UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Investigation of:	*	
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ENBRIDGE - LINE 6B RUPTURE IN MARSHALL, MICHIGAN	*	Docket No.: DCA-10-MP-007
	*	

Interview of: LEON ZUPAN

Crowne Plaza Hotel
Edmonton, Alberta
Canada

Thursday,
November 17, 2011

The above-captioned matter convened, pursuant to notice.

BEFORE: MATTHEW NICHOLSON
Investigator-in-Charge

APPEARANCES:

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I N T E R V I E W

MR. NICHOLSON: Okay, this is NSTB Pipeline Case Number DCA-10-MP-007, Enbridge Energy July 2010 Crude Oil Release in Marshall, Michigan. These are the Human Factor Group interviews being conducted in the Crowne Plaza Hotel in Edmonton, Alberta, Canada. Today is Thursday, November 17th, 2011.

This interview is being recorded for transcription at a later date. Copies of the transcripts will be provided to the parties and the witness for review once completed.

For the record, Leon, please state your full name with spelling, employer name, and job title.

MR. ZUPAN: Leon, L-E-O-N, Anthony, A-N-T-H-O-N-Y, Zupan, Z-U-P-A-N, Senior Vice President of Operations, Enbridge Pipelines, Inc.

MR. NICHOLSON: Thanks. For the record, please provide a contact phone number and e-mail address that you can be reached at.

MR. ZUPAN: Contact phone number, area code [redacted]

MR. NICHOLSON: Okay. Leon, you're allowed to have one other person of your choice present during this interview. This other person may be an attorney, friend, family member, coworker, or nobody at all. If you would, please indicate for the record whom you have chosen to be present with you during this interview?

MR. ZUPAN: I've chosen not to have anyone with me.

MR. NICHOLSON: Okay. We'll now go around the room and have each person introduce themselves. I will start and we'll progress clockwise to my left. My name is Matthew Nicholson, M-A-T-T-H-E-W, N-I-C-H-O-L-S-O-N. I am with the NTSB as the IIC. My number is [redacted] My e-mail is [redacted]

MR. PIERZINA: And Brian Pierzina, B-R-I-A-N, P-I-E-R-Z-I-N-A. I'm with the PHMSA [redacted] My e-mail is [redacted] and my phone number is [redacted]

MR. JOHNSON: I'm Jay Johnson, Enbridge Pipelines, [redacted]

MS. BUTLER: Karen Butler, K-A-R-E-N, B-U-T-L-E-R. Email is [redacted] Phone number is [redacted] I'm the accident -- I'm the supervisor of accident investigations for PHMSA Central Region out of Kansas City.

MR. STRAUCH: I'm Barry Strauch with the NTSB. That's B-A-R-R-Y, S-T-R-A-U-C-H. My e-mail address is [redacted] and my phone number is area code [redacted]

MR. NICHOLSON: So, Leon, today, the focus is on human factors and organizational type questions. And Barry Strauch is our human factors guru, I guess, so we're going to start off with Barry's questions, I think.

MR. STRAUCH: Oh, okay. Thank you.

INTERVIEW OF LEON ZUPAN

BY MR. STRAUCH:

Q. Is it okay to call you Leon?

A. Leon is fine, yes.

Q. Okay. Can you kind of walk us through your experience and background?

A. I've been with Enbridge coming on 25 years. I started off in their engineering group. I have a -- don't have an engineering degree; I have a degree in science and physics. I moved into our Operations Group about a year and a half later, and then was transferred to Sarnia, Ontario as the operations manager in 1989. Returned in 1994 as the manager of shipper services, and then director of shipper services.

In November of 1999, I was transferred to be director of information technology. A year later, in November of 2000, I was promoted to vice president of development and services and held that role until about 7 years ago, when I was moved back to Edmonton as Vice President of Operations. In October of 2010, I was appointed to the position of senior vice president of operations with the major change of including the control center operation in my area of responsibility.

Q. So before October of 2010, you were not -- your area of control did not include the Operations Center?

A. The control center. That's correct, yeah.

Q. The control center. Uh-huh. Okay. But at the same time, it was also a promotion?

A. That's correct.

Q. In the promotion, do you know why the Operations Center was brought under your control in October of 2010?

A. We have actually had the control center under Operations and Customer Service back and forth a number of times since I've been with the company. It's always a bit of a discussion point as to whether there's a tighter link between the scheduling and the pipeline and the operations and the pipeline. And as we've looked at the situation post-Marshall, we decided that there was some benefits of having it all under an operations focus as we go forward. And so, it was my understanding that the impetus behind the change in October of last year.

Q. Okay. And will be some of those benefits?

A. Well, we have a large relationship between control center and the field, obviously, in terms of who carries out the actions both at the terminals and at the pump stations from a maintenance and emergency response perspective. We have a number of very similar circumstances in terms of compliance and training and being responsible with the regulations and the requirements to safely operate the pipeline system. And so, I think those are probably the two major focus areas.

And I have had some experience with our control center over the years, not directly working in it, but working with the previous members and directors of the control center. So I had some familiarity with the roles and responsibilities, as well as, obviously, the field staff that do similar roles, but not in,

obviously, a pipeline operations mode.

Q. And what was it about the Marshall incident that contributed to the move of the Operations Center to your area?

A. Well, I think our focus post-Marshall was really around what more do we need to do for an operational excellence perspective, not just within liquids pipelines, but as a corporation. And so, all three of the major business units within Enbridge were put under a president. They were previously under executive vice presidents, so they wanted to look at them as standalone business units accountable for the safe operations of their facilities.

Steve Worey (ph.) was given the role of president of liquids pipelines. Each one of the major business units was given a senior vice president role for operations both in liquids pipelines gas distribution and gas transmission, and a senior role in integrity was also created in the case of liquids pipelines, a senior vice president position under Art Meyer. And then in conjunction with that, they recognized that in order for us to continue to move the ball forward from an operational excellence perspective, we would need a resourcing plan and a way to effectively carry out any necessary changes post-incident. And so a vice president of pipeline control was created, the first time we've had the control center under a vice president who's directly responsible for just the control center, and that's Kirk Burdess (ph.), who reports up to myself.

Q. And who else reports to you? What other positions (indiscernible)?

A. We have a vice president of Canadian operations who looks after the main line systems in Canada, Cynthia Hansen. We have -- had in the past, vice president of U.S. operations, Rich Adams, who is in the U.S. And then I have a senior director of our gathering systems for both the North Dakota gathering system and Enbridge Saskatewan group of companies that are in the feeder -- pipeline side of the business.

In addition to those executive vice -- or those vice president roles, I have a number of directors. I have Scott McKeckran (ph.), who you interviewed earlier in the work, as director of our safety culture initiative; Tom Zimmerman, who you probably met as part of the investigation, who is now the director of operation services; and Kevin Underhill, who is the director of environment and right of way for both the project side of our business, as well as the main line base business.

Q. Do the other two units have directors of safety culture as well?

A. No. They are embedded into their safety departments. We were actually the first out of the gate in terms of our safety culture initiative and felt that it was an important enough role that we wanted to have it a director level.

Q. Uh-huh. Well, why would there be a director of safety culture only in liquid pipelines and not the gas pipelines, the

other --

A. Each of the business units has different risks and they're in a different position. Each one of them made their own call as to what they needed to do and what was the most effective way to do. Because we are the largest of the three business units and we have a fairly significant impact on the environment and we had had three fatalities in the space of 2 years, we decided that it was important for us to find the right candidate who could make a significant change in how we organize our people, our management team, our employees, and further our safety cultures. So we felt Scott McKeckran was the best candidate we had and was the first choice and he had agreed to it. And I think I still agree that the director level and I feel the liquids pipelines is the appropriate way to provide that senior leadership.

Q. Okay. Since you've been in this position, which has been a little over a year, have you had any role in implementing changes as a result of the findings that the company has learned with regard to the Marshall incident?

