIED SPEAKER: What threat?

MR. FASSETT: What threat?

MR. MANEGOLD: What RMP is it, first?

UNIDENTIFIED SPEAKER: This is 6.

MR. MANEGOLD: Six?

UNIDENTIFIED SPEAKER: I thought he said 6.

MR. MANEGOLD: Did he say that?

UNIDENTIFIED SPEAKER: No, it's Section 6.

UNIDENTIFIED SPEAKER: Section --

MR. GUNTHER: Section 6. This is the integrity management program. This is the --

MR. MANEGOLD: RMP6?

UNIDENTIFIED SPEAKER: Which RMP?

MR. CHHATRE: Okay, yeah.

MR. GUNTHER: RMP --

UNIDENTIFIED SPEAKER: Six.

MR. MANEGOLD: Okay.

BY MR. GUNTHER:

Q. Yeah, RMP6.
A. My understanding is that the pipe in question is no longer in service.
Q. Okay.
A. Is that correct or --
Q. The pipe in question no longer in service?
MR. FASSETT: The piece that failed is no longer in service.
BY MR. GUNTHER:
Q. Oh, the piece that failed.
A. Well, not just the piece, the -- I think the whole job.
MR. FASSETT: The whole segment, mile and three quarters of pipe is no longer in service.
MR. MANEGOLD: I think the whole job that installed that piece is no longer in service.
BY MR. GUNTHER:
Q. Yeah. I mean to me, it wouldn't apply to a piece. It would apply --
A. Right. But --
Q. -- to the whole line.
A. -- I thought the whole line that was installed with that pipe is no longer in service.
Q. No, I believe parts of Line 132 are still in service.
MR. FASSETT: Bob Fassett, clarification. He says when he's -- I believe what he says is that piece was installed on

the 1956 project that we have provided evidence that was somewhere around 1800 feet long. That 1800 feet long segment is no longer in service because it's within the valves that have shut in that mile and three quarter of pipe that was affected. That's what he's saying.

MR. GUNTHER: Okay, okay. Then --

MR. FASSETT: Is that what you're saying? I'm sorry, I don't want to speak for you.

MR. MANEGOLD: Yes.

MR. GUNTHER: Yeah, I accept that.

BY MR. GUNTHER:

Q. Have you looked into a possibility that there are other segments in your system that could have this threat?

A. I know there are efforts going on to do that. I'm not involved with those.

Q. Okay. All right, no more questions.

MS. MAZZANTI: No questions.

MR. NICHOLSON: Matt Nicholson, NTSB.

BY MR. NICHOLSON:

Q. Bob had mentioned earlier that joint efficiencies -- and I don't have your manual, so I apologize, but I didn't hear. DSAW is a 1, seamless is a 1 joint efficiency, but I didn't hear, what is a pipe, if you don't know? If you haven't confirmed the seam of a pipe or it's assumed in the GIS database, what's the joint efficiency?

A. Joint efficiency would be, if it's bigger than 4 inches, I believe it's .8.

Q. Point 8?

A. I'd have to look in the code and see what it says, but I think it's for greater than 4 inches, it's .8. Less than 4 inches, it's .6. For 4 inches and less.

Q. It's .6?

A. Right.

Q. Okay. And Line 132 --

A. Is a 30-inch line.

Q. And --

A. In that point that failed.

Q. And the joint efficiency was what?

A. Was -- in our system, it was listed as 1.

Q. Okay. I guess that was my other question was your joint efficiencies are aligned with the code, basically?

A. Yes.

Q. Okay. PG&E hasn't gone to do their own?

A. No.

Q. They haven't exceeded code?

A. Well, no.

Q. Okay.

A. We haven't made up our own code.

Q. The automatic valves you were talking about, you said they're part of the 2020 program, what is the 2020 program? Can

you elaborate?

A. 2020 is a program that PG&E has publicly announced to improve the safety of our pipeline system by 2020. It's a multi-step program. I don't remember all the steps, but it involves both the addition of automatic shutoff valves, as well as replacement of pipe. And they'll be -- and there's some other steps and we're still working on it.

Q. And the discussion around automatic valves, what has taken place?

A. Again, I'm not the expert on that part of the program, but I know we're looking at adding additional automatic valves throughout our system.

Q. All right, thanks.

MR. CHHATRE: Ravi Chhatre, NTSB.

