



## A P P E A R A N C E S

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A P P E A R A N C E S (Continued)

COUNCIL MEMBERS PRESENT:

William Lynch - Chair  
Jaime Rossman, Department of Commerce  
Cullen Stephenson, Department of Ecology  
Joe Stohr, Department of Fish and Wildlife  
Dennis Moss, Utilities and Transportation Commission  
Dan Siemann, Department of Natural Resources

Local Government and Optional State Agency:

Ken Stone, Department of Transportation  
Bryan Snodgrass, City of Vancouver  
Greg Shafer, Clark County  
Larry Paulson, Port of Vancouver

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A P P E A R A N C E S (Continued)

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1                                   A P P E A R A N C E S (Continued)

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1 PROCEEDING

2 JUDGE NOBLE: Good morning. We are back on  
3 the record before the State of Washington Energy  
4 Facility Siting Council in the case of Matter of  
5 Application No. 2013, Tesoro Savage LLC Vancouver Energy  
6 Distribution Terminal.

7 Are the parties ready to proceed?

8 MR. POTTER: Your Honor, I do have just a  
9 couple preliminary matters. I just want to be clear on  
10 exhibits with Mr. Lopossa that I'd be referring to  
11 Exhibit 3130, which is the Gate Downtime Analysis. I  
12 think I included that in the list of exhibits for  
13 Mr. Lopossa.

14 And then for Chief Appleton, there's two  
15 exhibits, 3039 and 3040, which are the videos of the  
16 Mosier fire, and I'd be asking Chief Appleton foundation  
17 questions on those and moving to admit those.

18 Lastly, we sent a list of witnesses that the  
19 opponents to the terminal intended not to call, and one  
20 of those witnesses was the executive director of the  
21 Washington State Fire Chiefs, Wayne Senter. I don't  
22 know if council had any questions for him. I know the  
23 applicant did not. So I need to let Mr. Senter know  
24 sooner rather than later if he's going to be needed.

25 JUDGE NOBLE: Right. I sent the council an

1 e-mail with those names last night and have not heard  
2 that there's a need to ask questions of any of them. If  
3 you could just give me until the break to poll the  
4 council rather than doing it right now.

5 MR. POTTER: Sure. Any time today would be  
6 fine.

7 JUDGE NOBLE: Thank you.

8 Anything else, Mr. Potter?

9 MR. POTTER: No, ma'am.

10 JUDGE NOBLE: You may proceed.

11 MS. BOYLES: Good morning, Your Honor. My  
12 name is Kristen Boyles and I'm counsel for the  
13 collective environmental groups called Columbia  
14 Riverkeeper. We're going to do something slightly  
15 different this morning.

16 For your viewing pleasure, our next witness  
17 is Susan Harvey. She is a witness on oil spill risk,  
18 response and planning. You've heard her mentioned  
19 several times already in the past week. She's also a  
20 commercial salmon fisherman in Alaska and is unable to  
21 participate in this hearing live, so we have prerecorded  
22 her testimony through direct and cross, and we have that  
23 on video to play this morning.

24 So with that, I would call my witness,  
25 Ms. Harvey, per video.

1 JUDGE NOBLE: Thank you. I think Ms. Mastro  
2 has it queued up to play.

3 (Videotape of prerecorded testimony of Susan  
4 Harvey was played from 9:17 a.m. to  
5 10:21 a.m.)

6 MS. BOYLES: I wanted to let the council  
7 know that Ms. Harvey would be available for questions  
8 should the council member have any questions. We  
9 currently set up a phone call with her on Wednesday,  
10 July 20th, which is next Wednesday, but that is the next  
11 time that she is closer to shore that we can be assured  
12 of getting a connection. And we're reserving that time.  
13 Right now, I suppose, if there are no council questions,  
14 please let us know, but we will set up the phone call on  
15 the 20th.

16 JUDGE NOBLE: Could I ask council members to  
17 my right to just raise your hand if you have questions  
18 for Ms. Harvey. All right. I see some questions.

19 And to my left? No questions to my left.  
20 So we have one council member. Just one? All right.  
21 So just if you need an estimate of time. Thank you.

22 It's 10:23. It's probably a good time to  
23 take a break before you call your next witness. We'll  
24 be off the record.

25 (Recess taken from 10:23 a.m. to 10:43 a.m.)

POTTER / LAPOSSA

1 JUDGE NOBLE: We are back on the record.  
2 Are you ready to call your next witness?

3 MR. POTTER: Yes, Your Honor. Call Mr. Ryan  
4 Lopossa.

5 JUDGE NOBLE: Mr. Lopossa, would you raise  
6 your right hand when you're able.

7

8 RYAN LOPOSSA,  
9 having been first duly sworn, testified as follows:

10 JUDGE NOBLE: You may proceed.

11

12 DIRECT EXAMINATION

13 BY MR. POTTER:

14 Q. Mr. Lopossa, please state your full name and  
15 give us the spelling.

16 A. My name is Ryan Lopossa, R-y-a-n, L-o-p-o-s-s-a.

17 Q. And Mr. Lopossa, how are you employed?

18 A. I'm employed by the City of Vancouver.

19 Q. In what capacity?

20 A. I'm a senior civil engineer.

21 Q. All right. Licensed in the State of Washington?

22 A. Yes.

23 Q. What are your responsibilities in the City of  
24 Vancouver?

25 A. My primary responsibility are reviewing new

POTTER / LAPOSSA

1 development proposals that come to the city. We review  
2 them for impacts to our transportation infrastructure  
3 and then I also review them for impacts to traffic and  
4 concurrency.

5 Q. Do you also oversee the design of improvements  
6 to the city's transportation system?

7 A. As it relates to new development, yes.

8 Q. Have you reviewed your prefiled testimony in  
9 this case?

10 A. Yes, I have.

11 Q. And do you affirm that that testimony is true  
12 and correct?

13 A. I do.

14 Q. You've prepared a couple of exhibits. 3014 is a  
15 listing of crossings in the City of Vancouver across the  
16 BNSF main line; is that correct?

17 A. Yes.

18 Q. And we're going to have 3014 displayed here.  
19 I'd just like you to -- there's a laser pointer there on  
20 the table, but not go through every crossing but if you  
21 could please tell us the type of information that was  
22 provided on the listing.

23 MS. MASTRO: I'm sorry, Mr. Potter. The  
24 Internet is not working for the display.

25 MR. POTTER: I'm going to need 3014 and

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1 3015, Your Honor. I don't know if it makes the most  
2 sense. Do you want to take a brief recess?

3 JUDGE NOBLE: Do you have a hard copy of  
4 that exhibit?

5 MR. POTTER: I do.

6 JUDGE NOBLE: We have the ability to copy.

7 MR. POTTER: I don't have the ability to  
8 make additional copies.

9 JUDGE NOBLE: Let's go off the record for a  
10 minute.

11 (Discussion off the record.)

12 JUDGE NOBLE: Back on the record. You may  
13 proceed, Mr. Potter.

14 MR. POTTER: Thank you.

15 BY MR. POTTER:

16 **Q. Mr. Lopossa, 3014 is I believe a two-page**  
17 **exhibit. Can you tell us what this exhibit shows?**

18 A. This exhibit illustrates the different at-grade  
19 rail crossings that are located within the City of  
20 Vancouver along the Burlington Northern Santa Fe line;  
21 both the east-west line, we often term that as the  
22 Evergreen line, and then also the north-south line that  
23 runs through Vancouver.

24 What's contained here is a location of the  
25 crossing. If it's a -- if it has a street name, we've

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1 identified the street. If it's simply a driveway, we've  
2 identified the address.

3 We've also identified what type of property is  
4 served; for example, the first entry is access to a  
5 park. Most of them are access to residential  
6 properties. We also have an entry at the very end which  
7 is access to a lumber mill.

8 We've identified whether it's a public or  
9 private crossing and then we've also identified the  
10 average day traffic associated with that crossing.

11 And then finally, we've identified whether there  
12 are protective measures at that crossing such as  
13 signals, gates, arms, or, in the case of many of them,  
14 no protective measures.

15 **Q. And the blue shading, what does that signify?**

16 A. The blue shading are the public crossings  
17 identified in this particular list.

18 **Q. If we could go to the second page. Same thing  
19 on this page?**

20 A. Same thing on this page. We did not shade the  
21 public crossings, but there are several of them.

22 **Q. Okay. But they have a descriptor there, public  
23 or private?**

24 A. Correct.

25 **Q. How many at-grade crossings are there in the**

**POTTER / LAPOSSA**

1 City of Vancouver?

2 A. We have a total of 32 at-grade crossings. There  
3 are 25 on the Evergreen line and 7 on the north-south  
4 line.

5 **Q. And of these, how many are public and how many**  
6 **are private?**

7 A. A total of 10 are public and 22 are private.

8 **Q. And how many have no protective measures?**

9 A. A total of 20 do not have any protective  
10 measures.

11 **Q. If we could then go to Exhibit 3015. If you**  
12 **could expand it. Scroll down just a little.**

13 **You're familiar with this exhibit?**

14 A. Yes, I am.

15 **Q. What is it?**

16 A. This exhibit is a map that depicts the locations  
17 of the various crossings along the BNSF rail line.

18 **Q. Okay. And can you just show us what symbols are**  
19 **indicating crossings?**

20 A. So, for example, this Number 1 correlates to  
21 Number 1 up here in the list, which is Southeast Beach  
22 Drive which is a public crossing. So this list has  
23 numerical references which are shown on the map.

24 The identifier of the crossing, again, whether  
25 it's a road name or a driveway address, and then a

POTTER / LAPOSSA

1 notation as to whether it's a public or private  
2 crossing.

3 Q. Okay. And it looks like the circles with the  
4 numbers showing the location are different colors as  
5 well?

6 A. That is correct.

7 Q. And why the different colors?

8 A. That denotes the public crossings versus the  
9 private crossings.

10 Q. If we could just go to the second page of this  
11 exhibit. Okay, so this is in what direction from  
12 Page 1?

13 A. So this is to the east of Page 1. This  
14 identifies or illustrates many of the crossings that we  
15 have on our Evergreen -- the Evergreen line.

16 Q. Okay. And there's a dashed line north and south  
17 of the railroad tracks. What does that denote?

18 A. I am not aware of what that denotes. This  
19 dashed line here?

20 Q. Yeah. Go down to the key. Do you have 3015?

21 A. According to the key, that is a line that  
22 represents a distance of one-half mile from the river.

23 Q. Okay. Did you have some pictures taken of the  
24 number of crossings?

25 A. Yes, we did.

POTTER / LAPOSSA

1           **Q.    Bring up 3108.**

2                   **Now, 3108 does not include pictures of every**  
3 **crossing, does it?**

4           A.    No, it does not.

5           **Q.    Are these recently taken?**

6           A.    Yes.  These were taken in the second week of  
7 June of this year.

8           **Q.    Are they a fair representative sampling of**  
9 **crossings in the City of Vancouver?**

10          A.    Yes, they are.

11          **Q.    If you would please just go through them and**  
12 **describe the location and what they're -- if they're**  
13 **public or private.**

14          A.    So the first one, this is a public crossing.  
15 This is actually a grade-separated crossing that  
16 connects Columbia Way to State Route 14.

17          **Q.    There's been references to the Marine Park area.**  
18 **Is that the area where this --**

19          A.    That is where this crossing is located, yes.

20          **Q.    And how wide is that?  Is that a one-lane,**  
21 **two-lane?**

22          A.    That is a one-lane crossing.  That is designed  
23 to allow only outbound traffic or traffic headed towards  
24 the highway to go through it.  It's not allowed for  
25 two-way traffic; it's not wide enough.