A. As -- definitely. And I recognize that the focus of this might be more so on the control center, but, obviously, our focus on emergency response and the field component of the learnings from our Marshall and Romeoville incidents are also in my area of responsibility. But with respect to the -- I guess, the learnings that came out of our own internal investigation, most of those, I have basically worked closely with Kirk Burdess,

my Vice President of Pipeline Control, discussed what we saw as the common areas of focus, the key things that we needed to look at in a different manner, and to potentially make changes around. And so, Kirk has a tremendous amount of experience in this area. He was a member of our control center engineering staff, has worked with the control center in almost all of his roles in the last 20 years within Enbridge and is technically a very knowledgeable person. And with the team that we put together underneath, including a new director, Al Baumgardner (ph.), we have been able to come up with a new plan to implement necessary changes to start the process of heading towards having a world class operation in our control center.

Q. Okay. Could you walk us through some of the changes that you've implemented as a result of the Marshall incident? Let's start with the pipelines first.

A. Sure. With the pipeline control?

Q. Yes.

A. Sure. I think first and foremost, we've recognized that although it was a priority, we had focused on the need and the growth of a new control center, obviously, the regulations that we had in front of us in terms of control room management. What we had not yet implemented was the resources to get us there. So I think, first and foremost, if we wanted to make some significant changes in an area that was extremely important to the organization and one that had a number of challenges in terms of

its growth, in terms of the level of experience of its pipeline operators in terms of turnover, that we could no longer do that with just a manager reporting up to a vice president and having multiple responsibilities. So when we took a look at the key areas that we wanted to focus on, first of all, we felt -- I felt very strongly we had to resource that adequately. In order to make change in an organization, it takes smart people who have the time to do it and not working off the side of their desks.

So that was the first major change that we made and it wasn't too long before Kirk and Al were in their new roles. And Al Baumgardner had a significant amount of the experiences being a manager in the control center in the past and between the two of them working with the existing team, they were able to take the lessons learned from our internal investigation and start looking at what more we would do from a policy and procedure management, what more we need to do from training, hiring, organization structure, as well as dealing with the regulatory requirements like under control room management.

Q. Okay, could you report to any specific changes that have been implement in the control room as a result of the Marshall incident?

A. Well, I think first and foremost, we were concerned about morale in the control center. It was obviously a fairly significant incident for them to have gone through. A number of their coworkers were taken off duty immediately after the incident

occurred. And they were in a fairly intensive hiring mode already so we had a lot of operators that had a lot of responsibility in terms of if you were a senior operator and a lot of new people being trained, as well as being -- having less than the staff we wanted. So our first focus was to make sure people realized that we were there to support them, we were there to make positive changes and to deal with the issues that we had in front of us.

Secondly, we wanted to ensure that we were hiring the right people. So we had hired a number of individuals over the last 2 years, maybe 2-1/2 years, and our overall retention rate wasn't where were wanted it to be, so we focused on making sure that in the hiring process we have people that we think would be a long-term fit and be able to deal with the challenges of pipeline control operations in a very compliance pipeline system.

The next piece was really supporting the people on shift, so our view of the night of the Marshal incident was that we had people that were really trying hard to do what they thought was the right thing, but they needed more technical support, they needed more management support, they needed more technical training, and they needed to be clear about what our expectations were in terms of following procedure both in terms of the people directly under my control and pipeline control, as well the support staff in the MBS positions. So our focus was how do we ensure that they will have a plan put together that will deal with all of the significant issues that came out of that.

So we had a training program, we had an acquisition plan on how we were going to hire the right people, and then we took a look at the overall organizational structure. So in addition to a vice president and a director, we ended up with other managers within the control center both on the technical side, and then to support the operators, what we really wanted to focus on is, obviously, with the number of consoles that we have, which is quite different than most pipeline companies -- we have a lot of people on shift and more people than just one supervisor was going to be, in the long term, capable of having the kind of oversight that we would want to see. So they're dealing with people issues. They're dealing with technical issues. They're dealing with making sure that they have enough people available if someone gets sick to come in. And so, they had a pretty challenging role.

So we have gone down the path of saying we need a technical support person as well as a supervisory support person, and so that basically is doubling the amount of oversight that we would have on each shift within our control center. We're in the process of finalizing the filling of all of those roles. Some of them, we have taken senior operators and moved in and, obviously, we needed to have other operators being hired and trained to backfill for people being promoted within the control center itself. So that was the other major focus is to make sure that our operators can be successful by having the support they need 24 hours a day.

On the technical side, we've taken a look at our relationship with all of our service providers and made sure there was a clear understanding of accountabilities between the support people, who are, in some cases, reporting up to another director, another vice president, and the people that are actually responsible for running the control center itself.

On the training side, we've recognized that there was what would be appear to be an apparent gap of the understanding of hydraulics and column separation based on the conversations that took place that night. And so, our first -- one of our first focuses on the training side was to make sure that hydraulic training was available and all of operators and our on-call management team were run through hydraulics training so they would understand what basically was happening. And even though we will be relying on more people to make a final decision in a situation like that, we wanted them to understand the hydraulic component of what was going on that night so that they would not come to the wrong conclusion if they ever had a situation like that in the future.

I think the other key point that we wanted to ensure was taking place is that the oversight of critical decisions is one that, first and foremost, if in doubt, shut the line down and leave it down. There has been, I think, in our organization, a tremendous amount of growth. With growth comes a drive to a finish line and a need to start taking on more responsibility and

taking over the responsibility of more assets. But our message from the top on down is that, first and foremost, we will operate these lines safely; and if we can't, we will not operate them and we will not restart them until we know exactly what's going on. So that message is, I think, very clear that we will not sacrifice safety for throughput or expediency or the ability to return a line to service.

Secondly, I think we've recognized that management's responsibility is not only to understand what procedure you need to have in place and to train people on those procedures, but to ensure people understand them and they're in compliance with those procedures. So whether it's a field position or whether it's a pipeline position in the control center, first and foremost, management has to take on the responsibility of ensuring that our employees are supported and they're not only trained, but we have a way of coming back and ensuring that they understand what that roles and what they should be doing based on the procedures.

So it's great to have procedures to show the regulators, but the real requirement in a world class operation is that all of your employees understand those procedures, why they're written, and what their expectations are, and if ever in doubt, they know that they should first ask before making assumptions or taking on any responsibility of making decision when they have, clearly, a support team around them that are there to help them on shift and off shift in terms of our on-call support.

Q. What specific managerial failures in the control room contributed to the accident?

A. You know, I think I would, first and foremost, not classify it as a managerial failure. I would say that the person that we had on call that evening, Blaine Reinbolt, in hindsight, should have had some additional training. And, in fact, we have a very clear set of guidelines now as to what responsibilities, what training and level of experience someone needs to have in order to go on call so that if we have someone who's on call that's being challenged to make those decisions, they've seen enough in the organization and have all of the training and that we feel comfortable that they -- what calls they should make and, again, in doubt, then they escalate that to the director, the vice president, or even myself, if necessary. I think we had tried our best to try to ensure that the process would lead to success, but I think when we take a look at the kind of discussions that happened that night, it was clear to us that we could have done more to train and support those people and to have an assurance in place that, if in doubt, they would have continued to escalate it rather than try to restart a pipeline.

Q. Well, it appears in hindsight as if the supervisors that were selected for their interpersonal leadership skills may not have had the technical skills that were needed and that by adding technical people in the restructuring that you've you tried to address that. Is that accurate?

A. Yeah. We -- you know, it would be nice to say you would have a super supervisor that has all of the people skills and all of the technical skills and has enough time in a 12-hour shift to do everything, but I think we recognize that that might get you by on most shifts, but it won't get you by when you have a challenge. And with a pipeline as complex as ours, it's very often that you will have shifts that have challenges on them that require a lot of supervisory attention. And so we wanted to not just have those people focus technical issues and not deal with the people side of our business.

