

ENBRIDGE PIPELINES INC.

INTERVIEW
OF
AARON ZIMMEL

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Transportation Pipeline and
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Administration

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1 INTERVIEW OF AARON ZIMMEL, TAKEN AT 1:08 P.M.:

2 MR. JENNER: Good afternoon. Today is
3 Thursday, July 29, 2010. My name is Stephen
4 Jenner, and I'm an investigator with the National
5 Transportation Safety Board in Washington, D.C. We
6 are currently at Edmonton, Canada at the Crowne
7 Plaza Hotel in regards to a pipeline spill near
8 Marshall, Michigan that occurred on July 26, 2010.

9 I'd like to go around the room and have
10 everyone introduce themselves, your names and who
11 you're with.

12 MR. GULSTAD: Rick Gulstad. I work for
13 PHMSA, Pipeline and Hazardous Materials Safety
14 Administration. I'm an engineer, [REDACTED]

15 [REDACTED]

16 MR. TOLLEFSON: Tyler Tollefson, senior legal
17 counsel, Enbridge Pipelines.

18 MR. GOESON: I'm Curt Goeson, control

19 centre supervisor, Enbridge Pipelines.

20 MR. ZIMMEL: Aaron Zimmel, control centre

21 shift lead with Enbridge.

22 MS. BUTLER: Karen Butler, PHMSA, [REDACTED]

23 [REDACTED] regional project

24 manager.

25 MR. JENNER: Great, thank you.

26 QUESTIONS BY MR. JENNER:

27 Q MR. JENNER: Aaron, just for the record,

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1 can you spell your full first and last name.

2 A Yeah, A-A-R-O-N, Z-I-M-M-E-L.

3 Q Thank you. I'm just going to ask you a little bit

4 about your experience at Enbridge. How long have

5 you been working there?

6 A I started in '99, so just over 11 years.

7 Q And in what capacity?

8 A I started as an operator. And I've been a shift

9 lead for the last almost three years.

10 Q So you were an operator for seven, eight years?

11 A Yeah.

12 Q Had you done any other -- prior to Enbridge, had

13 you been an operator at another company?

14 A Not at a pipeline company, no.

15 Q So you received your training from Enbridge?

16 A Yes.

17 Q Okay. And how did that go?

18 A How did the training go?

19 Q Right.

20 A Good.

21 Q And your years as an operator, did you enjoy your

22 time as an operator?

23 A Yes, I did, yeah.

24 Q What made you change to a shift lead?

25 A I don't know. I guess time for something

26 different, and after talking to the people, yeah,

27 they said it might be a good spot for me, so tried

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1 it out.

2 Q In general, would you please just describe your
3 duties as a shift lead.

4 A Well, we were -- there's two shift leads on shift.

5 We're responsible for the operators on shift, so we

6 provide support and guidance for them. And any

7 time during any anomalies or something going on,

8 they look to us for support and guidance, so we

9 help them. So we look after their performance

10 management and help them grow and become better

11 operators.

12 Q Okay, great. Okay, what I'll do is I'll take you

13 up to Sunday. Did you -- were you on duty on

14 Sunday?

15 A On night shift.

16 Q From the night shift?

17 A Yeah.

18 Q What time did you report for duty local time?

19 A 6:30.

20 Q And that's p.m.?

21 A Yeah.

22 Q And if you would, can you just walk us through who

23 you talked to to have a shift changeover and your

24 early activities on duty?

25 A Let's see. I would do shift change right away, and

26 it was -- Bob Donald is the guy I took over from.

27 So he kind of told us about his day or whatever.

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1 And then we started about 6:30.

2 Q Did anything unusual occur that he communicated to
3 you?

4 A No, there was nothing unusual, no.

5 Q All right. So you're starting off your shift.

6 What activities are you doing?

7 A Usually we log in, look at any e-mails, and then
8 we -- Darin and I were on shift together. We did a
9 meeting with the guys that night, so we went around
10 and had a meeting with everybody, all the
11 operators.

12 Q And how did that work out for you and for them
13 and --

14 A I think it was good. Everybody liked it.

15 Q Okay. All right, what else? Besides the meetings,
16 did that -- were you preoccupied with that for the
17 first few hours?

18 A Yeah, that was probably up until -- up until
19 midnight we were doing that. We kind of did it in
20 groups. There's 21 operators, so we kind of did it
21 in groups of 2 or 3. We kind of went around and
22 did each one, so...

23 Q So you met with all the operators that were on
24 duty?

25 A Yeah.

26 Q Okay.

27 A Well, Darin did some, and I did some, yeah.

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1 Q Good. Anything -- so that took you back to
2 midnight?

3 A Yeah.

4 Q So for the next -- after that and next hour, what
5 were you doing?

6 A I'm not sure. I know I had a conversation with
7 Darin talking about how it all went and that, and I
8 probably looked at some more e-mails. I don't know
9 exactly what I was doing, but...

10 Q Just routine activities?

11 A Yeah. Yeah.

12 Q Very good. Okay, we've been talking to other
13 people before this, and what I'd like to focus on
14 are the events related to line 6B.

15 A Okay.

16 Q And were you involved in some of the activities
17 related to starting and shutting down the line?

18 A Yeah, I was, yeah.

19 Q If you would -- and I'll leave it up to you. When
20 you first got involved in the events related to 6B.

21 A Okay. When I first got involved was when the
22 operator phoned Darin and said he was at his ten
23 minutes. So that's when I got involved. That's
24 the -- when he was starting up the line.

25 Q That he was just finishing up the ten minutes --

26 A Yeah. So what our -- our ten-minute rule is when
27 we start a pump station and we don't see any

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1 pressure at the next station in ten minutes, that's
2 our -- our key to look deeper into it, what's going
3 on.