POTTER / LAPOSSA

1       **Q.    Is there a height restriction?**

2       A.    Yes, there is.

3       **Q.    Is it large enough to allow a fire engine to go**  
4 **through?**

5       A.    No, it is not.

6       **Q.    Okay. Next picture. What does photograph show?**

7       A.    This is a photograph of Southeast Beach Drive as  
8 it leads down to the at-grade rail crossing.

9       **Q.    Would you just show us where the rail line is in**  
10 **that picture?**

11      A.    This is the rail line right here.

12      **Q.    Okay. Next picture, please.**

13           **The location?**

14      A.    This is the same crossing. This is actually  
15 looking back up the hill from the south side of the rail  
16 line on Beach Drive, and here's the rail line here.

17      **Q.    Is this a public crossing?**

18      A.    This is a public crossing.

19      **Q.    Okay. The next picture.**

20      A.    This crossing is the crossing on what we call  
21 Chelsea Drive and also Topper Landing Road. The  
22 crossing itself is a public crossing. These are the  
23 rail lines here, and then this access is a residential  
24 development comprised of approximately a dozen homes.

25      **Q.    I'm sorry. Did you say this is public or**

**POTTER / LAPOSSA**

1 private?

2 A. The crossing itself is public.

3 **Q. The next picture, please.**

4 A. This is a private crossing. This is Lieser  
5 Point Drive. This is a gated access and then it wraps  
6 around the corner, goes across the at-grade crossing.  
7 Again, this serves a number of residential parcels on  
8 the south side of the railroad.

9 **Q. Next picture, please.**

10 A. This is South Image Road. This is a  
11 grade-separated crossing, another undercrossing portal.  
12 It does have a height restriction. This access is a  
13 handful of residential properties and also a community  
14 boat launch facility located on the river.

15 **Q. Next picture, please.**

16 A. This is an at-grade crossing. This is actually  
17 located just to the east of the previous location. This  
18 crossing is used for vehicles that are too tall to go  
19 through the portal that we saw in the previous photo.  
20 And so in those instances, the gate is open and those  
21 vehicles are allowed to cross at the at-grade crossing.

22 **Q. The next picture.**

23 A. This is a private driveway. It serves a single  
24 parcel, the home that you see in the background;  
25 at-grade private crossing.

POTTER / LAPOSSA

1       **Q.    Next picture.**

2       A.    This again is a private driveway serving a  
3 couple of homes on the south side.  Again, a private  
4 crossing.

5       **Q.    Next picture, please.**

6       A.    This is Southeast Ellsworth Road.  This is a  
7 public crossing that then serves about a dozen  
8 residences on the south side.

9       **Q.    Is that protected?**

10      A.    It doesn't have any protective measures other  
11 than signage.

12      **Q.    Next picture.**

13      A.    This is a private crossing.  It's a private road  
14 that serves about two or three residences on the south  
15 side of the tracks.

16      **Q.    Next picture.**

17      A.    This is a photo looking east on Evergreen  
18 Highway.  It's looking towards a crossing that I believe  
19 we'll see in the next photo.  The photo is one of the  
20 areas where the city has implemented a quiet zone  
21 strategy, and so we have signage and different measures.  
22 And this was intended to show some of the signage that  
23 we have along Evergreen highway.

24      **Q.    And what is a quiet zone?**

25      A.    A quiet zone is an area where additional

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1 protective measures have been put into play that allow  
2 for the training passing not to have to blow their horn.  
3 Trains will typically sound their horn to warn drivers  
4 of a potential crossing of an oncoming train. We've  
5 done a number of locations in the city where we've  
6 worked with the federal railroad association to  
7 implement the quiet zone strategy which allows the  
8 trains not to have to blow their horn, but again, it  
9 provides for additional protective measures.

10 **Q. Next picture, please.**

11 A. This is the crossing that the previous picture  
12 was looking towards. This is Southeast 139th Avenue.  
13 This is also the entrance into a development we know as  
14 Steamboat Landing, in excess of a hundred residences.  
15 So the crossing itself is public.

16 **Q. And that crossing, is that the sole means of**  
17 **ingress or egress from Steamboat Landing?**

18 A. Yes, it is.

19 **Q. Next picture, please.**

20 A. This is a crossing, an at-grade crossing at  
21 Southeast 148th Avenue. Again, a public crossing.

22 **Q. Next picture.**

23 A. And then this is a picture of the crossing  
24 itself at 148th Avenue.

25 **Q. Okay. Next picture, please.**

**POTTER / LAPOSSA**

1 A. This is a crossing at 18637 Evergreen Highway.  
2 This is the location of the Columbia Vista lumber mill.

3 **Q. And do you know how many people are employed at**  
4 **the lumber mill?**

5 A. I believe approximately 20.

6 **Q. Okay. And is this public or private?**

7 A. This is a private crossing.

8 **Q. Next picture, please.**

9 A. This is the same crossing looking directly  
10 across the crossing itself. It would be towards the  
11 mill.

12 **Q. Next picture.**

13 A. This is a grade-separated crossing. This is at  
14 Columbia Shores, Columbia House Boulevard. It also is  
15 adjacent to the Highway 14/Columbia House Boulevard  
16 interchange.

17 **Q. Next picture. Where is this?**

18 A. This is a public crossing on West 11th Street.  
19 This is the street that accesses the Amtrak's public  
20 rail station.

21 **Q. Public crossing?**

22 A. Pardon?

23 **Q. Public?**

24 A. Yes, public crossing.

25 **Q. Next picture, please.**

**POTTER / LAPOSSA**

1           A.     This crossing is on West 7th Street. This is  
2 actually the entrance to what is termed the Lafarge  
3 Terminal which is within the Port of Vancouver. This  
4 crossing is actually a crossing of the Port of  
5 Vancouver's spur line that leads into their property.

6           **Q.     All right. Is this the line that would lead**  
7 **into the terminal?**

8           A.     Correct.

9           **Q.     Next, please.**

10          A.     This is a picture, the same crossing, just a  
11 close-up view of the crossing itself.

12          **Q.     And I think there's a couple more.**

13          A.     This crossing is actually an undercrossing of  
14 the Burlington Northern north-south rail line and their  
15 rail bridge structure that spans the Columbia River.  
16 This is on West 8th Street which also turns into Port  
17 way.

18          **Q.     Next, please.**

19                   MS. MASTRO: Mr. Potter, that's the last  
20 one.

21                   MR. POTTER: That's it? Thank you.

22 BY MR. POTTER:

23          **Q.     How many of the crossings in the City of**  
24 **Vancouver are the only means of ingress or egress to the**  
25 **properties that they serve?**

**POTTER / LAPOSSA**

1       A.     Twenty.

2       **Q.     Okay.  And are other crossings restricted in**  
3 **some manner or if a train was a mile long and there was**  
4 **a stop, could it block more than one crossing?**

5       A.     Yes.  We have a couple of sets of crossings  
6 that, for example, if we go back to the list of  
7 crossings in the numerical identifiers, there's three  
8 crossings, Number 7, Number 8 and Number 9 that are  
9 actually interconnected on the south side by a common  
10 road.  So all three of those crossings are connected on  
11 the south side.

12            However, those crossings are located in such  
13 close proximity to one another that it's likely that all  
14 three of them will be blocked at the same time by a  
15 train.  And then we have a similar situation with two  
16 other crossings further to the east, Crossings Number 19  
17 and 20, again referencing the list and the map.

18            Again, both of those crossings are connected  
19 together by a private road, but again, both of those are  
20 in very close proximity and would likely be impacted by  
21 a train.

22       **Q.     If we could display 3131.**

23            **Mr. Lopossa, are you familiar with this exhibit?**

24       A.     Yes, I am.

25       **Q.     And what does it show?**

**POTTER / LAPOSSA**

1           A.     This is an exhibit that shows the Evergreen rail  
2 line as it's approaching the intersection or interchange  
3 with the -- both the north-south rail line and then also  
4 the location of the spur that would lead a train onto  
5 the Port of Vancouver line and into the Port's property.

6                     MR. POTTER:   If we could just scroll down a  
7 little bit more, please.   That's good.   Thank you.

8 BY MR. POTTER:

9           **Q.     So the Evergreen line is the Burlington Northern**  
10 **main line?**

11           A.     Correct.

12           **Q.     Can you show us where that is in this picture?**

13           A.     That is this line here.

14           **Q.     Where is the intersection with the Port line?**

15           A.     The intersection with the Port line is located  
16 here, and then the Port line runs along this line here.

17           **Q.     All right.   Are you familiar with the route that**  
18 **a train would have to travel if it's leaving the Port**  
19 **line and it's going to proceed north on the Burlington**  
20 **Northern main line?**

21           A.     If it's leaving the Port line, it's going to  
22 travel down this line here to the switch.   It's going to  
23 have to then travel down this line far enough such that  
24 the lead car on the train can clear the switch.   At that  
25 point, the switch is then activated and then the train

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1 can proceed in this direction advancing up to the north  
2 line.

3 **Q. So if the train is a mile long, it has to back**  
4 **up a mile to the east past the switch and then proceed**  
5 **north?**

6 A. That is correct.

7 **Q. Okay. Can you tell us what the term "gate**  
8 **downtime" means?**

9 A. Gate downtime is the amount of time that at a  
10 protected crossing that has a gate system, it's the  
11 amount of time, the total amount of time that the gate  
12 is going to be in the down position. This will include  
13 the time in advance that the train arrives to the  
14 crossing, the gate will be actuated. That's typically  
15 about 30 seconds before the train arrives at the  
16 crossing.

17 It will activate the gate; the gate will come  
18 down. The train will pass through the crossing and  
19 then, approximately 12 seconds after the train has  
20 passed through the crossing, the gate will rise up  
21 again. So that that before time, that during time and  
22 then that after time is the total gate downtime.

23 **Q. Do you have an opinion as to the amount of gate**  
24 **downtime a motorist would experience with an oil train**  
25 **such as those that will be serving the oil terminal in**

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1 this case?

2 A. So based on the information that we have in the  
3 application, a typical oil train is approximately  
4 7800 feet long. They would typically travel at  
5 approximately 20 miles per hour as they advance -- as  
6 they approach a crossing. So factoring in that speed,  
7 factoring in the length of the train, considering the  
8 30 seconds of time before it arrives at the crossing,  
9 the 12 seconds of time after it passes through the  
10 crossing, total gate time for that train crossing would  
11 be approximately five minutes and eight seconds.

12 **Q. You used a speed of 20 miles per hour. There**  
13 **was previous testimony about speeds in Washougal being**  
14 **30 miles an hour. Why did you assume 20?**

15 A. As the train comes into the Vancouver area, as  
16 it starts to approach the switching area, the spur area,  
17 it needs to slow down to about 20 miles an hour to  
18 safely navigate that switching area.

19 **Q. And if there's no gate, what's the amount of**  
20 **delay that a motorist would experience for the same**  
21 **train?**

22 A. It's going to be less than the five minutes and  
23 eight seconds. Obviously, there's not -- in the absence  
24 of the gate, the motorist is going to be able to use  
25 their own judgment as to when they could potentially

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1 cross before the train arrives as well as after the  
2 train has left.

3 In a lot of cases, you know, a motorist isn't  
4 going to wait 30 seconds for the train to get there.  
5 They're going to attempt to cross beforehand. So most  
6 commonly it's going to be in that 30-second interval  
7 where we're going to see a reduction in the amount of  
8 time of delay.

9 **Q. How significance do you think the difference**  
10 **would be?**

11 A. You know, I've had experiences where motorists  
12 have driven across the tracks literally in front of the  
13 train. So a motorist who is exhibiting risky behavior,  
14 they might go 25 seconds or 5 seconds before the train  
15 arrives at the crossing.

16 **Q. As a transportation engineer, do you have**  
17 **concerns about motorist behavior when a motorist is**  
18 **being presented with a potential delay of five minutes?**

19 A. Yes. You know, motorists who are presented with  
20 delays at any kind of an intersection, and especially at  
21 a railroad crossing, delays of five minutes, that's  
22 going to invite what we term as risk driving, risk  
23 behavior. Motorists, they're going to tend to take more  
24 chances, especially if this is a motorist who frequents  
25 this crossing often, as is the case --

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1           **Q.    Why is that?**

2           A.    They go through the crossing often enough so  
3 they know what they can do, what they can't do. You  
4 know, they form an opinion on how fast the train is  
5 moving. They generally determine, yeah, I can get  
6 across there in time. And as opposed to a situation  
7 where there's gates in place, you know, the gates come  
8 down. They really don't have the option to exhibit that  
9 kind of behavior.