It's equally important to have operators that are being supported and want to stay and want to -- and work for us and feel comfortable that they're being support not just technically, but as employees. So we thought both of those things were important and instead of trying to find the ideal candidate who could do both, we felt that splitting those into two roles would be a more effective way.

And then in terms of training, mentoring, continuing to support our employees while they're going through the training and while they become senior operators, we still have an opportunity to continue to support them in their roles in the organization.

Q. What was the driver that led the organization to emphasize interpersonal skills and leadership skills instead of technical skills among the supervisors?

A. Well, I would say it's not instead of, it was in

addition to. And in our organization, the engagement and retention of our employees is extremely important to us. We want people to stay strive and be successful within Enbridge and that means they do need to be supported in a number of different ways, including in terms of the one-on-one relationship between them and their supervisor, the support they get, the ability to deal with people issues in addition to the technical support side. That's obviously extremely important in the control center.

So I think our initial role was to continue to do what we've always been doing, which is you have one supervisor on shift and they basically started taking more and more responsibilities as Enbridge continued to add priorities to what was important in the operation of a control center. We've now recognized that in reviewing that, that that is, on average, more duties than the average person would be able to do, especially in challenging times, so that drove us to go down this path of having a two-supervisor one-shift process here, especially with the continued growth of our control center.

Q. What was the specific retention rates that you were facing that led to some of these actions?

A. Well, we had probably -- I don't have the specific percentages in front of me, but instead of, you know, hoping that 9 of 10 operators would continue to stay with the company after their training period, our loss rate was higher than that, and so we were continually in a replacement and retraining mode whereas

the original plant, my understanding was that we would hire 10 people, they would go through the training process, and now we'd have 10 people on staff to kind of support either retirement or the new initiatives that we were taking on and any other people leaving. Instead, we were losing too many of those people, so we were always in the backfill mode and we were never quite getting up to the full compliment we wanted, so that's why we focused on over hiring and a way of making sure we would have people who would want to be successful after their training.

Q. So now that you've addressed -- attempting to address the retention through hiring through changes that you made in hiring, could you describe what the changes were and, you know, what it takes now to be selected to be hired as a operator?

A. Only at a very high level. My vice president and his director have done all of the heavy in this area, and so I've gotten briefings from them about what they believe is the way forward. So they've worked with our human resources department to look at screening tools. They've looked at the exit interviews from the people that they've hired, and we do one on everyone that leaves the organization, try to understand what was wrong, was there a wrong fit, was there -- learnings that we would have to say this type of an individual generally won't do well on shift work either because of their family situation or what they see as the challenges of working 12-hour days and continuing to rotate their schedule. So that was one of them, is not only looking for

the technical skills when you're trying to find new employees, but also trying to find out whether shift work in this type of an environment would be a good fit for them or not. And I think we feel that the new focus that we have will allow us to be more success in retaining more of the people that we've hired.

Q. Now, when people are assigned to the control room, they're assigned to work with a team member, is that correct?

A. That's correct, yeah.

Q. All right.

A. They start off in training, and then once they finish their basic training, then they'll be assigned a person to help train them, and then when they get to the position where we feel they've mastered the skills, then it's more of a mentorship relationship and that mentorship relationship will continue until we feel that the control center operator can work independently with just the support of the supervisory team.

Q. And what training do operators, supervisors get to work as teams?

A. Well, the -- the supervisors in the control center?

Q. Yeah, and the operators.

A. Well, I think that the operator piece has kind of been covered in terms of how we bring them into the organization and what basic training they get before they go behind a console. The supervisors, we're generally looking for two things, people who have not only been good operators, but have shown the capability

to do more than just be an operator. So people who have initiatives in terms of looking at how our system operates, making suggestions on improvements, working well with their coworkers. So we're looking for the people skills, we're looking for the technical skills, and we're looking for the leadership skills that would allow people to work well in a control center environment.

Q. And once somebody becomes a supervisor, they're no longer, as I understand it, subjected to the OQ requirements, is that correct?

A. I don't know that.

UNIDENTIFIED SPEAKER: That's correct.

BY MR. STRAUCH:

Q. Okay. So what will Enbridge do then to ensure that supervisors retain the technical skills and knowledge of pipeline operations that will be required of someone who is a pipeline operator full time?

A. That's a question I haven't got an answer right now and it's part of our overall focus as a general answer that all of our roles in our organization are important. We need a way of ensuring that people continue to get trained and they have ongoing capacity in those areas. So the general approach that we would have is those technical supervisors would report up to a manger, and that manager's responsibility would be to performance manage those individuals both in terms of their people skills and their technical skills. Obviously, the key piece that has to happen is

every time you have a close call or an incident, it has to be thoroughly investigated, and if it turns out there's a gap or a lack of understanding or, potentially, even a complacency issue, then that comes out of the investigation and that's gets addressed immediately, and if it can't be addressed, then we have to move on in terms of that relationship.

Q. And one of the things we've learned is that the operators, certainly now, have final say in whether a pipeline will shut down, is that correct?

A. They have the first responsibility for shutting the pipeline down. If in doubt, shut it down. They can't overrule their supervisor or -- and they can't overrule the procedure. So if the procedure requires them to shut the line down and they haven't taken that initiative on their own, which, hopefully, would never happen, and say there is a lead type situation where the MBS analysis is indicating here's the information in front of us, then it would be the responsibility of that supervisor to ensure that the line is shut down.

Q. And what's to prevent a supervisor now from telling an operator to violate a procedure?

A. Well, to be absolutely honest with you, in a world of human people working on shift, that can always happen, so you have to be vigilant to know that that risk exists. So, first and foremost, you want to make sure that there's clarity of vision and responsibility of what we're actually trying to -- and, generally,

my experience is that when people make those wrong decision, they have been either given directly or indirectly the wrong motivation about what's really important. So first and foremost, you want to make sure there's clarity of vision and responsibility of about what pipeline control is all about.

If you have a good performance management system, particularly in a close environment like a control center, I think it becomes pretty clear whether people get it or not. Generally, you will see that in the training program as they become operators and as they move into the system. It would be very rare for someone to kind of change their views after being a successful and safe operator, so those are the kind of people we're trying to ensure are in the leadership roles, and then we have a responsibility for ensuring that they don't become complacency. Complacency is a problem with me, it's a problem with everybody in our organization, so we have to recognize that's a risk and that we have to have systems in place to make sure that they are continually reminded of what's the most important thing that we do, and then having a way of ensuring that that's happening, particularly from a close call in an incident investigation.

Q. Now, one of the things we've learned is that there have been new procedures implemented as a result of this accident. In light of the fact that the procedures that were already in place weren't followed, what mechanisms have been implemented to ensure that all procedures are followed at all times?

A. Well, it comes from our -- starting with our supervisors and our employees to make sure there's clarity of what the responsibilities on are following the procedures. Secondly, we would, again, be investigating any incident to make sure that the procedures are followed. Particularly, we have an opportunity with our new process on shift change of making sure that the new shift supervisor and the new operator have a chance to see what the previous shift has done and if they flag any concerns or inconsistency, we would automatically take action at that particular point in time. And because of the nature of our operation, something could happen on shift and, certainly, it will always be possible to have an incident that didn't result in an impact to go undetected. So I don't think we believe that we can do things in a foolproof manner, but that means that we have to have more focus on the people that are put in charge of operating these facilities both as operators and as supervisors.

Q. Uh-huh. So can you kind of walk us through? If the same situation in terms of mass balance alarms and so occurred tomorrow that happened during the Marshall incident, how should things operate today given all of the changes that you've just enumerated?

