Docket No. SA-534

Exhibit No. 2-BO

NATIONAL TRANSPORTATION SAFETY BOARD

Washington, D.C.

INTERVIEW OF JOHN GROPPETTI
(JAN-5-2011)

(39 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: JOHN GROPPETTI

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

Wednesday,
January 5, 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 T E R V I E W

MR. CHHATRE: I think it's still morning. Good morning, everyone.

Today is Wednesday, January 5th, 2011. We are currently in Birmingham, 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 9th, 2010. The NTSB Accident Number for this investigation is 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 transcriptions when they are completed.

Also, I want to make sure I pronounce the name right here. I will inform John Groppetti --

MR. GROPPETTI: Si.

MR. CHHATRE: Mr. Groppetti, you are permitted to have one other person present with you during 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, contact information such as phone, e-mail address, mailing address, and whom you have chosen to be with you.

MR. GROPPETTI: John Groppetti, G-r-o-p-p-e-t-t-i, and that's in . Phone is 925- . E-mail is john@g-t-s-inc.com. And Dane Jaques is my guest.

MR. CHHATRE: Thank you for that.

Now, I'd like to go around the room to have each person introduce themselves. State your name, spelling, title, and organization you represent, business e-mail and phone, starting with the City.

MR. CALDWELL: Geoff Caldwell, City of San Bruno. My information is on the card provided.

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

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

MS. JACKSON: Connie Jackson, City of San Bruno. My information is on my card.

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

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

MR. KATCHMAR: Peter Katchmar, U.S. DOT, Pipeline and Hazardous Materials Safety Administration, PHMSA, and my

information is on the card.

MR. GUNTHER: Karl Gunther, NTSB, Operations Group Chair. E-mail, karl.gunther@NTSB.gov, phone 202-314-6478.

MS. MAZZANTI: Debbie Mazzanti. My information is on the card.

MR. CHHATRE: Who do you represent?

MS. MAZZANTI: IBEW Local 1245.

MR. CHHATRE: Thank you.

MR. SPERRY: Joshua Sperry, and I represent the Engineers and Scientists of California, Local 20, IFPTE. You have my contact information.

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

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

MR. NARVELL: Rick Narvell, NTSB, Human Performance Investigator. E-mail is narvelr@NTSB.gov, and phone is 202-314-6422.

MR. JAQUES: Dane Jaques on behalf of the witness and my information is on the card.

MR. GUNTHER: Yeah, I'm going to start.

MR. CHHATRE: Do you want to go first?

MR. GUNTHER: Yeah.

INTERVIEW OF JOHN GROPPETTI

BY MR. GUNTHER:

Q. Could you please give your title and your affiliation, who you work for?

A. My title is vice president of Groppetti Technical Services, Incorporated.

Q. Okay. And what are your professional qualifications?

A. I have a bachelors degree in electrical engineering from Cal Poly San Luis Obispo, masters degree in electrical engineering from University of Santa Clara. I'm a registered electrical engineer in the State of California.

Q. And since the day of the accident, have you done any work for PG&E at Milpitas or anywhere else?

A. Anywhere else, yes.

Q. Okay. But, and none in Milpitas.

A. None in Milpitas.

Q. Or anything that would affect this particular accident?

A. No.

Q. Okay.

MR. CALDWELL: Goeff Caldwell, City of San Bruno.

BY MR. CALDWELL:

Q. Since the morning after you left Milpitas, I think you -- I was in the last interview with you --

A. Um-hum.

Q. -- and you mentioned that you left early the next morning. Karl just asked, you never went back to Milpitas. Did

you do any contract work for PG&E since then?

A. I, could I retract? I did go back one time. I want to say maybe the following week to talk to the PG&E lawyers.

Q. Okay.

A. They wanted a walk-thru of that September 9th.

Q. Okay.

A. That was the only time I've been back.

Q. Okay. Do you want to tell us what you told those lawyers?

MR. JAQUES: No, I object. That's --

MR. CALDWELL: It was worth a try.

UNIDENTIFIED SPEAKER: Nice try.

MR. CALDWELL: I was going to try.

UNIDENTIFIED SPEAKER: I knew that one would --

MR. JAQUES: I'm still awake.

MR. CALDWELL: That's fine. All right. I thought you fell asleep and I was going to put a mirror under.

(Laughter.)

