ENBRIDGE PIPELINES INC.

INTERVIEW

OF

DAVID SCOTT

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INTERVIEW OF DAVID SCOTT, TAKEN AT 2:19 P.M.,

MR. JENNER: Good afternoon. Today is Wednesday, July 28th, 2010. My name is Stephen Jenner, and I'm an investigator with the National Transportation Safety Board in Washington, D.C. We are currently in Edmonton, Canada, at the Crown Plaza Hotel, and this is in regards to a pipeline release of crude oil in Marshall, Michigan, that occurred on July 26th, 2010.

I would first like to go around the room and have everyone introduce themselves, and if you would, just state your name with the correct spelling, your title, and who you're with. I'll start to my left.

MR. GULSTAD: Okay. I'm Rick Gulstad. I work for PHMSA, Pipeline and Hazardous Material Safety Administration. I'm a staff engineer with

[redacted]

[redacted].

MR. TOLLEFSON: Tyler Tollefson. I'm with Enbridge Pipelines. I'm a senior legal counsel.

MR. GOESON: I'm Curt Goeson. I'm with Enbridge Pipelines. I'm control centre supervisor.

MR. JENNER: Okay. David.

MR. SCOTT: I'm David Scott, control centre operator trainee.

MR. JENNER: Very good. Thank you.

MR. GULSTAD: Karen, why don't you introduce yourself.

MS. BUTLER: I'm Karen Butler. [redacted] [redacted] but I'm currently in D.C. this week, and I am a program -- regional program manager.

QUESTIONS BY MR. JENNER:

Q MR. JENNER: The first person we'd like to talk to is Mr. Scott. So would you please state your full name with the spelling?

A David Scott, D-A-V-I-D S-C-O-T-T.

Q Thank you, David. Could you give us your address and telephone number and cell number, please?

A [redacted].

Q Do you have a -- who are you employed by?

A I'm employed by Enbridge Pipelines.

Q And what is your current position?

A Operator trainee.

Q And how long have you been a trainee, considered a trainee?

A One month.

Q All right. I'm just going to ask you some general questions about your background. Can you tell me how long you have been with Enbridge.

A 31 years.

Q If you would walk me through just how you got

started, what capacity, and how you worked your way up to where you are now.

A I started in Edmonton terminal as a utility man, worked my may up to a gauger or relief gauger. That was over a two-year period. Since then, I've been in operations.

Q And how long in operations?

A 29 years.

Q And could you give me a little detail about what you do in operations?

A I was an operator. I run pipelines from Edmonton, Alberta, Canada, down to Superior, from Superior through Griffith back to Sarnia.

Q Are you -- now, you called yourself a trainee. Can explain why you're -- why you gave yourself that title?

A Because I've been off work for -- I was off work

for six months due to a major illness, and I've just returned back to the control centre in the last month.

Q But prior to six months, you were a qualified or certified pipeline controller?

A Yes.

Q What is the official title of what we're talking about? Is it an operator?

A I was an operator.

Q And, again, I'm sorry, in that capacity, how long

have you been an operator?

A Up until my sickness, it was 29 years.

Q 29 years. Okay. How long is this process of, oh, I'll call it refresher training? How long is that expected to continue?

A There was no set time frame.

Q Okay. Have you -- things coming back to you pretty well, do you think?

A Yes.

Q On the last couple of days since Sunday, have you been the primary operator? Have you been the one making decisions about product movement?

A Decisions for product movement actually come out of Calgary from shipper services.

Q I'm sorry, just to clarify, opening and closing valves and monitoring. Were you operating the SCADA?

A I was operating with a mentor the SCADA system.

MR. GOESON: Sorry, Stephen, is that since Sunday was the question?

Q In the last -- on Sunday.

MR. GOESON: Okay. On Sunday.

Q MR. JENNER: Okay. Were you the primary operator, if that makes sense, and you were being overseen, or were you observing?

A I guess, then, I would be the primary operator with a trainer sitting next to me.

Q Okay.
A Advising me or telling me details.
Q Well, what I would like for you to do is if you can just walk me through your shift that day, what time you arrived at Enterprise and walk me through the shift changeover and some -- if any information significant stands out, if that was discussed, if you let me know about that.
A I came into the office about 0615 hours daylight time, started to take my rundown, took over about 6:30 daylight time. Was advised that there was a number of jobs going on at the time, inspections, people out working on the pipelines.
Q Was it --
A Pretty standard.
Q In terms of workload, was it a pretty normal, higher workload, smaller workload than typical, or

was it a typical day?

A Smaller workload.

Q Would you conceptualize it as just standard operations?

A Yes.

Q Pretty routine day?

A Yes, pretty routine day.

Q Okay. If you can just continue on. From 6:30, what were some of your activities?

A Doing CMT on the odd hours of Mountain Standard

Time, which is 7, 9, 11, 1300, 1500, 17. That's Mountain Standard Time.

Q And please explain what doing CMT is and what it involves.

A Is the tracking of the commodity of the oil in the pipelines. It's a paper -- computer paper initiated thing. So we do all our checks and balances on those numbers. We set up all our times on those numbers.

Q Okay. What information are you looking for?

A Discrepancies, trying to find out when your next swing would be. We set those up six hours in advance. If I have to make any rate changes because of new pump orders with Dean Such.

Q Now, from the times you just named, when you do these CMTs, were they all pretty much as expected? Was there something, any one of them you consider

abnormal?

A No, they were all perfect.

Q Can you tell me some other activities you were doing in addition to the CMTs, the scheduled ones?

A Running the pipeline, talking to pig trackers who were on line 6B at the time.

Q Did you have deliveries to make during --

A When I came into work, I was already delivering into Stockbridge, Minnesota.

MR. GOESON: Michigan.

A Michigan, sorry.
Q MR. JENNER: And anything else?
A No, I was in there until the time I shut down.
Q Okay. When we -- from my understanding of what I learned earlier, there was a scheduled delivery shutdown?
A Yes.
Q Can you tell me about that?
A There was a scheduled shutdown for a tankage conflict at Griffith at about 1500 hours Mountain Standard Time.
Q For, I'm sorry, for tankage?
A No -- well, the tankage problem was at Griffith.
Q Right. Okay.
A So on completion of the delivery at Stockbridge at 1457 hours Mountain Standard Time, I started to shut down the pipeline in standard procedures.