BY MR. CHHATRE:

Q. So Manegold, how involved you are with your integrity management program documentation? It says here that procedures for risk management, RPM01 through 013, what is your involvement in preparing this document?

A. It depends on the document.

Q. So are you involved in preparing any --

A. Yes.

Q. -- part of the document?

A. Yes, I am.

Q. Which part of the document you are involved in? Which

procedures you're involved in?

A. I said at the beginning, RMP1 through 5, 6, and 8.

Q. One through five, six, and eight, okay. All right. Do you write that? Can you approve that? Are you a part of the group in preparing that risk mix?

A. I'm not the approving authority, but I do review them and I do participate in the preparation of them.

Q. Are you a member of these steering committees that prepare these, are you a chair of any committee?

A. I'm not a chair of any of the committees. I do participate in most of the committees.

Q. And your participation is focused on what specific area, if there is such a thing?

A. I represent the risk management group, so I make sure that the procedures are consistent across the committees. I make sure that the committees are properly staffed, and in areas where I have expertise, I provide that expertise.

Q. Are the committees required to have the membership in the -- with all the expertise that the committee requires are that is a desired process to have each person --

A. We have experts in each of the committees.

Q. And are these the experts recognized by PG&E or they are recognized by certification?

A. They're experts by PG&E.

Q. And what is PG&E's definition of an expert?

A. Someone who has familiarity with -- enough familiarity with the material to render a professional opinion.

Q. So familiarity is adequate, but being -- okay. Looking back on page 1 of the document and on this -- and I can give you a copy, if you want, but it says here where I'm looking at the -- some sort of a stamp and it says the division, the date, description, and whole bunch of other columns to tell me they're accurate. My question is, assuming the date applies to the division date and the document that I read indicates to me that this manual and documents had to be reviewed each year; is that not correct?

A. Which RMPs are you looking at?

Q. I think the RMP -- I looked at, almost every RMP says that it is to be reviewed once a year.

A. I don't believe they all say that, but --

Q. Okay. Which say that they need to be reviewed each year?

A. I believe 1 through 5 say they need to be reviewed each year.

Q. Okay. Now, I'm looking at RMP1 and there is nothing, understand, that goes beyond '05 to, as we speak today, '11. Is it reasonable to be assumed that the document was not reviewed since then?

A. That is correct.

Q. Any document is reviewed, how would a person reading it

know --

MR. FASSETT: Can we go back? Did you say that it wasn't reviewed or that it wasn't revised? I'm not sure you two were communicating on that.

MR. MANEGOLD: RMP1 was not reviewed.

MR. JAQUES: Okay.

MR. CHHATRE: Let me -- for the record, I will repeat the question.

MR. FASSETT: No, that's okay.

UNIDENTIFIED SPEAKER: Which is it again, I'm sorry, so we can clarify? Is it reviewed or revised?

MR. CHHATRE: That's okay. I'll repeat the question again.

BY MR. CHHATRE:

Q. RMP1 says it will be reviewed and revised at appropriate, I guess, every year. Is that correct or not?

A. It says it will be reviewed or revised each calendar year, that's correct.

Q. And I asked a question, there is no number after '05. Is it reasonable to assume, then, it was not reviewed and revised since then?

A. Not because it's not signed, but in that case, it was not reviewed.

Q. Can you elaborate that not because it is not signed, what does that mean?

A. It means some committees could meet and they could say we think this document is adequate as is, we're not going to change anything, and they would -- and there would be no revision to the document.

Q. But then it is clearly reviewed and it was not -- I mean, does a stamp have to be here that you make any changes or you can still have revision done and not make any changes? Shouldn't the document --

A. What would be revised if you didn't make any changes?

Q. So let me make sure I understand. There is no stamp on it that showed any year that means -- how do I know the document was not reviewed and there was no changes made? How would me, as a reader, would know what to interpret that stamp?

A. The stamp is telling you whether there was changes to the document or not.

Q. It doesn't tell me whether it is --

A. Reviewed or not.

Q. -- reviewed or not?

A. That's correct. You'd have to look at the meeting notes to see whether it was reviewed or not.

Q. So how --

MR. DAUBIN: Brian Daubin, PG&E. You kind of snuck that one in there the last minute, Ravi, that -- reviewed or revised. Those are two different things.

MR. CHHATRE: Right.

MR. DAUBIN: The document can be reviewed and then the document can be revised. Those are two separate things. You're adding those two together in the sentence. I want to make sure there's clarity around the fact that those are two separate processes.

