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NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

INTERVIEW OF DAVID AGUIAR, PG&E
(JAN-3-2011)

(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: DAVID AGUIAR

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

Monday,
January 3, 2011

The above-captioned matter convened, pursuant to notice.

BEFORE: RAVINDRA CHHATRE
Investigator-in-Charge

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I N D E X

I N D E X (Cont.)

I N T E R V I E W

MR. CHHATRE: Good afternoon, everyone. Today is Monday, January 3rd, 2011. We are currently in Burlingame, California at the San Francisco Airport Marriott and we are meeting in regards to the investigation of the pipeline rupture in San Bruno, California that occurred on September 9th, 2010. The NTSB accident number for this investigation is DCA-10-MP-008.

My name is Ravi Chhatre. I am with the National Transportation Safety Board and I'm the 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 would like to inform Mr. Aguiar that you are permitted to have one other person present with you during the process of the interview. That person will be of your choice. It can be a supervisor, friend, family member or, if you choose, nobody at all.

So for the record please state your full name, spelling of your name, correct information such as -- contact information such as phone, e-mail, mailing address, and whom you have chosen to be with you today during this interview.

MR. AGUIAR: My name is David Joseph Aguiar, A-G-U-I-A-R. My phone number is -- cell phone number, 510-501- . I just request that I have Dane here as my attorney.

MR. CHHATRE: Okay.

MR. AGUIAR: I can be reached at dja4@PGE.com.

MR. CHHATRE: Okay. Now I'd like to go around the room and have each person introduce themselves. Spell your name, title, organization that you represent, business e-mail and phone number, and we'll start with the City.

MR. CALDWELL: Geoff Caldwell, G-E-O-F-F, C-A-L-D-W-E-L-L, City of San Bruno. All my information's on the card.

MR. CHHATRE: Okay.

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

MR. CHHATRE: Okay.

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

MS. JACKSON: Connie Jackson, City of San Bruno. I will give you the card that has all my information.

MR. CHHATRE: Okay.

MS. FABRY: Klara Fabry, San Bruno. The information is on the card.

MR. SHORI: Sunil Shori, California Public Utilities Commission. My information will be on the card.

MR. KATCHMAR: Peter Katchmar, U.S. DOT, Pipeline and Hazardous Materials Safety Administration, and I've submitted my information as well.

MR. GUNTHER: Karl Gunther, NTSB, karl.gunther@NTSB.gov.

Phone, 202-314-6478.

MS. MAZZANTI: Debbie Mazzanti, M-A-Z-Z-A-N-T-I, and all the information's on the card.

MR. SPERRY: Joshua Sperry, J-O-S-H-U-A, S-P-E-R-R-Y, with the Engineers and Scientists of California, Local 20. The information's on my card.

MR. NICHOLSON: Matthew Nicholson, NTSB, M-A-T-T-H-E-W, N-I-C-H-O-L-S-O-N, matthew.nicholson@NTSB.gov.

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MR. NARVELL: Rick Narvell, N like in Nancy, A-R-V-E-L-L, NTSB. Phone is 202-314-6422. E-mail is narvellr@ntsb.gov.

MR. JAQUES: And on behalf of the witness Dane Jaques, D-A-N-E, last name, J-A-Q-U-E-S, and I'll provide a card for you with my information.

MR. CHHATRE: All right. Since we do not have a court reporter here, please remember to identify yourself before you speak and speak, please, a little bit louder so we can get the wording. Let's begin with Karl.

INTERVIEW OF DAVID AGUIAR

BY MR. GUNTHER:

Q. Okay. I'd like to begin with your name or your job title and affiliation.

A. My current job title is senior advising engineer and I'm with PG&E, Gas Transmission and Distribution.

Q. Okay. And what are your formal qualifications, education?

A. I have a bachelor's of science degree in metallurgical engineering. I have a NACE CP certification specialist as well and internal corrosion specialist or technologist, rather.

Q. Okay. In my understanding you were involved in the camera viewing of line 132?

A. Yes.

Q. Please describe what you saw -- what you did and what you saw?

A. Well, we were inserting cameras into the pipeline at various locations trying to identify seam type and location, and along the way we made notes about things that we saw inside the pipeline. We saw a lot of pipe that was welded from the inside. We saw some seamless pipe, apparently seamless pipe. We saw a lot of girth welds, a lot of stenciling. It's all contained in the report.

Q. Okay. And so then you made a formal report on everything you found?

A. I didn't, but the leader of our field team did.

Q. Okay.

A. I provided information to him.

Q. All right. Did you find anything particularly unusual or just a lot of different types of welds?

A. Well, I don't know that we found anything unusual. I

mean, we did see a lot of welds, a lot of what we think were submerged arc welds from the inside, et cetera.

Q. How about corrosion, did you see any corrosion on the inside?

A. I didn't see any corrosion.

Q. Did you see any incomplete welds on the inside?

A. What do you mean by that?

Q. Or evidence or maybe the weld didn't penetrate all the way through.

A. There was some evidence of that, yes.

Q. Okay. All right. I'll go ahead and pass it on.

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

MR. DAUBIN: Brian Daubin, PG&E, no questions.

MR. FASSETT: Bob Fassett, PG&E.

BY MR. FASSETT:

Q. Just to clarify, the section of pipe that you cameraed went from where to where?

A. From -- in the south from San Andreas Station to Healy Station in the north.

Q. And as I understand it that's the section of pipe that is still out of service?

A. That's correct.

Q. Just to clarify, you said you saw pipe without seams. Could you be more specific?

A. We saw pipe in -- from the internal camera inspection we saw pipe that did not appear to have a weld deposited from the inside.