10          **Q.    As a transportation engineer, would you consider**  
11 **this amount of delay to be significant?**

12          A.    Yes.

13          **Q.    Why?**

14          A.    Well, if you add up all of the trains under the  
15 proposal, you take a look at the number of trains coming  
16 in. So it's approximately five minutes per train, four  
17 trains a day. That's an additional 20, 21 minutes  
18 coming in. Four more trains going out, so there's  
19 another additional 20 to 21 minutes.

20                So a total additional time of 42 minutes, that's  
21 about 15 percent more than the current delay that we  
22 experience at these crossings. Yeah, that's a  
23 significant increase.

24                The other aspect is what we term as "level of  
25 service." We use level of service as a measurement of

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1 delay at intersections. We're experiencing five-minute  
2 delays at these intersections. That correlates to what  
3 we term as a "failing level of service."

4 So if you had to wait that long at a signalized  
5 intersection or unsignalized intersection, we would  
6 constitute that intersection as failing. And then of  
7 course as I previously mentioned, because of the delays,  
8 because of the amount of wait time, we would expect more  
9 risky behavior to be exhibited, which in turn creates a  
10 safety issue.

11 And then it's also -- it's a safety issue for  
12 folks who need to get through those crossings, emergency  
13 responders. We have several of our crossings that  
14 access large numbers of homes, such as the Steamboat  
15 Landing crossing. We had one crossing that accesses a  
16 city park. We have a crossing that accesses a sizeable  
17 city -- or a sizeable industrial area, a lumber mill.

18 Those are all high used crossings. They are  
19 places where there's lots of people; places where  
20 there's the potential for an emergency situation that  
21 would require response by an emergency responder. So by  
22 adding delay at these crossings we're just increasing  
23 the likelihood that those emergency responders could be  
24 delayed and not be able to reach the emergency scenario  
25 in time.

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1           **Q.    And you referenced a public park.  What's the**  
2 **name of that park?**

3           A.    That's Wintler Park.  That's on the Beach Drive  
4 crossing.

5           **Q.    What type of a park is it?**

6           A.    It's an urban park.  It's located along the  
7 Columbia River, so it's a very popular destination.  
8 It's one of the few public beach areas along the  
9 Columbia River in the city, so it has a high usage.

10          **Q.    Exhibit 3014 I think shows the annual visitor**  
11 **count, but do you know what that is?**

12          A.    It's about 242,000 people per year.

13          **Q.    Did you review the testimony of Mr. Brian Dunn**  
14 **as it relates to the transportation impacts from oil**  
15 **trains and those related to the facility?**

16          A.    I did.

17          **Q.    Do you have any comments on his analysis?**

18          A.    Having reviewed Mr. Dunn's analysis, a couple of  
19 things stood out.  The first and foremost was the -- his  
20 analysis, his testimony analyzed a number of crossings  
21 along the rail line, but none of them were in the City  
22 of Vancouver.  There were crossings in the City of  
23 Washougal.  There were crossings over on the east side  
24 of the state I believe in Spokane and Pasco, but none  
25 were in the city.

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1           And each of the crossings that Mr. Dunn looked  
2 at in his analysis were crossings that were not the only  
3 means for getting from that side of the tracks to the  
4 opposite side of the tracks. Each of those crossings  
5 had an alternate means where traffic or motorists could  
6 use to reach the other side if there was a delay.

7           And then finally, the analysis really focused in  
8 on the amount of queueing at each crossing. Mr. Dunn  
9 compared the amount of time that the crossing would be  
10 closed based on a train passing through there today; you  
11 know, the longest train that could pass through there  
12 today, compared that to the trains that are being  
13 proposed. But he really focused in on is there enough  
14 room for the cars to stack up during that five-minute  
15 period when that crossing is blocked.

16           And so -- and in each case he noted that, yes,  
17 in fact there was sufficient room. This would not  
18 affect because traffic wouldn't back up and adversely  
19 affect other transportation facilities.

20           And, you know, so that's -- looking at the  
21 queueing is one way to look at it. There's other ways  
22 that we would also look at it.

23           **Q. All right.**

24           MR. POTTER: I have no further questions.

25           JUDGE NOBLE: Cross-examination?

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CROSS-EXAMINATION

1  
2 BY MR. JOHNSON:

3 Q. Mr. Lopossa, I'm Dale Johnson, I represent the  
4 applicant in this case. Just some follow-up questions  
5 based on Mr. Potter's questions.

6 First of all, in your discussion of your  
7 experience and how drivers respond in trying to rush a  
8 track or beat a train.

9 Do you recall that testimony?

10 A. Yes, I do.

11 Q. Okay. Is that in any way a phenomenon unique to  
12 crude oil trains?

13 A. No. That's a phenomenon just unique to trains  
14 in general.

15 Q. And similarly, the significant delay that you  
16 commented on associated with the increased in rail  
17 traffic to the Port that would be represented by this  
18 project, is that unique in any way with crude oil  
19 trains?

20 A. Only in such as the length of the trains, the  
21 amount of delays based on the length of the train, based  
22 on the travel time of the train. It would be unique to  
23 trains who are accessing the Port of Vancouver because  
24 of the need to slow down to the 20 miles an hour speed.  
25 So that could be an oil train, that could be any train

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1 of that length that's going into the Port of Vancouver.

2 Q. Okay. So any train of that length going into  
3 the Port of Vancouver will have the impacts you were  
4 referencing; is that right?

5 A. Right.

6 Q. Okay. And you commented on Mr. Dunn's prefiled  
7 testimony. You haven't done your own traffic impact  
8 analysis, have you?

9 A. No, I have not.

10 Q. Okay. And you also talked about your analysis  
11 of gate downtimes. You haven't done any independent  
12 crossing analysis on your own; is that correct?

13 A. I've simply inventoried the crossings, the  
14 locations of them, and presented the information here.

15 Q. Okay. And you testified about impacts on the  
16 crossings to the park. Was that Winter Park?

17 A. Wintler Park, yes.

18 Q. Wintler, I'm sorry. Okay.

19 And some homes, the lumber mill, what you  
20 characterize as high use crossings.

21 Do you know how the FRA evaluates traffic  
22 impacts at grade crossings?

23 A. I don't.

24 MR. JOHNSON: Okay. Could you pull up  
25 Exhibit 3015, please, if we can? Could you go to

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1 Page 2?

2 MS. MASTRO: This is Page 2.

3 MR. JOHNSON: I'm sorry. I guess Page 1.  
4 There we go, okay.

5 BY MR. JOHNSON:

6 Q. Did you prepare this exhibit?

7 A. No, I did not.

8 Q. But you did testify that the key indicated that  
9 the dashed line indicated a distance of a half mile from  
10 the rail line?

11 A. That's based on the information in the key, yes.

12 Q. Okay. And you see where the dashed line turns,  
13 I would call it north although that's probably  
14 inaccurate given the orientation of the map, turns to  
15 the upper left-hand side of the --

16 A. Are you referring to this area here?

17 Q. Yes, where it makes that turn.

18 A. Yes.

19 Q. What is the dashed line following there?

20 A. I'm assuming it's following the north-south  
21 portion of the BNSF line.

22 Q. Okay. The main line?

23 A. Yes.

24 Q. Okay. So that doesn't represent the distance  
25 from cars at the Port facility; is that right?

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1 A. Correct.

2 Q. Okay. And with regard to the photographs that  
3 you testified about, the series of photographs, those  
4 are all existing conditions; correct?

5 A. Correct.

6 Q. Okay. And with regard to the residential areas  
7 that you discussed and the private crossings, do you  
8 know whether or not those homes are constructed  
9 primarily before or after the railway was in place?

10 A. I do not.

11 Q. Okay. And you refer to two groups of at-grade  
12 crossings. I think the first was 7, 8 and 9 that are  
13 likely to be impacted by a train.

14 So is it your testimony that those are likely to  
15 be blocked?

16 A. What I was trying to illustrate is Crossings 7,  
17 8 and 9 have a connection on the south side of the rail  
18 tracks that connects them together. So a person moving  
19 from the north side of the tracks to the south side of  
20 the tracks could use any one of those three crossings to  
21 reach their destination because of the common  
22 connections. But the proximity of those crossings to  
23 one another, the spacing, the closeness of those  
24 crossings to one another, my conclusion is that those  
25 would be impacted simultaneously as a train, especially,

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1 you know, a mile-long train, is passing through.  
2 They're essentially all going to be delayed at the same  
3 time.

4 **Q. Okay. So that relates to delay, not to some**  
5 **blockage related to a stoppage of the train?**

6 A. There's been -- we've had instances where trains  
7 have been stopped on the line. So if a train were  
8 stopped in this area, it most certainly would likely  
9 block all three crossings.

10 **Q. Okay. Of the 20 crossings that you testified**  
11 **about having, you know, no protection, are most of those**  
12 **single driveway crossings?**

13 A. Yes.

14 **Q. And isn't it true that trains from the Port area**  
15 **where the facility will be located will not block any**  
16 **at-grade crossings when they're being pushed back out on**  
17 **the main line?**

18 A. Assuming the train is the length that has been  
19 described as 7,800 feet, no, as they're being backed out  
20 onto the main line they shouldn't block any at-grade  
21 crossings. The nearest at-grade crossing is further to  
22 the east than that.

23 **Q. Okay. And in your experience as a traffic**  
24 **engineer, have you ever reviewed a level of service**  
25 **analysis for impacts caused by trains?**

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1 A. No, I have not.

2 MR. JOHNSON: Nothing further, Your Honor.

3 JUDGE NOBLE: Redirect?

**REDIRECT EXAMINATION**

6 BY MR. POTTER:

7 **Q. Mr. Lopossa, in response to the cross, you said**  
8 **that there have been an experience of a blockage of a**  
9 **crossing by a train. Where did that occur?**

10 A. It frequently occurs at the Wintler Park  
11 crossing. For whatever reason, there will be trains  
12 that will be stopped there for a period of time due to  
13 rail operations, and so that crossing is in fact  
14 blocked.

15 **Q. Has there been an experience of a train accident**  
16 **or derailment blocking a crossing on the Evergreen line?**

17 A. No, it doesn't come to my mind.

18 **Q. The Steamboat Landing?**

19 A. Again, that doesn't come to mind.

20 MR. POTTER: Thank you.

21 JUDGE NOBLE: Anything further, Mr. Potter?

22 MR. POTTER: No, ma'am.

23 JUDGE NOBLE: Questions from the council?

24 Mr. Snodgrass?

25 MR. SNODGRASS: Good morning, Mr. Lopossa.

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1 Just one question.

2 I'm having trouble with the Internet access  
3 so I can't pull up one of these maps on my screen to  
4 check it, but it's really a question about the spacing  
5 of the driveways and the other accident at crossings,  
6 excuse me.

7 How many and generally where, beginning in  
8 the city hall area and then traveling east, spaces  
9 between crossings are there that are at least 7,800  
10 feet?

11 THE WITNESS: Well, I know initially from  
12 the city hall area, which is in close proximity to the  
13 spur connection that leads into the Port of Vancouver,  
14 there's at least a 7,800 feet before you get to the  
15 first at-grade crossing, which is at Wintler Park, Beach  
16 Drive. Beyond that, without having a scale out here in  
17 front of me, I couldn't say if there's 7,800 feet  
18 between that crossing and the next and so on and so  
19 forth. Once you get past Wintler crossing and  
20 continuing east, most of the crossings are fairly close  
21 to one another until you reach the east city limits.

22 MR. SNODGRASS: So other than that between  
23 Wintler and city hall, if there was -- we've heard in  
24 recent testimony about one of the strategies to provide  
25 access in the event of an evacuation is, for lack of a

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1 better word, backup, that any kind of a derailment or in  
2 the Wintler area at least and points east, how far would  
3 have a train have to go based on your general knowledge  
4 of the spacing of these in order to create some  
5 evacuation space to not block somebody else's evacuation  
6 space?