BY MR. CALDWELL:

Q. The next question I have is were you aware of subsequent investigation that occurred related to the incidents the day before?

A. Yes.

Q. Okay. And who informed you of that

A. I just heard in talking to PG&E people that I deal with

that they were going to be doing some work at Milpitas to further investigate and that was it, period.

Q. Okay. Did you hear what the results of that --

A. No.

Q. -- investigation were? Nobody has ever --

A. No.

Q. You've never heard any scuttlebutt from any of your prior coworkers from working at PG&E?

A. No, because I pretty much have -- haven't had a lot of contact with PG&E since.

Q. Okay. No further questions. Thank you.

MR. DAUBIN: No questions.

MR. FASSETT: Bob Fassett, PG&E, no questions.

MS. JACKSON: No questions.

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

MR. SHORI: Sunil Shori, California PUC.

BY MR. SHORI:

Q. Part of the work that you did at Milpitas --

A. Um-hum.

Q. -- there was some discussion about the chromatographs --

A. Um-hum.

Q. -- and necessary for the EPS work to basically keep them up. Was there a need -- what was the urgent need to keep those, basically, keep those energized?

A. They were tied to the existing UPS system that was in a

failing state, and in order to clear the breaker that fed them, it was requested by the district that the chromatographs be put on a mini UPS because they provide gas quality data for a number of pipelines coming into and out of Milpitas and that's very valuable information, a) for calculating what's, you know, the through (ph.) put of the station and for therm (ph.) billing, for a number of the billing systems, and having them down would have just been a lot of extra work of having to do hand sampling because it's all done automatically there. You would have had to gone out and collect samples by hand, take them to another chromatograph someplace, analyze them, data would have been old, and in this way they kept -- keep real time gas quality data going to gas control.

Q. And were you able to keep those energized?

A. Yes.

Q. Okay. There was also discussion about critical circuits, five, in particular five critical circuits that needed to be kept powered. Can you describe what those were and why those were considered critical?

A. Okay. One was a chromatograph circuit. That was one of the five.

There are a number -- there were some circuits in the communications room that needed to be kept alive because that housed the equipment that was used to interface the control system at Milpitas to Gas Control. So, we needed to keep data sharing devices, routers, that kind of stuff alive so the data could keep

going back and forth.

There is a programmable logic controller, PLC, that is like the station control system that gathers all the data and it's what packages the data to be sent to Gas Control. So, that had to be kept alive so all the data would be available.

There were two power supplies associated with the PLC system that powered the input/output subsystem of the PLC. These are devices that signals actually came into and then the PLC would interrogate these devices to gather the data. So, they needed to be kept alive so the data would keep coming through.

There was a redundant pair of power supplies that are used to power all of the pressure transmitters and flow transmitters in the yard and that had to be kept alive to keep the pressure transmitters alive.

Is that five yet?

Q. I counted five.

A. I think so, yeah. Those are the ones I was intimately involved with.

Q. Okay. We talked about two different power supplies. You had the redundant power supplies and the ones, the fourth item power supplies. Are you talking about two different power supplies that you needed to --

A. Say that again, I'm sorry.

Q. You talked about power supplies and then you talked about redundant power supplies.

A. Um-hum.
Q. Can you differentiate between those two different sets --
A. Okay.
Q. -- of power supplies?
A. The redundant power supplies, which were labeled, which were called PS2A and 2B, just for the record, are the ones that power the various pressure and differential flow transmitters throughout the yard. They provide the 24 volts just to power the transmitter loops. Okay.

The other power supplies power the PLC, call it the I/O subsystem that bring in, oh, valve limit switches, pressure switches. Also, the pressure transmitters are routed through that I/O system, but they basically provide power for the blocks that are used to transfer the data from the field to the PLC.

Q. On the redundant power supply, the PS2A and the PS2B --
A. Um-hum.
Q. -- did you confirm which circuit fed those?
A. Yes.
Q. Did you confirm the circuit closed?
A. Pardon me?
Q. Did you confirm the circuit closed?
A. At what point --
Q. Did you open that circuit at any point?
A. Okay. Ask that one more time.

