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NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

INTERVIEW OF MARK REINHARDT, CITY OF SAN BRUNO, CA JANUARY 3, 2011

(35 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

*

SAN BRUNO, CALIFORNIA

* * * * * * * * *

Interview of: MARK REINHARDT

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

* Docket No.: DCA-10-MP-008

Monday, January 3, 2011

The above-captioned matter convened, pursuant to notice.

BEFORE: RAVINDRA M. CHHATRE Investigator-in-Charge

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I N D E X

ITEM				PAGE
Interview	of	Mar	Reinhardt:	
	Ву	Mr.	Gunther	9
	Ву	Mr.	Fassett	11
	Ву	Mr.	Shori	12
	Ву	Mr.	Gunther	14
	Ву	Mr.	Nicholson	14
	Ву	Mr.	Chhatre	16
	Ву	Mr.	Caldwell	23
	Ву	Mr.	Fassett	24
	Ву	Mr.	Shori	26
	Ву	Mr.	Katchmar	29
	Ву	Mr.	Chhatre	30
	Ву	Unio	dentified Speaker	32
	Ву	Mr.	Shori	33

- 1 INTERVIEW
- 2 MR. CHHATRE: The NTSB accident number for this
- 3 investigation is DCA-10-MP-008.
- 4 My name is Ravi Chhatre. I'm with the National
- 5 Transportation Safety Board in Washington, D.C., and I'm the
- 6 Investigator-in-Charge of this accident.
- 7 I would like to start by notifying everyone present in
- 8 this room that this interview is being recorded for transcription
- 9 at a later date. All parties will have a chance to review the
- 10 transcripts when they are compiled.
- 11 Also, I'd like to inform Mr. Mark Reinhardt -- did I
- 12 spell it correct -- pronounce it correctly?
- 13 MR. REINHARDT: Yeah, Mark Reinhardt.
- MR. CHHATRE: Okay. You are permitted to have one
- 15 person present with you during this interview. That person is of
- 16 your choice. It can be a supervisor, friend, family member or if
- 17 you chose, nobody at all.
- 18 So please state for the record your full name, spelling
- 19 of your name, contact information like phone number, e-mail,
- 20 mailing address and who you have chosen to be with you.
- MR. REINHARDT: My name is Mark Reinhardt, M A R K, last
- 22 name Reinhardt, R E I N H A R D T. E-mail is
- 23 mreinhardt@sanbruno.ca.gov. Phone number (650) -- this is
- 24 business (650) 616-7167, and I have brought Britt Strottman to sit
- 25 with me today.

- 1 MR. CHHATRE: Now I'd like to go around the room and
- 2 have each person introduce themselves. Please state your name,
- 3 spelling, your title and organization that you represent, a
- 4 business e-mail and phone number. Also, a word of caution, if you
- 5 use any acronym or any spelling or any word that's not common,
- 6 please spell it for the transcriber. We will start in the upper
- 7 right corner and everybody introduce themselves.
- 8 MR. CALDWELL: Geoff Caldwell, G E O F F
- 9 CALDWELL, City of San Bruno, Police Sergeant, e-mail is
- 10 gcaldwell@sanbruno.ca.gov. Phone number is (650) 616-7100.
- MR. DAUBIN: Brian Daubin, PG&E, Manager of Engineering
- 12 Support Services. The e-mail address is bmd5@pge.com.
- MR. FASSETT: Bob Fassett, PG&E, Director of Integrity
- 14 Management, NTSB party representative, rpf2@pge.com, phone number
- 15 (415) 973-7000.
- 16 MS. FABRY: Klara Fabry, F A B R Y, San Bruno Public
- 17 Services Director, kfabry@sanbruno.ca.gov.
- 18 MR. SHORI: Sunil Shori, California Public Utilities
- 19 Commission, Utilities Engineer, (415) 703-2407, sks@cpuc.ca.gov.
- 20 MR. KATCHMAR: Peter Katchmar, K A T C H M A R, United
- 21 States Department of Transportation, Pipeline and Hazardous
- 22 Materials Safety Administration, peter.katchmar@dot.gov, (303)
- 23 807-8458, and I'm an accident coordinator.
- MR. GUNTHER: Karl Gunther, NTSB, karl.gunther@ntsb.gov,
- 25 (202) 314-6478, and I'm the Operations Group Chair.