Q. Was that on a fitting, a seamless fitting, or was that on a pipe?

A. That would be, I believe, on a fitting.

Q. And there is a note in the file at 881 Glenview that we cut out a section of pipe. Is that --

A. That's correct. That was one of the ones we didn't see a seam from.

Q. But as I understand it that was the only one that you didn't see an inside weld seam that you hadn't already confirmed wasn't the seamless fitting; is that correct?

A. Yes.

Q. No further questions.

MS. JACKSON: Connie Jackson, City of San Bruno.

BY MS. JACKSON:

Q. Can you tell me when exactly this operation occurred when you did the televising?

A. I don't know the exact dates. I'd have to look them up. In October, I believe.

Q. Following the incident?

A. Yes.

Q. Okay. And any time prior to the incident?

A. I wasn't involved in any camera work.

Q. Thank you.

MS. FABRY: Klara Fabry, no questions at this time.

MR. SHORI: Sunil Shori with the California PUC.

BY MR. SHORI:

Q. David, you indicated that there were other locations where you saw not necessarily seamless but metal not deposited or weld not deposited on the seam. Can you describe those a little bit more, please?

A. I'm not sure I understand your question.

Q. Okay. In terms of the camera viewing you said you found some locations where there was -- you said weld not through on the seam. What --

A. You're talking about -- I believe, it's Karl's question about lack of penetration or whatever the term was that he used?

Q. Yes.

A. I did not see that on any seam welds.

Q. Where did you see that then?

A. I saw some of those types of anomalies on some girth welds.

Q. Have you been reviewing line 132 beyond the camera viewing?

A. In terms of a camera inspection?

Q. Right, other locations -- have you reviewed any other locations for potential camera location?

A. We did do some camera work on other pipeline sections as

well.

Q. Are there any other locations on line 132 where you contemplate doing camera work?

A. I'm not aware of any.

Q. I'll pass. Thank you.

MR. KATCHMAR: On these girth welds -- Peter Katchmar with PFMSA, Pipeline and Hazardous Materials Safety Administration.

BY MR. KATCHMAR:

Q. On these girth welds you said you saw a lack of penetration. Could you elaborate a little bit on that?

A. Well, by lack of penetration all I'm saying is that we saw some areas where the penetration to the root was rough and it appeared to be that it wasn't completely fused to the back side at some locations.

Q. Okay. Did you notice any grinding off of long seam or what you might consider as grinding off of long seam near those girth welds in any of this pipe?

A. Yeah. There were some locations where -- you know, where we saw that the seam welds that were welded from the inside were ground down as they approached the girth welds. I believe that's a standard industry practice, to grind down the welds as you approach can to can connections.

Q. So how close to the girth weld would this have been?

A. The grind down areas? Probably -- if it was ground

down, and it depends on the individual case, something on the order of 6 inches or so away.

Q. Okay. Was there anything -- do you have a document that identifies these special areas, you know, where you saw these lack of penetration in the girth welds or any other special areas?

A. Well, I believe it's categorized or documented in the report that PG&E issued, some kind of report as I understand it.

Q. Okay. All right. That's it for now. Thank you.

BY MR. GUNTHER:

Q. Okay. The inspection you did was visual only, you did not do anything like ILI?

A. Correct, visual only.

Q. And ILI is basically a non-destructive testing technique just for the record.

UNIDENTIFIED SPEAKER: Inline inspection.

BY MR. GUNTHER:

Q. Anyway, how long did it take you to complete your inspection?

A. I don't recall. I mean I'd have to look up the dates that we were onsite. It was --

Q. Well, could you give an estimate, you know, like three days, three weeks, you know?

A. I would say something on the order of two weeks.

Q. Okay. All right. That's all I have.

MS. MAZZANTI: Nothing.

MR. SPERRY: I have one question.
BY MR. SPERRY:
Q. You said with your certification NACP [sic] specialist?
A. NACE.
Q. NACE. And what does that stand for?
A. National Association of Corrosion Engineers.
Q. Okay. That's all.
MR. NICHOLSON: I've just got a few questions for you.
MR. CHHATRE: Identify yourself.
MR. NICHOLSON: Matt Nicholson, NTSB.
BY MR. NICHOLSON:
Q. The camera that was used, can you tell me a little bit about it? I mean what was the image quality of that camera?
A. I don't know what the specs of the camera were.
Q. Was it a full circumferential inspection?
A. Yeah. The camera had the ability to tilt and look around, so yes.
Q. And how often were you taking the shots?
A. What do you mean by shots?
Q. Well, were you taking stills as you went?
A. We occasionally took stills to document specific features in addition to the video that was being recorded.
Q. Okay. So there was a live video?
A. Yes.
Q. And only when you saw something of interest did you take

a still?

A. Correct, something on that order, yes.

Q. Did you compare what was found on the inspection with what's in the drawings?

A. I did not.

Q. Is that something PG&E is doing?

A. I don't know.

Q. And you mentioned the start and end points, but I don't -- I'm not familiar with your system. How many feet are we talking about or miles?

A. I don't know the exact mileposts of the start and stop areas. It's on the order of a mile to a mile and a half, I think. That should be documented in the report as well.

Q. Thanks.

MR. FASSETT: Just to clarify -- this is Bob Fassett. NTSB has received the video and the report.