Q. Okay.
A. Sorry.
Q. The circuit breaker feeding PS2A and PS2B --
A. Um-hum.
Q. -- did you confirm where that was on -- within the station?
A. Yes.
Q. Did you confirm if that circuit was closed?
A. At what point in time?
Q. Prior to the start of your work. These were the five circuits that you needed to --
A. Yes.
Q. That you considered critical circuits.
A. Prior to our start of the work, that circuit breaker was closed.
Q. Okay. Did you put any safeguards in place to assure that all five of these, or the breakers feeding all five of these, were kept closed or kept hot?
A. No, because the whole point was to open those circuit breakers after we put the little UPS's in. So, as we took each subsystem, we opened the circuit breaker because we had to kill the circuit. We installed mini UPS. Wired the mini UPS to power the subsystem, whichever subsystem we were doing, and we tagged the circuit breaker as open at that point so somebody wouldn't accidentally close it because it had dangling wires at that point.

Q. So, at some point in your work process, did you get to the circuit feeding PS2A and PS2B --

A. Yes.

Q. -- the breaker?

A. Yes.

Q. Did you open the breaker?

A. Yes.

Q. Did you test PS2A and PS2B at any given stage of that work in terms of what they were supplying or what they were -- whether they were -- how they were operating? Did you do any kind of testing on those two individuals?

A. When we opened the circuit breaker, we made sure that the two power supplies were indeed powered down, put a bolt meter on the AC side, make sure there was no power going to them. We then removed the wires, installed the mini UPS, powered up those two power supplies again and verified that we had 24 volts coming out of them. We also looked at the various -- we got various displays on the panel that show the pressures, made sure all the pressures had come back. Also Gas Control was called to make sure they had gotten all their data back. And once that was confirmed, we then tagged the circuit breaker, it was open at that point and we tagged it so nobody would accidentally close it.

Q. And what was the capability of the mini UPS that you had installed on these when you opened that breaker? How long did you expect that UPS to basically --

A. Depending on -- it would depend on which circuit it was on. The one power -- for the transmitters, there were 1500 VA UPS's, and we calculated they would last for somewhere between 10 to 20 minutes depending on the load at the time.

Q. So, again, just in particular to the mini UPS's that you put on the circuit --

A. Um-hum.

Q. -- that you opened for PS2A and PS2B, and let's confirm, there was only one circuit, one breaker that fed both of these power sources, power supplies?

A. Are you talking about PS2A and 2B?

Q. PS2A and B, 2B.

A. Yes, one circuit breaker.

Q. Okay. So, when you opened the breaker and put on the mini UPS, what was the capability of that mini UPS? Is that the one you're referring to --

A. Yes.

Q. -- within 20 minutes?

A. Ten to twenty minutes, it depends on -- because the load is going to go up and down depending what the transmitters are reading.

Q. Um-hum. So, in effect --

A. But a minimum of ten minutes.

Q. Okay. And with the intent that that's all -- within that time you intended to, I mean, after that 10 minutes, 10 to 20

minutes the mini UPS is no longer capable of supplying power.

A. Right.

Q. Okay. So, the intent is to get the work done and put the breaker back in --

A. No.

Q. -- in that time? Or how does that work?

A. No. No. There are also two very large standby generators at Milpitas Terminal. Any time there's a power loss those generators would automatically start.

Q. Um-hum.

A. And there's two of them for redundancy.

Q. Um-hum.

A. And all of the mini UPS's were plugged in to emergency generator power. So, the generator takes somewhere between 20 and 30 seconds to start, come up, and sync on line. So, the mini UPS's just had to ride it out for 20 to 30 seconds.

Q. And even with the breaker open, the mini UPS's would be tied into the generator?

A. We -- within the terminal there are various outlets that are fed by the emergency power and those are the outlets we plugged the mini UPS's into.

Q. And the mini UPS's, when you plug them in, they're basically 120 AC type --

A. Yep.

Q. -- plug?

A. Yes.
Q. So, you're opening --
A. 120 in, 120 out.
UNIDENTIFIED SPEAKER: Let's go off the record for a second.
MR. CHHATRE: Off the record.
(Off the record.)
(On the record.)
MR. CHHATRE: Back on the record. You are back on the record?
UNIDENTIFIED SPEAKER: Yeah.
MR. CHHATRE: Okay.
BY MR. SHORI:
Q. So, after you install the mini UPS and plugged that into the generator, did the generator come back on to supply these --
A. No.
Q. -- power supplies?
A. The generator only comes on if we lose grid power. We still had grid power --
Q. Okay.
A. -- that day.
Q. All right. Thank you.
MR. KATCHMAR: Peter Katchmar, U.S. DOT.
BY MR. KATCHMAR:
Q. You used a couple of acronyms without defining --