7 THE WITNESS: They basically have to go the  
8 full length of the train. I think, again, just my  
9 familiarity with the locations of the crossings, the  
10 spacing between the crossings, I think if a train were  
11 stopped anywhere in the vicinity of Wintler Park, it  
12 would likely -- it would at least back up and possibly  
13 block the next crossing to the east, which would be  
14 Chelsea Drive, Topper Landing area. If the train were  
15 stopped and it was clear of Wintler Park and the train  
16 was west of that, then in likelihood it would not block  
17 any crossing.

18 MR. SNODGRASS: Thank you.

19 JUDGE NOBLE: Was there someone else on my  
20 right? On my left?

21 Mr. Siemann?

22 MR. SIEMANN: Good morning. Thank you for  
23 being here. Just a couple of questions.

24 Have there been any train-vehicle collisions  
25 over the past ten years or so that you're aware of given

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1 the potential for risky behavior?

2 THE WITNESS: I'm aware of at least one.  
3 There was a -- it was a train versus vehicle collision  
4 that was at one of the private crossings. I couldn't  
5 speak to exactly which one. Further to the east in the  
6 eastern part of the city, but that's the one that I can  
7 remember.

8 MR. SIEMANN: And one other question. I'm  
9 curious about this.

10 In previous I think prefiled testimony I  
11 read that it takes about a mile to slow a train to a  
12 stop from -- and I'm not sure starting at what speed,  
13 but there's some, let's assume some amount of time that  
14 it requires to slow a train to a stop.

15 And so I'm curious, in this 20 miles an hour  
16 kind of at a crossing, these trains are going to perhaps  
17 be going at a decelerating speed, and I'm just curious,  
18 because I'm not familiar enough with the crossings here,  
19 if some of those at-grade crossings could be affected  
20 longer because trains would be going slower because they  
21 would be approaching the site and therefore slowing and  
22 therefore going at a slower speed than 20 miles per  
23 hour.

24 THE WITNESS: I couldn't say for certain  
25 exactly how slow the trains will go, you know, once they

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1 actually reach the spur, the point where they need to  
2 transfer to the Port line. We assumed a 20-mile-an-hour  
3 speed as being a reasonable speed in which they could  
4 take that -- they could take that -- or navigate through  
5 that spur point.

6 In reality, they may need to go slower than  
7 that. If that's the case then, yes, that need to slow  
8 down to even a slower speed could affect the amount of  
9 delay time at at-grade crossings.

10 MR. SIEMANN: I'll just put out there, I  
11 understand you probably can't answer this, but my  
12 understanding is that the trains will -- and maybe you  
13 guys can correct me at some point along this.

14 My understanding is that the trains have to  
15 stop to transfer the papers and things at that point,  
16 and maybe I'm wrong on that. But that's why I was  
17 asking the question.

18 THE WITNESS: I'm not aware of that.

19 MR. SIEMANN: Thank you. Nothing else.

20 JUDGE NOBLE: Any other questions to my  
21 left?

22 Mr. Stephenson?

23 MR. STEPHENSON: Thank you. This is  
24 something I thought of last night and should have asked  
25 yesterday, but somehow my brain doesn't turn off at

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1 night about this adjudication.

2 So I was wondering, we've heard some  
3 testimony about crossing times and how long it takes for  
4 a train to come through. Do unit trains come through in  
5 bunches or is it usually just one at a time?

6 THE WITNESS: My experience is it's usually  
7 one at a time.

8 MR. STEPHENSON: Thank you.

9 JUDGE NOBLE: Anything else?

10 Mr. Moss?

11 MR. MOSS: Are there sidings where trains  
12 park for periods of time in the Vancouver area or are  
13 those all outside of the Vancouver area?

14 THE WITNESS: Within the Vancouver rail  
15 yard, there's an extensive amount of siding area where  
16 trains are stored. Once you start to get out on the  
17 main lines, the locations of those sidings is limited.

18 MR. MOSS: Okay. So I think as a practical  
19 matter, then, is it the case that there are not parked  
20 trains blocking crossings?

21 THE WITNESS: My experience is there's been  
22 parked trains blocking crossings on the east-west  
23 Evergreen line. As I previously testified, we've had  
24 experiences where there's trains that block the Wintler  
25 Park crossing and crossings further to the east. I'm

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1 not aware that we've had trains blocking any of the  
2 crossings on the north-south line. Most of the  
3 crossings along that are now grade-separated so we don't  
4 have that type of situation.

5 MR. MOSS: And with your experience with  
6 stopped trains blocking crossings, of what duration  
7 would that be typically? Or maybe there's no answer to  
8 that.

9 THE WITNESS: I don't have a specific answer  
10 as to the duration.

11 MR. MOSS: Okay. Thanks.

12 JUDGE NOBLE: Any other questions to my  
13 left? Any more questions on the right?

14 Questions based upon council's questions.  
15

16 RECROSS-EXAMINATION

17 BY MR. JOHNSON:

18 **Q. Mr. Lopossa, with regard to some questions posed**  
19 **by Mr. Siemann, was the train-vehicle collision that you**  
20 **referred to a crude oil unit train?**

21 A. I don't recall.

22 **Q. And with regard to the deceleration question and**  
23 **your answer to that, is that unique to crude oil unit**  
24 **trains?**

25 A. Again, that would be indicative of -- well, I

1 don't know.

2 Q. Okay. And in response to the question by  
3 Mr. Stephenson about trains passing through one at a  
4 time, is there any difference between crude oil unit  
5 trains and other trains that are passing through?

6 A. No.

7 MR. JOHNSON: Thank you. Nothing further.

8 JUDGE NOBLE: Mr. Potter, did you have any  
9 questions?

10 MR. POTTER: No, ma'am.

11 JUDGE NOBLE: All right. Well, Mr. Lopossa,  
12 thank you very much for your testimony. You are excused  
13 as a witness today.

14 We could get in -- do you know, Mr. Potter,  
15 who the next witness is?

16 MR. POTTER: That will be Chief Appleton,  
17 Mosier Fire District.

18 JUDGE NOBLE: At the pleasure of the  
19 council, I think we could take some testimony. We have  
20 20 minutes, so let's go ahead.

21 MR. POTTER: I'm not sure if he's here yet.  
22 I'll have to check.

23 JUDGE NOBLE: Why don't you check that?

24 MR. POTTER: We're checking. I had asked  
25 him to arrive by noon, so...

1 JUDGE NOBLE: Thank you.

2 MR. POTTER: Your Honor, Chief Appleton is  
3 not here yet.

4 JUDGE NOBLE: All right. Can you contact  
5 him and maybe get him here a little bit before 1:00?

6 MR. POTTER: I will do my best.

7 JUDGE NOBLE: We will be in recess for one  
8 hour.

9 Is there anything else that we can do on the  
10 record before we break for lunch?

11 Mr. Johnson?

12 MR. JOHNSON: I just was going to say, not  
13 that I can think of, Your Honor.

14 JUDGE NOBLE: We will be in recess until  
15 12:45. Thank you.

16 (Lunch break.)

17 JUDGE NOBLE: We are back on the record.

18 Mr. Potter, would you call your next  
19 witness?

20 MR. POTTER: Yes. I call Fire Chief Jim  
21 Appleton.

22 JIM APPLETON,  
23 having been first duly sworn, testified as follows:

24 JUDGE NOBLE: You may proceed, Mr. Potter.  
25

POTTER / APPLETON

DIRECT EXAMINATION

1  
2 BY MR. POTTER:

3 **Q. Please state your name and give the spelling of**  
4 **the last name.**

5 A. Jim Appleton, A-p-p-l-e-t-o-n.

6 **Q. And, Chief Appleton, how are you employed?**

7 A. I'm the fire chief in Mosier.

8 **Q. And how long have you been the fire chief?**

9 A. Seven years, five paid.

10 **Q. Can you just review for the council your**  
11 **education, training and experience as it relates to**  
12 **emergency response and firefighting?**

13 A. So I came to the fire service fairly late, just  
14 a year before I became the fire chief, so my education  
15 and training is actually outside the realm. Prior to  
16 that, I spent 25 years in advertising.

17 Since then my training in the fire service has  
18 been fairly typical for somebody in my position. I came  
19 on the job as a volunteer, got very quickly up to the  
20 basic training levels that I needed just to have the  
21 job.

22 And since then I've been a quick study with some  
23 of the broad issues of the fire chief, and I have my  
24 strengths and weaknesses, but -- I'll just say that.

25 **Q. All right. Can you describe the Mosier fire**

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1 district in terms of personnel and equipment.

2 A. We have at this time about 13 or 14 volunteers.  
3 I'm paid. We have three stations, although they're  
4 really just equipment sheds, and we have way more  
5 equipment than we really need for our district just  
6 because that's what we've -- accumulation over the  
7 years. We're not terribly well funded and are still  
8 essentially a volunteer department, even though I'm a  
9 paid chief, I have a volunteer background. So that's  
10 kind of my status.

11 **Q. Are you the only paid employee of the fire**  
12 **district?**

13 A. At this time, yes.

14 JUDGE NOBLE: Mr. Potter, I'm sorry to  
15 interrupt, but the IT people are going to be able to  
16 make an effort at fixing the problem if we give them  
17 five minutes, and they would have to work in front of  
18 the camera. And so we need to be off the record for  
19 between five and ten minutes. I do apologize, but I  
20 think it would be good if we could get it fixed.

21 MR. POTTER: That's not a problem.

22 JUDGE NOBLE: We're off the record.

23 (Discussion off the record.)

24 JUDGE NOBLE: We are back on the record.

25 Mr. Potter, thank you for waiting.

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1 BY MR. POTTER:

2 Q. Chief Appleton, you're still under oath.

3 A. Yes.

4 Q. Can you describe the Mosier Fire District in  
5 terms of its size and number of residents in the area?

6 A. So can we look at the map on the exhibits,  
7 please?

8 Q. Yes. There's Exhibit 3135, and while that's  
9 being pulled up, can you just tell us a little bit about  
10 this map, how it's prepared, what it shows?

11 A. So this comes from the Wasco County GIS  
12 Department -- (Court Reporter interruption.) Wasco,  
13 W-a-s-c-o. This is done at our request. It shows the  
14 locations of each home in our district. Those are the  
15 little purple dots, and then it also shows the size, our  
16 boundaries there in green. So we cover roughly 7 miles  
17 along the interstate, 4 miles south of the river, 22  
18 square miles is the size of the district, roughly 1,500  
19 people in the permanent residence in the district. We  
20 get more in the summertime, a lot of vacation rentals  
21 and second homes.

22 Q. Do you know number of structure or homes?

23 A. Roughly 700 homes; and again, some of those are  
24 second homes, some of them are vacation rentals. Not  
25 all of them are primary residents.

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1 MR. POTTER: Your Honor, we'd move for the  
2 introduction of 3135.

3 JUDGE NOBLE: Is there an objection to 3135?

4 MR. JOHNSON: No objection from the  
5 applicants, Your Honor.

6 JUDGE NOBLE: 3135 is admitted.

7 BY MR. POTTER:

8 **Q. Chief Appleton, most of us don't know a lot**  
9 **about rural fire districts. Can you compare the Mosier**  
10 **Fire District to other rural fire districts in**  
11 **Washington?**

12 A. Well, there's really no typical fire district,  
13 so to say we're typical is kind of meaningless. The  
14 issues that we face I think are fairly typical,  
15 attracting and retaining volunteers. The level of  
16 training that's required for volunteers is the same as  
17 paid professionals and the curve gets steeper all the  
18 time. So those are challenges that all of our fire  
19 districts face.

20 As far as the makeup and capabilities of our  
21 department, I would say that we're fairly typical in the  
22 sense that we are at a fairly basic level compared to  
23 professional departments around us.