MR. CHHATRE: Let's look at that particular -- it's not a big document. We can look at where it says that particular section and if someone from PG&E remembers -- there it is. Okay, 6.2.3, "The committee shall meet at least once each calendar year to review and approve the methodology used to calculate risk determination if changes are advisable." Now, that tells me that you are not going to be able to decide unless you review it, if changes are appropriate, or my interpretation is wrong.

MR. DAUBIN: Is that a question for me?

MR. CHHATRE: Yes, sir. You are the one who has the clarification.

MR. DAUBIN: What I asked for was for you to not use review and revise synonymously.

MR. CHHATRE: The way -- and again, I need some help here. "The committee shall meet at least once each calendar year to review and approve the methodology used to calculate the risk" --

MR. MANEGOLD: Ravi. Maybe it would help. The reason that we issue those, we have that sign-off block and we change it or reissue it is because we've changed something about the

procedure. If there's nothing inside that's changed, we wouldn't -- there would be no reason to reprint it and to send it out to everybody. We'd leave the one that we had.

MR. CHHATRE: Okay.

MR. MANEGOLD: The review process, we can review it and say there's no changes and in that case, there will be no reissue. As it happens, RMP1 was not reviewed in those years.

MR. DAUBIN: Not reviewed or not revised?

MR. MANEGOLD: Neither.

BY MR. CHHATRE:

Q. Okay. I'm still going back to the question is, if I see this document or an auditor sees this document regarding the stamp in here, how an auditor would know, in documentation, that (a) there's no -- it was reviewed but no changes made, or (b) it was not reviewed?

A. How would the auditor know that? They would ask to look at the meeting notes from the committee.

Q. So they had to dig further for the document -- all right. The document, as it is, wouldn't tell them; is that correct?

A. That's correct.

Q. I guess I asked this question before, but didn't -- I don't believe I acquired the answer, that you are the right person to help me on this one. 6.2.5 tells me a whole bunch of (indiscernible) and there's a definition of a pipe segment for

PG&E and since you helped prepare the document, do you have any idea as to how many pipe segments we are talking about in PG&E transmission system only, not distribution?

A. Approximately?

Q. Approximately.

A. Twenty-two thousand.

Q. So of these 32,000 [sic] pipe segments in 6.2.5, it says at each meeting, at least each calendar year -- and I won't go into all this (indiscernible) business, the review shall, at minimum, consider the following: thin pipeline segments with the highest likelihood of failure and then most likelihood of failure plus possibles of failure and all that, and I'm trying to understand what is the basis for number 10. Is there some sort of statistical basis for that, picking number 10?

A. I didn't prepare that document. I can't tell you why they picked the number 10. But I can tell you that there's going to have to be a cutoff level and 10 was assumed to be a reasonable number to the people that wrote that procedure. It seems reasonable to me.

Q. So 22,000, 10 is reasonable as a -- okay. But they use statistical basis to you, as far as you know. You helped prepare the document and --

A. No, I didn't help prepare that document.

Q. You didn't help prepare the document.

A. What's the date on it? I don't believe I did. What's

the date on it?

Q. The last date is 10/31/05.

A. I don't believe I did that. I'd been with the group four months when that -- five months in that position. It's possible I did, but I don't remember that.

Q. Here I'm looking at 6.4 on page 5 and I know you don't have the page, but I'm going to just read and if you need, I'll give you the page. There's some cutoff dates for the years and one of the cutoff dates is prior to 1947 and again, my question is the same, what is the basis for choosing that particular year? I'm not saying it is right or wrong, I'm just trying to understand the logic of picking that.

A. My understanding is that 1947, after 1947, we did not use bell belt chill ring construction and we did not -- and my understanding is we did not use SSAW construction in our pipes. But I'd have to go back and check our records to confirm that.

Q. Okay. Do you recall how many people have been involved in preparing this document? Again, I --

A. Originally?

Q. I just limit myself to '01.

A. Do I remember? No, I wasn't there.

Q. Okay. When did you get involved in preparing the document process?

A. I joined the group in 2005, so I would've had some involvement. At that time, I was a risk management engineer in

our department.

Q. But before 2005, you used this document?

A. No.

Q. Okay.

A. I didn't.

Q. So since 2005, do you know, in any divisions -- let me ask you this. Did you join before 10/31/05 this particular group?