A. Sorry.
Q. -- them. PLC?
A. Programmable logic controller.
Q. And I/O.
A. Input/output.
Q. Okay. What would happen if the breaker was, to PS2A and 2B, was closed after you put the UPS on?
A. One of two things. Either nothing would happen, or if the wires we had to pull off in order to tie our UPS on, if the wires, we taped them off, but if they happened, if the tape happened to fall off of the bare wire, if they would have struck a piece of metal, we would have, what am I going to say, we would have tripped the breaker which wouldn't have caused anything to happen, but it was just --
Q. Okay. It just didn't sound right to me so I had to ask.
A. Yeah.
Q. Thank you. I'm done.
MR. GUNTHER: No more questions.
MR. SPERRY: No questions.
MR. NICHOLSON: Just a couple of questions for you.
BY MR. NICHOLSON:
Q. Were there panel schedules --
A. Yes.
Q. -- of the --
A. Yes.

Q. -- EDP?
A. There's a panel schedule on the EDP.
Q. And it's accurate?
A. Yeah.
Q. You traced it out?
A. Um-hum.
Q. Okay. The emergency outlets you plugged into, are they colored?
A. Yeah, they're colored. I want to say orange.
Q. Okay. So, you know you're plugging into --
A. Orange or red, I can't remember.
Q. Okay.
A. But there was -- and they all had a label on them. I don't remember now if the label says EMC or EDP for emergency distribution, but I think they say EDP, emergency distribution panel, which is the panel they're suspended on.
Q. Perfect. Thanks.
A. Um-hum.
Q. That's all.
MR. CHHATRE: Javi Chhatre, NTSB.
BY MR. CHHATRE:
Q. You mentioned earlier that mini UPS's will ride out for ten minutes or so?
A. Ten to 20 depends on the --
Q. Yeah. I'm not --

A. -- load.

Q. I'm not concerned about the time as much as I am --

A. Yeah.

Q. -- trying to understand when you say ride out, meaning to -- are they acting like a small battery that even if they are not getting any juice, they can still supply? Is that what ride out means? What does ride out mean?

A. Ride out means if we lost grid power, then the UPS would have to supply the load from its own internal battery system.

Q. Okay.

A. That's what I meant ride out. Ride out input power loss.

Q. Okay. So, that means they are acting like a, are they acting like a battery then for ten minutes?

A. There's a battery with an inverter.

Q. Okay.

A. Because they got to take the DC and convert it to AC because it's all AC load.

Q. Well, I want to ask you this for my own clarification. There was a sketch prepared yesterday. In your earlier testimony you said some wires were loose and you were tweaking the wires --

A. Um-hum.

Q. -- and you got the power back in. I'm going to quickly show you this sketch that was done earlier and if you will just tell me on that sketch where -- what wires you are tweaking.

A. Okay. And I don't believe I said the wires were loose. I said we traced to this terminal block and we started removing and replacing wires to see if we could find where we thought the perceived short was.

Q. That is fine.

A. Okay.

Q. I was using it in a very loose sense. I just want to bring your to attention --

A. Yes.

Q. -- the wires are what I'm looking for.

UNIDENTIFIED SPEAKER: Do you want to look at a drawing, Ravi?

MR. CHHATRE: Yeah.

MR. CHHATRE: I lost my order, I guess.

UNIDENTIFIED SPEAKER: If I'd have known I could draw pictures before, I would have been drawing pictures.

BY MR. CHHATRE:

Q. I'll tell you what I was told on this --

A. Um-hum.

Q. -- correct me if I'm wrong, is actually backup for UPS.

A. Um-hum.

Q. This is backup generator for UPS.

A. Um-hum.

Q. And it is normal AC.

A. Um-hum.

Q. Coming from EDP to UPS.
A. Um-hum. Um-hum.
Q. And then it's going to UDP. Now all this --
A. And it goes out from there, correct.
Q. And what I'm trying to understand is when you are doing the work where you are putting those wires, the wire you referred to in earlier testimony where they will be generating this. I'm just trying to --
A. I'm not sure I understand exactly what wires you're talking about.
Q. Okay. I'm talking about in your earlier testimony a few minutes ago you mentioned that you lost power.
A. Yes.
Q. UPS, and then you guys are either pulling the wire one at a time and --
A. Okay.
Q. -- reinserting.
A. That -- those wire.
Q. Those wires.
A. Okay.
Q. Okay.
A. What do you want to know?
Q. Where that work was being done on this sketch?
A. Can I draw a little picture?
Q. Yeah, choose though a different color then you can --