24 **Q. So when you have an event that requires a**  
25 **response, what's done?**

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1 A. I'm not sure I understand your question.

2 **Q. If there's a fire, do you have to get a fire**  
3 **crew to respond? Just what's the procedure?**

4 A. So our 911 center dispatches us by radio, and we  
5 have one person typically who is on duty, takes the lead  
6 of the initial response. Unlike a lot of other  
7 departments that have set protocols for what equipment  
8 and what people respond, we just don't know from day to  
9 day who's going to be there, so it's all basically  
10 improvised and put together just based on who shows up.

11 In a larger incident, say a house fire or a  
12 multiple casualty vehicle wreck, we'll immediately call  
13 for incoming mutual aid from our surrounding  
14 communities. That is also fairly typical. No fire  
15 department in the Gorge can handle a large incident on  
16 its own. We depend on each other.

17 **Q. On June 3, 2016, there was a derailment of an**  
18 **oil train in Mosier; is that correct?**

19 A. That's correct.

20 **Q. I'd like you just in your own words to describe**  
21 **to the council how that event unfolded and the response**  
22 **to it.**

23 A. Okay. If we could zoom in on the map, and I  
24 want to show one feature of that derailment site.

25 **Q. You have on the table, there's -- there's a**

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1 laser pointer and it would probably be best if you  
2 could, if you would display on the screen behind you  
3 there. But you're going to have to move your mic around  
4 so we can hear you better.

5 A. Can that be zoomed in a little bit more? There  
6 we go.

7 So the derailment site is right about where that  
8 orange marker is. I apologize for the shaky hand.  
9 That's actually a mileage marker for the railroad that's  
10 indicated on our maps. That's Milepost 69 for the  
11 railroad. That's also where the fire occurred.

12 Just a little bit of orientation. This is our  
13 overpass; that's our main link in and out of town. Our  
14 sewage treatment plant is right there. The fruit  
15 growers warehouse, which is a large 120-year-old wooden  
16 structure, is right here, and the rest of the town is  
17 there.

18 If we could go to the first of the photographs  
19 now, I think I can tell you a little bit more about how  
20 the event unfolded.

21 **Q. Okay. The photographs I believe are 3132, and**  
22 **there's a series of five photographs in 3132. This has**  
23 **been admitted. So you can use any of the photographs**  
24 **that are helpful.**

25 A. Okay. This one is going to start with -- so

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1 it's a little bit dark, but you can see the fire there.  
2 That's on the tracks; you can see the overpass there  
3 that I mentioned. And then the fruit growers warehouse  
4 is that building there.

5 So this is taken I'm going to say probably about  
6 3:00 or 4:00 in the afternoon, well into the fire. And  
7 the way it unfolded, roughly 12:15, 12:20 that afternoon  
8 of June 3rd, a westbound train derailed. And the fault  
9 in the track was about there. That's where the  
10 fasteners failed and cars were in the process of  
11 derailling. You can see that they remained upright and  
12 mostly on the track or in some form of derailment, but  
13 still upright, until they got through the under -- the  
14 overpass there.

15 **Q. Can you approximate the distance between the**  
16 **defect in the track causing the derailment and where the**  
17 **cars came to rest?**

18 A. There is an exact measurement. I'm going to  
19 eyeball it, but it's probably about 800 feet from the  
20 derailment site to where the first of the railcars were  
21 derailed, and then the fire was another 150 feet or so.  
22 So not quite a quarter mile.

23 **Q. How did you first become aware of the fire?**

24 A. I was in Hood River and didn't really understand  
25 the text message that I got because I didn't have my

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1 glasses on, and I heard "fire by overpass."

2 So I was in a fire truck coming back from Hood  
3 River, and I saw a large column of smoke. But it didn't  
4 really concern me because of the weather. It was a very  
5 really calm day. To me it looked like a car fire.

6 We've had car fires that had a bigger column of smoke.

7 So I didn't really understand that this  
8 incident, that the call that I just had, had anything to  
9 do with trains until I was right on that overpass  
10 looking down on it. And the moment of hair rising,  
11 realizing that I was on top of an explosion hazard was  
12 pretty incredible. One of about three times in my life  
13 that I felt that terrified. So that's how I first  
14 became aware of it.

15 **Q. So what did you do then?**

16 A. I made a quick run to get as close to the fire  
17 as I could just to see what the situation was. Again,  
18 in my fire truck, understanding that I was in an  
19 explosion hazard zone, quickly understood that there was  
20 no point in engaging anything. Went back to --

21 **Q. What was that? I'm sorry to interrupt you, but**  
22 **why was there no point in engaging in anything?**

23 A. The training that I've had in oil fires says  
24 don't engage, so I wanted to be sure that this was  
25 indeed as bad as it looked before I really made any

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1 other assessment. Looking down on it I couldn't really  
2 tell much.

3 **Q. How close to it did you get?**

4 A. I was just a little bit past the overpass, so I  
5 was maybe 200 feet at my closest.

6 **Q. What did you observe?**

7 A. I could see that the -- I couldn't tell what was  
8 on fire exactly, and I couldn't see if it was liquid oil  
9 on the ground, but it was a fairly small but angry fire  
10 in a small area at that point. There was no pressure  
11 behind it at that point, so there were no big fireballs.  
12 It was just a hot, small but fairly angry fire that said  
13 get away.

14 **Q. Okay. And so what did you do?**

15 A. I went back into town at the corner of the  
16 school yard where incoming resources were arriving and  
17 beginning to make a man post and an action plan. Our  
18 volunteers were immediately at work evacuating homes  
19 that were close to the derailment, and that was the  
20 extent of our actual operation. So we understood that  
21 we're not going to be doing anything on this fire.

22 There is a book and we went by the book, the  
23 Emergency Response Guide, that said pull back to half  
24 mile. We quickly got some information from Union  
25 Pacific HAZMAT that assured us that we could be closer

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1 than that as long as we were somewhat protected, that  
2 the explosion hazard, as they were saying, was probably  
3 fairly minimal.

4 So that was the extent -- that all took probably  
5 an hour to decide where we were going to station  
6 ourselves, what was safe, where it was safe to do that,  
7 and then also the exclusions of closing the freeway,  
8 evacuating the mobile home park that was closest to the  
9 scene and get trying to get what resources we could to  
10 deny access to the hot zone.

11 **Q. And the incident command team, can you describe**  
12 **for the council first in the agencies that responded**  
13 **initially and then what was the makeup of the incident**  
14 **command team or ICT?**

15 A. So the initial response was Mosier Fire. Oregon  
16 Department of Forestry had resources there quickly,  
17 including their lead fire operator -- fire officer. The  
18 U.S. Forest Service had a couple of engines there  
19 quickly and their fire commanding officer. And in short  
20 order we had resources coming in from Hood River County,  
21 Wy'East Fire District, and West Side Fire District, and  
22 also the Columbia Fire and Rescue from The Dalles. Then  
23 a little bit later, about 45 minutes to an hour, we were  
24 joined by the Gresham HAZMAT Team 3, State Fire  
25 Marshal's Team 3 from Gresham Fire. They are our HAZMAT

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1 team.

2 So that was the initial unified command was  
3 really the Oregon Department of Forestry, Mid-Columbia  
4 Fire and Rescue was my -- (Court Reporter interruption.)  
5 Mid-Columbia, and myself, were the initial unified  
6 command.

7 I was overwhelmed and so I relied on the  
8 expertise of the general officers from the Hood River  
9 County and Wasco County to really run the show. I don't  
10 take much credit for doing the command level on the  
11 fire, but it was really their operation.

12 **Q. Let me ask you a question about mutual aid and**  
13 **the reliance upon it.**

14 **Is the support that you get when you ask for**  
15 **mutual aid, can it vary in terms of the amount of**  
16 **support available?**

17 A. Oh, yeah. And the day of the derailment, we had  
18 a pretty much a picture perfect response from all of the  
19 local agencies that we get. That's not uncommon, but  
20 just this last week on July 4th we had a call that had  
21 all of us scratching our heads.

22 Three o'clock in the morning on Sunday -- or  
23 Monday, July 4th, we had a call for a structure fire in  
24 Mosier, and there were exactly two Mosier firefighters  
25 that responded and myself. I was off that day, but I

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1 heard the call and said they're going to need the water  
2 truck. So I was there in support, but I wasn't an  
3 actual responder.

4 The depletion of our resources was something  
5 that was not unusual. But what happened next is that we  
6 called our mutual aid partners and none of them showed  
7 up. They were all at work on what became a 300-acre  
8 fire threatening The Dalles that started six hours prior  
9 to our house fire call.

10 So all of those agencies that I mentioned,  
11 Mid-Columbia, West Side, from Hood River County, from  
12 the Forest Service, from Oregon Department of Forestry,  
13 they were tapped out and exhausted from that fire, which  
14 was the third one in and around The Dalles that week.

15 So that's an example of how variable our mutual  
16 aid can be. Had we had that derailment a month later,  
17 on July 4th, we would have not have had the quick,  
18 effective, massive local response that we did for the  
19 June 3rd derailment. That's something that we're  
20 realizing and just beginning to absorb.

21 **Q. Okay. Well, going back to June 3rd, fire starts**  
22 **around 12:20, you've described some of the response in**  
23 **the initial two or three or four hours.**

24 **What was the fire doing during this time, if you**  
25 **know?**

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1           A.     The sequence of the derailment, as I understand  
2 it, and I'm not an expert, but I've paid pretty close  
3 attention, there was one car that was compromised  
4 immediately by puncture, and that then shed its cargo  
5 onto the ground, which very quickly started a fire.  
6 That was just a pool of burning oil on the ground at  
7 that point, and for about the first 20 or 30 minutes  
8 that's the extent of the fire.

9           As that fire burned under the cars and  
10 compromised valves and gaskets for some of the sealing  
11 devices for the cars, those failed because of flame  
12 impingement and so three other cars eventually caught  
13 fire through impingement.

14           We were just pulled back and watching this for  
15 this time and developing a plan. And that plan came  
16 together quickly and it involved cooling the cars with  
17 about a million gallons of water that we brought in with  
18 a water truck shuttle, 35 or 40 water trucks that we  
19 called from mutual aid.

20           So from the time that it took us to decide that  
21 we needed that water shuttle, that was about 1:30 to  
22 2:00, so about an hour, hour and a half into the  
23 incident, we realized that that's the direction we  
24 needed to go. And we made one phone call for water  
25 trucks, and thank goodness we had a mutual aid pact with

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1 two states, five counties, that it was that one phone  
2 call. Otherwise, it would have taken us -- we would  
3 have been overwhelmed just trying to find the resources  
4 and call them in.

5 So after that phone call, it took about three  
6 hours for all of the elements of the water shuttle to  
7 assemble. We were pumping water out of a pond about a  
8 mile and a half, two miles out of town, and coming back  
9 into town. So there were water trucks pumping,  
10 transferring water for that. It took us three hours to  
11 get that in place. You don't start the cooling  
12 operation until you can do it continuously, and that's  
13 what happened.

14 So roughly 5:30, 6:00 at night we started the  
15 first flow of water, and kept the -- kept that up for  
16 eight hours, a million gallons-plus. All of it shuttle  
17 would in by water truck and pumping continuously on the  
18 fire, on the cars.

19 **Q. So let me just ask a couple of questions and**  
20 **make sure we're on the same page.**

21 **You referenced the Emergency Resource Guideline?**

22 A. Uh-huh.

23 **Q. And that provides a guidance on the size of the**  
24 **evacuation zone?**

25 A. Uh-huh.

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1           **Q.    And that, was that initially did you say half**  
2 **mile?**

3           A.    Initially a half mile and we drew it back to a  
4 quarter mile within 20, 30 minutes.

5           **Q.    And based on what?**

6           A.    Based on information that we were getting from  
7 the local Union Pacific HAZMAT people, and I couldn't  
8 tell you the basis of their guidance, but they were  
9 saying explosion hazard is less than you might think and  
10 you definitely want to keep the quarter mile isolation,  
11 but you don't need a half mile.  So it was on their  
12 advice.