Q And what was the problem at Griffith?

A They didn't want to prepump a batch.

Q And?

A That comes from scheduling in Calgary.

Q So this is sort of a scheduling conflict?

A Yeah, I guess.

Q How -- is this something that happens now and then, or is this very rare that you have to address this type of problem?

A It happens. The customer doesn't want their oil

until a certain time, so it's pretty standard.

Q Pretty standard. Okay. That's all. So if you walk me through the process of shutting down, it was a scheduled shutdown, so what are some of the SCADA inputs that you need to do or people you need to talk to?

A I talk to the Griffith terminal operator and ask him, on the stopping of my units, to stop his boosters.

Q Okay. Did that go okay on their end?

A Yes. I -- from SCADA, I stopped my units at Griffith. I stopped my units at La Porte as the pressure drop came through. As the pressure drop came through Mendon, I stopped my units there. And I raised my holding at Stockbridge to slow down the flow of oil so I didn't break the column or drain too much up.

Q Okay. Before you continue, break the column, if you would just tell me what that means and what it means to you.

A Column is when you cause the pressure to be too low at a high point.

Q Okay. So were you successful in doing what you set out to do?

A Yes.

Q So I think the last thing, you addressed Mendon?

A Mendon, yes. As the pressure drop came in to

Niles, actually, it's Niles and Mendon, I dropped the units there. As the pressure drop came into Marshall, I dropped the units. At that time, a few seconds later, I got an MBS alarm, Material Imbalance System alarm, and that was at about 1502 hours.

Q And what does that tell you, the MBS alarm?

A That there's a discrepancy. So I phoned my shift lead, advised him that I had a five-minute MBS alarm at those -- between the two locations that it signified.

Q You phoned your shift supervisor, is that -- I'm sorry.

A My shift lead, yes.

Q Shift lead, yes.

A I call him my shift lead. He called MBS. At that, I continued to raise my holding at Stockbridge.

Q Okay.

A Once I noticed the flow had stopped into the tanks, I closed the delivery valve, the tank valve, and the sectionalizing valves, all standard procedure.

Q You are closing all these valves?

A Yes, because the line was shut down. At 1506 hours Mountain Standard Time, I got an all clear from the MBS analyst saying it was a column separation, and at that time I also got an alarm from SCADA saying that that alarm had cleared.

Q And this alarm on SCADA, does this come up on a designated alarm screen?

A Yes.

Q And what -- are they separated by colours?

A Yes. Severity 8, red.

Q And what colour was this?

A It was red.

Q This was red?

A It's a high priority alarm.

Q Is there an audible?

A Yes. It's audio-visual alarm?

Q Are all the alarms audible, or just more the critical ones, the red ones?

A They're all.

Q What colours are there in terms of alarms?

A Green when you're starting or stopping units, S4. There's an S6, it's a little bit more critical, and

then the S8s.

Q And each one of those has --

A Different colours, and they're all audio-visual alarms.

Q The same tone, the same audible tone?

A Yes.

Q Just a bit of a side note, what -- do you like the audible part of the alarm?

A Yes.

Q So if you would just elaborate on, you used the

term discrepancy. What is the discrepancy that you're referring to?

A It just said that there was a five-minute imbalance between two locations.

Q And what does that mean to you? When you look at that, what is the significance of that, a five-minute imbalance? What's happening in the pipeline?

A That it wasn't -- it was missing some data. There was something that -- the computer itself that runs MBS, there's two different systems. I'm not sure what they are. And it -- to one set of numbers to the other set of numbers, there was an imbalance, and so it rings to say there may be a potential problem.

Q Okay. So when you're saying missing some data --

A Not missing data. They're -- the two systems are

not lining up properly.

Q The numbers --

A The numbers.

Q -- are not matching up. Okay. And that causes, was that the first alarm? Was this -- it showed up as an alarm?

A Yes.

Q And that's when you started to make your calls?

A Yes.

Q Okay. If we can finish that part of the sequence,

you had finished closing valves according to procedure?

A Yes.

Q What happens from that point? You got an alarm from a SCADA that -- the SCADA information that the alarm had cleared.

A Yes.

Q Okay. So what does that tell you?

A That it had cleared. Whatever the two systems were -- numbers weren't jibing, they came back into line.

Q Do you have any idea why the numbers, is there any reason from the SCADA that would help you understand why the numbers weren't...

A No. Not my expertise.

Q Whose expertise is it to understand why there is a discrepancy when -- in real time?

A The MBS analysts.

Q Okay. So as far as you're concerned, did the whatever happened was causing the initial alarm, that was resolved?

A Yes.

Q Okay. All right. Can you -- what were some of your -- after all the valves were closed, the SCADA's saying it had cleared. Were you done with that situation?

A Yes.

Q What were some of your activities for the remainder of the shift?

A I talked to a local electrician and had him set up a station for a pig bypass that was an hour away from the restart. We set that up. He bypassed the station. I did my 1500 CMT. All my numbers looked good at that point.

Q Now, with the scheduled line shutdown, how long was that in effect?

A I shut down from -- I was supposed to shut down 1500 hours to 0100 hours.

Q 1500, I'm sorry, until?

A 0100 Mountain Standard Time.

Q Right. And how -- you were supposed to, and is that -- how close were you?

A Three minutes early.

Q Okay. But very close.

A Yes.

Q Was the line started up again during your shift?

A Not while I was there.

Q Does that mean it occurred after your shift, after your shift ended?

A Yes. Well, the line was supposed to start up at 0100 hours. I have no idea what transpired after I left.

Q And your shift ended at what time?

A About 1730 Mountain Standard Time.

Q And this is Sunday night?
A Yes.
Q During the -- you had a shift handover to the oncoming operator?
A Yes. That started about 1715 hours Mountain Standard Time.
Q What were -- do you recall some of the things that were discussed?
A Maneuvers I'd done during the day, that I'd finished the Stockbridge delivery. When he started up, he was supposed to start up from Griffith to Sarnia -- actually to Marysville was our next scheduled delivery. I told him about the pig bypass. I'd set it up. I'd set it up with the electrician and the pig trackers that we're shutting down at 1500 hours, starting up at 0100 hours. The station was on bypass, and we're all

set to go. And the electrician would be out in the morning to turn the station back on when required. I told him about the MBS alarms, and the rest was standard.