MR. NICHOLSON: Can you tell us which IR that is?

MR. FASSETT: I'm sorry.

MR. NICHOLSON: Do you know which information request that was?

MR. FASSETT: I'd have to look it up for you. I don't know it off the top of my head.

MR. CHHATRE: Off the record, please.

(Off the record.)

(On the record.)

MR. CHHATRE: Back on the record.

MR. NICHOLSON: I'm finished.

MR. CHHATRE: Okay. Ravi Chhatre, NTSB.

BY MR. CHHATRE:

Q. Dave, can you describe the camera system, what the camera system looks like, how it's supposed to function?

A. Not with much detail. All I know is it's manufactured by Anutkin (ph.) and it was a fairly elaborate model.

Q. How did it work?

A. It's just a remote video camera inspection. It's a tracked vehicle so, you know. It has internal lighting, of course. It's got an umbilical cord or a tether through which all the images are transferred, all that usual remote video stuff.

Q. And how many feet you can go with that at the time or do you have to (indiscernible) or you can continuously do all this 1-1/2 in a stretch?

A. Well, the capabilities of the camera, I'm not sure how long the tether was. I think it was on this -- I can approximate. I think they said it was about a mile if I'm not mistaken.

Q. And who assigned the project to you to do this?

A. I'm not sure. I don't know. I'm not sure of who actually ordered it.

Q. How did you know you were supposed to do this?

A. I guess it would be George Karkazis. He was leading that team.

Q. And whose group he belongs to?
A. Pipeline Engineering.
Q. Do you happen to know his supervisor's name?
A. Yes.
Q. Okay. Can you spell it?
A. Gary Grelli, G-R-E-L-L-I, I believe.
Q. Okay. And who was the project lead on this one and can you spell his name?
A. George Karkazis. It's K-A-R-K-A-Z-I-S.
MR. FASSETT: Point of clarification, Bob Fassett, this was the project that effectively was assigned by this team based on the field investigation. About 3 days into it we agreed that this 30-inch pipe could have only have been DSAW'd because we didn't make 30-inch pipe using ERW or seamless pipe. This team agreed when I proposed that I could get a tethered camera inside of it to look for where there wasn't an internal weld, if we didn't see an internal weld we would cut it out. The only one that fit that description was at 881 Glenview, which we have cut out and is sitting in the hangar in Virginia waiting for investigation. That investigation was supposed to take place next week, the week of the 11th through the 13th. That's been cancelled and rescheduled to a date yet to be determined.
MR. CHHATRE: Okay.
MR. FASSETT: So they were effectively working under my direction --

MR. CHHATRE: All right.

MR. FASSETT: -- as the NTSB party representative.

MR. CHHATRE: Now, I remember the team agreeing with the inspection. I'm not sure of the conclusion you drew that it cannot be anything but DSAW. I do not recall them making that decision at the time.

BY MR. CHHATRE:

Q. Having said that, let me ask Dave what is your experience on this inspection or camera?

A. On the camera, like I say, I wasn't driving or operating the camera. I was providing, if you will, expert advice on weld type and quality.

Q. Okay. Have you worked on this camera before?

A. Not this camera, no.

Q. Has anybody in PG&E used this camera in the past that you know of?

A. I think so.

Q. And where was it used, do you know?

A. Don't know.

Q. Do you know who has used it in the past?

A. I believe Robert Dahas (ph.) has used this camera in the past to the best of my memory.

Q. And do you remember who it was or do you recall or do you know that it's in the pipelines or somewhere else?

A. Don't recall.

Q. Now how could you identify the weld seam based on the images if you haven't done this before? Have you done any calibration runs on this one before the camera was put in the pipeline?

MR. JAQUES: I'm going to object. That's a compound question. If you could break it down to one question I'd appreciate it.

MR. CHHATRE: Sure, no problem.

BY MR. CHHATRE:

Q. Was there any calibration run done using this camera?

A. I don't know.

MR. CHHATRE: Is that information available, Bob?

MR. FASSETT: This was contracted, so we'd have to go through Anutkin which was the camera service we hired to come out and do this work.

MR. CHHATRE: That's not my question. My question was is that information available?

MR. FASSETT: I don't know. I'd have to go through them to find out.

MR. CHHATRE: Okay. Could you get back to us on that one?

BY MR. CHHATRE:

Q. Now if you haven't done the calibration run how do you know what you are seeing is what exists in the pipeline?

A. Well, I guess it depends on what you mean by calibration

run. I mean those of us that have examined welds know what different types of welds look like, so it's strictly a visual estimation of what welding process, if any, was used.

Q. So you don't need a calibration on inspections you guys do?

A. I wouldn't say that.

Q. So let me rephrase the question. Then why calibration was not done on this job?

A. I don't know.

Q. Okay.

MR. FASSETT: I'm sorry. What was the question? This is Bob Fassett. What was the question?

MR. CHHATRE: The question to the witness was why calibration was not done on this job.

MR. FASSETT: Again, for clarity -- this is Bob Fassett. This was essentially designed by this team to go get a camera, put it inside and look to see if there was an inside long seam. It was not requested by this team to have calibration runs done before that.

MR. CHHATRE: Your explanation is noted, but that did not answer my question. (Indiscernible). Now --

MR. FASSETT: So I have a question then for clarification. Bob Fassett again.

MR. CHHATRE: Okay.

BY MR. FASSETT:

Q. What's your experience in being able to visually identify the inside of pipes relative to long seams? What's your career experience understanding how to visually identify welds?