13                   That was something that, as I recall, there was  
14 some disagreement between Union Pacific HAZMAT and Union  
15 Pacific corporate as to what folks thought should be  
16 done, but we went with the HAZMAT people.

17           **Q.    Okay.  And we've had some testimony previously**  
18 **in this hearing about different types of response**  
19 **strategies, offensive, defensive, non-intervention.  Are**  
20 **you familiar with those terms?**

21           A.    Uh-huh, yes.

22           **Q.    So your strategy for this response was which of**  
23 **those three?**

24           A.    Really it was offensive.  It took awhile for us  
25 to get the resources there, and, in which case -- or

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1 during which time it was to basically let it burn. But  
2 we weren't going to let it burn beyond the point where  
3 we wanted to start extinguishment.

4 So with the understanding that it takes time to  
5 assemble the elements of an offensive attack, that's why  
6 we let it burn for a while. Once we had it, though, the  
7 cooling operation was sustained for eight hours and then  
8 the actual extinguishment happened with just about ten  
9 gallons of foam a little bit after 2:00 in the morning.

10 **Q. Okay. So tell us again from the time of the**  
11 **fire starting until the time that the cooling operation**  
12 **was actually in operation.**

13 A. So roughly, let's say roughly five and a half,  
14 six hours from the start of the incident to the  
15 beginning of the cooling operation, then another eight  
16 hours of pumping water continuously to cool the  
17 railcars, and then the actual extinguishment was just  
18 one guy walking in basically with a bucket of foam.

19 And all of that is very basic firefighting, and  
20 the only two people that actually engaged the fire were  
21 two very brave guys from Union Pacific who were the only  
22 people to actually handle the equipment that put out the  
23 fire. The rest of us were there just to support them.

24 And the equipment that they used and the amount  
25 of foam that they used, I have all of that stuff in my

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1 department. It's not like I'm not prepared for an oil  
2 fire. I just don't have a million gallons of water that  
3 I can rustle up good and quick.

4 **Q. The cooling operation sounds like it was**  
5 **previously been described as defensive.**

6 **Was there also a wild land fire?**

7 A. Yes.

8 **Q. Tell us about that.**

9 A. So -- let's see. It's hard to see from that  
10 photograph. Can we cycle through the photos here?

11 **Q. Sure.**

12 A. Keep going. Well, that one shows enough.

13 You can see the white smoke here, and those are  
14 big fir trees that are sort of a park area right on the  
15 approach into town. So that's the area; it's about two  
16 acres of second growth, fairly good-sized trees, maybe  
17 80, a hundred years old.

18 And that's the area that was affected by a wild  
19 land fire. It was a creeping fire; it didn't light the  
20 trees on fire. It was just a -- something that became a  
21 problem as it tried to extend out of the area that we  
22 could control it.

23 So we let that one go just because it wasn't  
24 safe to go in that close to the oil fire, and we did  
25 things on the perimeter of the wild land fire to keep it

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1 from spreading.

2 **Q. What types of things did you do?**

3 A. We had a crash truck from the Portland airport  
4 that enabled us to drive along the access road and spray  
5 with their water cannon, spray down a pretty good area  
6 that wasn't safe for us to be in otherwise. We had one  
7 of our pieces of equipment, a nozzle that we can leave  
8 on the ground and just pump water continuously in a  
9 water curtain, we used one of those briefly.

10 **Q. So you're soaking the fuel?**

11 A. Soaking ahead of the fire to keep it in a  
12 perimeter. We weren't doing anything to suppress the  
13 fire within the perimeter of that fire. We're trying to  
14 keep it contained.

15 **Q. I've been curious in this proceeding when we**  
16 **talk about evacuations and exclusion zones and this one**  
17 **got pretty quickly reduced to a quarter mile, but how do**  
18 **you station the equipment that you use to spray water**  
19 **onto the tank cars? Do you go within that quarter mile**  
20 **or how does that work?**

21 A. Oh, yeah. And that was the Union Pacific HAZMAT  
22 crew. And if I say two firefighters, but they had a  
23 whole team of men and women that were there with them,  
24 but these were the folks that actually moved the  
25 equipment.

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1           So there were portable pumps on trailers that  
2 they were driving in with pickup trucks and then leaving  
3 those stationed. They're self-contained trailers that  
4 can spray the water as long as they're attached to a  
5 source. So we set up the ability to supply those  
6 trailers and the firefighters within the hot zone, just  
7 kept moving the trailers around from time to time  
8 getting a different angle on the cars. So something was  
9 continuously -- there were two trailers. One was always  
10 continuously in action, sometimes two, so that they  
11 could reposition.

12           **Q. And they were repositioned during this cooling**  
13 **operation?**

14           A. Uh-huh. Yeah. Several times.

15           I wasn't there observing what they were doing,  
16 but I did hear that they were moving equipment around  
17 and using one nozzle from time to time and both,  
18 switching them around, et cetera. So, yes, there were  
19 people in that exclusion zone taking big risks, but  
20 that's their jobs.

21           **Q. And with respect to the application of the foam**  
22 **and the suppression of the fire, did you say that that**  
23 **occurred around 2 a.m.?**

24           A. Yes. I think just a little after 2:00 in the  
25 morning. So that was 8 hours after the cooling

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1 operation began and about 14 hours after the actual  
2 derailment.

3 **Q. Okay. Can you just describe for us how that**  
4 **part of the operation worked?**

5 A. As best I can. You mean the actual  
6 extinguishment?

7 **Q. Yes.**

8 A. So once the fire gets cool enough to approach it  
9 and put it out with the foam, one guy with one hose used  
10 very little foam. Just encapsulate what was left of the  
11 burning oil on the ground and then also into the one car  
12 that was still on fire with fuel in it.

13 So you cool the metal down to the point where  
14 the foam can do its job. And as I said, just ten  
15 gallons of foam was used on this fire.

16 **Q. Once the fire is suppressed, is the response**  
17 **over?**

18 A. No, no. So that's when the cleanup folks showed  
19 up, and that was a whole different unified command.  
20 That was myself as the local on-scene coordinator, EPA  
21 was the federal on-scene coordinator, DEQ was the state  
22 on-scene coordinator for Oregon, Washington Department  
23 of Ecology was the on-scene coordinator for Washington  
24 state. Because it's a shared resource with the Columbia  
25 River, they have the joint response between the DEQ and

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1 the Department of Ecology. And finally, the tribes were  
2 the fifth element of the unified command. Six being  
3 Union Pacific HAZMAT. But this was a different HAZMAT,  
4 not the local firefighters; this is the cleanup people  
5 that came mostly from Southern California and southeast  
6 of the country.

7 **Q. Generally, what needed to be done in terms of**  
8 **the response and the cleanup after the fire was**  
9 **extinguished?**

10 A. Generally, the oil that had come out of the cars  
11 needed to be accounted for and removed, any that was  
12 spilled there. So that was solar mediation, sewage  
13 plant, wastewater treatment plant actually captured  
14 10,000-plus gallons of oil, and that had to be  
15 decontaminated. It was fortunate that the plant was  
16 offline so none of the expensive equipment was affected.  
17 It was just a channel from the intake line into the  
18 storage tanks.

19 **Q. So let's talk about the wastewater treatment**  
20 **plant for a minute.**

21 **How did the derailment come to affect the**  
22 **wastewater treatment plant?**

23 A. So the --

24 **Q. If you want to use the map --**

25 A. Let's go back to the map, yeah. And zoomed in.

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1 There you go.

2 **Q. Do you want it zoomed any more?**

3 A. No, that'll do, I think.

4 So again, the fire was right there. That's  
5 where the ruptured derailed cars were. There were some  
6 cars either side of it.

7 The wastewater treatment plant is there. The  
8 main intake line run parallel to this road right there  
9 in sort of the ditch alongside that.

10 As the train -- as the derailed cars came off,  
11 they actually crushed the 8-inch intake line into the  
12 wastewater treatment plant.

13 **Q. So this is the line supplying the plant with**  
14 **wastewater?**

15 A. Correct.

16 **Q. Going to it?**

17 A. Right. So right at the intake into the plant  
18 basically, the pipes were crushed and oil got into the  
19 intake line and 10,000 gallons went into the treatment  
20 plant.

21 **Q. Now, you said the plant was offline?**

22 A. Well, I'm not a wastewater guy. I understand it  
23 was in some cycle where the expensive equipment was not  
24 on and not engaged, so basically it was just a channel  
25 through the plant from the intake into the holding

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1 tanks.

2 **Q. Okay. So what happened with that oil?**

3 A. It got removed, everything got cleaned out.  
4 There was a cleanup of the discharge line into the  
5 river. And the discharge of oil that actually was  
6 reported as a sheen was a little more than vapor that  
7 was coming through that discharge pipe into the river so  
8 there were little bubbles of vapor that would show up,  
9 and that sheen would spread and dissipate.

10 **Q. Is it your understanding that that would have**  
11 **been different if the plant had been operating at the**  
12 **time of the derailment?**

13 A. Possibly. We would have had more discharge had  
14 the plant been in a discharge cycle?

15 **Q. Uh-huh.**

16 A. Possibly. I can't say for certain, but I think  
17 so.

18 **Q. All right. While we're on this map, was the**  
19 **location of where the cars came to rest and the oil was**  
20 **discharged and the fire occurred, was that location**  
21 **significant in terms of response?**

22 A. Yeah. It's almost eerie how had that fire and  
23 oil spill happened just a few yards one way or the  
24 other, the outcome on that day would have been  
25 different.

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1       **Q. Explain what you mean by using the map.**

2       A. So I guess the most obvious one is if the fire  
3 had been just a few yards this way, so about where that  
4 "5" is, the same fire would have been aimed right at our  
5 wastewater plant and most likely would have damaged or  
6 destroyed millions of dollars. It's a brand-new,  
7 state-of-the-art plant that would have been destroyed.  
8 Go back a few feet this way, and if the fire had  
9 happened right up under the underpass, that would have  
10 destroyed our -- could have destroyed our access in and  
11 out of town.

12       **Q. How would that have affected the response if the**  
13 **fire had been under the overpass?**

14       A. Just about every resource that came in would  
15 have had to find another way.

16       **Q. So they used that overpass to get to the scene?**

17       A. Yes, yes.

18       **Q. And how close is the nearest alternative route**  
19 **to have gotten there? How much more travel would it**  
20 **have involved?**

21       A. Depending on which direction people are coming  
22 from, it might have taken another half hour, 45 minutes.  
23 But it would have also been -- I think those alternate  
24 routes would probably have clogged up pretty quickly  
25 because other people would have tried to find it.

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1           **Q.    Would it have affected the shuttle of the water**  
2 **at all?**

3           A.    It probably would have affected the arrival of  
4 those incoming water trucks, a lot of which came from  
5 Washington state, by some amount. Hard to say.

6           **Q.    So what else was significant about location?**

7           A.    Well, I mean, look again. So if our derailment,  
8 if our track fault is over here, it seems conceivable  
9 that on the same day just some variable might send the  
10 same cars a few hundred yards further west and into a  
11 slough that would have had oil in the water possibly on  
12 fire, not a great place to be fighting an oil fire in a  
13 body of water that we can't get to by water even. So  
14 that would be an interesting thing and definitely a  
15 different type of cleanup. Much different impact.

16          **Q.    And what about if it was further east?**

17          A.    Further east and you start affecting buildings  
18 that are close to the tracks here. That fruit growers  
19 building was something that was occupied at the time, so  
20 there were people that might have been affected. It  
21 certainly would be a big enough wooden structure that  
22 even on a calm day we would have had -- easily the fire  
23 would have extended to that big building, and we would  
24 have had that issue.

25          **Q.    People work in that building?**

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1           A.     Yes.  Not a lot, but I would say there were  
2 three or four people there when the derailment happened,  
3 inside.