Q When you were nearing the completion of your shift, did you have any additional alarms to suggest any discrepancies or any abnormalities in the system?

A No.

Q So by the end of your shift, you were satisfied that things, operations were normal?

A Yes.

MR. JENNER: Well, that's the questions I have for right now. We'll send it around the room.

Rick, do you have any questions?

MR. GULSTAD: Oh, I'll let Karen go ahead.

MR. JENNER: All right. Karen Butler.

QUESTIONS BY MS. BUTLER:

Q MS. BUTLER: Yeah, first of all I just want to start out by telling you how happy I am that your long-term illness is over, and we can all celebrate that. And in listening to this, I don't want to lose track of that.

But as we step through here, there's some things that I'm going to ask you that are just simply to clarify my understanding of what you said. So when I ask these questions, don't be afraid to, you know, maybe give me a little lecture

on what you meant to say or what you think is standard procedure, okay?

A Okay.

Q When we talk about the column, there being a column separation, is that, to you, something similar to a slack line condition? Have you heard it called a similar technology or similar term, or is that something totally different to you?

A No, it'd probably similar.

Q Okay. Is there anything that that brings out

that's different to you? Like when I say slack line condition, does that mean something different that's slightly different than the column separation alarm?

A Well, to me it would mean that you're running low pressures.

Q Okay. Does that particular section of line typically run in a slack line condition or frequently run in that condition?

A Not typically.

Q Okay. When I say -- when you say not typically, does that mean to you that normally you don't have to contend with that type of condition but on occasion you have before?

A We have -- yes.

Q Okay. All right. And is that something that you find a little bit more challenging to deal with?

A No.

Q Okay. And is that something you have some specific training about besides your previous experience?

A How do you mean specific training?

Q Like sometimes when you go through slack line training between different controllers and say they have different testers, there might be one person that says the slack line condition will look like this on this particular line, and by the way, there's a back pressure control valve that you need

to adjust up here to eliminate that and when you do that, you should do it in the following intervals. And then another particular trainer might say I don't usually use that back pressure control valve. I use something else, and that's how I handle the slack line condition. So have you had any specific training on that particular line segment on how to handle that slack line condition?

A Not -- no.

Q Okay. And regarding that, is there a back pressure control valve or anything that you can set besides changing your pump configurations to adjust for that slack line condition?

A Yes, we have pressure control valves.

Q Okay.

A It's hard for me to understand what you're perceiving as slack line conditions.

Q Okay. I'm just talking about where you don't have the line as packed, so to speak, as you would like, and you begin to develop a void, so it's not totally full. And I think that you said this is when you're looking at a high point. You don't want it to get too low, the pressure to get too low at a high point, which would be similar to what we're frequently calling a slack line condition, where there's almost a gap there.

So I just -- you say it in your own terms

where -- that there is a pressure control valve or a control valve that you can adjust the setting on, is that correct, in order to keep the pressure high enough at that high point that it doesn't cause you to have this column separation alarm? Is that fair?

A Yes.

Q And that pressure control valve that you would adjust, can you tell me, like, what it's called or if there's a number that you remember on the screen? If you don't, that's fine. But if you could tell me, like, vaguely where it's located, that would be helpful.

A Well, our pressure control valves work on either the suction or the discharge side of either station.

Q Okay.

A As to the physical location, I would look at my SCADA display.

Q Okay.

A Typically they're on the downstream side of the station.

Q Okay.

A As to reality, I don't know where they would be.

Q Okay. That's fine. Regarding this particular one that you would have adjusted to eliminate this column separation alarm that came in, where was

this? Was it -- what station was it closest to?
Forgive me, but I'm not looking at a schematic.
MR. GOESON: All right. So I just want to, sorry, I just want to clarify for Dave, because I believe Karen's referencing his comment, he said -- talked about raising the holding on the line. I believe that's what she's referencing, just for clarification.
Is that right, Karen?
MS. BUTLER: Sorry, could you say that louder? Forgive me, I'm --
MR. GOESON: Sorry, Karen, I'm just trying to clarify for Dave that I believe you're referencing his comment about the line shutdown when he said --
MS. BUTLER: Yes.
MR. GOESON: -- we raised the holding. Is

that correct?

MS. BUTLER: Yes.

MR. GOESON: And so you're asking the location of that particular valve?

Q MS. BUTLER: Yeah. And if you actually can give me, if it's got a valve number, if you know that, great, and if not, we'll just wait until we have a copy of the display.

A I do not know the valve number.

Q Okay. That's fine. That's fine. Okay.

A And the actual --

Q At some point we may need somebody to explain which valve that is. Okay. So I want to go back just a little bit from that now that I understand a little bit more of what was going on in the middle. And I think you said that when you came in, it was like a below average day, maybe, or close to average regarding the number activities that you had to check up on. And I take it that we're running a pig somewhere in here; is that correct?

A Yes.

Q And can you talk to me a little bit about -- had that pigging operation been going on for a continued amount of time, or had it started actually and stopped? Was the pig stuck? What all was going on with that pigging operation, based on what you know?

A When I came in, the pig was in the line. I believe it went in on the Saturday, and it had stop -- it had run continuously up until the time that I had shut it down.

Q Okay.

A In fact, according to the schedule, there was no -- supposed to be no shutdown.

Q Okay. So talk to me a little bit about that, so I get squared away. I assume what you're talking about is we know that we're running a pig. Were we

running a smart pig, do you know?

A It was a cleaning caliper tool.

Q Okay. So on your cleaning caliper tool, that specifically -- did they give you, like, any velocity considerations, or were you having to deal with any type of movement control on the pig itself?

A No.

Q Okay. All right. And when they tell you that there's no scheduled shutdown but yet you knew you had to shut down according to, I think what's a commodity schedule that you're referring to, did that mean that they just meant that the pig was going to run continuously? But obviously you had this scheduled delivery shutdown, and as a result of that, the pig had to stop? Is that what I'm picking up?