- 1 MS. MAZZANTI: Debbie Mazzanti, International
- 2 Brotherhood of Electrical Workers. Mazzanti, M A Z Z A N T I,
- 3 djmg@ibew1245.com.
- 4 MR. SPERRY: Joshua Sperry, Senior Union Representative,
- 5 with the Engineers and Scientists of California, Local 20, IFPTE.
- 6 It's J O S H U A, last name, S P E R R Y, e-mail
- 7 jsperry@ifpte20.org, (415) 543-8320.
- 8 MR. NICHOLSON: Matthew Nicholson, NTSB. That's
- 9 MATTHEW NICHOLSON. I am the Group Chair for the
- 10 SCADA operations. I can be reached at matthew.nicholson@ntsb.gov.
- 11 MR. CHHATRE: Ravindra Chhatre. That's R A V I N D R A,
- 12 last name, Chhatre, C H H A T R E, with National Transportation
- 13 Safety Board, Washington, D.C. I'm the investigator-in-charge of
- 14 this accident. Email is ravindra.chhatre@ntsb.gov, phone (202)
- 15 314-6644.
- 16 MR. NARVELL: Rick Narvell, N A V E L L, Human
- 17 Performance investigator for the NTSB in Washington, D.C. Phone
- 18 number is (202) 314-6422, e-mail narvelr@ntsb.gov.
- 19 MR. CHHATRE: Okay.
- 20 MS. STROTTMAN: My name is Britt Strottman, and I'm
- 21 senior of counsel at Meyers Nave, and also counsel for the City of
- 22 San Bruno. My e-mail address is bstrottman@meyersnave.com, and my
- 23 phone number is (510) 808-2000.
- 24 MR. CHHATRE: We didn't do it earlier. Maybe it will be
- 25 better if everybody presents business cards.

- 1 Let's begin with -- Karl Gunther, you want to start?
- 2 MR. GUNTHER: Yeah.
- 3 INTERVIEW OF MARK REINHARDT
- 4 BY MR. GUNTHER:
- 5 Q. Mr. Reinhardt, what is your job title?
- 6 A. I'm the water system and conservation manager for the
- 7 City of San Bruno.
- 8 Q. And what do you do in your duties?
- 9 A. My duties, I oversee the whole system. I'm chief
- 10 operator of the system. I don't deal with the day-to-day workers
- 11 as much as I do with more of the documents for the City, like
- 12 water system master plan, urban water management plan. I have
- 13 projects that I'm in charge of.
- 0. Okay. And by my understanding, there was a water main
- 15 break in the area where the accident occurred. Can you describe
- 16 the water main break, what you did, what actions you took?
- 17 A. Can you specify what area you're talking about?
- 18 O. The intersection of Earl and I think Glenvue.
- 19 A. So that's -- you're referring to 8/23/91.
- 20 O. The year?
- 21 A. Yeah, it was 20 years ago?
- 22 O. Yeah.
- 23 A. Okay. The only thing I have on that is I have a work
- 24 order, several work orders, a record of what happened out there.
- 25 Q. Uh-huh.

- 1 A. At that time, I wasn't in the water. I was working for
- 2 the City. I've been working for the City since '87, but this work
- 3 order, it shows, emergency response truck, 7312, assess that there
- 4 was small leak on the east side of Glenvue across from 991 Glenvue
- 5 on the 6 inch main, a very, very small leak at this time it says.
- 6 And this is at 12:40 p.m. on 8/23/91.
- 7 O. Are there any other water main breaks that you're aware
- 8 of in that area?
- 9 A. On where? Whereabouts? On Earl or --
- 10 Q. Yeah, Earl and I say Glenvue.
- 11 A. No.
- 12 Q. In that area --
- 13 A. There's no --
- Q. -- where the 30 inch main is.
- 15 A. Yeah, there's no record of any water leak on Earl in
- 16 that location. The only one I have is this one on 8/23/91 which
- 17 was up on Glenvue towards San Bruno Avenue.
- 18 Q. Okay. I understand there's some reports that there had
- 19 been lawns that had been soaked, you know, water, excess water
- 20 observed in that area among some of the homeowners. Do you have
- 21 any idea what that would be about?
- 22 A. No, no recollection.
- Q. Okay. All right. Well, in that case, I'll go ahead and
- 24 start.
- MR. CALDWELL: Geoff Caldwell, San Bruno, no questions

- 1 at this time.
- 2 MR. DAUBIN: Brian Daubin, PG&E, no questions at this
- 3 time.
- 4 MR. FASSETT: Bob Fassett, PG&E.
- 5 BY MR. FASSETT:
- 6 Q. Could you describe what inspection activities are
- 7 performed on the water lines at the intersection of Earl Avenue
- 8 and Glenvue Drive?
- 9 A. What inspections? As far as --
- 10 Q. Is there any required maintenance or turn a valve once a
- 11 year to make sure it turns or any of that kind of stuff?
- 12 A. No, not in that area.
- 13 Q. Have there been any inspections required for any reason
- 14 on Earl Avenue?
- 15 A. No.
- 16 O. You mentioned one leak on the 6 inch. Were there any
- 17 other leaks on Earl Avenue?
- 18 A. I mentioned there was a leak on Glenvue. There was
- 19 never a leak on Earl.
- 20 O. Never a leak on Earl. What's the age of the lines on --
- 21 A. I mean on what I have.
- 22 Q. Do you know --
- 23 A. The age --
- Q. -- the age of the lines?
- 25 A. Probably 1960s. So 50 years old.