4 Q So you're now involved in this?

5 A Yeah.

6 Q So what are your actions?

7 A So I went back to the operators desk, and we
8 figured out -- so we were -- it was a slack line,
9 which means we figured out -- we looked back to see
10 when the line was shut down to see how much was
11 drained during the shutdown.

12 So we calculated that, and that tells us how
13 much time we can expect to see pressure after we
14 fill in what's been gone. So we calculated that to
15 figure out how many minutes we should be running to
16 expect pressure at the next station. So, yeah, I
17 was involved in calculating that number and

18 figuring out how many minutes.

19 Q What is your process for doing these calculations?

20 How were you pulling numbers? Where are you

21 pulling from?

22 A Well, I'm doing this with the operator, but we

23 have -- it's called CMT. So every two hours the

24 operator prints off a CMT. So we get the numbers

25 from there. So we got to look back to see when the

26 line was shut down and then how many cubes were

27 drained during that time.

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1 Q And how long does this process take to do these
2 type of calculations?

3 A Just a few minutes.

4 Q Okay.

5 A Yeah.

6 Q Okay. Do you remember -- did you come up with a
7 particular number?

8 A Yeah, I don't have it. It's 500 and something. I
9 don't remember the exact number.

10 Q Okay. So now you have this number in mind. What
11 do you do with that information?

12 A So we take that information, and we divide it by
13 the flow rate that we're doing.

14 Q I'm sorry?

15 A The flow rate, so how much oil we're putting into
16 the line, flow rate. So if we know how fast we're
17 going, we know how long to expect to get that 500

18 and some cubes into the line or -- yeah. Does that

19 make sense?

20 Q I think so.

21 A Okay.

22 Q Did you talk to any -- compare notes with Darin

23 about calculations?

24 A Yeah, I did it with the operator, and I think Darin

25 was involved as well to figure out that number.

26 Q Okay.

27 A Yeah.

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1 Q Did he -- did Darin work with you or work
2 independently?

3 A We were -- we worked together on it. Like, I know
4 initially I was -- it was just me and the operator,
5 but I think Darin was involved, yeah.

6 Q Okay. So you were all looking at the same number
7 and came to that consensus, and no one took issue
8 with --

9 A No. No.

10 Q Okay. So what is this -- what are you thinking at
11 this point? You have 500 plus cubes, whatever the
12 number is. What are you thinking is -- needs to be
13 done, is going on?

14 A So I'm thinking we used the flow rate to calculate
15 how many minutes that would take, and then we add
16 on our ten-minute rule. So if we don't have
17 pressure after those -- that time frame, then we

18 need to shut down. So that's what we talked about.

19 Q Do you remember this minutes number? You came up

20 with a certain number of minutes you needed?

21 A Yeah, it was -- the pump, the Minden pump, started

22 at 1:27 MST, and we calculated 20 minutes drain-up

23 plus our ten-minute rule took us to 1:57 MST. And

24 that was our key time there.

25 Q Okay. All right. So you did all these

26 calculations. Came up with the 20 minutes and --

27 A Yeah.

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1 Q Okay. So then what happened?

2 A So we got to 1:57, and we still weren't seeing
3 pressure, so we shut down the line.

4 Q Okay. You're the first person to, I think, use the
5 word "slack line."

6 A Okay.

7 Q Is there another term that's similar to the term
8 "slack line"?

9 A Column sep.

10 Q Okay.

11 A Yeah.

12 Q Very good, okay. So we're talking about the same
13 thing, column separation, slack line?

14 A Yeah.

15 Q So at 1:57, you tried to start up again -- no, I'm
16 sorry. You made the decision to shut down?

17 A Yes.

18 Q Okay.

19 A Yeah.

20 Q Then what happened after that?

21 A Then we -- well, then we started investigating

22 further as to what happened. We -- we did all our

23 calculations again thinking we made a mistake. We

24 come up with the same numbers. Yeah, we were -- we

25 were at a loss of what to do next. We were, yeah.

26 Q What were you -- what were you -- some of your

27 hypotheses? What do you think is going on? I

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1 know -- I heard you say you were at a loss, but
2 what are possibilities in your mind?

3 A Yeah, there -- well, there's lots of possibilities.

4 You know, we could have done calculations
5 incorrectly. It could have been a leak. So I
6 guess at that point in time, we get our supervisor
7 involved. So that's what we did next.

8 Q All right. And just talk me through that.

9 A So I guess at that point, we're -- our procedure is
10 not -- we can't really start the line without
11 supervisor approval.

12 Q Now, you got the supervisor involved after the
13 second shutdown?

14 A Yeah, after the -- after the 1:57.

15 Q After the 1:57. And what's the name of the
16 supervisor?

17 A Blaine Reinbolt.

18 Q Okay.

19 A So actually Darin -- Darin was the guy that made
20 the call to Blaine.

21 Q Okay. Were you listening in on that conversation?

22 A No. There was actually a couple other thing -- I
23 kind of caught bits of it, but there's other things
24 going on, so I was involved in some other stuff.

25 Q Okay.

26 A There was a communication problem at Hershel (ph)
27 on our other systems, so I was dealing with that.

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1 So I didn't hear most of it.

2 Q So when do you get back to Darin? When do you talk

3 to him about the --

4 A After that? Yeah, I guess we -- we talked a little

5 bit about his conversation with Blaine and what

6 kind of was decided. So we didn't -- yeah, we

7 talked a little bit about their conversation and

8 how it was decided to restart the line.

9 Q Okay. And what was your understanding of what was

10 decided?