A. Yes.

Q. Okay. Were you able to ask anyone or do you know how many people are involved in preparing the document and their backgrounds?

A. When it was prepared in 2001, no.

Q. No, 2005. I think the one stamp here is 10/31/05.

A. When it was revised?

Q. Right.

A. Probably the people that -- whose names are on there. What does it say?

Q. There are no names.

A. Do you have initials?

Q. No.

A. Could I see it? Oh, they're blanked out. Okay. So no, I don't know.

Q. So if you have any questions about this document, where will you go?

A. To one that's not blanked out.

Q. And so do you recall who the persons were involved?
A. No.
Q. You don't recall. Do you recall who the people are involved as of today?
A. I said it hadn't been issued or revised.
Q. Okay. So -- never mind. What was your position at the time of the accident?
A. I was the supervisor of risk management.
Q. Okay. So you were in your current position at the time of the accident?
A. In 9/9, yes.
Q. I'm referring to Risk Management Procedure 2. Do you use this procedure in your work?
A. My group does and I do when -- on occasion.
Q. Okay. I'm referring to the external corrosion algorithm check and this pretty much applies to, I guess, most of your check calculations, but let's focus on this particular one. And I'm looking at various sub-parts, soil resistivity (indiscernible) survey, coatings, and there are points assigned and then there is a rating assigned to that. Do you know how those points, what is the basis for those points or where the numbers come from?
A. They're based on the committee's evaluation of the weight that each one of those components should have, part of the total threat.
Q. I'm not referring to that. I'm referring to the -- for

each category -- for soil resistivity, your document says the rating is 4 percent.

A. Right.

Q. Then it says it breaks it down further and it says (indiscernible) resistivity, highly conductive soil. You are giving 100 points.

A. The subject matter experts that were part of that group made that decision.

Q. But there is no document that can attest for the -- some supporting information for this point. The points I'm not saying -- and I don't really -- I'm not really worried about what numbers, what is the relative threat. So it's not absolute threat.

A. Right.

Q. I understand that part. What I don't understand is that your points are not consistent in different categories. That is where it throws me off. Because in Table A, your points start at 100, the highest point is 100, the lowest is 10. The total number of points in that category is 310. When you go to the corrosion survey criteria, the highest points are 300 and the lowest is minus 100. So the total will come to 250.

A. But remember, these are values that we apply to a particular segment. One segment won't have more than one value. It's only going to have one.

Q. I understand that. What I'm trying to understand --

A. Well, why would they add up? I mean, why should they add up to any particular value if you're adding all these different choices? I don't understand.

Q. I'm not saying that they should, I'm just trying to find the logic of picking the numbers. I'm not questioning any of these numbers at all. It looks like there has to be some basis for picking any of these numbers.

MR. FASSETT: Bob Fassett --

MR. CHHATRE: Go ahead, Bob.

MR. FASSETT: -- PG&E. I have the document up. What page are you referring to?

MR. CHHATRE: I'm referring to page 6 of 12 on RMP02.

MR. FASSETT: Okay. Did you read, on page 4, Section 3, the introduction that explains all of the weighting and specifically for EC and how --

MR. CHHATRE: Oh, I read that.

MR. FASSETT: Oh, you did.

MR. CHHATRE: I didn't go to page 5 without reading page 4, but --

MR. FASSETT: I was just checking. It's pretty thorough.

MR. CHHATRE: But what my question --

MR. FASSETT: It talks about how, you know, the factors come from industry, they also come from the team of experts. But that isn't it -- I'm just trying to make sure you read it and you

still have questions.

MR. CHHATRE: Oh, I read it. Like I said, I didn't -- don't go to page --

MR. FASSETT: Just wanted to clarify because you've had the document for two months and you could've asked clarifying questions between now and then. I'm just trying to understand where you're coming from.

MR. CHHATRE: Right. No -- well, I would talk to the people who are using this --

MR. FASSETT: Okay.

MR. CHHATRE: -- and who are participating in making them, I want to hear their logic, not your logic, to answer the question.

MR. FASSETT: I'm just asking my question, making sure you're on the same page --

MR. CHHATRE: And I'm giving you the answers.

MR. FASSETT: Thank you.

BY MR. CHHATRE:

Q. Going back again and if you do not know, that is fine, we can go on. But to me, doesn't matter what the subject experts say is, I'm trying to find out the logic for picking 100 points at one time, 50 points for the next time, and again I'm going back to 100. There has to be some logic. I'm just trying to understand the logic. I'm not questioning the points at all. But I'm hoping that somebody who use the document would have the

answer.