- 1 O. For both Earl and Glenvue?
- 2 A. Uh-huh.
- 3 Q. Was there any maintenance work done on the lines on
- 4 Glenvue?
- 5 A. No.
- Q. The forms that you have talking about the leak, is there
- 7 any kind of estimate of the water leakage quantified or qualified?
- 8 Was it a small leak, big leak, leaked at the rate of?
- 9 A. Yeah, it doesn't have anything specifying how big the
- 10 leak was. From the work order, it says a small leak.
- 11 Q. That's all I have. Thank you.
- 12 MR. FABRY: Klara Fabry, City of San Bruno, no
- 13 questions.
- 14 BY MR. SHORI:
- 15 Q. I missed the address. It was 991 Glenvue or the leak
- 16 was across?
- 17 A. Yeah. Correct.
- 18 Q. And that was reported at 12:40 p.m. 8/23/91?
- 19 A. Correct.
- 20 O. And when was it repaired?
- 21 A. From the records, it shows -- I would think this is over
- 22 the weekend, and they came in probably -- came in the 26th and
- 23 repaired the leak.
- Q. On the 26th you said.
- 25 A. 8/26, correct.

- 2 A. Wait a second. I'm sorry. It was actually repaired the
- 3 same day at 1:20 p.m. I'm looking at a different work order.
- 4 8/26 was a guy was out there, located a valve and hung a tag on
- 5 some -- on a home or something. That's a different, but I
- 6 switched to the next page, 8/23/91, 1:20 p.m., it was repaired.
- 7 O. And what did the repair consist of?
- 8 A. It was a curb stop leak. They dug down to the curb stop
- 9 on the 6 inch main and fixed it, and that was it, backfilled the
- 10 hole.
- 11 Q. Okay. And then this entire main runs along, north/south
- 12 on Glenvue on the east side you said of Glenvue?
- 13 A. Correct.
- Q. And then there's a tap off to --
- 15 A. There's a T at --
- 16 O. -- feed Earl?
- 17 A. Yes, that feeds Earl.
- 18 O. And what size is that?
- 19 A. Six inch.
- 20 O. So it's a 6 inch main and a 6 inch T --
- 21 A. Correct.
- 22 O. -- to feed Earl --
- 23 A. Correct.
- 24 Q. -- in the westerly direction. And you haven't had any
- 25 repairs I would say within 500 feet of the intersection of Earl

- 1 and Glenvue since 1991 on that pipe?
- 2 A. We haven't had any, correct.
- Q. Have you had any reports of leaks on that, any of your
- 4 records show, in that area?
- 5 A. Not in that area.
- 6 Q. And what type of material is that pipe made of?
- 7 A. Cast iron.
- 8 Q. Do you have any projects in place to replace that at
- 9 this stage?
- 10 A. Not at this stage. Not at this time.
- 11 Q. That's all. Thank you.
- MR. KATCHMAR: I don't have any questions.
- 13 BY MR. GUNTHER:
- 14 Q. The diameter and pressure of the cast iron main?
- 15 A. It's a 6 inch main. Pressure up there is probably about
- 16 80.
- 17 Q. 80 psi?
- 18 A. 80 psi, yeah.
- 19 O. That's all I have.
- MS. MAZZANTI: Nothing.
- MR. SPERRY: No questions.
- MR. NICHOLSON: Matt Nicholson, NTSB.
- BY MR. NICHOLSON:
- Q. The 6 inch, that's the IV, right? A 7 inch OV in cast
- 25 iron.