4           **Q.     Let's just go through the pictures and take the**  
5 **opportunity to point out anything you'd like to in**  
6 **those.**

7           A.     Okay.  So the most obvious thing is the column  
8 of smoke going straight up.  That's something that  
9 people talked about, that that's an unusual weather  
10 pattern for Mosier.

11          **Q.     Would you agree with that?**

12          A.     I would, yeah.  A few times over the summer we  
13 get periods of calm weather, usually during a hot spell.  
14 But the usual weather in Mosier is blowing sideways.  
15 We're a wind surfing town for gosh sakes, so we really  
16 lucked out.  Twenty-four hours before this picture was  
17 taken we had 30-mile-an-hour sustained wind with higher  
18 gusts from the west, so everything you see behind that  
19 was potentially something that would have been affected  
20 by a big wild land fire.

21          **Q.     So let me ask you, as a firefighter, how big of**  
22 **a role does wind play in the spread of a wild land fire?**

23          A.     It's huge.  And I have experience fighting a  
24 couple of wind-driven fires in Mosier that got big.

25                 In 2009, we had the Microwave Fire -- (Court

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1 Reporter interruption.) Microwave, like a microwave  
2 oven, that started to the west of Mosier and burned 4  
3 miles downhill in 24 hours right to the edge of town.  
4 Coincidentally, the Microwave Fire stops 442 feet from  
5 where this fire began.

6 **Q. If we go to the first picture in this exhibit,**  
7 **that blackened area in the right-hand side with the dirt**  
8 **road through it?**

9 A. No, that's an old quarry. The Microwave Fire  
10 burned down to a point just across Rock Creek, and  
11 that's where it stopped six years ago. So that's the  
12 biggest what-if, really is that the wind was such a  
13 factor in this fire.

14 The way that the wild land -- this fire would  
15 have progressed is that the white smoke there that you  
16 see from the wild land fire, that would have instantly  
17 become what we call a crown fire. So those second  
18 growth hundred-year-old trees would have been on fire  
19 from top to bottom. They would be shooting off embers  
20 that would go miles in some cases and cause secondary  
21 fires downwind. And that would be totally at the mercy  
22 of the directional speed of the wind.

23 Typically, we have a little bit of north in our  
24 wind so that the pattern would be to go this way.  
25 That's our school right there. So that fire would have

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1 probably affected our school almost immediately, which  
2 was full of kids and parents arriving to pick them up.  
3 So that's kind of the biggest what-if.

4 Another thing to look at in these photographs is  
5 something that the news media didn't really show, which  
6 is this line of un-derailed and un-burning cars that was  
7 still through the center of our town. That caused so  
8 much anxiety for people to see that and to -- and for  
9 people that understood that as bomb material, to see  
10 that and not know why they were still there while  
11 there's a fire burning upwind.

12 That is an unappreciated element. We are a  
13 thankfully rare group of people who almost got blowed  
14 up, and that's our community. So...

15 **Q. Describe for us the community reaction to this**  
16 **event while it was going on.**

17 A. While it was going on, I honestly can't say what  
18 was the community reaction was because I had my hands  
19 full. But I can tell you that the city manager and the  
20 city engineer and some of the council members were  
21 Johnny-on-the-spot at identifying what they could about  
22 the sewage plant and other elements of the local  
23 infrastructure.

24 So -- and they were also instrumental with our  
25 volunteers in getting information out as quickly as we

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1 could. My volunteers became essentially an information  
2 bureau for, say, the first 12 hours of the incident.

3 **Q. Let's go to the second picture. Just anything**  
4 **to add from this viewpoint?**

5 A. No. I might be repeating myself.

6 **Q. Okay. Again, those white plumes on the**  
7 **left-hand side, the dark plume, that's the smoke from**  
8 **the wild land fire?**

9 A. Yes. The dark is the oil fire and the white is  
10 some degree of the wild land fire. At that point, there  
11 may have been somebody engaging that. I'm not sure.  
12 It's hard to say.

13 **Q. Next picture, please.**

14 A. That just emphasizes, these people are about --  
15 it's closer than it looks because it's down a bluff. So  
16 those people are maybe 75 feet from this line of cars,  
17 and those did not get moved until, most of them, late at  
18 night about the same time as the fire was put out.

19 The cars that were still upright and the damaged  
20 section of track were there for another day. So there  
21 were lots of oil cars in our town for a day or so  
22 following the derailment.

23 **Q. Roughly, how far to the east of the fire did the**  
24 **train extend?**

25 A. Well, it's out of this picture, which that's

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1 right at the city limits, which is about a half a mile  
2 from the derailment site. And I can't tell you how many  
3 more cars there were. I remember there was an engine  
4 attached to them that you could still see, so it was not  
5 much further out of the picture that way.

6 **Q. So I'm sorry. The city limit to the scene of**  
7 **the fire is?**

8 A. About a half a mile, maybe a little bit more.

9 **Q. Okay. During the cooling phase of the response,**  
10 **were those cars decoupled and moved out of the way?**

11 A. No. No, sir. Not until after the fire was put  
12 out, most of them. And the reason being that they  
13 couldn't identify exactly where the fault in the track  
14 was for some time, so they tried pulling the cars away  
15 and realized that there was -- they couldn't budge some  
16 of them. It took trial and error to get back to the  
17 point where they could identify and decouple and move  
18 them away.

19 **Q. So it was the next day before that happened?**

20 A. No. I think that happened, my memory is it was  
21 shortly after the fire was put out, maybe shortly  
22 before. It was in that say 12-hour timeframe, 12 to  
23 14 hours.

24 **Q. Okay. And what about the train to the west of**  
25 **the fire?**

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1           A.     That was moved fairly quickly.  There were  
2 locomotives and a couple of cars that had not derailed,  
3 and they were out of there fairly quickly.

4           **Q.     So just a couple to the west?**

5           A.     Yeah.  Yeah.

6           **Q.     Let us just go through the next couple pictures**  
7 **and see if there's anything else to add from these.**

8           A.     No.  Again, I think this is a fairly telephoto  
9 lens, but if you pull back and realize that our whole  
10 town is downwind of this fire.  That's what I see, our  
11 town at risk.

12          **Q.     The next picture, please.**

13          A.     Same.  You can kind of see the -- had the wind  
14 been blowing, it would have been probably on about this  
15 axis and all of that and all of the landscape behind  
16 would have had that wild land fire on a windy day.

17                   MR. POTTER:  Is there any other?  Last one?

18                   MS. MASTRO:  Last one.

19                   MR. POTTER:  Okay.  Thank you.

20 BY MR. POTTER:

21          **Q.     So Chief Appleton, you had the opportunity to**  
22 **observe the fire and the fireball that was caused by**  
23 **this derailment?**

24          A.     Yes.

25          **Q.     And have you reviewed an Exhibit 3039, which is**

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1 a video of that fire and fireball?

2 A. I believe so, yes.

3 **Q. Does that video fairly and accurately show that**  
4 **event?**

5 A. It shows the fire behavior at that point, which  
6 was fairly typical after the additional cars had been  
7 impinged. And so I believe that's what we're looking  
8 at.

9 MR. POTTER: We'd move for the admission of  
10 3039.

11 JUDGE NOBLE: Objection?

12 MR. JOHNSON: No objection.

13 JUDGE NOBLE: 3039 will be admitted.

14 MR. POTTER: And could we play that, please?

15 (Video was played.)

16 THE WITNESS: Yeah. So you can see derailed  
17 cars behind the fire, in front of the fire. And all  
18 this does is really just show the fire itself.

19 Yeah. I'm going to say that is after the  
20 addition -- at least one more car than the original  
21 punctured car. You can see that car right there is the  
22 one that had the most impingement. It's the actual torn  
23 car is in front of that.

24 So that was after the fire became good and  
25 big. The original fire was right -- yeah. So that's

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1 about the most extreme fire behavior that we saw that  
2 day. I've seen some additional videos that show what  
3 one channel called an explosion. It really wasn't. It  
4 was just a pressurized burp of oil that came out and  
5 made a flare-up. Nothing exploded in Mosier that day.

6 BY MR. POTTER:

7 **Q. Okay. There were fireballs?**

8 A. Yes. There were flare-ups. There were  
9 fireballs, there was some spectacular unomalies  
10 (phonetic), but nothing exploded.

11 **Q. Do you know how many cars derailed?**

12 A. I believe it was 16, and -- but that's to me  
13 kind of a term of art, because I'm not sure if some of  
14 the upright cars that were still roughly on the tracks,  
15 if those qualify as derailed. But there were 16 that  
16 were off the tracks, 4 total that were involved in fire.

17 **Q. Was there an initial attempt to use water from  
18 the Mosier water system to respond to the fire?**

19 A. Only for the -- that one ground nozzle that I  
20 mentioned that we fired up briefly.

21 **Q. Was that when you were talking about soaking the  
22 area ahead of the wild land fire?**

23 A. Yes. That was purely about saving -- preventing  
24 the extension of that wild land fire from the area where  
25 it threatened homes. And we may have used a little bit

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1 of additional city water, but not much.

2 **Q. Was the aquifer that the city relies on for its**  
3 **water source, was that affected?**

4 A. No. There was some bad information that got  
5 out. The city water supply was not affected by the  
6 fire. There was some engineering anomalies coming into  
7 the fire that caused what we thought were strange  
8 effects, but nothing that was -- nothing that affected  
9 the source of our water or the water system itself.

10 That was a bad story that got out that we were  
11 out of water, or that the city water had been affected  
12 in any way. I read in one place that we had oil in our  
13 water, which was not true. Never happened.

14 **Q. The wastewater treatment plant, how long was**  
15 **that offline?**

16 A. I think it was eight days after the incident  
17 that they had it back to -- yeah. No, it was less than  
18 that. Would have been -- yeah, eight days. I'm sorry.

19 **Q. That's okay.**

20 A. It all blurs together.

21 **Q. A lot going on.**

22 A. Yeah. The cleanup still had a bit of a  
23 footprint at that point, but after eight days, the  
24 sewage plant, the wastewater plant was back online.

25 **Q. What was done to provide sewage service to the**

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1 residents during that time?

2 A. Union Pacific provided a pumping service, so  
3 they suctioned wastewater out of the mains, trucked it  
4 to Hood River where it was put through their sewage  
5 treatment plan, and that went on day and night for the  
6 entire eight days.

7 **Q. Was there a period of time that people could not**  
8 **use their toilets?**

9 A. During the initial fire and for a few hours  
10 after that, but I believe by sometime -- if it wasn't  
11 the day after the fire, it was the Sunday. So within --  
12 I'm going to say within 48 hours-ish, they had the  
13 transfer up and running. And that was done  
14 continuously.

15 **Q. And was Interstate 84 closed during any of this**  
16 **event?**

17 A. Yes. I think it was about 12:40 that the order  
18 for the freeway to be shut down, so 20 minutes into the  
19 incident, and I believe it was about 11:30 that night  
20 that the freeways opened up again.

21 **Q. So roughly ten hours?**

22 A. Yeah, roughly.

23 **Q. So it sounds like many things with this response**  
24 **went quite well.**

25 A. Yes. Yeah. And I have to say that Union

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1 Pacific's HAZMAT response from the initial fire, those  
2 local Portland firefighters through to the cleanup  
3 folks, they really set a very high bar for how industry  
4 responds to this type of incident. They were right  
5 there in our unified command.

6 The people that were there from Union Pacific  
7 were my brothers and sisters in the emergency response  
8 world. They're not track crews that got promoted.  
9 These are people that have the same goals that I do, the  
10 same treatment of this as a public emergency, not as a  
11 derailment.

12 The track guys were telling me that ten years  
13 ago Union Pacific would have put the trains back  
14 running, moved the burning cars off to the side and  
15 said, Chief, you got a problem there. What are you  
16 going to do about it?

17 That's the track people at Union Pacific that  
18 say that. Ten years ago they would have done it very  
19 differently. So that was a big reason for why things  
20 went so well.