A. My career at PG&E, basically the entire career.

Q. Could you put a little more detail in that, how many years?

A. Twenty-six years.

Q. So you've been -- just to clarify, you've been looking at weld types for at least 26 years?

A. That's correct.

Q. Would you say it's fair to say that after 26 years of looking at weld types that qualifies you for being able to identify whether there was a long seam weld on the inside of the pipe using a high res camera?

A. Yes, I would.

Q. Thank you.

MR. CHHATRE: Done? Ravi Chhatre again.

BY MR. CHHATRE:

Q. Now based on what you saw you said at girth welds you did not see complete penetration. On seam welds -- were you making a note of (indiscernible) position of the seams?

A. Yes, we were.

Q. And except for that location that was cut out were you able to see longitudinal seams along the length of the one-and-a-mile pipe?

A. Well, there were some fittings that we didn't see seams on, so the answer to that is no, we didn't see a seam on every piece of pipe that we saw. Some of it was seamless.

Q. Can you describe a fitting, what kind of fitting you're talking about?

A. Like an angle point, 45 degree, or a miter of some kind -- not a miter, but a forged bend.

Q. Were there any small pipe sections welded together in that length of the pipe?

A. Small pipe sections welded together?

Q. Pops if you would.

A. Yes, there were some.

Q. And were those locations outside of the pipe that you guys cut out that is sitting in NTSB now?

A. Yes. There are some there -- yes. They're not -- there are some of those sections that we welded together that are still in the system.

Q. And can you -- if you can, where those locations would be relating to the rupture at Earl and Glenview?

A. That's a lookup question. I'd have to go back to the records and go through them.

Q. Okay. How many of those small pop sections you saw that you recall?

A. I don't know. I don't know how many.

Q. Do you recall what the length of those pop sections was?

A. Well, they were short. They were the individual pop sections were usually on the order of, you know, one to just a couple feet long in length.

Q. So 1 to 2 feet long pops in the pipeline. And the girth welds that you saw incomplete penetration at some locations, was that involving the small pops?

A. I don't recall.

MR. CHHATRE: Since I haven't seen the report yet, Mr. Fassett, do you know if that is the case?

MR. FASSETT: I don't recall. It's been about a month since we sent it to you and specifically to the Met Group Chair and whether Mr. Kramer has gone through that yet or not I couldn't tell you.

MR. CHHATRE: So does that mean that you have not gone through the report you sent us?

MR. FASSETT: We've provided you the report. We were asking to send it directly to you for review. That's what we did. We're awaiting your comments or questions in the Metallurgical Group.

MR. CHHATRE: Since you contracted this work, the contractor did this work, you paid the contractor, and my question is have you -- before you paid the contractor have you looked at what he has produced?

MR. FASSETT: I have not, no.

MR. CHHATRE: Somebody in PG&E has looked at it, like

(indiscernible)?

MR. FASSETT: Yeah. We wrote the report. The contractor did not write the report.

MR. CHHATRE: Okay. So my question then is are the girth welds that Mr. Aguiar is talking about, were they associated with small pops, and he did not recall. That is fine, but the question is is that information available?

MR. FASSETT: You have that information. I don't recall.

MR. CHHATRE: Okay. Mr. Fassett, you also have the report, so you can simply answer yes or no.

MR. FASSETT: I said I don't recall.

MR. CHHATRE: Do you know how long we have the report?

MR. FASSETT: I said I don't recall.

BY MR. CHHATRE:

Q. And the team lead, is he the one that prepared the report?

A. I believe so, yes.

Q. And his name is --

UNIDENTIFIED SPEAKER: He's next.

MR. CHHATRE: Okay, good.

BY MR. CHHATRE:

Q. What is the condition of the pipe inside, clean, dirty from the deposits?

A. For the most part it was clean. There was some liquid

in certain sections of it, but other than that it was in very good condition I felt. I didn't see any corrosion.

Q. Okay. And if I understand the camera correctly, the camera runs and if you want to rotate it there's no need to rotate (indiscernible) specifically; is that correct?

A. Yes. You could -- right. It's fully articulatable, if that's a word. You can, you know, stop and --

Q. So when you are moving it, when you are doing 360 degrees at each location as the camera moves forward or you wouldn't stop it and look at certain degrees at certain locations?

A. The latter, at certain locations.

Q. Then going back, how confident you are that the pipe had no corrosion at locations that the camera was not tilted?

A. Well, we certainly had -- high confident. We certainly had the frontal view before we rotated the camera, spun it around 360, and we could see the pipe as the camera moved forward. We could see all the way around the pipe without having to spin it.

Q. There would be no shadows?

A. There could be.

Q. So let me rephrase the question again. If the camera is not rotated 260 degrees -- and you are focusing on seams, were you not?

A. Yes.

Q. And the seams being at any o'clock position how would you feel confident in assuring that there was no internal

corrosion?

MR. JAQUES: I'm going to object. I think that's been asked and answered.

MR. CHHATRE: No, he did not. He said he's not sure. I just wanted to give him one more chance.

MR. JAQUES: He said the camera view going forward saw the entire pipe as it was moving forward. That was his testimony.

MR. CHHATRE: So that still doesn't answer my question. The question is --

MR. JAQUES: I think it does, but he can clarify. He can answer.

MR. CHHATRE: Very good.

MR. AGUIAR: Would you rephrase the question, please?