- 1 A. It's not 7 inch. 6 something. It's not a total of 7.
- Q. 6 is the IV though, right?
- 3 A. Yeah.
- 4 Q. I don't have a drawing in front of me. So I just want
- 5 to be sure I understand. There's a 6 inch line running north and
- 6 south on Glenvue and a 6 inch takeoff running down Earl?
- 7 A. Yeah.
- 8 Q. Running east.
- 9 A. Correct.
- 10 Q. And what is -- that 6 inch takeoff running down Earl,
- 11 what does it serve?
- 12 A. It serves Earl all the way to --
- 0. Residences?
- 14 A. Yeah, all residences.
- 15 Q. Hydrants?
- 16 A. One hydrant or a couple of hydrants on that block, yeah,
- 17 maybe three or four. It goes all the way to Sneath Lane.
- Q. What's the depth of that Earl line? How far down is it?
- 19 A. Where the crater is?
- 20 O. Where the crater is? Yeah.
- 21 A. It's about 4 feet, 3 to 4 feet.
- 22 O. Four feet (indiscernible).
- 23 A. Yeah, it was fairly shallow. You're talking about the
- 24 T, right? Where it T's off down Earl?
- Q. Yes, right.

- 1 A. Yeah.
- Q. And really the only way you know that you have a leak is
- 3 by water bubbling up to the surface or do you have meters on this
- 4 line? How do you detect leaks?
- 5 A. Usually you would see it surface.
- 6 Q. Okay.
- 7 A. Yeah.
- 8 Q. But you don't have pressure sensors, flow monitors.
- 9 A. Well, we do have pressure sensing at our pump station on
- 10 Sneath Lane, but as far as a drop in pressure, we wouldn't see it.
- 11 Q. You wouldn't know if it was demand related or --
- 12 A. Right.
- 13 O. That's all I have.
- 14 MR. CHHATRE: Ravi Chhatre, NTSB.
- 15 BY MR. CHHATRE:
- 16 Q. You did say that leak, the small leak was fixed by plug
- 17 of some sort that small leak that happened in 1991? Was it curb
- 18 stopped or something like that?
- 19 A. A curb stop. It's basically a tap off the main where it
- 20 has a valve. It's called a curb stop, and you shut that off. It
- 21 shuts the service off to a resident. It's a 3/4 inch service.
- 22 Q. Okay.
- 23 A. That was leaking probably at the saddle where the hole
- 24 is tapped for the service, and they repaired it and then
- 25 backfilled it.

- 1 Q. I want to make sure I understand this. The leak was not
- 2 on the main. The leak was not on the 6 inch main. It was on the
- 3 service tap for residence?
- 4 A. No, it was at the curb stop which is on the main.
- 5 Q. So at the T. So this T went in there or --
- 6 A. It a 3/4 inch tap off the 6 --
- 7 O. That comes off the --
- 8 A. Yeah, the section with the little valve there, that was
- 9 leaking.
- 10 Q. Okay. And you said the way you detect the leak is by
- 11 water flowing on the street. (indiscernible) all asphalt, how
- 12 would you know if it was leaking a long time? How would you know
- 13 it was leaking?
- 14 A. It surfaced.
- 15 Q. (indiscernible).
- 16 A. Yeah, it eventually surfaced.
- 17 Q. I'm a little confused. The case that I had showed a
- 18 water main going east-west on, not Glenvue, yeah, east-west. It
- 19 was going east-west. But there's nothing showing a line going on
- 20 Glenvue north-south. Which way it goes? (indiscernible)
- 21 explosion site?
- 22 A. What line are you talking about?
- Q. You said there is a 6 inch main that runs north-south on
- 24 Glenvue.
- 25 A. Correct.

- 1 O. And 6 inch takeoff on Earl.
- 2 A. Correct.
- 3 Q. Now where does that 6 inch takeoff on Earl takes place
- 4 on your 6 inch main that was not (indiscernible) physically.
- 5 A. There's --
- 6 Q. Is in the same area of the rupture or some other
- 7 location?
- 8 A. There's no pipe there now because the rupture took about
- 9 40 feet of the main out but it does come down Glenvue north-south
- 10 and there's a T and there's a valve and then there's no pipe there
- 11 now because it went over the crater.
- 12 Q. So the one on Earl, does it go in both directions of
- 13 Earl or it just goes in one direction?
- 14 A. There's only one direction to go on Earl.
- 15 Q. Only one. Okay. So the pipe was destroyed during the
- 16 fire and --
- 17 A. Yeah, 40 to 50 feet of the main.
- 18 Q. Okay. For the record, can you state your formal
- 19 education?
- 20 A. High school, Oceania High School.
- Q. Okay. And any other license, training, during your
- 22 tenure with the City?
- 23 A. Yeah, I got a lot of training through AWWA, American
- 24 Water Works Association. Went to school for my licensing. I got
- 25 a treatment 2, grade 2, with California --