A. I have to draw a little picture because this is -- well, I can put it right here. It's just this is not complete.

Q. Okay. Then draw the complete picture.

A. Okay.

Q. And for the record, just write down the date and your initials.

A. Okay. PS2A and 2B. This is the control panel. It was kind of a --

UNIDENTIFIED SPEAKER: Split panel.

MR. GROPPETTI: Here's where the -- this is the mimic panel.

BY MR. CHHATRE:

Q. You said mimic?

UNIDENTIFIED SPEAKER: Graphical display.

MR. GROPPETTI: This looks out to the old control room and this looks inside the, I'm not sure what they call that room. It's the old SCADA room.

BY MR. CHHATRE:

Q. That big room?

A. It used to be the SCADA room --

Q. Okay.

A. -- back in the day.

Q. Yeah.

A. Okay. And then over here on this -- so this has the power supplies, all the controllers are mounted here facing

outward. On the backside is where all the terminal blocks are, compartments and there are just lots of terminal blocks.

Q. Okay.

A. All the wiring comes in this way, gets fed here, and then there's some wiring that comes back out. But they all go through a terminal block.

Q. Okay.

A. Okay. I can't remember whether it was this compartment or this compartment because I just don't remember, there's some terminal blocks right here and I can't tell you what they're labeled, TBDC, TB24, something like that.

Q. Okay.

A. I just don't remember. The power from these two power supplies through their diodes come in to that side of the terminal block.

Q. Okay.

A. Okay. I'm going to take this --

Q. Can you do me a favor --

A. -- and I'm going to stand it this way. So, this is the 24 volts coming in. Then coming out of here we had six wires coming out.

Q. Okay.

A. Each of these wires fed a fuse panel. Each panel had like 20 fuses on it. So, that's -- the DC comes in from this power supply into this block, gets split up into six, and then

those six feed six fuse panels which then feeds transmitters, switches, all kinds of stuff. That's the terminal block where we started looking to see if we could find where the partial, what we thought was a partial short on the system.

Q. Okay. At the bottom maybe you want to write down terminal block, all the acronyms and abbreviations you have written down there.

A. The TB is terminal block.

Q. Okay.

A. PS is power supply. FP is fuse panel. And I don't think I used any other acronyms there.

Q. Okay. And PS2B --

A. 2A and 2B?

Q. Oh, 2A and 2B. They are both feeding that --

A. They feed from right here. This wire right here goes from PS2A and 2B.

Q. 2A. That is an inlet. Okay.

A. That's the inlet for that --

Q. Okay.

A. -- for this block.

Q. Okay.

A. Yes. And then it starts getting distributed and redistributed out of there.

Q. Okay.

A. This is the block that we ended up pulling wires out and

as we started putting wires back in --

Q. Okay.

A. -- when we got through finally we cleared the fault. So, whether there was something -- we don't know why.

Q. Sure.

A. It, you know --

Q. Well, the wires --

A. Ultimately, we cleared the fault.

Q. Where are the diodes?

A. The diodes are back here at the power supply. Right here and right.

Q. Okay.

A. Didn't draw them very clearly.

Q. That's okay. Just write it down and then that's enough.

A. Okay.

Q. Okay.

A. They're back right fairly close to the power supply.

Q. Okay. So, when you initially did that work, it was even working, is that correct? When you switched to those UPS's --

A. Yes, everything was working. When we brought that mini UPS, put the power supplies on the mini UPS, we then had one more circuit to clear and that was the communications room, but when we did that work, we checked to make sure all our pressures had come back up. We looked at indicators and all the pressures were up. We checked, we had 24 bolts. Everything looked good. We went and

did our work in the communication room, which was the last one we put in, and then when we came back out, it was still working. Everything was fine until approximately 5:20-something.

Q. Okay. I can't see it from here. Where is the UPS, those two UPS's that you used, where are those?

A. I'm trying to remember where we ended up putting them. I think we put it right here next to the control panel.

Q. Okay.

A. My spelling isn't too good. Sorry.

UNIDENTIFIED SPEAKER: That's all right.