11 A My understanding was we were going to restart the

12 line. I don't know what the -- I'm not sure about

13 all the reasoning and the background to that.

14 Q Okay. So you didn't get a full explanation about

15 why and what you think is going on?

16 A No.

17 Q You were told we're going to try again?

18 A Yeah.

19 Q Okay. All right. So then what happened?

20 A Then we restarted the line again. I -- yeah, it

21 was after. I can't remember the exact time. So,

22 yeah, we restarted the line. Minden pump come

23 online. I don't remember the exact time. So we

24 waited our ten minutes again. No pressure

25 downstream, and we shut down again after the ten

26 minutes.

27 Q This time, you did not give it the extra 20

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1 minutes?

2 A No.

3 Q Okay. And that was per -- that was what was
4 decided from the phone conversation?

5 A Well, yeah, we didn't really talk about it, but my
6 thinking is we've already given it that. We can't
7 do it again. That was just the one time, one-time
8 thing.

9 Q Do you recall the time that it was -- you tried to
10 start it up again?

11 A It was after 4 mountain time, but that's, yeah, 5
12 something.

13 Q Right. And so you gave that ten minutes, shut it
14 down. So then what happened?

15 A Then we shut it down, and then we -- it was pretty
16 much shift change pretty close.

17 Q Okay. Have you ever experienced anything like this

18 where you -- where you try to start up a line and

19 give it the ten minutes, and it didn't respond as

20 you expected?

21 A No, not that I recall.

22 Q Okay. In terms of the slack line or column

23 separation, that's been discussed previously. What

24 we're unsure of or I'm unsure of is how precise

25 can -- let's start with an operator -- determine

26 the location of a slack line or a column

27 separation?

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1 A I guess you can't be totally exact, but from our --

2 did you guys look at a line display, or do you know

3 what a line display is yet? No? It's just if

4 we -- our pump stations are, for the most part, 30

5 miles apart.

6 Q 30 miles apart?

7 A Yeah, give or take. So if we have one pump station

8 that has pressure, the next place that we have any

9 indication of pressure would be 30 miles. So I

10 guess we would know in that range where it would be

11 because we don't see pressure at the next station,

12 so we know it's in between there somewhere.

13 Q So it's a pretty -- it's somewhere within 30 miles

14 is the best that an operator can pinpoint it?

15 A Depending on the locations, yeah.

16 Q All right.

17 A Some are closer, but...

18 Q So somewhere between the stations, but --

19 A Right.

20 Q Okay. Now, is there other information you can look

21 at to help pinpoint the exact, maybe closer

22 location of a slack line?

23 A Is there other information --

24 Q Is there other data you can pull from to make it a

25 more precise estimate?

26 A We have -- we have trends we can look at that might

27 help to locate it closer.

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1 Q Okay.

2 A Like, we have -- it's, like, historical trends of
3 stations. So you can bring up two or three
4 stations together and look at the pressures and how
5 they're changing, like, a historical report.

6 MR. GOESON: But those still be, Stephen,
7 at that -- those locations on either side of the
8 section.

9 MR. JENNER: So those are not really
10 helping too much to narrow its location?

11 MR. GOESON: It's the same as the visual is
12 what they're looking at except just historical or
13 just a trend. It's still at -- like, on that line
14 display, it's still pressure at this location and
15 pressure at this location.

16 MR. JENNER: Right.

17 MR. GOESON: On occasion, if the el -- if

18 it's a -- if it's a big enough elevation change or
19 critical one I'll say, they'll have a midline in
20 between that 30, 40 miles, but that's it.

21 MR. JENNER: Okay.

22 Q MR. JENNER: Are there elevation maps that
23 you can refer to that gives you a better idea of
24 the slack?

25 A We have -- we have an elevation profile we can look
26 at, yeah, to see where the hills are and stuff,
27 yeah.

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1 Q All right.

2 A Yeah.

3 Q Are you familiar with line 6B as an operator?

4 A Yeah.

5 Q Did you operate this line?

6 A I did, yeah.

7 Q You did, okay.

8 What can you tell me about the elevation
9 between Minden and Marshall? Would -- can you
10 recall?

11 A It's -- it's fairly flat. There is -- there is a
12 small hill there, but it's -- it's not a huge hill.
13 I don't know the exact elevation, but...

14 Q Okay. And how about between, like, Marshall and
15 Stockbridge, do you recall elevations?

16 A Do I know the number?

17 Q No. I mean, just is it hilly? Do you have to deal

18 with changes in elevations? Are they dramatic, or

19 is it pretty flat?

20 A It's not dramatic.

21 Q Okay.

22 A There's a change in elevation, yeah, but it's not

23 dramatic.

24 Q The reason I'm asking is the slack or the column

25 separation, if they're somewhat common in this area

26 or is this an uncommon occurrence?

27 A Yeah, it's not common. I wouldn't say I've never

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1 seen it. I've seen it before, a column separation
2 on 6B.

3 Q Right. Are there some areas -- and I'll let you
4 pull from all consoles that you just see
5 separation, column separation, more frequently in
6 particular areas than --

7 A Yeah, there's certain places you can see it more
8 often.

9 Q And that's due to the elevation?

10 A Yeah, for the most part, yeah.

11 Q Are there other reasons that it -- what are some of
12 the other reasons that that may occur?

13 A That they could occur? Well, in this case, the --
14 when I -- when I first went over there, we were
15 landing -- our delivery point was Marysville, and
16 we were landing at 700 cubes an hour at Marysville
17 at that time. So I knew that we were draining the

18 bottom end of the line.