A. So first and foremost, we have addressed the MBS analyst role and his or her responsibilities and what they can and cannot do, what their role is as the person who is providing support to the control center. Secondly, we've revisited with all of our

operators what they have as a responsibility in terms of the rules and procedures. We've also revisited that with our supervisors on shift, both the technical and the people supervisors, as well as changed the responsibilities and who is on call. So first and foremost, they have to shut down. In the case of Marshall, the real situation was not so much on the shutting down, but on making the wrong calls and starting back up again. In our case now, there's a small handful of people who have that responsibility of making that call and, again, if they're in doubt, they have to escalate that to our director and our vice president, who are basically on call all the time.

Q. Okay, let's start with the MBS analyst. The MBS analyst had a role in the Marshall incident and said that it was a column separation and not a leak. What changes have been implemented now to make sure that the MBS analyst no longer gets involved?

A. That's not an area that I'm specifically responsible for. So the MBS analysts don't report to the control center. They're a service provider, so they report up to our director -- manager and director of pipeline control and leak detection. So they are a service provider to the control center. They are not part of my direct team.

Q. Okay. But what -- or maybe -- I know they can only give certain information to the control center, MBS?

A. That's right.

Q. So I think that would address it.

A. Yeah. So if -- you know, they are the ones that we are -- who have the technical expertise to review the information and to make the call as to what they're actually seeing, whether the alarm is valid or not and what particular conditions are there.

In a case like Marshall where even if they indicate it is a column separation, before we can restart, we would be looking at not only involving the supervisor -- and in particular, where we have now we've mapped out all the areas where we normally have column separation. We have a situation where we have column separation in a line that's never had it before, we involve not only our on-call staff, but our engineering staff that support the control center, to come in and to do that analysis, along with our MBS people, to come to the conclusion as to is this really column separation or not. And in the case of Marshall, obviously, it was in an area that normally does not see column separation, so, first and foremost, that's a flag now to our management team that why would we have column separation in an area that we haven't seen it before?

And again, there is, you know -- I think if there was a ever a lesson learned about whether it's important to restart a line or not, line 6B was down long enough that I think people recognized waiting an extra even 24 hours to do a full visual inspection of the pipeline is much preferable than to have a situation where you damage the environment, you take the line of service for an extended period of time, or you put people's lives

at risk.

Q. Does it make -- I have a hard time understanding that as the person who's ultimately responsible for the safety of the control room, that one of the key elements of that control room, the MBS analyst, is not under your span of control. Could you explain to me why that doesn't make sense organizationally?

A. I think the reason we have it today is that we have a -- we had an IT department that was responsible for these roles. We had a new appointee, a senior vice president of engineering and Integrity, who also had responsibility for this group in the past, Art Meyer, and when we took a look at the challenges that we had in front of us, I think, my view anyway, was there was a comfort value that taking this team from IT and putting it under Art would have the necessary direction not only to look at the support for the on-call or for the people who are on shift, but also our overall leak detection and our (indiscernible) programs. So it doesn't do us any good to have a world class control system if we don't have world class leak detection system and a world class operating system and the support people to go behind that.

So you can, you know, eventually try to put all of the support people under the control center, but eventually that breaks down as you get into server responsibilities and control systems, and so we thought that a good separation is to take someone like Art, who has responsibility in that area, who has been able to come in and show he's been able to put the team

together to deal with these situations. And so, first and foremost, I need to feel comfortable that under that relationship, I am getting the service I need. So does Kirk, so does Al Baumgardner, and I've made that very clear to them. Your responsibility is ensure your service providers provide the support that is required, and if there's an issue with that, then we will deal directly with that support department to make sure we are going to achieve that. And that's the way -- you know, we are not a silent organization. We're a team that needs to support one another whether you're field employee, whether you're in engineering, leak detection, or in the control center. And so, first and foremost, the responsibility to ensure that the appropriate and required level of support is going to be there no matter whether they directly report to you or not.

Q. Okay. Now, let's go back to changes since the Marshall incident. So the MBS analysts in your -- the supervisor was called and the supervisor who should have been -- should have questioned the actions of the controllers to defer to them, because he didn't have the technical expertise to really question them -- so now, if that scenario were to happen tomorrow, what would be different in terms of the supervisories, the supervisor's advice that he or she would provide to the operator?

A. So first and foremost, all of the people that would be involved now -- that were involved back then have been given upgraded training on column separation procedures, hydraulic

training, so that they have a better understanding of how column separation works and what you should or should not be able to see in a situation like that. There was obviously what appears to us to be a gap in that understanding. I think our supervisor who was on call that day, from my understanding of the transcripts, was going down the right path, was asking the questions, and probably, in my view, if they would have had the level of training they have now, they probably would not have been dissuaded as to what was actually going on and they would not have looked at this as, I guess, the way I've looked at it. They did not look at this as a suspected leak, they looked at it as a column separation. And although they tried to consider the fact that it was a leak, they came back and were convinced that this was column separation and, for whatever reason, they just needed to continue to pump into it and, eventually, of the world's problems would disappear. That was not the right call, very clearly, to other people in the control center, other people who were responsible at the time, but it was the call that was made.

So again, it shows if you want to have a control center that's world class, every one of the members has to meet those minimum thresholds and you need a belted (indiscernible) so you don't just rely on one person making a decision that could be catastrophic to your organization. You need to have the right training for that person, but you need the right support for that person as well and the right ability to escalate to more

knowledgeable people when an area of discrepancy comes up and people are not sure exactly what's going on.

Q. Okay. Why don't we suggest another possible explanation and that is that leaks -- and this a good thing -- are extremely rare events. Column separations are not. So when an MBS analyst sees a column, a situation that could be either a column separation or not, the odds are if he or she goes with the column separation, he's going to be right just because the previous or ratio or column separation to a leak is quite high, so -- and no amount of training is going to alter that, that the expectancies will always be a column separation and not a leak just because leaks are such rare events. How do you change those expectancies so that people will question it and not just through additional training?

A. I think it's a good question and it's probably the biggest issue that people in our business face when it comes to complacency. If I've taken the same risk every day for 20 years, then my sense that something will happen today is very, very low. And so it's the complacency component that I think is, first and foremost, a prime responsibility. That's why we have a focus on our safety culture. That's why we have a focus on compliance and our procedures, and not just what Jay is responsible for, but what we're all responsible, particularly the management team. You can always say, well, the employee didn't follow the rules, but the question becomes why didn't the employee follow the rules. Was

this the first time in their career that they hadn't followed those rules? Were they not given the right, not only the training, but the focus of what's really important in the organization?

Whenever we have an incident now, we review the incident with our executive leadership team. Any business unit has an incident, we get together once a month and all of the Operations and Integrity and Senior Management Team for Enbridge review those incidents to try to understand what's going on because they are too important for us to take lightly, and the same thing happens with any incident that happens in the control center. Each one of them is important and we recognize that people will have a human nature to be complacent, so our responsibility is to ensure that we understand that and have systems in place to come back not -- not just the fact that you've been trained, but after the training, did that make sense to you.

One of the, I know, the new initiatives that we've had recently is safety observations and our director of our control center, Al Baumgardner, had relayed the story that, you know, how is that going to feel like to the operator to have a safety observation when the guy's operating the pipeline and -- but we said it's important, so he sat down and did it and he said it was one of the best experiences for both him and the control center because instead of trying to catch them doing something wrong, they're there to support them in understanding that this

important, what do you think is going on, why would you be doing that, what do we think we need to do about situations like that, and it's that safety observation focus that really helps with the complacency. Generally, if you don't watch what your people are doing, it's very easy for them to become complacent. If they realize that that's important and they're not there to watch -- to catch you do something wrong, they're there to help you be successful, you will be able to deal with, as best as you can, the risk of complacency.

Q. Okay. And can you just tell us a little bit about the safety observations, what it is and how often it occurs and who (indiscernible)?