A Yes. When they originally set up the schedule for the pig, it was supposed to be continuous flow.

Q Okay.

A But because of problems, they had to shut down the pipeline, which is not uncommon.

Q Okay. All right. So they had to shut down the pipeline, and they had to shut down the pine line only because of the delivery schedule; is that correct?

A Yes. The injection schedule, actually, not the

delivery.
Q Oh, thank you for clarifying that. All right. And so which meant that the pigging operation would simply be delayed, right?
A Yes.
Q Now, was there anything else going on maintenance-wise on that particular line that you're aware of or remember from having shipments on?
A Earlier in the day, there was crews working along the pipeline.
Q Okay. When you say crews working along the pipeline, were they clearing right-of-way, or were they working on maintenance of some type like doing -- the technicians calibrating sensors? What was going on?
A There was a couple backfilling jobs going on the

pipeline --

Q Okay.

A -- from a previous dig. And there's a couple guys working downstream of Stockbridge doing digs, which had no effect on the pipeline.

Q Okay.

A And there was a couple guys doing cleaning -- clearing and prepping to do jobs upstream, earth or, you know, bush clearing and...

Q Okay. And was that clearing and digging work,

nothing was going on in the vicinity of where we would have shut down and had the column separation alarm or had any other imbalance calculations or do we know?

A Don't know.

Q Okay. All right. Thank you. So as we're talking about that pigging operation and as far as we know everything was going on and we had these previous digs, this was previous digs, because they'd found some anomalies? Is that what I'm understanding?

A Yes.

Q Through a previous pig run? So they had found some anomalies. Okay. All right. Can you talk to me a little bit about the types of activities that you traditionally contend with? Like, for example, do you answer a lot of phone calls in the day? Is it like the line rings to you and each person in the

control room takes a shot at it, or how's that set up? How does that work?

A I get calls that are only pertinent to my lines. We have dedicated lines --

Q Well, talk to me a little bit -- talk to me -- let me clarify that for you, I apologize. So calls would come in, whether it be, let's say it's on the 800 line, does that come into your lead supervisor or does that come directly to console phones that are rotated based on whoever's available to take

the call or how does that work?

A All the emergency calls go to the shift leads.

Q Okay.

A I only deal with my pipelines. I have dedicated telephone lines that the guys use to reach my lines.

Q Okay. And when you say the guys use to reach your line, would that be maintenance as well as, say, customers that need some manual valve switching or something?

A Just my electrical/mechanical crews or anybody who's working on a right-of-way that I'm controlling.

Q Okay. And as we go through this, did you get any emergency calls that day or...

A I took no --

Q Is that the --

A That'd be up to the -- I do not know.

Q I'm sorry. I interrupted you. Could you repeat that?

A I do not know. I didn't take any calls.

Q Okay. All right. So from the dedicated personnel that would be calling you specifically associated with your pipeline segment, was there any specific activity that they would have called you about that stands out in your mind besides the cleaning -- or the pig run operation?

A No.
Q Okay. Normally when you're sitting at your console, do you have any specific manual tasks? Like I consider picking up the phone in certain circumstances a manual task. Is there anything else that you're required to do manually?
A No.
Q Okay. Are you running any calculations independently besides on your over and short system or your imbalance system?
A I -- no, I calculate the times, that's...
Q Okay. And then in your standard operations on that console, do you -- are there a lot of valving arrangements that you automatically control, or are you also monitoring circumstances where somebody else in the field has control over those valves?
A I have control over those valves. If I was talking

to an electrician, he would have to be at the valve talking to me.

Q Okay. And then the way that that would work is would you tell him you need to open or close that valve, and he would tell you what's happening as he does it?

A If he was checking them, like on a DLT check.

Q Okay.

A But --

Q So basically -- oh, I'm sorry. Go ahead.

A But he -- nobody -- I control all the valves, and they have to get permission to move anything.

Q Okay. And when he does move something, on your particular screen, is there any of your valves that, say, you have to manually change the status of in order to have the correct position, or are they all automatically changed for you?

A They automatically change.

Q So the switches --

A They automatically change.

Q All right. I think that you said, and forgive me for repeating this, but I think you said that in the process of shutting down, other than receiving that alarm, which did appear to clear itself, and the MBS, which I take that five-minute MBS, is that your leak detection system, or is that your over and short system --

A Leak detection system.

Q -- imbalance?

A Leak --

Q All right. So that's your leak detection system.

So you had a leak detection five-minute alarm, and that alarm is separate -- and I want to clarify that, and it may not be separate -- from the column's separation alarm?

A No, they would be the same.

Q So those are two same alarms. Okay. So we're just

calling it two different things; is that correct?
A The MBS or Material Imbalance System is the computer that analyzes what the pipeline is doing.
Q Right. Okay.
A What the technician or analyst said to me was he said it was column separation which was triggering the alarm.
Q Okay. So basically one was cause and effect. So we're thinking what was said to you was that there was a column separation or, from my viewpoint, I would say slack line condition, that was causing the leak detection alarm, which in turn was a balancing system alarm. Okay.

Could you repeat for me, simply because I missed it, as you were saying it, I couldn't hear. As you were shutting down the valves, you mentioned a specific, I think you did something first and

then you followed -- you stopped flow into the tanks, I think is what you said. You closed the delivery valve, and then you said something else about the valves, some other line where valves were closed. I don't know if that was the pipeline valves or what specifically you said there, so could you fill me in on that?

A Okay. I raised the holding. I closed -- once flow had stopped into the tank, I closed the delivery valve. Then after a few minute -- after a minute,

I closed the tank valve.
Q Okay.
A Or the manifold valve.
Q Okay.
A And I closed the upstream sectionalizing valves according to procedures.
Q Okay. And when you say you raised the holding at Stockbridge, what does that really translate to, tank level? What are you raising?
A I think you would understand if I said I started to close the PCV, the pressure control valve.
Q Okay. All right. On alarming, I got a bit confused once again, but that was simply because maybe I'm trying to listen long distance and not catching everything. I heard like an S6, S4, S8. Are those priorities of alarms, or is that like a different type of alarm?