- 1 0. Okay.
- 2 A. -- a license. I got the highest D5 in distribution
- 3 license and I have a collection license also, grade 2.
- 4 Q. Was there any visible soil displacement from the damage
- 5 of that small leak in 1991? Was an inspection done
- 6 (indiscernible)?
- 7 A. I was not on the leak. I couldn't tell you that at this
- 8 time.
- 9 Q. Would there be a record of some sort --
- 10 A. The only record I have, sir, is these three worksheets.
- 11 Q. Does it say anything about the damage to the soil?
- 12 A. No.
- 13 Q. You live in the earthquake country here in California.
- 14 In the past, since your tenure with the City, was there any calls
- 15 made to the City about a water problem due to any past earthquakes
- 16 do you recall?
- 17 A. In the City?
- 18 Q. I mean we're focusing on Glenvue and Earl Avenue area.
- 19 A. I was here in '89. I don't recall, I don't recall --
- 20 not in the Glenvue-Earl, no, there was nothing.
- Q. Are there any other leak reports related to earthquakes
- 22 only in the City of San Bruno?
- 23 A. I'm sure there were several but more down below. We had
- 24 leaks. I don't have the list of leaks but they weren't in that
- 25 area. I would have had them, you know.

- 1 O. Okay. Now do you recall what kind of leaks those would
- 2 be due to earthquakes in the past?
- 3 A. What do you mean?
- 4 Q. Well, the City fix the water leaks --
- 5 A. Yeah.
- 6 Q. -- does it not?
- 7 A. Uh-huh.
- 8 Q. And the earthquake damage to pipe, what kind of leaks
- 9 have they fixed in the past? When you explain about, a few
- 10 minutes ago about the --
- 11 A. Curb stop.
- 12 Q. -- what kind of leaks will be due to earthquake to your
- 13 water main?
- 14 A. You would probably have a circumference split or a
- 15 jagged split along the, you know, the top of the pipe, more severe
- 16 break, and you would see that right away and it would probably
- 17 cause localized flooding.
- 18 O. And how will you fix those?
- 19 A. We'd have to isolate -- if it was a severe leak like
- 20 that, we would have to isolate both sides, keep the water flowing
- 21 and then cut out the section and replace it with couplings and a
- 22 piece of pipe.
- Q. And do you recall any such incidents since your tenure
- 24 with the City due to earthquakes?
- MS. STROTTMAN: I'm sorry. Can you just please clarify

- 1 which area?
- MR. REINHARDT: Yeah, you keep --
- 3 BY MR. CHHATRE:
- 4 O. City of San Bruno.
- 5 A. I'm sure there was. I wasn't in the water department at
- 6 that time.
- 7 Q. Okay. Do they keep someplace about those ruptures,
- 8 earthquake in the city? Are you familiar with that?
- 9 A. Can you repeat the question?
- 10 Q. Okay. Is there someplace in the City documentation that
- 11 would show where the ruptures occurred in the earthquakes in the
- 12 City of San Bruno and the City fixed those leaks or repairs?
- 13 A. I don't know if we have -- I mean we may have records.
- 14 I'd have to go back and look. That was '89. That was the
- 15 earthquake that was a major earthquake.
- 16 Q. And is that in your jurisdiction currently, that area or
- 17 it is not? Looking at the earthquake repairs to waterlines.
- 18 A. What do you mean jurisdiction?
- 19 Q. Who is responsible for fixing the leaks on the water
- 20 mains?
- 21 A. The City of San Bruno if it's in San Bruno.
- 22 Q. Okay. And who in the City of San Bruno will be taking
- 23 care of those leak requests?
- MS. STROTTMAN: I'm sorry. Can you just clarify what
- 25 timeframe? You mean just from '89 --

- 1 MR. CHHATRE: Since his tenure with the City.
- MS. STROTTMAN: Okay. Thank you.
- 3 BY MR. CHHATRE:
- 4 Q. Since your tenure with the City.
- 5 A. Who would be in charge of that? Overall, I'd be in
- 6 charge of the system. (indiscernible) would probably delegate,
- 7 the water service manager would delegate the guys out there.
- 8 Q. Could you please find out if there are any reports of
- 9 that happened --
- 10 A. Yeah, I could do that.
- 11 Q. -- and provide it to us.
- 12 A. Yeah.
- 13 Q. You know, before I made request the record, I want to
- 14 make sure it's in your jurisdiction. So --
- 15 A. Yeah, I'll look in our records.
- 16 O. Okay. And again, I'm looking for earthquakes.
- 17 A. That's fine.
- 18 O. That information.
- 19 A. Yeah.
- 20 Q. On the day of the accident, some residents living on
- 21 Earl told me, on our, if you recall, we had an e-mail deposit for
- 22 people to contact us, of the accident, and somebody called me and
- 23 told me that there was water running and they saw City's truck on
- 24 Earl, and that's why she was not making a report. My question is
- 25 was there any water leaks whatever saw on Earl that day?