A. Well, they just started it, and so I've only gotten the one download, this week, actually. And what that basically is, is sitting down while an operator is on shift, and you do that both in terms of the mentor relationship that we've set up, as well as people who are responsible for the control center, so that management gets involved with the actual working operations of the control center. So in this case, our director would spend a number of days in the year actually doing an observation of different components within his span of control so that he has a sense of what's going on, but he's also doing that to say is there anything more I need to do as a director to support those people to do their jobs successfully.

Q. So he will be doing that, this is Al Baumgardner will be

doing this on a regular basis?

A. My understanding is that, yeah, we would take on that responsibility for a number of people who are a supervisory role.

Q. Okay, so not just Al?

A. No. That would be my sense. Although, again, I've got a very good vice president and director. They are not waiting for me to tell them what to do. They are figuring it out on their own and they're letting me know what they're doing, and everything I've seen so far has been very positive. And I do provide them with advice. I still make sure I stay in tuned with where they're going and how fast they're getting there and what their challenges are, but they don't have to wait for someone to tell them what to do.

Q. Okay. And I understand, as per the requirement, Enbridge has a fatigue management plan in place, but that fatigue management plan does not include identification of people at risk for sleep disorders?

A. I don't know.

Q. Okay.

A. I know we've ruled out our fatigue management training. I know the feedback I got from my management team was that it was extremely received by both the management team and the employees themselves and was a real plus in terms of looking at fatigue management from a number of different perspectives. I'm not aware of any deficiencies at this stage.

Q. Okay. Well, there are several sources that could -- several reasons why people could be fatigued. One is that they have either undiagnosed or an untreated sleep disorder, such as sleep apnea.

A. Right.

Q. The source of fatigue could be other medical conditions or it could be medications.

A. Or it could be stress.

Q. Let's talk about medications --

A. Okay.

Q. -- and medical conditions. Does Enbridge plan to institute a requirement that employees report to management any and all medications that they're taking?

A. It is my understanding that they recognize that they need to report medications that could affect their abilities --

Q. Okay.

A. -- operate safely, not all medications, obviously.

Q. Why not all medications. Shouldn't --

A. Not all medications would impact people.

Q. Right, but, right now, it's up to the operators to determine whether or not the medication could affect his or her performance. Shouldn't it be up to the company to make that determination?

A. I think if we thought it was a risk, yeah, I would agree with that.

Q. Okay.

A. If that means that people have to report that they're taking two Advil because they have a headache, then I think we would -- what we want to make sure is that our control center operators recognize that we do things that are in everybody's best interest. If the line gets so gray that they don't believe that this is in their best interest of why they're doing certain things and you can't explain to them effectively why those rules are in place, then you start losing people's trust an people's willingness to do everything else properly. So I think what we always want to do is to do the right thing, to err on the side of safety, but not to do things that you can't explain and are appearing to be unreasonable.

Q. Okay. Well, I'll give you another illustration.

A. Sure.

Q. There's considerable medical literature that shows an association between body mass index and sleep apnea, which is true. Yeah. If your -- if you have a BMI of 30 or above, you're considered obese, and obese people have a -- are at higher risk for sleep apnea. Does Enbridge plan on implementing a program to screen at risk people for sleep apnea?

A. That's good point. I'm not aware of an initiative in place at this particular time.

Q. Do you think there should be?

A. I think if it's a risk, absolutely.

Q. Okay. And finally, what is Enbridge's policy with regard to reports of a hostile environment, sexual harassment and so on and so forth. If a reporter -- if a supervisor has been informed by a subordinate that he or she feels that they're a hostile environment has been created, what is the supervisor's responsibility?

A. Well, first and foremost, we have a respectful workplace policy that all of our employees have to take the training on and it also includes the responsibility of supervisor and the need for them to report every and all incidents up to their management team and, if there is ever a concern about a conflict of interest, is to report it directly to our human resource contact.

Q. Under U.S. law, if a supervisor is informed of -- by a subordinate of a sexually hostile environment and the supervisor does nothing, then that supervisor is -- can be subject to all kinds of sanctions. Is that the case here in Enbridge?

A. Even if it wasn't the case by law, it would be our policy to do exactly that. We don't tolerate our supervisors not take their role seriously.

Q. Okay. We have had a report by a female employee who said that she brought sex charges to a supervisor and the supervisor told her to deal with it.

A. And?

Q. I'm asking about that. Why did that happen?

A. I haven't heard that and I don't know any of the details

on that, so I can't comment. Theoretically, if any female employee a condition forward and it was not dealt with directly with the supervisors, we would, if we found out about it, we would take action with that supervisor as to, first and foremost, to get to the facts, is that really exactly what happened. There's always the perspective of the injured party, as well as the aggrieved party, and so we would want to make sure we have a clear investigation of those particularly. We take them very seriously and we have a very low tolerance for not only violence in the workplace, but definitely sexual harassment in the workplace and, in my area of responsibility, we have taken direct action with employees who have violated that policy and, in some cases, not only disciplined them, but terminated them.

Q. Okay. All right, I don't have any more questions at this point.

MR. NICHOLSON: Karen?

MS. BUTLER: Okay.

MR. NICHOLSON: Go ahead, Karen.

MS. BUTLER: Okay.

BY MS. BUTLER:

Q. I think the areas of interest for me are along three areas. That would be communication -- and I don't mean communication between points and IT communications, like that.

A. Right. People communication?

Q. That's right. Integrity and disciplinary actions.

A. Uh-huh.

Q. So we know from having studied this event that there were several people at least that thought leak on that day, at least prior to the second restart. And --

A. I'm sorry, that though what?

Q. That thought leak.

A. That thought that --

Q. A leak, that there was a leak as opposed to --

A. Okay. I understand your question.

Q. -- an element of column separation that was not being filled. And they had reported them to shift leads and the shift leads simply dismissed it. What has been done with the people skills side? Because these are supposed to be people that would help them learn to listen and take action appropriately to their subordinates.

A. Uh-huh. Well, again, the approach that we've taken is to, first and foremost, ensure that all of our employees and supervisors are aware of our procedures, what they are responsible for, that they are not be interpreted loosely, and what their responsibilities and the various roles are. Secondly, we've taken them and retrained them so that they would understand clearly and we could say that if you have received this training, you would clearly know what things could be going on and what your responsibility were, and even if you couldn't figure it out yourself, that we are on the side of keeping the line down until

we can have a technical explanation of exactly what's going on.

In the situation that occurred that evening and into the next day, I think it was clear that people thought they knew what they were doing. They had made an assumption that was incorrect and they continued to try to look at filling the line because they thought the pressure would come back up. It's not something that I believe all of our shifts would have done, and so there was potentially inconsistency of people's understanding of their ability to make the right call and their ability to always end up with the same result, and that's why the focus on complacency and training and support is so important in the changes that we've made since the Marshall incident.

Q. Do you believe that supporting people involves listening to them and responding to what they tell you?

A. Absolutely. The whole point of having a successful relationship with your employees is that they can feel supported and they can feel trusted. And in a situation where an employee does not feel their supervisor believes them, is taking them seriously, is listening to their concerns and ignoring them is the worst situation you can have between a supervisor and an employee.

Q. Okay. So, to me, reiterating procedures explains to me what to do and why I should do it, in some cases, training helps me do it, but the support part I haven't heard yet that we can prevent Marshall in the future is what we're going to do for our shift leads that are supposed to be specific people oriented --

Now, we have a technical one and I'll talk to that in a minute -- that the people-oriented individual such that they go though some specific leadership training associated with listening and responding to their subordinates.

A. Uh-huh.

Q. Has that been discussed?

A. Let me think about that. One of the things that I have had in place prior to the control center being my responsibility is a line supervisor training program. So we've recognized that it is important that people don't just get into supervisors, that they get specific training of the roles and responsibilities and the challenges. That is a good point. I don't know where we are with respect to taking our shift supervisors and looking at the people side of the training for that. Our supervisors and field operations have been through all of that and we have an ongoing program to run new supervisors through that, so it's a point that I will take away and take a look at.