19 So the first thing we -- I guess I didn't

20 leave the -- I left the first part, but we closed

21 the PCV at Marysville to stop the flow into our

22 billier (ph) location. Because if you have flow

23 coming in and flow coming out, you can never get

24 your column separation to come together. You have

25 to have no flow at the bottom.

26 Q Right.

27 A So that's what we did first is we stopped that, and

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1 then give us the time to fill in what we thought
2 had drained out.

3 Q Sort of pack the line; is that what it's --

4 A Yeah. So that's -- that would be another reason
5 why you would have a column sep. If you're
6 pulling -- if you're taking up too much as you're
7 putting it in, that would be another way it could
8 get there.

9 Q Okay. At the time, it's -- the conversations that
10 are going on either that you're involved in or
11 other people involved in has to do with trying to
12 get enough pressure to compensate for the
13 separation?

14 A Right.

15 Q Okay. Did the term "leak" ever come up? Did
16 someone propose it as a realistic scenario that
17 this may be explaining what's going on?

18 A Well, when we calculated our -- how much we figured
19 to put it together and it didn't come together
20 after that time, then, yeah, it was -- we talked
21 about it.

22 Q And is this after the first shutdown or the second
23 shutdown?

24 A The first one.

25 Q So you talked about it?

26 A Yeah.

27 Q And what was -- what was discussed and --

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1 A Well, we talked about our next course of action,
2 and our next course of action is we cannot restart
3 without supervisor approval.

4 Q All right.

5 A That's when we talked to our supervisor.

6 Q Okay. And but the leak was not -- the possibility
7 of a leak was not -- was -- you didn't think that
8 was going on? You had other explanations about how
9 the line is responding?

10 A Well, for the first startup, yeah, our explanation
11 was we had column sep., and we were trying to fill
12 it in.

13 Q Right.

14 A Yeah. But I don't -- yeah, I don't recall having
15 another -- another explanation for that. You know,
16 that was my understanding of why we started and why
17 we ran as long as we did.

18 Q If -- this is hypothetical. If a leak scenario was
19 thought as a possibility, what actions would an
20 operator or you or people in the control centre
21 take? What's the course of action?

22 A Well, we'd look at -- look at our historical
23 pressures to see if we can see anything that would
24 indicate.

25 Q And how far back does -- you know, would you start?

26 A Yeah, that's -- I guess it depends on how far you
27 want to go back. You can go back -- yeah, we went

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1 back -- well, as far as I looked back, I looked
2 back earlier on that day. Like, they had shut down
3 the line at 1500 that afternoon before, so I looked
4 at those pressures. I didn't see anything to
5 indicate a leak.

6 Q You had done that?

7 A Yes.

8 Q And for what purpose?

9 A To see if I could see anything that would indicate
10 anomalies or something wrong.

11 Q So you did look back to 1500 that day?

12 A The day before, yeah.

13 Q The day --

14 A Or -- yeah, it would have been the day before
15 because it was in the middle of the night.

16 Q Right, but earlier in -- still in your shift? No,
17 before your shift.

18 A No, I started the shift at, like, 1800, around

19 there, around 6 o'clock.

20 Q Right. So you're looking back a few hours?

21 A Before my shift started, yeah, but it was 14 hours

22 earlier than the 4 in the morning or whatever.

23 Q Right, okay. What did you see when you looked back

24 there in terms of trends?

25 A Well, I seen the pressures of when they shut down

26 the line. I didn't see anything abnormal.

27 Q How far -- if you know, how far do you think you

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1 would have to have looked back to see something

2 abnormal?

3 A Well, I -- now I know. I know when the -- it

4 happened. From the information I know now, we had

5 to look back that morning to see something.

6 Q So how many hours from --

7 A It would have been about 24 hours before.

8 Q Okay. But from everything that you saw as far as

9 you went back, nothing abnormal?

10 A Right.

11 Q Okay. Were you on board with all the direction and

12 the decisions that were being made?

13 A Yeah, I -- well, I -- like I said, I wasn't part of

14 the conversation with the supervisor, so I didn't

15 know what they were talking about. So, yeah, when

16 they started up, I was -- I was invol -- I was

17 watching them -- the startup with them. I was part

18 of that. I was watching the stuff as they were

19 starting up.

20 Q Okay. And just to finish your shift, when you

21 transitioned -- when you're briefing your relief --

22 A Right.

23 Q -- what conversation did you have with them?

24 A Well, we told them about what happened during the

25 night and what we did. And then we talked about a

26 possibility of not -- not having enough head

27 pressure to overcome the hill between Minden and

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1 Marshall. So we talked about that possibility that
2 we don't have enough pressure to overcome that
3 hill.

4 Q To overcome the hill between Minden and Marshall?

5 A Yeah.

6 Q Okay. Okay, anything else that you discussed?

7 A We just talked about what we might do if we --
8 yeah, just -- just how we calculate the line loss
9 between the next two stations and the hill -- the
10 hill -- or the elevation difference between the two
11 and how that might affect things, so...

12 Q Okay. Well, thank you so far. That's -- we'll go
13 around, then, and have other people ask some
14 follow-up questions.

15 A Okay.

16 Q That's it for me for now. We'll go around a couple
17 times.

18 A Okay.

19 MR. JENNER: On the speaker phone is Karen.

20 Karen, do you have any follow-up questions?

21 MS. BUTLER: I do.

22 QUESTIONS BY MS. BUTLER:

23 Q MS. BUTLER: When -- first of all, I know

24 that you said that you had some operating

25 experience on line 6B. Do you also have operating

26 experience on, say, 4 and 14, the other part of

27 that group of consoles?

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1 A Yeah, I operated those two as well, yeah.