- 1 A. What day?
- 2 Q. September 9th, the day of the accident?
- 3 A. No, there's no record of that, of a leak there on that
- 4 day.
- 5 Q. Will you please also check on that date just to make
- 6 sure --
- 7 A. Sure.
- 8 Q. -- there were no leak reports?
- 9 A. Yeah.
- 10 Q. And that's all I have. Thank you so much for the time.
- 11 MR. NARVELL: I have no questions.
- 12 MR. CHHATRE: Any follow-up questions.
- MR. CALDWELL: Yes, Geoff Caldwell, City of San Bruno.
- BY MR. CALDWELL:
- 15 Q. Mark, every once in a while the City does that flushing
- 16 thing.
- 17 A. The flushing program.
- 18 Q. Yeah. Has any of that happened up there in the days
- 19 prior to the incident or --
- 20 A. I'd have to check on that. I couldn't tell you right
- 21 here.
- 22 Q. Okay.
- 23 A. But that's a good question. We should check on that,
- Q. Yeah, the flushing, and then regarding that paperwork
- 25 that you have from 1991, is there any information on there that

- 1 tells you how it was called in or was it just happenstance of
- 2 water when driving by?
- 3 A. It probably was called in. It does have a number,
- 4 Janet. She was the secretary for water at the time. She was
- 5 called -- it doesn't say who called her but someone had called
- 6 her. I --
- 7 O. And anything --
- 8 A. I'm sorry. Go ahead. I don't have a record who
- 9 actually called this in.
- 10 Q. Okay.
- 11 A. But she dispatched our emergency response truck 7312 out
- 12 there.
- Q. Okay. And then is there anything also in that document
- 14 that would say how long that leak was leaking?
- 15 A. Well, 12:40 p.m. they got the call in. 1:20 p.m., the
- 16 same day, they dug down and fixed it.
- 17 Q. So it was leaking for at least 45 minutes. All right.
- 18 A. 45 minutes.
- 19 O. Okay.
- 20 MR. DAUBIN: I have no follow-up questions.
- 21 MR. FASSETT: I have a few. This is Bob Fassett.
- 22 BY MR. FASSETT:
- 23 Q. I'm a little confused on the records thing --
- 24 A. Okay.
- Q. -- and your reference. I'm assuming you were asked to

- 1 present any records of repair and maintenance for the line either
- 2 on Glenvue or Earl. Is that correct?
- 3 A. Correct.
- 4 Q. And that single record base you would go to, if there
- 5 were any ruptures or leaks associated with the Loma Prieta
- 6 earthquake, there would have been a record --
- 7 A. Yeah.
- 8 Q. -- file that you would have presented to us?
- 9 A. We would have looked far enough back and would have seen
- 10 that.
- 11 Q. But you did not find it.
- 12 A. We did not find it.
- 13 Q. Okay.
- 14 A. Well, I'll look again.
- 15 Q. I just want to make sure we're not talking about --
- 16 A. Yeah.
- 17 Q. -- another database?
- 18 A. No, it's one database.
- 19 O. Okay. You mentioned that this is a 6 inch cast iron
- 20 main. What's the average length of a joint of cast iron pipe?
- 21 A. 20 feet.
- 22 Q. That's probably a random --
- 23 A. Yeah. It's around 20.
- Q. What's the connection?
- 25 A. It's a bell leaded. Probably back then it was a leaded

- 1 jointed bell.
- Q. At 80 pounds of pressure, it's leaded jointed bell?
- A. I'm not sure. I couldn't tell you. I'd have to dig up
- 4 a section and tell you but --
- 5 Q. The service connection type, is that a, is that a
- 6 friction connection? Is it a bolt on connection? Is it a braised
- 7 connection? Do you recall?
- 8 A. Are you talking about the curb stop?
- 9 Q. Yeah.
- 10 A. It could have been a saddle or it could have been a
- 11 direct tap where it screwed in, threaded.
- 12 Q. So it would have been tapped into the main?
- 13 A. Yeah.
- Q. And the saddle would have been a bolt on saddle?
- 15 A. Yeah.
- 16 Q. But you don't use any friction --
- 17 A. No.
- 18 Q. -- any more. Okay. That's all I had. Thank you.
- 19 A. You're welcome.
- MS. FABRY: No questions.
- 21 MR. SHORI: Sunil Shori, California PUC.
- 22 BY MR. SHORI:
- Q. As far as the 6 inch tap that T's off, going in the
- 24 westerly direction on Earl, is that a one-way tap?
- 25 A. It's not a tap. It's a T.