BY MR. CHHATRE:

Q. Yes. Since you were not rotating the camera as the camera was moving through one and a half mile length and you stated earlier you did not see internal corrosion, my question is how confident you are telling us that there is no internal corrosion when the camera was not rotated (indiscernible)?

A. What do you want, a number, how confident am I?

Q. No.

A. I mean I don't --

Q. You made a statement on the record that said you did not see internal corrosion. What I'd like to clarify is does that mean you did not see internal corrosion on the seam only or the

entire pipe?

A. Well, we didn't -- like I said before, we didn't -- we only spun it at certain locations, but as the camera moved forward all that imagery is captured in the record and we can see the bottom of the pipe, so I'm confident that there wasn't any internal corrosion in the pipe. When you say how confident, I really don't know how to answer that.

Q. Then let me ask the question another why. Then why you are even focusing on the seam? Why don't you just push the camera straight all the way and make a judgment on the seam? If you see the camera and if you can see the front as the camera moves, why the camera was focusing mainly on the seam as it was moving forward and why not just push it?

MR. JAQUES: I'm going to object. That's ambiguous. If you understand the question you can answer it. I sure don't.

MR. CHHATRE: Are you an engineer, Mr. -- and I understand you don't understand. I can rephrase the question if you want.

MR. JAQUES: I object.

MR. CHHATRE: I'm not sure I can ask a question that you will understand.

MR. JAQUES: I object and I'm going to instruct the witness not to answer. If you want to try it again, try it again.

BY MR. CHHATRE:

Q. The question is you told me the camera was moving

forward and you can see ahead of the camera, and the question is why not do the whole inspection that way and make a judgment on the seam? What is the reason for focusing on the seam?

A. That was the direction we were -- the camera work was done primarily to look for and identify seam welds inside the pipe.

Q. So meaning focusing on that seam gives you a better idea of the condition of the seam?

A. It gives us a better idea of the type of seam.

Q. And then can you look at the corrosion of the seam?

A. If there was -- yeah, if there was some on the seam, but -- we could make that judgment if it was in the field of view, but --

Q. All right. Looking at the inspection, can you tell what kind of weld that is on the seam?

A. Yes.

Q. And in your judgment what was the weld on the seam?

A. Based on the report, all the information is in the report, but my recollection is that every seam that we saw inside that pipeline where we inspected was welded from the inside by the submerged arc process.

Q. Okay, but --

A. Where we identified a seam it was submerged arc welded.

Q. Okay, but looking at the inside, could you tell if it was double submerged or it was just done --

A. Could we tell if it was? No, because we can't see the outside.

Q. Okay. The cutout section that you did not see any seam, did you look at that after it was cut out?

A. Briefly.

Q. Did you see any weld seam in that pipe?

A. On the OD we saw a weld seam in that pipe.

Q. What about ID?

A. Didn't see a seam on the ID.

Q. Did you see any incomplete penetration on the ID?

A. No.

Q. Were you involved in any corrosion testing on the pipe?

A. On the piece that was cut out? No.

Q. Do you recall anybody doing any microbial tests on this piece of pipe?

A. Yes. We sent a sample of the liquids out for analysis, for microbial testing.

Q. Okay. What about the (indiscernible) samples, any deposits?

A. No. We didn't see any deposits.

Q. (Indiscernible) sampling, okay. Is the camera system optical, do you know that, or was it like using infrared or maybe --

A. Optical as I understand it.

Q. You said in your statement that you observed at some

location ID weld was ground off.

A. Yes.

Q. And you also made a statement that at some locations, meaning not all locations, it was ground off; is that correct?

A. That's correct.

Q. And you also made a statement earlier that the standard industry practice is done so pipe pieces can be put together; is that correct?

A. That's my understanding of the modern practices, yes.

Q. So you are saying it's the modern practice to do it?

A. No -- well, let me take that back. It is the modern practice. That's how pipe is made at the pipe mill.

Q. Okay. Now do you know if the pipe is constructed since 1948 (indiscernible)?

A. Approximately. Yes, that's my understanding.

Q. As a welding person you have some experience. If this is the modern practice would you expect that in older pipe?

A. It carries over into the modern practice, but there were a lot of areas there where the seam was ground down in that section of pipe.

Q. So then is it reasonable to assume that where it was not ground, it was not ground, it was acceptable in the (indiscernible) practice?

A. I wouldn't say that.

Q. And can you elaborate? You said it's the standard

industry or acceptable in industry practice to grind the longitudinal seam so girth welds can be made. So if it is an acceptable industry practice, does that mean by grinding it it is not an acceptable industry practice? (Indiscernible).

A. I can't really comment on what was acceptable practice back when -- in the '40s did you say?

Q. Well, late '40s, early '50s. But you did say that practice was carried over to modern times, right?

A. That -- yeah. In my trips to the pipe mill to witness pipe being manufactured that's how it's made today and has been for a number of years.

Q. I'm still a little confused. If you say it's a standard industry practice, but when you don't see (indiscernible) you consider it as a non-standard. Can you elaborate?

A. I can't.

MR. FASSETT: Bob Fassett, clarification.

BY MR. FASSETT:

Q. You said that it's typical for those welds to be grounded down at the mill. I'm assuming you're referring to full lengths. If you saw a full length pipe it would not be a surprise to see the ends ground down.

A. Correct.

Q. And as I recall the reason for that, especially with cold drawn pipe, is that they have to put plugs in the end of the pipe and then use hydrostatic pressure --

MR. CHHATRE: Off the record, please.

(Off the record.)

(On the record.)

MR. CHHATRE: On the record.