A. If you -- soil resistivity, for instance, accounts for 4 percent of the total weight in that particular threat.

Q. Right.

A. And so a full value for that is 100 points.

Q. Right. I'm aware of that.

A. So other values in there that are not full value are not going to have 100 points. It will have some scaled percentage of that 100 points depending on what their contribution is.

Q. Understand that, too. But my point is, for that table, if you add all the points in different segments, the total amount comes to 310.

A. Why would you add the points?

Q. I'm just trying to find out what your logic -- go to the next table, then you have 50, minus 100, and 300. I'm just trying to find out where these numbers are pulled from. I'm not -- again, I'm not really questioning any numbers. These points, to me, don't make any -- I don't understand why these numbers are picked. I mean, you could pick any number. You can start with 25 and say 25, 10, 5, 2. I mean, I'm not questioning the validity of the numbers, I'm just trying to understand the total points and your rating and where these numbers are picked. What is the basis for picking them, that's all I'm trying to understand. If you do not know, that's fine. We can move on.

A. Well, I think I know and I thought I answered. I don't

understand your confusion.

Q. Okay. I'll give it last time, one last time, and we'll move on. What is the basis for picking the numbers under the pipe column that have been picked, minimum or maximum?

A. They represent a scale. The points are used to calculate the relative likelihood of failure.

Q. That part I understand.

A. And the points here for -- if it's a contribution for -- 100 points represents a full-scale value, so --

Q. I understand that, also.

A. Okay. So if it's --

Q. Why the full-scale value is changing for each table?

A. Because in the different values, it's felt that the difference -- for instance, under soil resistivity, that those different soil resistivities represent less where it's more points or less points. Less points. It represents that it's less of a likely -- it's going to contribute less to the likelihood of failure.

Q. That's not my question.

A. Okay, I'm --

Q. That's okay. We can move on.

A. I'm sorry.

Q. We can move on. We will go on to coatings since -- the answer for that, obviously --

A. Let me take one more stab at trying to make it clear.

When the committee is looking at these things, they want to be able to -- it's a scaling factor, so when it says that it's -- that if you've got something that's 100 points and you've got a contribution of 4 and you've got something else that's got a contribution of 8 and it also has 100 points, what they want the committee to be able to do is to say look at these different choices you have and try to determine which one is -- if this is this important, is this one only half as important, or is this one -- 10 percent is important.

And a zero to 100 scale is easy for people to calibrate in their mind. If on each one they said this is going to be 4 percent so we want you to go from zero to 4 percent on this one and calibrate it, it was felt it was more -- that was more difficult and it would be easier for people to calibrate if it went from zero to 100. Is that clear?

Q. That part I understand. I don't have any problem with that. I even understand the contribution numbers, how you are getting that. You are taking the points and multiplying that by the risk factor you are associating --

A. That's right.

Q. -- and then you are coming with that. I understand all that part. Off the record.

(Off the record.)

(On the record.)

MR. CHHATRE: Back on the record.

BY MR. CHHATRE:

Q. I'm going to take a look at the previous table here and go to table -- page 7 of 12, first table about the coating. And the way I read the table and I want is any clarification that if I'm reading the table wrong here. If I have a seriously disbonded coating, your point assignment is 100 and that means that particular segment, joint, or whatever you want to use, the full rate is as a contribution to the safety. It becomes 100 times, you have 8 percent, it becomes 8. That's one of the highest numbers on that table at any given time, correct?

A. It's the highest number in that particular table.

Q. Yes.

A. That's correct.

Q. Now I go back to the bottom line, it says bare pipe, no inspected coating, so -- and it is older than 30 years. In your entire table, it is probably the worst condition, that there was no inspection made, coating is much older than 30 years. And you assigned 51 points to that. But I do not know how that number, 30.8, comes. And I know that it has gone through a lot of (indiscernible), so I have no reason to question. That is the thing that throws me off.

A. It's a typo.

Q. Oh, it is a typo?

A. It should be 4.08.

Q. Okay. And then the next question on the same table is

if I have the same kind of pipe, which is -- I didn't look at the coating at all for last 30 years. I didn't look at the coating, it is older than 30, and I have 51 points. But if I look at the coating and it is severely disbonded, I have 100 points. So maybe I'm better off not looking at the coating. Is that correct interpretation?