Q. Okay.

MR. JOHNSON: Actually, I -- and I'll jump in here. There are some of them in the line supervisor training next door right now.

MR. ZUPAN: Okay.

MS. BUTLER: I would hope that there's some --

MR. JOHNSON: There is.

BY MS. BUTLER:

Q. -- there's some enhanced training going on for listening skills to your subordinates in understanding how to respond to that properly. And my second aspect of what we've got going on with the shift leads is their technical ability. Have the people that reported to you expressed to them -- to you that all consoles are not the same?

A. Absolutely.

Q. So what are we doing to make sure that the person we put on shift, that is the technical shift lead, is fully equipped to deal with the toughest console on the (indiscernible)?

A. So what we've looked at is this is still a journey. So we would have loved to have been able to change overnight and say we would have technical people that can support both the toughest lineup there and the toughest terminal. A long-term focus is to have a technical supervisor for the pipelines as well as for the terminal operations. We will not be able to get there in a short period of time because of the whole training piece.

Q. Completely get that.

A. Right. So our view is that that technical supervisor needs to be basically the brightest technical person on shift there, so they should be able to deal with the toughest line. We don't want to take someone who's operated the easiest pipeline and just assume that now they can become a technical expert. In fact, we've recognized that more so over time, that some operators are very good at operating some lines, but some of them find it so

challenging to operate the tough lines that, in some cases, that's part of the reasons why they left the organization. So other operators love the challenge of operating the tough lines and they do a very good job on it. So it's making sure that we put not only operators in place that can operate the toughest lines, but we also put technical people in place that can operate in the challenges of the toughest lines.

Q. I would ask you to consider on a go-forward basis that part of your long-term plan is that you use people that have operating experience on the toughest (indiscernible), that you have conversations around what that means so that when someone like I come in here, it can already spell out they've got it underway.

A. Yeah.

Q. Okay, so there is nothing there. All right. So then, I guess what I'm going to ask now is how many are in the pool associated with training? Because you mentioned that resources is a key to preventing Marshall from happening again.

A. So I was hoping you actually would have interviewed Al Baumgardner --

Q. Okay.

A. -- because the man knows all of these details inside and out. I get briefed at a high level of where we are. I don't get those briefings every week, and so I'm not in a position to give you any details specifically on that, but there are people in our

organization who could do that right now, if you want them to --

Q. Okay. We'll -- we can ask that --

A. Sure.

Q. -- if we need to. And then I would ask, the next question is do you know the methodology or what they've talked to you about that is going on behind the scenes to determine what the right number of resources is?

A. In general?

Q. Yeah.

A. Yeah. So what our folks have been doing is looking very closely at where the challenges are from the employees. So instead of just a management view, they've been engaging the employees to understand what they see as the challenges. Our focus on safety culture within the control center is another way of getting that information from them, and our safety perception survey is providing again information to us about what people see as the support and their roles and the roles of the people that support them. So our (indiscernible) work with the control center, I think, is one of the areas that we're trying to get another view of what people feel that they need to be supported.

I think Kirk and Al have done a very good job of listening to their supervisory team, their management team, and looking in great detail on each one of these areas to try to figure out what more they need to do. And again, I -- they don't see this as the destination, they see this as a journey and

they're -- if there's a destination, it's to maintain a world-class statute for our control center in the future. They realize we aren't there yet. They realize the challenges that we have to do that. And I think, over time, working with peers in other industry, we will continue to learn from what others have done, learn from what the regulators are saying are important, as well as from our own supervisors and employees themselves.

Q. Okay. I think I'd like to shift just a little bit then into you made a statement, I believe, it is clearly the controller -- or you've emphasized to the controller it's their responsibility to shut down that we've clarified that will -- in your mind, whose responsibility is it to decide when to start up?

A. Oh, it depends on the situation. So we have situations where that could occur, because we had a (indiscernible) at a pump station, because we had a power failure, because we had a gas alarm. So provided the right information comes back to the control center operator and the control center shift supervisor, there are a number of things that, under our normal procedures, they can make the call themselves that they understood the problem, they've corrected the problem, and now they're in the position to restart again. There case would be a power outage. There are other situations where they need to be able to explain exactly what has happened along with the technical expertise that's available to them, and if they can't, then they're not in a position to make the call. They need to escalate that to the on-

call person, if it's during the night, and, if necessary, to bring the engineering support in order to evaluate the situation before they restart.

Q. So if we have a situation where on-call thinks it's okay to restart and the shift leads do, but the operator is not comfortable, what do you think is the expectation in that case?

A. That the lines stays down until the operator is either comfortable or they go and get further support to make that decision.

Q. Do you believe it's been emphasized to the operators since the Marshall (indiscernible)?

A. That is my understanding, yes.

Q. Communication, I want to emphasize the communication that goes on between the Integrity Department and the control center. So when Integrity recognizes that we have a significant condition out there and we need to restrict pressure and they send that notification, what's done to prepare the controllers for what that impact is going to be to them?

A. Pre putting in the restriction or post or both?

Q. Pre putting in the restriction?

A. So I think the process, the way I understand it, is when that notification comes in, our engineering support people in the control center would receive that information, and then they would take action to explain to management, the shift supervisor, what conditions exist and what requirements need to be put in place

immediately, and that could involve, first and foremost, shutting the line down, if it's a serious notification that comes in in terms of anomaly on the pipeline, or a requirement to put in a, either an immediate pressure restriction or a pressure restriction when they're actually doing the investigation itself on a pipeline. So under those scenarios, those -- my understanding -- and again, Al Baumgardner would be in a much better position to have an explanation of exactly how the process works. But my understanding would be then that would be explained to the shift operator and that shift operator would also explain it to the person that would be replacing them.

Q. Okay. So do you think that the training group is in this link at all? Like, we know that maybe we're going to be running in a lower condition than we've ever done before and we're not even sure that our control valves can handle that. Is the training group in the link such that maybe they can prepare simulators on -- simulations on short order or have they have talked about that to you?

A. My understanding is they can do that and that they can make that a priority and achieve that. I think it raises, you know -- we've been in an interesting situation for the last couple of years where a number of our pipelines have had limitations on them that have made them much more difficult to operate than they have under normal conditions, and so it has not been something that hasn't been anticipated and actually been dealt with for

quite some period of time. It is very challenging for some of the operators. I have talked to them on shift. Some of our lines not only were difficult to operate in the past, they're even more difficult with the Integrity programs that have gone on.

So our perspective is really on ensuring that we have a good process and procedures between not only what comes in from Integrity and what they're finding in the field, but also how our control center engineers deal with multiple issues. So we've staffed up our engineering team and the management and oversight of that team quite a bit in the last year here and we will continue to add resources as necessary to manage those types of conditions. Now, we do anticipate, with the large number of internal inspections that we're running that will continue well through 2012 -- but our goal is to have completed not only in the inspections, but our day programs be largely finished by the end of 2012, and as a result of that, we should be able to, over the next year and a half here, start returning our lines to more normal operations.

Q. Is there anything in place right now that would guarantee when there is a pressure restriction that somebody reviews it for whether or not training should happen before it's -- but I realize that there are mediates that no one has control over.

A. Yeah. I would say very difficult to take a hypothetical situation and determine whether you need training. I think the

more practical approach is to, first and foremost, implement the pressure restrictions. If it turns out the line is almost impossible to operate, then at that point in time, we would have the discussion not only with the shift supervisors, but also with the engineers and our management team, and then take action as to whether it is actually still possible to safely operate the line. If it becomes a challenging operation, the I agree that's where not only just the training piece, but the on-sight support needs to come in and determine what's the best way to train our operators to operate under those circumstances and to make sure that information happens on each one of the shifts.