A Priorities.

Q So that is the priority. All right. So you mentioned that a red was a high priority. What level is that, is it an S1, an S what?

A 8.

Q An S8. Okay. So then an S4 is less significant?

A Yes.

Q Is that correct? Okay. And so does that imply that you have eight levels of alarms or priorities of alarms, or is there really only the S6, S4, S8

that you mentioned?

A Those are the only ones that we receive, yes.

Q Okay. And when I'm sitting at your console and I'm getting ready to open or close valves, do you traditionally send a command and then you receive, after a period of time, that the valve's actually started to travel and then it tells you when it's actually closed? Or tell me what usually happens from your perspective.

A I would send a command. I would get an audio-visual alarm saying that the valve is going open, in travel open or in travel closed, depending on the way I'm sending it.

Q Correct. Okay.

A On the valve display, the colour of that valve would change.

Q Okay.

A As to the direction it is going -- traveling, either open or closed. Green being open, red being closed.

Q Okay.

A Once the valve has sequenced, then I would get an alarm stating, an audio-visual alarm stating that it has traveled to the position I asked, and on the valve display, it would also show that valve in the position that I required by the change of colour.

Q Okay. You briefly mentioned that there were two

different systems comparing their balance (indiscernible) basically, I think, to each other and that they were different and they didn't match, so that's what triggered the alarm. And then we asked why that might happen, and short of the explanation that was given to you, I think by the leak detection person, that the column separation had done it, is there anything else that we ought to know about that particular sequence that struck you as odd? Was there anything that struck you as odd in that whole sequence?

A No.

MR. JENNER: Karen, can you just rephrase the question, please, starting with the --

MS. BUTLER: Oh, sure.

Q MS. BUTLER: I think -- I was looking back at some notes that I believe were a follow up to a

previous question where we asked to elaborate a little bit on the five-minute imbalance and what it meant to the controller -- or operator, forgive me, and missing -- we made a comment about we might be missing some data or something that was being computed in the computer itself. And then we talked about two different systems not having the same numbers, and so that generated an alarm. And we kind of asked why that might occur, and I didn't really get a good feeling that we had a good

explanation for why, other than we definitely did have some input from someone that the five-minute MBS was the result of a column separation. I thought that that column separation information came from a leak detection specialist. If that's not true, I just need to clarify that for me.

A It would come from the MBS analyst.

Q Okay. And that is our leak detection system, correct, the MBS?

A No.

Q Okay.

A There's -- it's a model. It's a computing -- computer modeling system.

Q Okay.

A That analyzes thousands and thousands of bits of information.

Q Gotcha.

A Now, the analyst, I believe, is the one who, at that discrepancy, would go into the model and see what it's telling him.

Q Okay. From that standpoint, then, other than what you were told by the analyst, was there anything else in that timeframe where you received the five-minute MBS alarm that struck you as odd?

A No.

Q All right. Thank you for your patience on letting me rephrase that.

I think there's just a couple more here. You mentioned that you called out, I believe, to an electrician and had them set up a particular station for a pig bypass. Was that a valving station or a pump station? I missed that part.

A That was a pump station.

Q Okay. And which one was that?

A Niles.

Q Thank you.

A And that was done after the pipeline was shut down.

Q Okay. And based on how this would occur, since then the pig was stopped but we're setting up for the pig to run again, right, by bypassing that particular pump station, then is that something that traditionally goes in some type of maintenance system? Do you have to enter that information anywhere?

A No. It's not entered. That's pretty much standard. Electricians are there, and the pig trackers go downstream or go to the station and listen for it to go through the pump station.

Q Okay. And so basically when we talked about the fact that he would just duck out, in the morning, then, that's when we're first thinking that the line would be back up and the pig would be moving. Was that a correct understanding of that last little bit there?

A Yeah, the electrician was going to come out after the pig was through.
Q Okay.
A And what I call or we call deisolate the station and actually putting that pump station back into service.
Q Okay. Do you have anything in your SCADA system that looks at, say, communication statistics, or is there anything that you can see as a controller that indicates whether points are communicating effectively?
A Yes.
Q Okay. So explain to me what that is.
A We work on a WAN system, wide area network, and if that fails, we get a little telephone or a lightening bolt which means it's going to the backup system which is dial up.

Q Okay.

A We also get -- the station that is what we would call comming out or losing communications on the left-hand side going to the right starts to turn into a gray box highlighting that line or lines.

Q Okay.

A And typically after a minute or so, communications are restored through the dial backup.

Q Do you have to activate the backup system yourself, or is that automatically triggered?

A Automatically triggered.
Q Okay. And on this particular day, on line 6B, did you have any communication outages that you're aware of?
A Not in that sector, no.
Q Did everything on your console appear to be functioning correctly?
A Yes.
Q Okay. What about any instrumentation?
A Perfect.
Q Do you guys keep logs, handwritten notes about your shift?
A Can you elaborate?
Q Yeah. Well, sometime, you know, controllers will usually have the formal shift change that they've got and they'll take typing of notes for the next person coming on, like I've got a pig operation.

The pig's located between here and here. The line's shut between here and here. But a lot of times there's other things that they're noting. Like they might just keep a notebook sheet, maybe it's in your computer, that'll say things like this particular element appears to be sluggish or I had to activate this twice today, unusual, or might think about looking at this particular element, it could be streamlined and more effective. Things like that.

A No. I did have the pig run sheet out, because we have to keep track of when all the trackers call us.

Q Okay?

A But I have no formal rundown sheet.

Q Do you have a formal shift change sheet?

A No, not that I'm aware of yet.

Q Okay. So basically the information that you exchanged, is that pretty much just based on your memory, and you just do it verbally?

A Yes.

Q Okay. So I believe that the last part we left with was that we had exchanged shifts, and I think you left about 1730? Is that correct?

A Yes.

Q And the line was still shut down, and you had no reason to believe that there was anything going on

that was unusual?

A No.

Q Okay. Is there anything that you've been specifically trained on regarding abnormal operating conditions?

A Yes.

Q Can you talk to me a little bit about that, because you mentioned maybe not on slack lines or what we had previously talked about a little bit, but what are some of those that you have been trained on?