This one's -- I mean, I don't understand the logic for it. If I don't look at it at all, it's older, because your first column doesn't refer to any age at all, and it has this number of points. Then I look at the coating, I see the bad news, and I'm penalized, I get 100 points. I feel there's some disconnect and maybe there is no disconnect and there's an explanation for it, so that's why I'm asking how you interpret that.

MR. JAQUES: This one here versus this one here.

MR. MANEGOLD: Which line was this? Which line, Ravi?

BY MR. CHHATRE:

Q. I'm looking at the very first line, severely disbonded.

A. Uh-huh.

Q. One coating, no age limitations.

A. Okay.

Q. Then I'm looking at -- I mean, I can go through all them but I think (indiscernible) focusing on all of them, but I just think the best one is at the bottom, and I'll give it to you that maybe there's a typo on that, if they used the wrong number for calculations but having said that, I have a pipe which is much

older, 30 plus years, like in this case, San Bruno. And I don't look at the coating at all, so when I do my calculations, I use the number 51.

A. So you think that if we haven't inspected it, we haven't had a cause to dig it up, there's been no leaks or anything on the pipe because if there was --

Q. No, I'm not --

A. Well, there aren't any leaks because otherwise we wouldn't have any coating inspection report, that we would have a worse -- that it would rate worse than one that we had cause to dig up?

Q. No, I'm not making any stipulation on my own. I'm just --

A. I thought that's what you were asking me.

Q. No, no. What I'm -- I'm looking at the table under the columns here, severely disbonded coating.

A. Correct.

Q. And you know that if you look at it, right?

A. That's correct.

Q. Okay. And then you assign --

A. And then the reason that you look at it is you have cause to look at it.

Q. It doesn't say that. Table -- you're looking at calculations for risk assessment. It doesn't say you are --

A. No, but the only reason I know that it's severely

disbonded is I have a report. I have them dig the pipe up to look at it.

Q. No, but I think the document is prepared for somebody to use in the future. When you open the -- when you look at the -- okay. So all the pipes are looked at --

A. So what we do is we use the A forms that we have, the inspection reports on the pipe --

Q. Okay.

A. -- to determine the point values to assign.

Q. If you can, the title says on the table here that Coating Visual Inspection and that Number 1 is an inspection that I gather more than 30 years should not be used.

A. That's right.

Q. So then I don't understand why the last column that says it cannot be used then why are you even having 30 years anywhere? Having said that, you review them at 30 years, I still don't understand why that number is less than any other number involved. That is the only thing I'm trying to understand. I'm not questioning your numbers, I'm not questioning your (indiscernible) points, and I'm not questioning your ratings. I'm just trying to understand some logic in these tables which will be used to calculate a risk.

A. And what was your question?

Q. The last line that says bare pipe are no inspection, coating age more than 30 years and then the point assignment

is 51. However, I have pipe which is -- I looked at -- it doesn't say -- none of them says leak. It's just disbonded. So at least I know the condition of that pipe and then 100. And I have a pipe which is unknown condition and it is less number. And that's all I don't understand.

A. And you wonder why the committee did that and --

Q. No, no. I'm not questioning you. I trying to --

A. Okay.

Q. -- understand what is the logic for the committee doing it.

A. Okay. Like I said, the information for the risk algorithm is calculated by data that we have on the pipe, which is gathered primarily from our A forms. If we have no reason to dig up the pipe, it's not leaking, it's not a problem, to me that's less of a likelihood of failure than a pipe that we've had -- to me, if we've dug it up, we dug it up for a reason and if we found that it's bad, we should record that. If I make everything I don't know as severe, as the worse case, it washes out the value of any of the other data.

Q. Okay. All right, we'll go on.

A. Does that make sense?

Q. I think I'm all right there. I'm just (indiscernible) ideas.

MR. NARVELL: While we're talking, Connie, can you introduce yourself for the record, please?

MS. JACKSON: I'm sorry. Connie Jackson, City of San Bruno.

MR. MANEGOLD: Thanks.

MR. CHHATRE: I guess I need to (indiscernible) at this point. No more questions.

MR. NARVELL: Rick Narvell, NTSB.