BY MR. FASSETT:

Q. So for cold drawn pipe is it your understanding that the ends of those welds have to be ground down enough so that plugs can be put into the pipe so that when the pipe is hydrostatically stressed to cold draw it those plugs will seal on the ends and won't have (indiscernible) with an inside blow?

A. Yes.

MR. CHHATRE: Ravi again.

MR. CHHATRE: Now if that is your understanding and the whole pipeline, as PG&E said for the witness information, is stressed cold, would that change your mind and will you consider not grinding the seam would be unusual?

MR. JAQUES: I'm going to object. It's not clear what seam you're talking about, whether it's the end of the pipe or the middle of the pipe.

MR. CHHATRE: I'll rephrase it. On the longitudinal seam -- just a minute ago Mr. Fassett said that when it's cold drawn and stressed that it is done so you can put the plugs in. Now this pipeline, based on information PG&E has provided, its entire length was manufactured that way. Now my question to you is based on this information not grinding the longitudinal seam at

the end of the pipe joint, would that be unusual?

MR. JAQUES: I would object. It's not clear what kind of a joint you're talking about, whether it's the end of a pipe section or there's a piece of pipe cut off.

MR. CHHATRE: We are talking about the pipe grind that is being made on the pipe. That is what Mr. Fassett's question was.

MR. JAQUES: That wasn't your question. So you're qualifying it now and you're talking about a section of pipe as it comes out of the factory?

MR. CHHATRE: That is correct.

MR. JAQUES: Okay.

MR. AGUIAR: Can you rephrase the question one more time?

BY MR. CHHATRE:

Q. Sure. So based on what Mr. Fassett asked you, that when the pipe is cold drawn and stressed at the factory it is commonly done so that the plugs can be put in at both ends of the pipe joint (indiscernible) so they can do that. Now based on that information my question is since this pipeline was manufactured according to that process from information based on PG&E, would you consider not grinding those would be unusual because then you cannot put the plugs in?

A. No.

Q. You would not consider that unusual?

A. No, because it might -- because it could be a piece from some place other than the ends of the pipe if it's a pop. So on the standard lengths they're ground down, but if -- in the field if we're putting in shorter pieces that we're cutting from a larger section, it would be quite common to not see the weld ground down.

Q. Thanks for the clarification. Now the question is where you did not see those seam welds not ground were they in the pops or regular pipe joint?

A. The pops for the most part.

Q. Can you explain, most part meaning there were few that were not?

A. I would have to -- I don't recall how many, Ravi. I would have to go back and look at the record and review the video and --

Q. Okay. I'm just trying to find out whether the pipes we have -- I'm not trying to make you say something that you don't want to say, but I'm just trying to find out whether the pipes we have in that system, they all came from the mill or not. The reason for my question is that because if you do see some -- even if you see one or two pipe joints which have not been ground but are full length, then that probably would indicate that those pipe joints are not from the same batch.

A. Okay. I can't comment on that. I don't know.

Q. Okay. No more questions. Thank you for your time.

A. Thank you.

MR. NARVELL: No questions, sir.

MR. CALDWELL: Geoff Caldwell, San Bruno.

BY MR. CALDWELL:

Q. When you guys got the camera -- this is a camera from Canada. Is that where you guys got the camera?

A. Manufactured yeah.

Q. Manufactured, okay. So when you got the camera were you told or informed of any limitation that the camera might have for the purposes of using it to look on these seams or did you discover any limitation while you were using it?

A. No. Whatever limitations were on the machine were communicated to the people running the video -- running the actual machine.

Q. Are you aware if there were any limitations what they are or what they were?

A. I'm not aware of any.

Q. Okay. And then is there any portion of both of those runs of pipe that were videographed, any portion that was not captured on tape or that was unexpected?

A. I don't think so. I think it was all captured.

Q. Thanks.

MR. DAUBIN: Brian Daubin, PG&E.

BY MR. DAUBIN:

Q. You were talking about internal corrosion earlier. Was

there any internal corrosion noted in the report?

A. I don't believe so, no.

Q. And on that video camera in regards to single saw pipe or single submerged arc welded pipe, would you be able to tell if there is a seam if it were SSAW, and would you be able to determine the difference between DSAW and SSAW internally?

A. Yes and yes.

Q. Thank you.

MR. FASSETT: I have no follow-up.

MS. FABRY: No questions.

MR. SHORI: Sunil Shori.

BY MR. SHORI:

Q. So on that particular piece that was cut out there was a weld on the OD, no weld on the ID. So would you classify that as DSAW pipe?

A. What I think I said was there was no weld metal deposited from the ID that was visible. I'm not saying it wasn't welded from the ID. I'm just saying there was no weld reinforcement visible on the ID.

Q. But normally for a DSAW you expect to see that --

A. Yes.

Q. -- on the inside cap?

A. Yes. Normally yes.

MR. DAUBIN: Brian Daubin with just a quick follow-up question. Your original request from Bob was that anything that

was not DSAW to be cut out; is that correct?

MR. AGUIAR: Yes.

MR. FASSETT: Well, just to clarify, it was anything you did not see an inside weld on or could not confirm to be seamless you were to remove; is that correct?

MR. AGUIAR: Yes, that's correct. Sorry.

MR. DAUBIN: So on that same clarification, there were no other portions of pipe that you saw where you did not see an inside weld?

MR. AGUIAR: Not that we couldn't determine were fittings, so they were the forged -- the forged fitting is likely not going to have a seam either, so those were -- we could identify where those were. We didn't cut those out because those are one piece by design.