Q. Okay. You've mentioned that the control room has been in a lot of growth and we know there's been lots of pipelines going on.

A. Uh-huh.

Q. Has there been any discussion about giving a longer timeframe for when the pipeline is expected to be in service to get more resources trained up?

A. I think we've had enough notification. What we needed to be able to do is to show that we have the capabilities to have people in place to operate those facilities prior to them being commissioned so that we don't find ourselves in a catch-up mode. But, practically speaking, we're in a catch-up mode right now. We want to hire more people to fill up the technical supervisor roles to ensure we've got the strength to handle all of the new

pipelines that are coming our way. Fortunately, most of the new lines that are coming into service are not difficult to operate because they're either in start-stop mode or they're very low in terms of their overall through. But it's more of a situation where the lines that we have operated for, in some cases, decades, are the most difficult lines for us to operate and they're becoming more challenged as we manage the integrity programs and return them back to their safe operating limits by having all of the anomalies addressed. So it's more of a situation of being able to handle the complicated, the tough lines, as you mentioned earlier. It's easier, actually, to bring our new lines up and operate them because they tend to not to be the challenges that they're -- our main line is.

Q. So if we had enough time to -- at least we had enough notification and they're fairly simple, but they still take resources to operate, then have we looked at what could be done to hire earlier or --

A. Yeah. Well, as an example, we've just announced that we're going to be training (indiscernible) our (indiscernible) system in Alberta. That's a 2-year notice that we have. So it's not like 2 years is not enough, if only we had 2-1/2 years, we'd be ready for it. It's more of a situation of saying, all right, in 2 years, we need to operate this pipeline. In 16 months or 12 months, we need to have this capability, we need to start hiring at this point in time. And I think our people understand that now

and they are feeling confident that we are starting to get to the point where we aren't having to rely on overtime and extra shifts in order to manage the situation. Some of those new hires are getting through their training program and they're now being put on shift and our starting to ease on the workload, and I think they've done a pretty good job on workforce planning to look forward to make sure we are going to have enough operators for the new lines that are coming on as well.

Q. Okay. Can we talk disciplinary for a minute?

A. Okay.

Q. Do you know who was involved with the initial decision to pull who off shift right away and take them out of the control room?

A. No.

Q. Okay.

A. You mean in terms of right after the incident?

Q. Yes.

A. No. That would have happened back in July, and I didn't take on any responsibility until October.

Q. Is there any additional things that have fallen to delay disciplinary actions based off of the outcome of the investigation or in the internal investigation that did fall to you or will fall to you?

A. It has post-October, yes. So, you know, our -- I think our formal view back (indiscernible) the NTSB is that until the

investigation is complete, we are not taking disciplinary action with any of the employees. We're not allowing them to necessarily continue to do the duties that they had prior to the incident, but the disciplinary actions are really being predicated based on the investigation.

Q. So if a shift lead that may have had some involvement or inappropriate involvement in the event has not been removed, is there still that possibility or have we have just moved on?

A. I think we have tried to err on the side of taking all of the people that might have been in an area of responsibility and ensuring that they have been taken off their regular duties. And other than what we've -- as you are aware today, some of the employees that were involved have decided to leave the company. Two of them have decided to take a retirement package from us, and the rest would, again, be awaiting the final determination of the investigation.

Q. Okay. So those two that took retirement, was that their choice or was it a forced retirement?

A. It was offered to them and they accepted it.

Q. One last thing on communications between groups. Since Integrity management reports to a different VP, if I have this right, and conceivably senior VP -- forgive me if I --

A. Uh-huh. There's two senior, VPs, myself and Art Meyer, that have responsibility --

Q. Okay.

A. -- for the control center, for Leak Detection Integrity.

Q. Okay. So what Integrity comes through and they know that in the near future, they're going to need to replace three (indiscernible) or they're going to need to have a special timeframe during an upcoming year when they get time to really go out there and they need low conditions --

A. Uh-huh?

Q. -- what have we done to make sure that that communication occurs in enough time to prepare the controller?

A. So our Integrity Group has heard more than on one occasion from operations about the need for prior notification. In some cases, it's just impossible. Obviously, if we get the results for a tour run tomorrow, we will take immediate action. It would be nice to plan all these things, but in some cases, the tour runs say the line's fine, and in some cases, they say we have to take action. In terms of your example of pipe replacement, those are long-term items, so --

Q. Right.

A. -- those are the easiest ones for us to manage. But whenever we're going the planning for tour runs, we have a maintenance advisory team that comes together that looks at that a year in advance. So we take all of the known capital and operating work that will happen in 2012 to plan that in advance because we do want to minimize the impacts to our customers wherever that is possible. And where it happens on an unplanned

basis, if we have prior notification, that goes into the next month's plan of what we will do not only to schedule the system, but to operate it. And then, of course, anything can happen on a daily basis, and so that's why we have a large group of people that are there to handle that type of change on a daily basis and on (indiscernible).

Q. So something that can be planned is really supposed to go through this Maintenance Advisory Team you've set --

A. Absolutely, yeah.

Q. -- and that could happen up to a year in advance for that?

A. That's right, yeah.

Q. All right. So who's on that Maintenance Advisory Team? Do you know?

A. We have representatives from the other department, but it's basically coordinated under -- our Vice President of Pipeline Control has the responsibility to make sure that's being done properly.

Q. So --

A. And one of the thing's they're actually interested in is if we have plan maintenance, they want to understand what impacts that will have to line. Because we do know that some of our lines, a pressure restriction will take them to a very, very tenuous operating mode and, in some cases, we might actually have to plan on shutting down under the circumstances. And then, of

course, we try to be efficient by planning and combining a number of different maintenance projects in the same line for the same shutdown.

Q. So that would make sure that the VP of Pipeline Control, which would be under you, is responsible for reaching out (indiscernible)?

A. He's responsible for ensuring that process is done effectively and efficiently, and I've talked to him about that and it's one of the things that he's pretty passionate about.

Q. Do you believe he gets the cooperation he needs from the other department?

A. I do.

Q. I believe that that's all I have. Thank you.

A. Okay.

BY MR. PIERZINA:

Q. Leon, early on, you mentioned your role in CCO changes, which we spent a great deal of time on, but also emergency response changes. Could you touch on those?

A. Sure. You know, I think we saw firsthand the difference in dealing with all of the regulators, Marshall versus Romeoville. Although we had trained our people on incident command, we had never had to implement a unified command structure with a number of federal agencies and local agencies. And what we learned at Marshall was that if you can effectively put an incident action plan in place, you can assign the roles, you can have the

communication upfront and the right briefings, you will largely be held as the responsible party to actually operate that. And so, it clearly showed to us the value of being more of a world class -- have world class capability in incident commanded emergency response. So we've created an emergency response group and we've started to -- well, we've staffed it up. I think we're about five people right now and working with consultants who are very well trained in this area, the response group. In fact, one of their VPs was the incident commander for VPM Mocango (ph.). They've started training our people in terms of incident response. We're -- we've got a syllabus of training programs for all of our key people to go through from an incident response perspective, including an enterprise-wide approached incident response, which is basically what happened at Marshall. We had people from all of our business units coming together. They just hadn't been trained ahead of time to know what to expect, to know what their roles are.

In terms of the emergency response capabilities, we've indicated that we will be probably spending in the neighborhood of 50 million dollars over the next 2 years to improve our equipment, our capabilities, the development of better tools to deal with particular waterborne spills, to be able to deal with our worst case scenarios, to improve our training program to deal with our worst case scenarios, and our involvement with contractors and co-op agencies so that we know who we can rely on, timing, obviously,

being in the essence -- being of the essence in an emergency. So it's a fairly major initiative in operations right now and we're focusing on implementing a lot of change in the next 12 months.

Q. Does public awareness also fall under your purview?

A. It's kind of strange situation in the United States. It is part of our Public Affairs Group and, in Canada, it's part of our -- more of our right-of-way responsibilities, which is under my responsibility.