2 Q Okay. And you mentioned that when you guys came
3 in, you had a meeting and that that took you up to
4 midnight. So I take it that this meeting was
5 planned in advance; is that correct?

6 A Advance, like, as of the day before or --

7 Q Yeah.

8 A Well, not really. Me and Darin, the other shift
9 lead, had talked about it, but we -- we kind of
10 planned the first part of that shift when we got
11 there mostly, like, what we were going to talk
12 about and what we wanted to tell everybody.

13 Q Okay. And when you guys do come on shift, I think
14 I've heard before that there's really no formal
15 shift change where you always go through a certain
16 list of information that you -- that you pass off;
17 is that correct?

- 18 A Yeah, I guess we don't have, like, a formal piece
19 of paper. We just kind of write down what we think
20 is important and what we want to pass on.
- 21 Q Okay. And so when you normally come on, do you
22 ever just check pressures right then?
- 23 A Of pipelines?
- 24 Q Yes.
- 25 A Not unless I -- I was told that there's something
26 going on. No, I wouldn't. Like, if some -- if
27 the -- at shift change, a guy said there could be

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1 an issue here, there's something going on, I would

2 then. But, yeah, normally I wouldn't, no.

3 Q Okay.

4 A There's a whole bunch of pipelines, so it would

5 take me more than my shift to do that.

6 Q Okay.

7 A Yeah.

8 Q Do you know if the operators traditionally do that?

9 A No, not unless they -- something keyed them to do

10 that, like, a problem.

11 Q Okay. Were you made aware of any comm. errors when

12 you came on shift?

13 A Any comm. errors?

14 Q Right.

15 A Like, communication problems?

16 Q Yes.

17 A No.

18 Q Were you made aware that they'd had a leak

19 detection or a five-minute alarm previously on the

20 previous shift and that it had been column

21 separation?

22 A No.

23 Q Did you know they were running a pig?

24 A At shift change?

25 Q Yes.

26 A No, not at shift change, no.

27 Q Okay. And did you know if Niles was bypassed or

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1 not?

2 A At shift change?

3 Q Correct.

4 A No.

5 Q All right. And so were you made aware of any

6 unusual circumstances on any other of the pipelines

7 in the op -- in the control room?

8 A No, not -- not that I can recall, no.

9 Q Okay. I have to type, so it takes me a bit here.

10 A Yeah, no worries.

11 Q Okay, so we've started up -- oh, excuse me. Did

12 you know that line 6B was down when you came in?

13 A No.

14 Q Were you aware that they would have to start back

15 up?

16 A Yeah, no, I wasn't aware it was down, so, no, I

17 didn't know about the startup or -- not at shift

18 change, no.

19 Q Okay. When we -- at the beginning of the shift,

20 was it a pretty normal shift day up until this

21 little dilemma, this ten-minute --

22 A Yeah, no, it -- shift change was fine. There

23 was -- yeah, everything seemed to go good during

24 the day. There was no -- no big issues, no...

25 Q All right. And then we start talking about we do

26 some calculations and that you kind of were helping

27 with the numbers?

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1 A Yeah.

2 Q So when you're doing the calculations, can you just
3 take a few minutes and tell me the inputs that you
4 either manually have to put in or what you
5 traditionally put in?

6 A Well, in this case, we had -- we had to figure out
7 when the line was shut down.

8 Q Okay.

9 A So in conversing with the operator, we figured that
10 out. And the line was shut down in two -- in two
11 sections, so there was a Stockbridge delivery where
12 part of the line was shut down the morning before.
13 So we look at our CMT to see how much volume was
14 drained. So we added that number to the number
15 that was drained on the shutdown in the afternoon
16 on the rest of the line, and then we add them
17 together, and that comes up with our amount that we

18 expect to fill the pipe.

19 Q Okay. Do you have to enter the type of crude,

20 like, any specifics about what you're moving?

21 A Well, CMT would indicate that to us, but I guess

22 it's crude oil, so it's not -- I guess it doesn't

23 factor into the equation at all.

24 Q Okay. So you don't, like, tell it's heavy or light

25 or any of those specific things?

26 A No, no, that doesn't factor into it at all, no.

27 Q Okay. And are you -- do you give it any manual

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1 elevation?

2 A No.

3 Q Okay. Okay. So just so it's just clear in my

4 head, is this -- are you really just taking the

5 overs and shorts and then comparing that with what

6 might be in the pipeline?

7 A Yeah, really what we're doing is we're calculating

8 how much oil was taken out during shutdown and then

9 adding it together, and that's how much we need to

10 put back in to -- to get it back to normal.

11 Q Okay. And is there anything else that I should

12 have asked about that process that, you know, comes

13 to mind? Like, when you're setting up to do it,

14 anything else that you always have to determine?

15 A No, I don't think so. I think it -- I think it can

16 be boiled down to -- yeah, it's pretty simple. How

17 much oil you've taken out needs to be put back in.

18 Q So was that part of your lead training, or was that
19 part of your previous operator training?

20 A Par of it is -- well, the op -- most of the
21 operators know how to do that as well or probably
22 all of them. So, yeah, our operator training, I
23 guess, is the answer.

24 Q Okay. Was it emphasized on your lead training?

25 A Yeah.

26 Q Okay. When you're running a pipeline in slack
27 conditions, is that something -- the types of

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1 situations you can run into or the types of alarms,
2 appropriate response. Is that something that you
3 were trained on as an operator, or something you
4 were trained at as a lead?

5 A So, sorry, that -- that's the MBS alarm you're
6 asking about?

7 Q Well, it just -- whenever you have a slack line
8 condition, you know, sometimes you might -- it
9 might not look the same, so I would assume that
10 you're always going to get an MBS alarm. But let's
11 just say for the -- for the principle of discussion
12 that you knew you had a slack line condition, and
13 even if the MBS alarm didn't commence, have you
14 received training on how to adequately respond to a
15 slack line or what your expectation is as an
16 operator?