A Well, we do ERT, emergency response training.
Q Okay.
A And we run simulations.
Q Okay. Any specific thing that might come to mind? Like do you run anything around running a pig?
A In our simulations, we do station bypasses which are similar to running pigs.
Q Okay. For this sequence I don't want to get out of order for you regarding, I think, what maybe our NTSB partner has planned next, so at that point I'll end my part.
MR. JENNER: Okay. Well, we'll continue around the room. Do have any follow-up questions.
MR. GULSTAD: Do you want me to go next?
MR. JENNER: Oh, sure. I'm sorry.
QUESTIONS BY MR. GULSTAD:
Q MR. GULSTAD: Just a couple of points of

clarification. Where was the pig when you started your shift, and where was it at when you ended? Do you know --

A I don't know specifically. It had just gone through La Porte. I think the second one had just gone through La Porte hours before I came in. Could have been at 4:00.

Q The second one?

A The second one.

Q Second pig?

A Yes.
Q So they were running more than one pig?
A Two pigs. Two pigs two hours apart.
Q Okay. But they were upstream of Marshall, anyway?
A They were way upstream of Marshall. They were way up -- they were upstream of Niles station.
Q And Niles is closer to Griffith?
A Yes.
Q And as far as you know, both pigs were moving well on your shift?
A Yes.
Q And then they stopped when you shut down?
A I got confirmation from the trackers that they had -- the first one had stopped.
Q And they were both well upstream of the --
A Over an hour upstream of Niles station.
Q And then you talked about missing data for two

locations from that MBS alarm. Where would -- do you know where the data was missing from?

A I have no idea where the data comes from. I don't even really understand the system. I know it has two different -- it looks at two different things, and it has to be within a minuscule balance.

Q Okay. And what was your definition of a column separation again? A column is what?

A A column is the oil.

Q Yeah, okay. But column separation, then, is?

A When you would separate the oil at a high point where you would -- it would actually cause a low pressure.

Q Yeah?

A The pressure would get too low, because your pressure coming up the hill and your pressure going down become different.

Q Oh, okay. And is there a significant elevation change along that pipeline somewhere?

A No. No, I don't know. Not significant. Not as significant as some of our pinelines are.

Q Okay. So you don't know specifically what would have caused that column separation alarm, then, if there wasn't any significant elevation change?

A I would not know, no.

Q Now, was the pipeline operating at a normal pressure, a typically normal pressure --

A Yes.

Q -- during your shift? So it wasn't operating at a reduced pressure or anything. And typically when you run a pig, it's normal flow, normal pressure, correct?

A Yes.

Q And then as a trainee, from the time you had stepped out of your position previously to the time you came back , had anything really changed in the -- on your control console or anything in the

control room? Had anything changed in terms of instrumentation or procedurally or anything else for that matter?

A Procedurally, of course, a few things have changed, making things better. Instrumentation, I don't believe so.

Q So it's --

A A few things we have to do had changed, operation of units and stuff, a few pieces of machinery since I've been gone were out of service, but that's on a different line, so...

Q So as a trainee, were you kind of provided some information to get you back up to speed by supervisors or others before you stepped back into operating the consoles?

A Yes.

Q And so how did that occur? Was it a period of time

before you actually step onto the console or before you resumed your duties? Or how -- I mean what was the sequence there?

A A month before I started, I went back onto shift. I was reading procedures, all of them, to make sure what'd changed. I was up in the training room with the trainers getting my familiarity back. I was watching. I'd go down to the control room sometimes and watch the operators operate, and they would give me information as to what has changed.

Q So this occurred over a month period?
A Yes.
Q And then were you, I mean, did you have to requalify, some OQ, cover tasks, or anything?
A I have to requalify everything.
Q But you are in that process phase?
A I'm in that process.
Q So as a trainee with somebody kind of looking over your shoulder, you can do that before you're OQ qualified, then?
A Yes.
MR. GULSTAD: Okay. Thank you.
MR. JENNER: Curt, do you have any questions?
MR. GOESON: No questions. Just maybe a clarification.
MR. JENNER: By all means.

MR. GOESON: If that's possible.

MR. JENNER: Absolutely.

MR. GOESON: And I think it was with respect to Karen's question. I'm not sure if Dave understand or if -- the question was is the MBS system what we refer to as leak detection. Is that correct, Karen?

MS. BUTLER yes.

MR. GOESON: And that is what we refer to as part of your leak detection system. I'm not

sure if that's what David had said or not, but I just want to make that clear for -- it's a component of what we refer to as our leak detection system.

MR. JENNER: Okay. Thank you.

MR. GOESON: Okay. That's all.

MR. JENNER: Very good. I'm going to ask some follow-ups. How are you doing? Do you need a break or anything?

A I'm fine.

MR. JENNER: Great. A few follow-ups. We're not going to hold you too much longer. I appreciate you being here.

MS. BUTLER: Could I trouble you all just to speak a little louder? I'm starting to have difficulty hearing.

MR. JENNER: Okay. Will do.

QUESTIONS BY MR. JENNER:

Q MR. JENNER: Just piggybacking on discussion of leak detection system, I'm trying to get my hands around this. MBS is bits of information. It's software. It's the software part of it, if I understand.

MR. GOESON: Correct.

Q MR. JENNER: This is part of your leak detection system. Does your leak detection system involve people who analyze what's going on in the

system?

MR. GOESON: Is this directed for Dave?

Q MR. JENNER: Yes. This is for you, Dave.

A I would believe yes. There is people that are monitoring that system 24 hours a day, 7 days a week on shift all the time, plus they have a backup of consultants and computer people taking care of it.

Q So leak detection is software, hardware, and people all working together?

A Yes.

Q How are the people involved in -- how do they get notified that they have to do some analysis? Is it through a phone call? Is it through them being alerted through the SCADA system? What makes them jump into action?

A I only know our part is I call the shift lead, the

shift lead calls or talks to the MBS analyst, who are on shift all the time.

Q So it's not a function of them monitoring the SCADA system and --

A I don't know how. All I know is our end.

Q Okay. Your end is --

A I'm sure they're sitting there watching it. I can't say.