MR. DAUBIN: Thank you.

MR. KATCHMAR: Do you -- Peter Katchmar with PHMSA.

BY MR. KATCHMAR:

Q. Do you have any knowledge or has anyone from PG&E checked the areas where those small pops were to correlate them to any as-builts?

A. I don't know.

Q. You don't know if they did that?

A. I don't know if we did that.

Q. All right. On that little pop, the one foot can that you cut out and sent back to NTSB, what was the outside long seam?

A. The outside long seam was submerged arc welded.
Q. It was? Okay.
A. And it looked like it had a repair on it.
Q. Can you tell what method of welding the direct weld was?
A. Not from the inside. I mean I could speculate, but -- I mean how I would put it together if I were building it, but I don't know -- I couldn't tell from the ID.
Q. No. You said that with your experience you were an expert in weld type and quality, and I was going to ask you what is your expert opinion of those girth welds?
A. You can have a number of welding defects with all manual welding processes. You can't really identify them from the ID necessarily.
Q. No, I'm not looking for the defects, I'm looking for the type of welding process. You can't determine whether it was stick welded or settling welded or --
A. Well, you -- no, not reliably.
Q. I don't know. I thought you said you could. Okay. Overall what would you -- in your expert opinion what do you think of the quality of the weld type of the long seams that you saw in this one and a half mile section?
A. I would classify it as double sub arc welded pipe.
Q. But I guess I'm asking -- what I'd like to know is what was the quality of the long seam on the inside?
A. It appeared to be very high.

Q. Okay. Alrighty. Thank you, sir.

MR. GUNTHER: Quick question. Are you an American Welding Society certified weld inspector?

MR. AGUIAR: No.

MR. GUNTHER: Okay. Do you have any other certification as a weld inspector?

MR. AGUIAR: No.

MR. GUNTHER: Okay. That's all for me.

MS. MAZZANTI: Debbie Mazzanti, IBEW.

BY MS. MAZZANTI:

Q. Ravi asked you several questions about, you know, what you were doing with this. My question to you would be when you were given this assignment what -- were you given specific parameters or specific directions on what exactly you were getting involved in? So, in other words, it might not have necessarily been the same level of an inspection or -- and it may not have necessarily been something that you would have done in a different circumstance. Were you given specific instructions on what your role was with this piece of pipe with this camera?

A. My role was to simply help try to determine the weld type and whether it was welded from the inside.

Q. So some of those other questions that Ravi asked you in regards to if you noticed this or your noticed that may not necessarily --

MR. CHHATRE: Off the record, please.

(Off the record.)
(On the record.)
MR. CHHATRE: Back on the record.
BY MS. MAZZANTI:
Q. So you had specific instruction of what your role was in regards to this camera to inspect this pipe?
A. Yes.
Q. Is that a correct statement?
A. Yes.
Q. No further questions.
MR. SPERRY: No questions.
MR. NICHOLSON: No questions.
BY MR. CHHATRE:
Q. Just a couple of follow-up, Dave. You stated that you were only supposed to identify and look for the welds, type of welds?
A. That was the primary mission.
Q. What was the secondary mission?
A. Learn whatever we can by the benefit of having the camera in the pipe.
Q. Now were you given instructions like Bob said a few minutes ago that anything that you don't see a weld seam should be cut out, was that your instruction?
A. For a stick of pipe, for a straight piece of pipe, yes.
Q. Was it also your instruction that you were supposed to

cut that pipe out?

A. Well, somebody at PG&E was going to plan to cut it out if that was -- if that's what we found, not me personally.

Q. Okay. That was confusing to me because you are the specialist, and then Bob said your instructions were to cut out anything that's not welded and you said yes, so I wasn't whether they said that.

A. That was our overall mission.

Q. Okay.

A. That was not my particular point.

Q. Thanks for clarifying that. The pops that you saw, did they have any seams in them?

A. It depends on the individual. I'd have to look at the video again and the notes.

Q. That's fine. Do you recall even one with a seam in it?

A. Yes.

Q. And how was that seam compared to the long pieces, longitudinal seam?

A. In terms of weld type it appeared to be used -- have used the same welding process.

Q. Same process, okay. In your opinion would that come from the same pipe mill?

MR. JAQUES: I'm going to object. He's not here as an expert witness and that would call for speculation. I'm not going to allow him to answer that.

MR. CHHATRE: Let me ask the witness if he wants to answer it or not.

MR. JAQUES: No. I'm instructing him not to answer it and that's the end of it.

BY MR. CHHATRE:

Q. So do you want to answer the question or not?

A. No.

Q. On the camera work were you doing any training prior to getting involved with this?

A. No, not specifically on the camera.

Q. All right. Have you looked at any weld, longitudinal or girth weld seams, looking at a visual camera like that?

A. I don't recall.

Q. So this would be your first time you are looking at a camera picture of the weld seam?

MR. JAQUES: I object. That's not what he said. He said he didn't recall.

MR. CHHATRE: Do you recall your first time you are looking at the camera?

MR. JAQUES: That's asked and answered. Let's move on.

MR. CHHATRE: Don't look at me, look at him. I mean I'm not looking that way, so you can look at him. Looking at me, you know, confuses me because I think you are talking to me, so --

MR. JAQUES: You're the one asking the questions. You're the one who needs to move on.

MR. CHHATRE: Yes, sir, but if you're --

MR. JAQUES: He's not going to answer it.