17 A I guess I'm not sure what you're asking, but the --

18 Q Well, let's rephrase it this way. Sorry. So let
19 me go through some other pipeline experience in
20 control rooms, and then maybe that will make more
21 sense. Sometimes in control rooms regarding slack
22 line conditions, there's very specific things they
23 tell you to do. Like, maybe there's a commoning
24 (ph) element. You don't particularly have this in
25 Enbridge situation, but where you're running more
26 than one line, and maybe there's a back pressure
27 valve that you've got to change a set point on, and

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1 they give you very specific instructions on how to
2 perform that or have it go through that task of
3 eliminating that slack line condition to the best
4 of your ability. And so I'm really asking you; did
5 you have any specific training regarding how to
6 eliminate that condition?

7 A Yeah. Yes, I've had training, yeah.

8 Q Okay. And what did that training consist of?

9 A What did that training consist of?

10 Q Yes.

11 A Well, there would --

12 Q Meaning only specific to slack line.

13 A So what you -- yeah, what you want to do is you
14 want to increase your pressure downstream to try to
15 alleviate the column sep. or slack line.

16 Q Okay. So did you simulate this?

17 A In my training?

18 Q Yes.

19 A Yeah.

20 Q I'm sorry. I spoke too soon.

21 A Yes, we did in training, yeah, simulated it.

22 Q Okay. All right. And was that as an operator or

23 as a lead?

24 A Both.

25 Q Okay. Is any of that verbal, or is it all just you

26 play with the simulation, it'll --

27 A Yeah, we've done both, verbal and simulation.

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1 Q When you're on the simulator, was it specific to
2 line 6B?

3 A No, I don't think I've ever been on 6B simulator,
4 no.

5 Q Is there anything unique about 6B that, you know,
6 pops out that when you're thinking about operating
7 it, yeah, you're always going to have this to think
8 about?

9 A No, there's nothing unique. Every pipeline has
10 it's -- is a little bit different, right, because
11 it's got a different profile and all that, but
12 there's nothing out of -- really out of the
13 ordinary I guess.

14 Q Okay, well, the reason I ask that question is, you
15 know, sometimes there's, like, I always have
16 trouble starting this second pump. No matter what,
17 there's always a problem?

18 A Yeah.

19 Q Is there anything like that on 6B?

20 A Yeah, I haven't operated it in quite a few years,
21 so I don't know. There's nothing I have on top of
22 my head that would...

23 Q Okay. While you were on shift, did you enter
24 anything into the FacMan system?

25 A As an operator?

26 Q No, as a lead.

27 A There's some things we do, but it's pretty rare

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1 that the shift lead would do that.

2 Q Okay. Was there anything that you did on this

3 particular shift in FacMan?

4 A That I -- no, I didn't do anything in FacMan, no.

5 Q When -- you said you had some communication

6 problems at Hershel on another system part way

7 through the shift I think?

8 A Yeah.

9 Q What was the cause of this communication issue? Do

10 you know?

11 A Not sure. All I know it was a phone company

12 problem.

13 Q Okay.

14 A So Telus was sending guys out to -- to get it

15 fixed.

16 Q Was it resolved on your shift?

17 A No.

- 18 Q When you said -- and I'm going to do this, you
19 know, to the best of my understanding based on what
20 I think you just told us -- that we were restarting
21 the line again, and then Minden came on line, we
22 waited ten more minutes, and there was no more
23 pressure downstream. When that statement was made,
24 where were you specifically checking? At multiple
25 locations or one or --
- 26 A Oh, I was -- I was at my desk at that time.
- 27 Q Right. So you would be looking for pressure at

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1 what location?

2 A The next station, Marshall station.

3 Q Okay.

4 A Yeah.

5 Q I just wanted to make sure before I... Okay.

6 A Yeah, we can bring up his screen on -- at my desk

7 and look.

8 Q Okay. I think you mentioned that there might be

9 some pipelines where you have closer than 30 miles

10 or someone mentioned in the room closer than 30

11 miles ability to see pressures. Is there any that

12 you're aware of on line 6B that's closer than 30

13 miles?

14 A Not between those two locations, no.

15 Q Okay. Okay, I think my last set for you would be

16 so now that you've had a chance to look back

17 through the historical log further into the day,

18 you said it would have -- you would've had to look

19 back at least 24 hours. When did the leak occur in

20 your opinion, and what was the cause of it?

21 A I have no idea what the cause is. And from what

22 I've heard, it happened the morning before.

23 Q The morning bef -- so help me out on that. What

24 does that mean? Who would have been on shift?

25 A I don't know who was on shift. I'd have to look

26 at, like, our shift schedule. I don't -- I'm not

27 sure.

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1 Q Okay. So it wouldn't have been the guys that
2 handed off to you? Would it have been the people
3 that, you know, gave you your shift change
4 information?

5 A Yeah, I guess it's possible.

6 Q Okay. So you really don't know whether it was the
7 tail end of the previous shift or their shift?

8 A No. I haven't -- I haven't been at work since it
9 happened, so I haven't looked back at all the stuff
10 myself to look, so I can't --

11 Q That's fine. That's fine. Just when you made that
12 statement, I wanted to make sure I understood
13 because I think you said 24 hours, and so that
14 could have meant we were back to the same shift
15 we're talking to now; right?

16 A Right. Yeah, it's possible, yeah.

17 Q Okay. All right. So because after that, was -- if

18 you can think back two shifts, is there anything

19 unusual on that shift?