MR. GROPPETTI: Right there.

BY MR. CHHATRE:

Q. Okay.

A. There's a door.

Q. And the -- so UPS is supplying to fed 2A and 2B?

A. Um-hum.

Q. Okay. Is that two UPS's or just one UPS?

A. Just one.

Q. So, one UPS goes to --

A. Yes.

Q. Those two are together fitting. Is that what you call panel? Is that the panel you're talking about?

A. This means control panel.

Q. Okay. And what is that small circle you drew? I can't read it from here.

A. That was just -- that was looking at the terminal block down and that was just like, just kind of looked to the side view of the terminal block --

Q. Okay.

A. -- to show the one wire coming in and the six going out.

Q. Okay. Yeah, one wire coming in, six going out, and those six are (indiscernible) feeding each (indiscernible) --

A. Each one feeds a fuse panel within that has 20 circuits that it can feed.

Q. Okay.

A. And the reason we only put one UPS in because the plan was the next day we were going to come out, replace UDP with the new one.

Q. Okay.

A. And return all the circuits back to their main thing.

Q. Okay.

A. But --

Q. And last question. How do you test that 24 volts was coming out? Where do you test that 24 volts are coming out?

A. We tested it at the power supply. We put a volt meter across each power supply to make sure we have 24 volts.

Q. Okay. And when you lost power, did you go back to those to make sure they are putting 24 volts?

A. When we what?

Q. Yeah. The only reason you, if I understand it

correctly, the reason you are tweaking with the wires is because you lost power.

A. The power supplies went into a state here they were fluctuating between 5 and 7 volts.

Q. Okay. At that time, did you measure what was the output from those?

A. Yeah. That's where I measured the 5 to 7 volts --

Q. Okay. That's --

A. -- on each one. I went to each one --

Q. Okay.

A. -- and we started turning one off, turning one, you know, and --

Q. Sure.

A. -- 5 to 7 volts, which to me indicate we had a partial short. Something was dragging it down.

Q. So, when you tweaked the wires, the power supply at those two units came back 24 volts with your readings.

A. After we had pulled all the wires out, looked for frayed edges on the, on -- because they're all twisted, they're all stranded copper wires, we looked to see if there was any strands poking out. We made sure they were twisted and we put each one in one at a time, got it all back together. At that time, of course, we had the power supply shut off because we were touching hot wires. When we turned the power supplies back on, they came back up to 24 volts.

Q. That's all I have. Thank you much.
A. Okay.
MR. CHHATRE: Anybody have follow-up?
BY MR. NARVELL:
Q. Yeah, Mr. Groppetti, I was just looking over my notes from --
A. Um-hum.
Q. -- the last time we talked. There was one item here just, I wanted to just double back with you on. After this --
MR. NARVELL: This is Rick Narvell from NTSB. Sorry.
BY MR. NARVELL:
Q. After the incident, did you undergo drug and alcohol testing?
A. Yes.
Q. Okay. What specimens did you provide and what times?
A. They -- we couldn't leave the site until we had it. They sent somebody out and they did a breathalyzer and a urine sample.
Q. Do you know about what times?
A. Mine was done, I was fortunate to be the last one. It was done about 4:30 in the morning that next morning.
Q. So, this would have been the 10th of September --
A. Yeah.
Q. -- correct? Okay. Have you been informed of those results?

A. Yes.
Q. And what did they tell you?
A. The breathalyzer was a zero and she gave that to me on the spot.
Q. Because it --
A. They did it, they had a little machine and it was zero. And then the next day I got a, I don't remember which day it was. It could have been -- it was either the next day or Monday. I just -- I think it was Monday, but I'm --
Q. That's fine.
A. -- kind of foggy. I got a call saying that I had passed the drug test.
Q. Okay. Great.
A. They didn't give me any numbers. They just said you passed the drug test.
Q. Great. Okay. Good. Actually, there were two other terms that you used --
A. Um-hum.
Q. Actually, Sunil used one and then you used one and I'll, since I have -- we have you here, can you describe briefly what a chromatograph?
A. Chromatograph?
Q. Thank you.
A. Yeah. A chromatograph is a piece of instrumentation that'll take a gas sample and break it down into its constituents,

different constituents of that gas and also will then tell you what the BTU value of that gas is.