MR. CHHATRE: Don't look at me because it confuses me because I thought you were answering my question, so --

MR. JAQUES: There's no question pending. I instructed him not to answer. It's been asked and answers.

BY MR. CHHATRE:

Q. Are you answering the question or not?

A. I'm following counsel's advice.

Q. Is there a pending job for you in the future -- have you been told that you'll be looking at some additional camera inspections?

A. I've been told that there may be additional inspections, yes.

Q. Do you know where those inspections will be?

A. No.

Q. No further questions. Thank you for your time.

A. You're welcome.

MR. JAQUES: I want to clarify one thing. This is Dane Jaques. To the extent you noticed any anomalies or features in the pipe, would those be captured by the --

MR. CHHATRE: Off the record, please.

MR. JAQUES: -- video recording?

MR. CHHATRE: Off the record, please.

(Off the record.)

(On the record.)

MR. CHHATRE: On the record, please.

BY MR. FASSETT:

Q. I am looking at the report and, to the extent that you remember, there is a specific comment here on 929.10, pipe segment 060. It says black spots at girth weld number 65, checking feature on pipe wall. and if you'd like to look at them I'll pass this around there. Can you tell me what you think those are? Do you remember seeing those?

A. Specifically no, but if it's in my notes then I did. I don't know if these are my notes.

Q. Well, that's the report. That's the report you were talking about. All right. Well, if you don't remember --

A. I don't know what those black spots are.

Q. All right. I don't know either. That's why --

A. Sorry.

Q. I was just wondering if you did. There might be some additional notes on that.

MS. MAZZANTI: I have a question. Are we on the record or off the record?

MR. CHHATRE: We are still on the record.

MS. MAZZANTI: On? Okay. Debbie Mazzanti.

BY MS. MAZZANTI:

Q. Did anyone else work on this report besides yourself?

A. Yes.

Q. And do you recall who that would have been? If you don't know it's fine.

A. I know there are -- I don't want to leave someone out. There were a number of people that worked on the report.

Q. Okay, that's fine.

MR. FASSETT: All right. Thank you, Dave.

MR. CHHATRE: Okay.

MR. KATCHMAR: So one follow-up question.

Dave, were any and all anomalies associated with that camera work noted in the report?

MR. AGUIAR: They're on the video.

MR. KATCHMAR: They're in the video?

MR. AGUIAR: In the video.

MR. KATCHMAR: Okay. Thank you.

MR. CHHATRE: Okay. Any other questions?

MS. FABRY: Klara Fabry.

MR. CHHATRE: Could you please speak loud so -- I want to make sure --

MS. FABRY: Klara Fabry.

MS. FABRY: Based on the visual inspection of the pipe, any -- based on your observation, you raised any concern about anything that you saw during the inspection?

MR. AGUIAR: The only thing would have been that piece at 881 Glenview that we didn't see a seam on. That seemed a little unusual and we cut that piece out.

MS. FABRY: Thank you.

MR. KATCHMAR: I do have one other question and I did write it down.

MR. CHHATRE: Identify yourself.

MR. KATCHMAR: Peter Katchmar.

BY MR. KATCHMAR:

Q. You said something in your previous -- answer to a previous answer about stenciling. You saw some stenciling inside the pipe?

A. In some cases stenciling, some cases markings, writing, inside the pipe.

Q. Okay. Are you familiar with the PG&E report they submitted from Consolidated?

A. I don't know. I'd have to see it.

Q. Specifically it's this -- it's a copy of a Moody Engineering Company description of how they made the pipe.

MR. KATCHMAR: Can you pass that around, please?

BY MR. KATCHMAR:

Q. And if you're not familiar with it -- you know, it's too big to read now, but it does talk in the back of there somewhere about stenciling, and I guess there's actually a page. Dane, if you could flip through the back there or Dave, there's a page that shows the stenciling, like a picture of the stenciling. Are you in the table?

A. I mean I'm starting at the back and working forward.

You said it was near the back?

Q. I thought it was near the back.

A. Okay.

MR. FASSETT: I think there's a series of heat numbers.

MR. AGUIAR: Looks like it, chemical compositions, heat numbers.

MR. FASSETT: Just to clarify, the discussion on stenciling is responded to in NTSB 035-002 and 016, I believe.

MR. AGUIAR: I don't see any figures with stenciling on them. Maybe I missed it.

BY MR. KATCHMAR:

Q. Hang on one second, please. Here it is. I'm sorry. I guess this is what Bob was referring to, NTSB 035-016, who manufactured the pipe in the manufacturing process? Did you see anything like the picture on page 2 of that document inside the pipe that you recollect, Dave?

A. No. I don't recall seeing anything like that.

Q. Because that appears to be an actual --

A. Punch.

Q. -- punch.

MR. FASSETT: Point of clarification. That was on the outside --

MR. KATCHMAR: Outside, okay.

MR. FASSETT: -- where that picture was taken. Bob Fassett, PG&E. Sorry.

MR. CHHATRE: Okay.

MR. KATCHMAR: All right, sir. Thank you very much.

MR. CHHATRE: Last go around. Anybody have any follow-up questions? If not, thank you so much for your help.

MR. AGUIAR: Thank you.

MR. CHHATRE: Appreciate your time.

MR. AGUIAR: Thank you, Ravi.

MR. CHHATRE: 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 David Aguiar
DOCKET NUMBER:	DCA-10-MP-008
PLACE:	Burlingame, California
DATE:	January 3, 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.

_____

Cheryl L. Phipps
Transcriber