20 A At shift change you mean?

21 Q Yes.

22 A No, there -- there was nothing unusual at shift

23 change, no.

24 Q All right. And was there any unusual circumstances

25 two shifts ago that happened on --

26 A No, not that I can recall, no.

27 Q But it kind of seems to me like they go to you for,

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1 like, the technical end, the calculation as to

2 what's been going on on their consoles --

3 A Well --

4 Q -- is that pretty -- go ahead.

5 A Yeah, they -- there -- we have procedures to

6 follow. So in that procedure, it says after ten

7 minutes, to advise your shift lead. So that's what

8 he was doing. But, yeah, like, I -- I look at it

9 as just a place of support. I'm trying to support

10 him and help him figure out what's going on.

11 Q So during your shift, did you look at any of the

12 alarm logs?

13 A Yeah, I did, yeah. I didn't -- I did it at the

14 operator's desk with him.

15 Q Okay. Was there anything that stood out to you at

16 alarm log?

17 A No, it -- I guess what I was looking for was when

18 that Minden pump was started, so to figure out when

19 we're going to start our timer, so that's what we

20 were looking for.

21 Q Okay.

22 A So, yeah, nothing else stood out or...

23 Q Okay. Based on having been a lead in a control

24 room in this circumstance -- and it's always easier

25 to look back -- is there anything specific that

26 stands out in your mind you'd like to have improved

27 on?

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1 A From -- from what I did?

2 Q Yes.

3 A Yeah, I've -- I've replayed it in my head many
4 times. That -- to start up, I -- I think I would
5 do the same -- same way again. You know what, it's
6 easy to go back and quarterback yourself and second
7 guess yourself.

8 Q Right.

9 A For the information I had at the time, yeah, I -- I
10 would do the same thing.

11 Q Okay. And based on that, if -- if you were
12 assigned the task to train controllers in the
13 future and you were to take a lesson learned away
14 from this, are there -- is there a lesson learned
15 that you would want to advise to them?

16 A To the operators?

17 Q Yes.

18 A I guess just to make sure that you follow your
19 procedure. In any -- in any case, I guess
20 that's -- if you follow your procedure, then, yeah,
21 that's -- all the procedure is there to help you
22 get -- to get through it. So if you follow that,
23 that's -- that's what you need to do.

24 Q Do you feel that there was any procedure they
25 didn't follow?

26 A The operators?

27 Q Yes.

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1 A No. No. No, I think he followed his procedures.

2 Q Okay. So do you think there's a gap in the

3 procedures?

4 A Yeah, I -- I don't know. Like, it's -- it's hard.

5 I don't know. I don't know. The -- the thing

6 about starting up a line in transient conditions,

7 no -- no startups are the same, and it's hard to

8 have a procedure for a startup in transient

9 conditions.

10 Q Okay. Are they allowed to start up more than one

11 line at the same time?

12 A Yeah, there's no procedure that says you can't, but

13 it's best practice that we do one at a time.

14 Q Do we have any reason to believe that was going on?

15 A Two startups at once?

16 Q Yes, same console.

17 A No, I don't think so.

18 Q Okay. Do you know of anything that may have been
19 going on in the field that you weren't told about
20 that could have impacted this happening?

21 A Anything in the field? Not that I was aware of,
22 no.

23 Q Okay. Were there any reasons why you thought we
24 might need to lower pressures on the line, on this
25 particular line, as to where it's been in the past?

26 A Lower the operating limits?

27 Q Yes.

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1 A To lower -- so is there any reason why I would
2 think we should lower the limits?

3 Q Is there -- yeah, is there anything that when you
4 came in to shift, was there anything that would
5 have indicated you might need to be operating at a
6 lower limitation than normal?

7 A Oh. No.

8 Q And this, of course, we've asked everybody, so it's
9 nothing specific to you, but were you drug and
10 alcohol tested?

11 A Yes.

12 Q Okay, with that, I think I'll turn it back over to
13 my counterparts. Thank you.

14 A Yeah, no problem.

15 MR. JENNER: Okay, do you have any
16 follow-ups?

17 QUESTIONS BY MR. GULSTAD:

18 Q MR. GULSTAD: Yeah, typically by the time

19 they get to me, all the questions have been

20 exhausted. Just a couple of clarifications on...

21 Before you restarted the line, did you know

22 the pressure at Marshall was zero?

23 A The -- yeah. Yes.

24 Q You did?

25 A Yes.

26 Q Did that raise any concerns?

27 A Yeah, I guess the -- we knew that -- we're thinking

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1 there was a column sep. That's what we thought.

2 Q And you indicated that you wish you would have

3 looked back 24 hours on a historical data, but what

4 would that data have told you?

5 A I don't know. I -- hopefully it might have told me

6 something. I haven't looked at it myself, so...

7 Q What would you be looking for?

8 A I'd be looking for an indication of pressure drop

9 or something that may indicate a leak or...

10 Anything abnormal is what I'd be looking for.

11 Q And then when you talked to Blaine Reinbolt, what

12 advice did he give you? Just to re -- besides

13 restarting the line, did he say anything else?

14 A I didn't talk to him, so...

15 Q Oh, you didn't talk --

16 A Darin.

17 Q Darin?

18 A Yeah.

19 MR. GULSTAD: That's all I have.

20 MR. JENNER: Okay. Curt?

21 MR. GOESON: No, I don't have any

22 questions.

23 MR. JENNER: Okay, we'll go around a second

24 time.

25 FURTHER QUESTIONS BY MR. JENNER:

26 Q MR. JENNER: I don't have any operational

27 type follow-ups, but I have some standard questions

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1 just about your off-duty.