- 1 Q. I take it back. It's not a service tap.
- 2 A. Yeah.
- Q. It's a continuation of your main. It's a T.
- 4 A. Yeah.
- 5 Q. A T in the main. And is that a one-way feed or is it --
- 6 is your system looped in a way that it comes back --
- 7 A. It's right -- at this time, it's not looped because we
- 8 don't have it connected but it is looped on Sneath Lane. It loops
- 9 over on Sneath Lane.
- 10 Q. Okay. So you can backfeed. You can feed from two
- 11 different sources into Earl?
- 12 A. Yes.
- 13 Q. Okay. And then the flushing program that you alluded to
- 14 a little earlier, can you describe what that is and how often
- 15 that's done or under what circumstances that's done?
- 16 A. It's done once a year and we do all the hydrants, all
- 17 900 hydrants are flushed once a year and it's done, each section
- 18 is broken down month by month. So we do it usually in three
- 19 months. So this year it started in August and we ended up in
- 20 September. So the last part was September.
- Q. So you do it the last quarter?
- 22 A. Yeah.
- Q. Of every year?
- 24 A. Uh-huh, or the last couple of years we've done it.
- 25 O. And what does it entail? I mean what is it that

- 1 you're --
- 2 A. We're basically trying to flush out dead, stagnant water
- 3 that's been sitting in the system. The way we treat water in
- 4 California is we introduce chlorine and ammonia which is
- 5 chloramines and if the water sits too long, the ammonia drops out
- 6 and causes nitrates. So to keep our nitrate levels down, we flush
- 7 the mains once a year. It gets rid of all the dead water.
- Q. Is this something that's particular to San Bruno or is
- 9 this generally from your knowledge of water systems is generally
- 10 done?
- 11 A. Yeah, anybody -- everybody who has chloramines usually
- 12 does a flushing program once a year.
- 13 O. And does this entail a shutdown of the main or
- 14 disruption of service or do you do it while in service?
- 15 A. While in service.
- 16 Q. And is it just running water through a hydrant or
- 17 basically running water out of the system for some period of time?
- 18 A. It's run out of a hydrant at high velocity to get all
- 19 the dead water out of there, not for a long period of time.
- 20 Q. And when did you start this program as part of your
- 21 system?
- 22 A. 2001.
- Q. And why then?
- 24 A. Was it 2001 or 2000? Yeah, 2001, I think about
- 25 chloramines. 2001, yeah, 2003. Sorry. 2003 chloramines, San

- 1 Francisco water started treating their system with chloramines and
- 2 that's when we started. I think it was 2003 we started.
- Q. Do you provide the residents with any kind of annual
- 4 notice of what this program entails, what to expect, when you're
- 5 going to be doing it and what kind of notices and how often do you
- 6 send that out?
- 7 A. We send it out a couple of months or a month before and
- 8 we send it in a mailer. So it'll be in your water bill. We send
- 9 it to every resident.
- 10 Q. Do you ever get any kind of complaints or concerns or
- 11 inquiries about this every year or is there a lot of -- do most
- 12 folks in this State understand or do you still every year get a
- 13 lot of questions related to when you send these out?
- 14 A. In the beginning we got a lot of calls but now people
- 15 are used to it, and with the fliers, additional of the fliers the
- 16 last three years, we've had a lot less complaints and I don't even
- 17 recall that many this year at all. So --
- 18 Q. Thank you.
- 19 BY MR. KATCHMAR:
- 20 Q. Mike, one point of clarification. Can you spell the
- 21 term you're using for where that leak occurred? Are you saying
- 22 curb, C U R B.
- A. Yeah.
- Q. Curb stop?
- 25 A. Yeah.

- 1 Q. Okay. Thank you.
- 2 MR. GUNTHER: I have no further questions.
- 3 MR. CHHATRE: I have a couple to understand.
- 4 BY MR. CHHATRE:
- 5 Q. A visual aide might help. If you can draw maybe a
- 6 sketch of Earl and Glenvue and where each line goes on the back.
- 7 I can show you photograph I have if that would help. I can draw
- 8 the two streets for you and you can show me where your main runs.
- 9 It's your preference. Which will it be? And I'd like to know
- 10 where that curb stop was again (indiscernible) interested.
- 11 A. This is Glenvue, right.
- 12 Q. Okay.
- 13 A. So the 6 inch main -- here's the sidewalk. 6 inch main
- 14 was just on the back of the sidewalk, right here. Okay. Then it
- 15 T's off right about somewhere in here.
- 16 O. Okay.
- 17 A. And it continues.
- 18 Q. Okay.
- 19 UNIDENTIFIED SPEAKER: And where is north. I'm sorry.
- MR. REINHARDT: Sorry about that.
- BY MR. CHHATRE:
- 22 Q. Okay.
- 23 A. So it comes down from San Bruno Avenue --
- 24 Q. Uh-huh.
- 25 A. -- and then there's a T here and then it has a little