Q I'm not going to make you answer this question, but you've had time to -- I imagine you've done some

thinking about the events over the last few days and what -- time to reflect on your shift and subsequent shifts in terms of putting the pieces together. When you heard from the analyst about his interp -- his analysis of the alarm, that it was due to column separation, as we're sitting here now, do you think that was the accurate assessment?

A At that time?

Q Well, let's answer it at that time and what you think now as well.

A At that time, yes, I took his word for it.

Q Okay. What is your impression now?

A Well, obviously now, knowing some of the facts, his analysis may have been correct. I don't know what happened after I left shift. I don't know what's transpired in the last two days through the company.

Q Was there any information available on the SCADA, all the information that was available to you to come up with a different analysis of why the alarm occurred, different from a column separation? That was one explanation about why it happened. Was there data available to come up with a different conclusion about what was going on?

A No.

Q Well, if that is the case that there wasn't data available, then how can an operator come to the

conclusion that it may not be -- that it may be something other than a column separation? We're interested in operators having all available information to make an accurate assessment. If there was a problem at the time, how can an operator gather information to make an accurate assessment?

A If the line had been continued to run, then I would have seen it, because there is the data there when you're running. But at the time after shutdown, there's still data there, but do you know if it's correct or not? I mean I looked at it, and everything looked fine. As a line shutdown, it was picture perfect. But had the line continued to run, let's say I was swung even from Stockbridge and I wasn't going to shut down, I would have and SCADA and everyone would have known, because it

would have been just too plain not to.

Q So if I understand, you'll get more insightful information if the line is running, more information to tell you what's going on on your pipeline?

A Yes.

Q So if the line is shut down, you're just not getting that flow of information to --

A You're still getting the information, but now your pressures don't change, because your line's not

running. So it's like sitting in your car idling. You're still at zero. When you start to drive, now the speedometer moves. When you're not driving, you're not moving, it's at zero. Your engine's still running, but you're not going anywhere. We still get the information, but it may only change a pound or so because of thermal expansion or contraction. So once the line is down, you get the information, but it doesn't change that much.

Q Thank you for that explanation. But does that mean that it's almost, as a function of the system, you need the system to be running, you need the line to be running in order to make an assessment of abnormal operations, or can you still make an assessment even when it's shut down? I understand it to be more difficult.

A You could make an assessment when the pipeline's

shut down. You still have that information if it changed a great deal, but if it only changes a few pounds, now is that because of an incident, or is it because of thermal expansion or contraction?

Q And when you talk about changes, changes in flow --

A Pressure.

Q -- pressure?

A Pressure, pressure changes. Sorry.

Q Right. But not enough to set off any alarm, or at some point will it set off an alarm, a rate of

change alarm or -- that you may see when the line's running?

A You -- I don't -- it may. It may set off an MBS alarm over a longer period of time, because it sees the imbalance.

Q From what you know now, is there anything about -- this is a question I usually ask at the very end, but it seems appropriate now -- is there anything about the SCADA system that you would recommend changing or improving to help you with -- to help any operator gain valuable information when the line is shut down?

A No. I think we probably have one of the best SCADA systems there is.

Q So how can an operator -- what can an operator do? If you were in a role of supervising, of being a trainer and you were simulating this situation,

what can you instruct a trainee to look for given the same circumstances? Like what data point should he be looking at or focussing on?

A Your discharge pressures on the upstream side, your suction pressures at the next downstream station. If you have any midlines in between, to watch, see if their pressures are changing.

Q Okay. Let me change pace on you. I have just a few standard questions. You mentioned that your -- about your background and health and off duty.

You're back from being in poor health, and how is your health now?

A Good.

Q Good. Are you on any type of medications, prescription, nonprescription?

A Yes.

Q Can you let me know what you're taking?

A I'm on Volopotral.

Q Could you spell that for me?

A No.

Q Okay. I'll -- phonetics. Volopotral?

A Yeah.

Q What is that?

A It's to help with my lung infection.

Q Do you know what type of dosage you're on?

A 200 milligrams twice a day.

Q Anything else?

A ASA, aspirin, 81 milligrams. Synthroid 0.15.

0.015? 0.015.

Q Per day?

A Per day, once a day. Crestor once a day, 10 milligrams. That's it.

Q Any side effects with these medications?

A No.

Q Effect your alertness, sleep quality, anything like that?

A No.

Q What days, what are your normal -- do you have normal shift days, normal days that you work and off days?

A Yes.

Q Just let me know those, please.

A I normally work -- it would be either -- do you want just around about.

Q Right.

A I work two day shifts followed by either two or three night shifts or I could work three day shifts followed by two night shifts or two day shifts followed by two night shifts, standard 12-hour rotation. Four days on, five days on, four or five days off.

Q Right. What days -- you work Sunday, started Sunday morning. Did you work Saturday, Friday, Thursday as well?

A I worked Friday, Saturday, Sunday was my regular scheduled day shifts. Then I was supposed to work Monday night, Tuesday night.

MR. JENNER: I think that's my questions for now. We'll go around a second time. Karen do you have any follow-up questions?

MS. BUTLER: I do.

QUESTIONS BY MS. BUTLER:

Q MS. BUTLER: I just want to go back to when you traditionally would leave for the day and

you're just verifying that, say, on a running line or a shutdown line or idle line, what's your traditional process? Can you just step me through that? Like are you checking a historical trending screen or tool? Are you checking a station pressure or one overall display that's got everything on it regarding pressures and flows? Step me through that a bit.

A We have a line display.

Q Okay.

A That has all our suction discharge pressures are -- and our set points, discharge and suction set points, our mono throttle or case pressure, and all the units that're running by changing of colours and also our calculated flow. Also tells you if you have any communications or if communications are on WAN line or on the dial backup system.

Q Okay.

A We also have an MBS display, which is a graphic display, tells you how your flows are. We have a sectionalizing valve display that tells you where your sectionalizing valves are, where your block valves are.

Q I'm sorry, what did you call that last display with the valving?

A Sectionalizing.

Q Okay. Thank you. Okay? Anything else?

A We have our alarm panels up, usually a multitude. We have one that's active. We have one that's historical. We have one that's command.

Q Okay.

A And that's about it.