2 A Okay.

3 Q And what are your -- what is your schedule -- if
4 you can go back a few days, just the times that you
5 worked prior to Sunday.

6 A Okay. I worked Wednesday day shift, Thursday day
7 shift, Friday night shift, Saturday night shift,
8 and then Sunday night.

9 Q Okay. That means you had Monday and Tuesday off I
10 assume?

11 A Yeah. Like, this -- yes, I did, yeah. The week
12 before, yeah.

13 Q Great.

14 A Yeah.

15 Q Okay. Questions about your health. Overall, do --
16 how -- are you healthy?

17 A Yeah, I think so, yeah.

18 Q Do you have any -- are you on any type of

19 prescription or nonprescription?

20 A No.

21 Q I'll ask you about your rest. Do you -- how did

22 you feel when you woke up and when on your shift

23 Sunday? How did you feel?

24 A Yeah, I got up at about -- I went to bed at 7 a.m.,

25 and I got up at 1:30 or 2. So I had a -- I had a

26 good sleep. I felt -- felt fine.

27 Q Is that your normal routine --

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1 A Yeah.

2 Q -- given this shift rotation that you're on?

3 A Yeah, usually a night shift, I go to bed right when

4 I get home, and then I sleep till 1 or 2 or

5 whatever.

6 Q So that's five -- six and a half, seven hours --

7 A Yeah.

8 Q -- in one block?

9 Do you sleep well?

10 A Yeah, I do, yeah.

11 Q No sleep problems that you're aware of --

12 A No.

13 Q -- or snoring or anything?

14 A No.

15 Q Just out of curiosity, is there one particular day

16 that's more difficult in terms of the shift

17 rotations to work that you feel?

18 A I guess it would depend on how much sleep I get.

19 Like, before my first night shift, I try to have a

20 nap in the afternoon before I go to work, and

21 that -- that's when I feel the best. So if I don't

22 get that, the first night is tough.

23 Q Right.

24 A So I don't -- I try to get that. Sometimes I

25 don't, so I feel a little tired, but so that would

26 be the worst I guess.

27 Q I appreciate that.

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1 MR. JENNER: I'm done. Karen, any

2 follow-ups?

3 MS. BUTLER: No, I think -- I think that's

4 it.

5 MR. JENNER: Great. Rick?

6 MR. GULSTAD: No.

7 MR. JENNER: Curt?

8 MR. GOESON: No.

9 CLOSING BY MR. JENNER:

10 MR. JENNER: Great. Let me thank you for

11 helping us out, for participating, and I apologize

12 for any inconvenience we put you through.

13 A Hopefully I helped you guys.

14 MR. JENNER: Let me just throw this out: I

15 know you've -- you've reflected on this somewhat,

16 and you probably will in the future.

17 A Yeah.

18 MR. JENNER: Can you think of anything that
19 may make the system safer in terms of new rules or
20 procedures or regulations or equipment? You know,
21 what can we do --

22 A Right.

23 MR. JENNER: -- to prevent something like
24 this from happening again?

25 A Yeah, that's the million-dollar question.

26 MR. JENNER: Indeed it is. It can make my
27 job a lot easier.

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1 A Yeah. Well, as a pipeline operator, if you're in
2 steady-state conditions, they're going to pick off
3 leaks every time I bet, but the transient ones,
4 that's -- they're hard to see. So if you can keep
5 your lines running all the time -- like, 6B, for
6 example, is a start-and-stop line, so it starts and
7 starts up quite a bit. So the more times you start
8 and stop it, the more chance you have of -- or the
9 more transient conditions you have; right?

10 MR. JENNER: Right.

11 A I don't know -- yeah, I don't know -- I don't know
12 the -- you have to -- you can't have lines running
13 all the time. So, yeah, I don't know the answer to
14 that. That's a -- if you figure it out, you'll --

15 MR. JENNER: Well, if you do, I'll ask you
16 the same thing.

17 Well, again, thank you very much for being

18 here. We'll conclude this interview.

19 -----

20 PROCEEDINGS CONCLUDED AT 2:06 P.M.

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1 CERTIFICATE OF TRANSCRIPT

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5 I, the undersigned, hereby certify that the

6 foregoing pages are a true and faithful transcript

7 of the proceedings taken down by me in shorthand and

8 transcribed from my shorthand notes to the best of my

9 skill and ability.

10 Dated at the City of Edmonton, Province of

11 Alberta, this 10th day of August, 2010.

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18 C. L. Stabbler, CSR(A)

19 Court Reporter

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UNITED STATES OF AMERICA
NATIONAL TRANSPORTATION SAFETY BOARD

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Investigation of: *

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ENBRIDGE OIL SPILL, *
MARSHALL, MICHIGAN *

Docket No.: DCA-10-MP-007

*

* * * * *

Interview of: Aaron Zimmel

Date: July 29, 2010

CHANGES TO STATEMENT

WITNESS NAME: Aaron Zimmel

DATE OF STATEMENT: Sept 1, 2010

PAGE	LINE	CHANGE	REASON
10	21	change Minden to Mendon	
9			
13	21	change Minden to Mendon	
17	9	change Minden to Mendon	
19	22	change billier to delivery	
22	27	change Minden to Mendon	
32	21	change Minden to Mendon	
35	18	change Minden to Mendon	
21	1-27	I looked back at the pressures but not as far back as 1500 the day before. I did not look at the pressures during the shutdown the day before.	

ENBRIDGE PIPELINES INC.

INTERVIEW

OF

AARON ZIMMEL



Tyler W. Tollefson, Esq. Senior Legal Counsel for
Enbridge Pipelines Inc.