- 1 valve here which we isolated during that night and then it
- 2 continues.
- 3 Q. Can you show the rupture you're talking about? Is
- 4 (indiscernible) the rupture of the pipe?
- 5 A. Well, the valve's more back here, but the rupture was --
- 6 are you talking about where the pipe's missing now? Or are you
- 7 talking about the leak?
- 0. Leak.
- 9 A. The leak was somewhere about here.
- 10 O. Around 1991?
- 11 A. Yeah.
- 12 Q. Okay. Can you just write the year please, write 1991 at
- 13 that location so I know? Was it 1991?
- 14 UNIDENTIFIED SPEAKER: August 23, '91.
- MR. CHHATRE: Okay.
- 16 BY MR. CHHATRE:
- 17 Q. The rupture was right here.
- 18 A. You're asking where the leak was.
- 19 Q. No, I understand that. I understand it okay.
- 20 A. Yeah, the rupture was basically -- actually the valve's
- 21 back here, and the rupture was somewhere in here, about right
- 22 here. Yeah. So this valve is more over here.
- 23 Q. Okay.
- A. And then this section of pipe was gone.
- O. Yeah, I don't remember the walkway on the left side of

- 1 the street.
- 2 A. Yeah.
- Q. I remember it on this side.
- 4 A. Yeah, there's a sidewalk on that side.
- 5 BY UNIDENTIFIED SPEAKER:
- 6 Q. So this valve here stayed intact.
- 7 A. Yeah, basically this valve was here. We were lucky that
- 8 valve stayed intact because we were able to isolate it. So, yeah,
- 9 so that valve stayed intact. The pipe coming out of it is a
- 10 little damaged but we were able to isolate it over here and over
- 11 here.
- 12 Q. I thought you said earlier this north-south section got
- 13 blown away?
- 14 A. Yeah, right here.
- 15 Q. That's the east-west section.
- 16 A. I'm sorry. East-west.
- 17 Q. Okay.
- 18 A. Did I say north-south?
- 19 Q. I thought you did.
- 20 A. Okay. East-west.
- 21 Q. So the north-south section stayed intact.
- 22 A. Yes.
- Q. But it wasn't exposed?
- 24 A. Yeah, this line on Glenvue was never exposed.
- O. Okay. Thank you.

- 1 BY MR. CHHATRE:
- Q. One last question, the cast iron you mentioned. Do you
- 3 know what type of cast iron is it?
- 4 A. No, I don't know.
- 5 Q. There are different kinds and I'm just concerned --
- 6 A. I have -- no.
- 7 Q. Okay. That's all I have.
- 8 MR. SHORI: I'm sorry. Sunil Shori. One more quick
- 9 follow up.
- 10 BY MR. SHORI:
- 11 Q. On that piece that got -- that was basically destroyed
- 12 with the incident, at this stage, was that replaced or is that --
- 13 have you just basically closed off, capped off the line?
- 14 A. Yeah, I capped it off right here about 100 feet away
- 15 from the blast site. We cut and capped it on Friday.
- Q. And then (indiscernible) today?
- 17 A. Yeah, we just opened that valve so we had water on a
- 18 roll. Everybody has water but we don't have the system looped at
- 19 this time.
- 20 Q. And then where do you have the cap off on the T on the
- 21 north-south main?
- 22 A. We don't. We just have the valve shut down.
- 23 Q. Oh, okay. So it's just valved off there --
- 24 A. Yeah.
- 25 O. -- and then capped on the west end.

1	A.	Correct.
2	Q.	Okay. Thank you.
3		MR. CHHATRE: Anybody else have any questions?
4		Thanks again so much for the help.
5		MR. REINHARDT: You're welcome.
6		MR. CHHATRE: Off the record.
7		(Whereupon, the interview was concluded.)
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CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

PACIFIC GAS & ELECTRIC COMPANY IN THE MATTER OF:

SEPTEMBER 9, 2010 ACCIDENT

SAN BRUNO, CALIFORNIA

Interview of Mark Reinhardt

DOCKET NUMBER: DCA-10-MP-008

PLACE: Burlingame, California

January 3, 2011 DATE:

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.

Kathryn A. Mirfin

Transcriber