Q Okay. So since you're operating more than 6B, line 6B, would you rotate these types of displays for each one of your systems that -- in a similar way?

A They would all be, yes, they'd all be about the same.

Q All right. And do you have a trending tool available?

A Yes.

Q And do you use it often or not?

A Trend pressures -- or sorry, to trend densities and stuff of upstream and station densities.

Q Okay. Do you typically have one of those running

on one of your screens?

A Yes.

Q Or just as you need it? Okay. Do you have a favorite display or something that you kind of consider your lock solid, this is my root element, and if things don't line up on it, I'm starting to dive into detail?

A My line display.

Q You know, we asked you some questions about 6B, obviously, and things that were going on, but was

there any other communication outages or activities going on on any other of the lines that you were running on this same console?

A No.

Q And is there anything unique about this particular line from a controller's standpoint?

A No, it's the only one that we do. We control the deliveries at Stockbridge. On the rest of the lines, we actually have a terminal operator control those.

Q Okay. All right. I think that pretty much shores up the things that I wanted to ask with one exception, and that was the night before this event, were you on a night shift? We kind of missed that, I think.

A The day before, on the Saturday, I was on a day shift.

Q Okay.

A We never go nights to days.

Q Okay. Without time off, you mean, right?

A Right. So on the Saturday, I would have started at about the same time.

Q Okay.

A About -- and left at about the same time.

Q All right. Was there anything unusual on Saturday happening?

A No.

Q On your console?
A No.
Q And how did you sleep between Saturday and Sunday?
A Pretty darn good.
Q Okay. Would you say that you had eight hours? Nine hours of sleep? Four hours of sleep? An estimate.
A Eight hours.
Q Okay. Is there anything you'd like to tell us that we didn't ask, anything that you feel -- that can go along with how we asked, anything you'd like clarification on or anything you wished we'd ask and didn't, anything you would have preferred we stated differently such that we can take this feedback as well?
A No.
MS. BUTLER: Think that's all I had.

MR. JENNER: Great. Thank you. Rick?

QUESTIONS BY MR. GULSTAD:

Q MR. GULSTAD: Oh, I just have a couple of questions. As you stepped away from your shift, did you feel like there was anything that would prohibit you from restarting the pipeline, any flags in your mind or anything that -- unusual?

A No.

Q And then a second question, were you at some point ever drug or alcohol tested?

A Yes.

Q And how --

A After the fact.

Q How many hours after your shift ended?

MR. GOESON: Lots.

MR. GULSTAD: Lots of hours?

MR. GOESON: This morning. So to expand on that, when the event was confirmed, Dave had already gone, been gone, so that's why we initially didn't trigger the policy. It was only after discussion after the fact that we said let's not wish we did, so we did.

MS. BUTLER: Could you repeat that? I'm sorry.

MR. GOESON: So sorry, sorry, Karen. When the event was confirmed, when we found out about it, David and many of the other 10 had already gone

home. The ones that were on shift when it was confirmed hadn't had any involvement, so that led to the decision by us, when I say us, the control centre management team, not to trigger the HR 18 policy at that time.

It was in the next day, actually Tuesday, yeah, next day, yesterday afternoon that we decided, well, it's better to do it now than not -- than to wish we had. And that's why we triggered the DNA testing for all 10. We knew -- we knew the

alcohol testing wouldn't apply but the drug would.

MR. GULSTAD: That's all I've got.

MR. JENNER: Same.

MS. BUTLER: If we get to go back around, I do have one more.

MR. JENNER: Well, go ahead, Karen. Oh, sorry.

MR. GULSTAD: I'm fine.

MR. GOESON: We keep cutting off Rick.

MR. GULSTAD: I'm good.

MS. BUTLER: No, Rick sent his slope, so I'm not interrupting. I'll wait.

MR. GULSTAD: Go ahead, Karen.

QUESTIONS BY MS. BUTLER:

Q MS. BUTLER: I just wanted to know, when you're typically shut down, what type of pressure would you expect to see on the line? Obviously you

still have commodity there. When you are checking your overall display, what type of pressures would you expect to see?

A On that line?

Q Yeah.

A Probably around 50 pounds or so.

MS. BUTLER: Okay. Sorry. Rick?

MR. GULSTAD: No, I'm done. I'm done.

MR. JENNER: Curt, do you have any follow-ups?

MR. GOESON: No.

MR. JENNER: Okay. Well, I want to thank you for taking time to talk with us and help us understand the operations in general and specific. If you have any thoughts about making the system safer, you know, if you think of something down the line, we'd appreciate -- we'd welcome your input at any point.

So, again, thank you for taking time out and helping us, and we'll conclude this interview.

A Thank you for the opportunity.

WHICH WAS ALL THE EVIDENCE GIVEN TO 3:47 P.M.

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I, the undersigned, hereby certify that the foregoing pages are a true and faithful transcript of the proceedings taken down by me in shorthand and transcribed from my shorthand notes to the best of my skill and ability.

Dated at the City of Edmonton, Province of Alberta, this 6th day of August, 2010.

Laura Slywka CSR(A), RPR

Court Reporter

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UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Investigation of:	
ENBRIDGE OIL SPILL, MARSHALL, MICHIGAN	Docket No.: DCA-10-MP-007

Interview of: Dave Scott

Date: July 28th, 2010

CHANGES TO STATEMENT

WITNESS NAME: DAVID SCOTT

DATE OF STATEMENT: _____

PAGE	LINE	CHANGE	REASON
7	5	ENTERPRISE (ENBRIDGE)	WRONG NAME
8	14	DEAN SUCH (OGAMSUCH)	WRONG WORDS
11	5	IMBALANCE (BALANCE)	WRONG SPELLING
14	10	JIBING (JIVING)	WRONG WORD
26	16/17		PART SENTENCE
27	24	DLT (DOT)	WRONG WORD
51	13	MONO ( )	WRONG DELETE
49	8	Voloptral (VORICONAZOLE)	WRONG SPELLING
23	24	PINE LINE (PIPELINE)	WRONG WORD
29	2	IMBALANCE (BALANCE)	WRONG SPELLING
51	14	THAT'RE (THAT ARE)	WRONG WORD