Q. Okay. Thank you.

MR. NARVELL: And then, Sunil, you used an acronym EPS, could you --

MR. GROPPETTI: What?

MR. NARVELL: This is for Sunil. What's EPS?

MR. SHORI: I may have meant emergency power supply, if that's --

MR. NARVELL: Okay. And the reason I'm asking --

MR. GROPPETTI: UPS is an uninterruptible power supply.

MR. NARVELL: No, this is E, like in Edward, PS is what I thought --

MR. GROPPETTI: Oh, EPS.

MR. NARVELL: And the reason I'm getting this, just for your clarification, is just for transcription purposes.

MR. GROPPETTI: Sure.

MR. NARVELL: So, all right. Thank you. That's all I have.

MR. CHHATRE: Follow up for City?

MR. CALDWELL: Nothing.

MR. CHHATRE: Follow up for PG&E?

UNIDENTIFIED SPEAKER: Do you have any follow up?

UNIDENTIFIED SPEAKER: No.

UNIDENTIFIED SPEAKER: No.

UNIDENTIFIED FEMALE SPEAKER: No.

MR. SHORI: CPUC, Sunil Shori, just one follow up.

BY MR. SHORI:

Q. The red or orange backup plug that you plugged this in, is that on a parallel circuit with a generator and the city's, or the -- and grids apply?

A. There's an automatic transfer switch that grid power is lost, the transfer switch will switch off of grid power to generator power.

Q. Okay.

A. Once the generators come up on line --

Q. Right.

A. -- start, come on line and come up to full voltage and full speed, then the transfer switch will transfer off of grid power to the generator power.

Q. Okay. My understanding, and I may be wrong, is that the generators never came on in this event.

A. We never lost power.

Q. Okay. So, in that particular case, that's what I'm saying is so basically the same receptacle that you plug this into, it would have grid power on it, and if you were to lose grid power, it would switch over to generator power. But so while you're plugged in it, there's always either grid power or generator power --

A. Correct.

Q. -- that would be on it.
A. Except for maybe that 20 to 25 seconds it takes the generator to come up.
Q. While it does the switch. Okay.
A. And that's why the UPS's are there to bridge that --
Q. Okay.
A. -- start up time.
Q. All right. Thank you.
A. Um-hum.
MR. CHHATRE: Anybody --
UNIDENTIFIED SPEAKER: Anybody else have any questions?
UNIDENTIFIED SPEAKER: Anybody else?
MR. NICHOLSON: Yeah, I do.
UNIDENTIFIED SPEAKER: Matt.
MR. NICHOLSON: A couple of questions. This is Matt with NTSB.
BY MR. NICHOLSON:
Q. Who sized and selected the mini UPS's that were installed?
A. I basically told them to get the biggest thing they could get off the shelf, which was a 1500 VA.
Q. 1500 VA.
A. Which would have been plenty because that would have definitely handled a 20 amp circuit for, you know, a period of time. We only needed ten minutes.

Q. Okay. And you're sizing for a 20 amp circuit.
A. Yeah.
Q. Okay. And they were new, not salvaged?
A. They were new.
Q. Okay. The feeder blocks --
A. They were APC brand, if you're interested.
Q. Thank you. I was going to ask later. The terminal block that you tied into, it was a fuse terminal block and from your description I'm gathering all the fuses were in tact.
A. Say that again.
Q. Where you tied that power supply, the DC side of the power supply into a terminal block, you said five takeoffs all fused.
A. Six.
Q. Six. Sorry, fused. I thought you said they were fused.
A. No. I said they, each of those circuits fed a fused panel.
Q. Okay, downstream.
A. Which then had 20 circuits going out of it.
Q. And those fuses downstream in the fuse panel were all in tact?
A. Yes. We checked to make sure we had no blown fuses and all the fuses were still in tact and they were all still in tact. They were -- they are indicating fuses.
Q. Okay. Thank you.

A. Um-hum.

MR. CHHATRE: I have no follow-up questions.

All right. If nobody has follow-up questions, thank you very much for coming --

MR. GROPPETTI: Um-hum.

MR. CHHATRE: -- second time. I appreciate your help.

And we're 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 John Groppetti
DOCKET NUMBER:	DCA-10-MP-008
PLACE:	Burlingame, California
DATE:	January 5, 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.

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Mary Anne Jones
Transcriber