BY MR. NARVELL:

Q. Just making a little list as I've been doing all week on some acronyms that have been introduced today and I have one for you, Mr. Manegold, one for Mr. Fassett. Just to clarify, early, when you first started, you referred to something called, is it B38 committee? Is that the right --

A. B31.8.

Q. What is that for -- in layman's terms?

A. It's an ASME committee that looks at -- it establishes a standard for natural gas transmission lines.

Q. Okay.

A. And distribution lines.

Q. Now I have another one for you. ASME stands for -- I'm sorry. It's just for transcriptionist purposes.

A. American Society of Mechanical Engineers.

MR. NARVELL: Okay. Someone's going to transcribe this and they won't know what the acronyms are. Mr. Fassett, I have one for you, sir.

MR. CHHATRE: Off the record, please.

(Off the record.)
(On the record.)
MR. CHHATRE: Back on the record.
MR. NARVELL: Bob, you had mentioned an acronym, DA, is that correct?
MR. FASSETT: Direct Assessment.
MR. NARVELL: Thank you. That concludes my --
MR. KATCHMAR: Stay on the record, please. This is Peter Katchmar, U.S. DOT.
BY MR. KATCHMAR:
Q. You said SSAW? What is that?
A. Single submerged arc weld.
Q. Okay. And could you also -- you said something about a bell ring construction?
A. Bell chill ring.
Q. Could you slow down and say that --
MR. FASSETT: Spell that? Spell it.
MR. MANEGOLD: Bell. Bell chill ring. The pipes are belled on each end and there is -- what's called a chill ring. It's like a vacuum ring that's put in at the girth weld and it's used at the joint.
BY MR. KATCHMAR:
Q. For the joint?
A. For the joint. It's a vacuum ring for the joint. It also helps with pipe alignment.

Q. And what's the largest size you would've used on that pipe?

A. Offhand, I don't know. You'll have to go back and look in our records. I don't know offhand.

Q. What is the usual, is it distribution piping?

A. No, no. It's transmission piping.

Q. Oh, okay. And is that a mechanical joint, then?

A. No. No, it's welded.

Q. Oh, it is welded. Okay. I'm just not familiar with it. I'm just trying to --

MR. FASSETT: Follow up.

BY MR. FASSETT:

Q. Talked a lot about corrosion and corrosion weighting factors and coating, and we know this pipe underwent external corrosion direct assessment, so it underwent an assessment for the threat of external corrosion. The NTSB recently provided an update two or three weeks ago that said essentially what was not found on the pipe that failed, gave a list of them, and one of them was there was no evidence of external corrosion on the pipe. Are you aware of that?

A. Yes, I was.

Q. Would you say that validates, at least, the threat associated with that segment if an NTSB metallurgic group lab comes back and says there is no external corrosion on the pipe?

A. Yes.

Q. Thank you.
MR. CHHATRE: Off the record.
(Off the record.)
(On the record.)
MR. CHHATRE: Back on the record. Any follow-up questions for anybody?
(No response.)
MR. CHHATRE: You have none?
MR. KATCHMAR: I --
MR. CHHATRE: What?
MR. KATCHMAR: I do have -- Peter Katchmar with the U.S. DOT.
BY MR. KATCHMAR:
Q. And you did -- I may have the wrong person here to ask these questions of and I think -- and that might be why I didn't ask it before, but are you aware of how to set MAOP on a pipeline?
MR. JAQUES: Why don't you ask him if it's part of his job duties?
BY MR. KATCHMAR:
Q. Yeah. Is it part of your job duties to --
A. No.
Q. Oh, okay. Is it part of your job duties to understand how to de-rate a pipeline due to classification change?
A. I understand parts of the rule, but it's not part of my job.

MR. KATCHMAR: All right, thank you. Done.

MR. CHHATRE: Any follow-up questions? If none --

MR. NARVELL: For the record, Joshua must have come in at some point. Can you introduce yourself?

MR. SPERRY: Yeah, sorry. I was late. My name is Joshua Sperry. I'm with the Engineers and Scientists of California, Local 20. I am PTE (indiscernible).

MR. NARVELL: Okay.

MR. CHHATRE: Thank you so much for coming and helping us. Off the record.

(Whereupon, the interview was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	PACIFIC GAS & ELECTRIC COMPANY SEPTEMBER 9, 2010 ACCIDENT SAN BRUNO, CALIFORNIA Interview of William Manegold
DOCKET NUMBER:	DCA-10-MP-008
PLACE:	Burlingame, California
DATE:	January 7, 2011

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing.

_____

Karen D. Martini
Official Reporter