Q. Okay.

A. So I follow very closely and work with our Public Affairs Group in the United States in terms of what our Public Awareness Program is, and in particular, it's our people that are responsible for the face-to-face meetings with first responders, Fire and Police, et cetera.

Q. And that's kind of what I was most interested in is your face-to-face interactions with the emergency responders. Have there been any changes considered or implemented to enhance the face-to-face liaison with emergency responders?

A. Yeah. Obviously, we were quite surprised to see the decisions that were made in Marshall leading up to our notification. And so, we've recognized that we have to do a better job in dealing with 911 centers and dealing with -- you know, you can deal with a local volunteer fire department chief, but if he doesn't pass that information on or he doesn't understand it or she doesn't understand it, then you're

discharging your duty to notify, but you're not necessarily getting to a point where you know what response will occur. So our focus it to work with our industry associations to figure out -- because it's not just an Enbridge issue, it's --

Q. Uh-huh.

A. -- it's a national issue as to what we could do collectively better, particularly when it comes to dealing with 911 centers. I think that's a very key area for us to figure out how to do a better job in terms of the training and support. Since there are thousands of 911 operators across our nations, it's a challenge to make sure that they -- you're able to get the right response when an order complaint comes in or a detection of a release comes in. The same thing with our local fire departments. We want to spend a lot more time making sure that they understand the various components where pipelines are and in doubt -- when in doubt, to make sure that they call us if they have any questions. So are we there yet? No. I think this is a set of requirements that's going to take us a little bit longer to implement on a national basis, at least to our own states that we have our pipeline facilities. But again, I think (indiscernible) this is something that our industry needs to take a lead role in as well.

Q. Do you think Enbridge would be willing to use Marshall as a training example?

A. We have already. So --

Q. Okay.

A. -- both in Canada and the United States, we have gone to industry associations and we've sat down and explained to them the details of what happened that aren't subject to the NTSB investigation so that -- our view is that environmental safety issues are not proprietary. There are some things that should be shared with all industry partners and that's the focus that we've taken on our major incidents.

Q. Okay. We were, a lot of here were on site early on in the accident and one of the things that struck me was, well, early on, there was the discussions of whether the leak took place, you know, Monday afternoon, when it was reported, or early Sunday evening and the volumes, and I recall, you know, questions concerning that coming from various agencies responding and no -- you know, I think information was known early on, you know, that would have happened, but no willingness, I guess, to bring that up during those earlier emergency response meetings and I was just curious why that was.

A. I'm not quite sure I'm clear on the question there, Brian.

Q. Okay.

A. So when -- could you be more specific?

Q. Well, so there's quite a -- a couple of issues. There was questions concerning the quality of a product released, and also the timing of the accident, I think, was probably the bigger

one because I think it was probably clear early on that the release occurred Sunday night, yet that wasn't -- you know, while it was brought up, I think, in the meetings, it wasn't admitted to or acknowledged, I guess. Maybe that's the better word. I'm kind of just, I'm just unclear as to why that would be.

A. Well, I can tell you from my perspective, having been site, there was never discussion about, okay, we really don't know, we're not going to talk about this, we're not going to provide any information on this. It was really a situation we were overwhelmed by the size of this incident and our primary responsibility for the people on site was how we were going to do with the community, how we're going to do with the oil in the environment and in the water, how were we going to implement a overall focus. I did not spend really any time talking to the people in the control center side as to the details of all that I was probably not even aware of as an executive in the organization for probably a week so. You know, it was really a focus of it wasn't so much important for me to know whether it happened as -- the responding in incident commander, whether it happened on Sunday night or on Monday morning. It was more about what are you going to do about the situation we have in front of us. We recognized there would be investigation and all the details would get out. In fact, I was -- when I did have time, my role was really to talk to our senior executive team to say I'd think we'd better appoint an internal investigator soon. Here's some people

that I think we would consider as names. And so, I can't have any responsibility for this, but I think it's important and I think we'd better start that process. But I was 110 percent response than what happened when --

Q. Certainly.

A. -- other than the whole situation of whether one of our employees might have been involved with the whole --

Q. (Indiscernible).

A. -- consumer energy incident.

Q. When did you first learn of the accident?

A. I was in Calgary preparing for a Board of Directors meeting on Monday and -- you know, it's a bit of a blur now. Sometime midday on Monday, I received a call from Tom Ferdell (ph.) indicating that we had oil in the Townridge Creek and heading towards the Kalamazoo River and that this might be a big one, in which case I informed my executive, Steve Worey, who informed Pat Daniels. We got further information that day and Pat decided that it was significant enough that we would take the jet down to Kalamazoo. And so, I went back to Edmonton and got my gear, they picked me up in Edmonton, then Pat and Steve and myself and Darcy Woobeck (ph.) flew down that evening.

Q. Okay, thank you very much.

UNIDENTIFIED SPEAKER: One (indiscernible) just to bring you up to speed. Harold Looney (ph.) just did a public awareness audit of our program in July (indiscernible) out of your area and

we covered a lot of those issues, and I think if you talk with Harold, he'll give you a pretty good indication of what our (indiscernible) is and (indiscernible) we're going forward with it. And actually, today was the second date (indiscernible) of our first public awareness plan committee meeting, which Mike Muller (ph.) is one of the co-chairs of, and they're -- and part of the reason -- and they've got a representative from each one of the regions that report to Leon to look at how Operations can better meet with emergency officials and 911 centers and everything else. That's going on literally.

MR. PIERZINA: Yeah, yeah.

MR. JOHNSON: Today is the second day for that. So that was --

And just one clarification because you did ask that, Brian, and then Karen had mentioned it, and Matt had mentioned it yesterday, and maybe Leon.

BY MR. JOHNSON:

Q. If you could touch on the ring in the message that was given to all employees here --

A. Sure.

Q. -- recently?

A. Our CEO, who obviously took a very strong leadership position in the incident for 3-1/2 months on site, wanted to ensure that operation and integrity were first and foremost the focus of our organization. We started off ensuring that we

reorganize or divisions, and then he directly wanted all of his executive team to be involved in a monthly review of all of the (indiscernible) so they had a better understanding of what's going on. But he also recognized that this was something that all of our employees need to learn from.

In Canada, there is a tradition if you become a professional engineer at an iron ring, which represents a bridge that failed in Quebec City because it was not designed properly, and so all engineers are reminded in wearing an iron ring of their responsibility to do their jobs correctly, we use the concept by providing each of our employees and all or our new employees with a ring that really speaks to their responsibility of maintaining the integrity of our system. And even though it does contain some of the line 6B pipe as a bit of a symbolic nature, the ring is really representing that we need to take responsibility in all of our different business units, not just (indiscernible) pipelines. So our focus is that this is not something that should ever been forgotten and, in fact, our new employees will be made aware of that as they hire on in the organization.

Q. Very good. That was all I had.

MR. NICHOLSON: Okay, Barry, have you got any follow-up?

MR. STRAUCH: Not for me.

MR. NICHOLSON: Okay.

UNIDENTIFIED SPEAKER: I've got nothing.

MR. NICHOLSON: Karen?

MS. BUTLER: No.

MR. NICHOLSON: All right.

Okay, Leon, appreciate you coming in.

MR. ZUPAN: All right.

MR. NICHOLSON: I think, at this point we'll conclude our interview.

(Whereupon, the interview was concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	ENBRIDGE- LINE 6B RUPTURE IN MARSHALL, MICHIGAN Interview of Leon Zupan
DOCKET NUMBER:	DCA-10-MP-007
PLACE:	Edmonton, Alberta, Canada
DATE:	November 17, 2011

was held according to the record, and that this is the original, complete, true and accurate transcript which has been compared to the recording accomplished at the hearing as recorded.

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Karen M. Galvez
Transcriber