21 That mutual aid agreement, the five-state,  
22 two-county agreement that two brilliant people, Chief  
23 Jim Trammell and Chief Bob Palmer, put in place a few  
24 years ago, if we hadn't had that, it wouldn't have gone  
25 quite so smoothly. The eerie coincidences of capturing

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1 all of the oil and virtually none of it going into the  
2 river, yeah, things went very well.

3 **Q. So since June 3, you've been rather vocal in**  
4 **your expression of your concerns about the**  
5 **transportation of crude oil by unit trains through our**  
6 **communities; is that true?**

7 A. That's true, yeah.

8 **Q. Were you vocal about it prior to June 3?**

9 A. No, I wasn't. And I was actually, I think, a  
10 very loyal fire chief in trying to assure my community  
11 that Union Pacific's track record, the fact that the  
12 horrible accidents that we see were in different  
13 circumstances that may or may not apply to Union  
14 Pacific. That was my standard line. It's like,  
15 folks --

16 **Q. Not going to happen here?**

17 A. -- not much we're going to do about it. Let's  
18 assume it's not going to happen here. I can't say that  
19 anymore. And it's so obvious to me in looking at the  
20 risks from this incident that it's not something that we  
21 should be tolerating.

22 **Q. Well, what do you see as the risk?**

23 A. The reason that it went well is a wake-up call,  
24 and again, change one little thing and that incident  
25 would have been very different.

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1           **Q.    Such as?**

2           A.    Such as the weather.  You know, that's the big  
3 one.  But those little changes that I mentioned, just  
4 going, you know, a few yards one way or the other, would  
5 have made a different incident.

6           In summary, though, the volume of risk is to me  
7 such a transparently clear issue that by having a unit  
8 training, you're just increasing your exposure to the  
9 law of averages, and it's going to be sooner or later.  
10 And I think our regulatory system needs to not encourage  
11 things that attract that level of risk.

12           The state departments of transportation I'm  
13 hearing are interested in seasonal restrictions on unit  
14 trains.  That's something that I would hope sooner or  
15 later affects the bottom line.  And, but -- anyway.

16           MR. POTTER:  Chief Appleton, thank you for  
17 your service and your testimony.

18           THE WITNESS:  Thank you.

19           JUDGE NOBLE:  Chief Appleton, you have to  
20 stay there in case there's cross-examination.

21           MR. JOHNSON:  Nothing from the applicant.

22           JUDGE NOBLE:  Anything from the Port?

23           MR. BARTZ:  Nothing from the Port.

24           JUDGE NOBLE:  Chief, are there any questions  
25 from council?

## APPLETON

1 Mr. Stone?

2 MR. STONE: Good afternoon, Mr. Appleton.  
3 Thank you for coming up and testifying today.

4 You mentioned that the personnel from Union  
5 Pacific Railroad were key in fighting the fire. Where  
6 did they come from and how long did it take for them to  
7 get there?

8 THE WITNESS: So the initial firefighters  
9 came from Portland. They're a local crew there based in  
10 Portland, and they came along with everyone else down  
11 I-84, got stuck in the same traffic jam that everyone  
12 else did. But somehow they pushed their way through.  
13 They made contact with some ODOT personnel fairly far  
14 down the traffic jam that got them hustled along a  
15 little bit.

16 In our after action review, that was one  
17 thing that was pointed out, that when the freeway is  
18 shut down you need to have better resources -- better  
19 access, because there's a whole half of the freeway that  
20 wasn't being used. If that could have been repurposed  
21 for arriving emergency personnel, that was one issue  
22 that we identified.

23 So it took them I would say probably about  
24 90 minutes, so it's a little bit longer than ordinary  
25 had they not run into traffic.

## APPLETON

1 MR. STONE: Do you know offhand how big of a  
2 geographic area that Portland crew is responsible for?

3 THE WITNESS: I don't. I do know that they  
4 responded, for instance, on the Lac-Megantic, that  
5 Portland resources were on that fire. I don't know  
6 Union Pacific's system to tell you if that was unusual  
7 or not.

8 MR. STONE: Okay. At this hearing, there's  
9 been previous testimony about emergency response  
10 training that's available to fire districts provided by  
11 the railroad companies and others. There's online  
12 training, there's three-day training somewhere, there's  
13 onsite training in the local area.

14 Has your fire district ever been able to  
15 take advantage of that training?

16 THE WITNESS: We've been able. It's not  
17 something that I felt was really a high priority. I  
18 think that my basic HAZMAT training tells me an awful  
19 lot about how to fight an oil fire.

20 So that said, it's something that we will  
21 be -- my district will be looking at taking advantage of  
22 some of that training, with the understanding that we're  
23 not likely to ever actually engage an oil fire, but it  
24 would behoove us to have some better awareness of how  
25 that's done and areas where we can improve in our local

## APPLETON

1 response to that.

2 MR. STONE: Okay. Thank you.

3 JUDGE NOBLE: Other questions to my right?

4 Yes, Mr. Snodgrass?

5 MR. SNODGRASS: Good afternoon. A couple  
6 quick questions.

7 THE WITNESS: Don't fritz out the router.

8 MR. SNODGRASS: Just in looking at the  
9 pictures, it looked fairly wooded near the source of the  
10 fire. What was the nearest dwelling to the fire, about?

11 THE WITNESS: About, maybe a hundred feet  
12 from that wooded area and directly across that road from  
13 the wastewater plant. So there's a few houses that are  
14 tucked just right behind the fire.

15 MR. SNODGRASS: And I assume they were  
16 evacuated?

17 THE WITNESS: Yes.

18 MR. SNODGRASS: All told, about how many  
19 were evacuated, homes and businesses?

20 THE WITNESS: About 70 homes, most of which  
21 were in the -- there was a mobile home development just  
22 to the right as you come into town, and that was -- all  
23 of that was evacuated. There was another eight or nine  
24 homes that are not part of that development that was  
25 closed as well.

## APPLETON

1 MR. SNODGRASS: Has there been any ballpark  
2 estimate of the total public costs that were incurred  
3 here?

4 THE WITNESS: No, not yet.

5 MR. SNODGRASS: Okay. That's all I have.  
6 Thank you.

7 JUDGE NOBLE: Any other questions from  
8 council?

9 Mr. Shafer?

10 MR. SHAFER: Mr. Appleton, thank you very  
11 much for your testimony today. A few questions.

12 As the fire began, obviously one or several  
13 of the cars took initial fire. Did fire like jump or  
14 leap from car to car? Was any of that activity  
15 occurring?

16 THE WITNESS: No. So again, the actual  
17 progression was one car spilled its cargo, its contents,  
18 as a puddle of burning oil on the ground, and that  
19 puddle is what impinged on to adjoining cars around it.  
20 It didn't really do a leap frog from car to car. So no,  
21 that wasn't --

22 MR. SHAFER: Was that largely due to  
23 containment activity from the fire department or --

24 THE WITNESS: No, that's just the way things  
25 worked.

## APPLETON

1           MR. SHAFER: Okay. So something under maybe  
2 normal circumstances, and that may be a little  
3 subjective, but under fairly typical or usual  
4 circumstances it would not be expected that fire would  
5 jump from car to car.

6           Is that a fair assessment?

7           THE WITNESS: I don't think I'm qualified to  
8 tell you that.

9           MR. SHAFER: But it did not occur in this  
10 case?

11          THE WITNESS: It didn't occur in this  
12 instance.

13          MR. SHAFER: Okay. Relative to the  
14 surrounding area, did the fire tend to spread to the  
15 surrounding area as was mentioned? It's reasonably well  
16 wooded and, of course, there's other materials that I  
17 think are at least subject to fire. I mean, did it  
18 spread relatively or was it relatively contained?

19          THE WITNESS: It did spread, but the wild  
20 land fire was a creeping fire that was mainly ground  
21 fuels, and it wasn't a forest fire. It was just a  
22 mainly pine needles and ground fuels that were creeping  
23 along and every once in a while would flare up. And  
24 that was limited to two acres during that eight-hour  
25 period where the fire was essentially controlled.

## APPLETON

1           MR. SHAFER: Okay. I appreciate very much  
2 the comments on mutual aid. And I realize it did not  
3 occur here, but under the scenario had the fire let's  
4 say surprisingly began to spread up the hillside or  
5 aggressively into town, I mean, in terms of the mutual  
6 aid, would there have been opportunity or a capacity,  
7 availability of other crews to come in, to mobilize in  
8 to assess, to assist at that time?

9           I think you made mention that there's been  
10 times when the crews maybe on the mutual aid have been  
11 required to, you know, perform duties in other areas and  
12 may have been exhausted or you exhausted your resource,  
13 but nonetheless, had something like that began to occur  
14 in this situation, would you have the confidence that  
15 additional crews could have been mobilized in to assist?

16          THE WITNESS: So let me clarify. Are you  
17 talking about a scenario with more wind, for instance?

18          MR. SHAFER: That would be an example. But  
19 at the site here at Mosier, if it had begun to spread to  
20 an area, maybe because of the wind or any other elements  
21 that would have, you know, aggressively spread the fire.

22          THE WITNESS: So I'm going to run with  
23 aggressively spreading fire and say that you're talking  
24 about a wind-driven event.

25          And no. The answer is no, we wouldn't have

## APPLETON

1 had resources. We would have had a lot of people trying  
2 to fight a big oil fire and we'd be scrambling for  
3 resources to chase down multiple fires over many, many  
4 square miles. And it's hard to predict where those  
5 would have happened. It would have been pretty random.

6 So we would have been overwhelmed on either  
7 incident. But to have two of them going at the same  
8 time would have instantly had us over a barrel.

9 MR. SHAFER: Okay. All right. Were there  
10 any fatalities as a result of the Mosier incident?

11 THE WITNESS: Not human. There might have  
12 been lizards or something.

13 MR. SHAFER: And has the site been largely  
14 restored or would you say that there's long-term or  
15 permanent damage as a result of the fire?

16 THE WITNESS: There's long-term damage in  
17 that wild land area, in the two acres, and between  
18 the -- around the wastewater treatment plant is actually  
19 a city park, and that got pretty well destroyed. Those  
20 will be somewhat long-term restoration projects, mainly  
21 native plants and they grow pretty slowly.

22 But, so that is not restored but it's been  
23 mediated, cleaned up. The hazard trees are gone, I  
24 believe. So there's no large-scale active work going on  
25 at this point.

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1 I think the one remediation project that's  
2 still left is that discharge pipe from the wastewater  
3 plant into the river will need to be replaced. But  
4 they're waiting to do that after wind surfing season so  
5 they don't disrupt the sail park that goes through.

6 MR. SHAFER: Okay. Thank you very much.

7 JUDGE NOBLE: Mr. Lynch?

8 MR. LYNCH: Thank you, Chief Appleton.

9 I was wondering if you could give us your  
10 thoughts about what would -- how would the response have  
11 changed in terms of assessing the fire or the mutual aid  
12 would have come in if this fire would have started at  
13 midnight, during the dark?

14 THE WITNESS: That's an interesting  
15 question. I'm not sure it would have been really that  
16 much different. It probably just the timing and the  
17 logistics of having fewer people on the road would have  
18 been resources arriving a little bit sooner. But I  
19 don't think the darkness would necessarily have hindered  
20 anything on this. It was pretty straightforward  
21 firefighting.

22 MR. LYNCH: Do you think the mutual aid that  
23 you got from other areas, do you think they would have  
24 been able to locate where to provide assistance or where  
25 people were meeting up? Do you think that would have

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1 added to their response time?

2 THE WITNESS: I don't think significantly,  
3 no. It's hard to say. And the question of mutual aid  
4 being kind of a bit random depending on circumstances, I  
5 think, is kind of the broader issue, that you kind of  
6 just don't know.

7 We got very lucky on June 3rd in having a  
8 robust, effective, fast mutual aid response, and that  
9 would have happened just as easily 12 hours later at  
10 nighttime on that day. But at 3:00 in the morning on  
11 July 4th when we had our house fire, that's more an  
12 example of how mutual aid is a little bit unpredictable.

13 All of our mutual aid resources that were in  
14 Mosier on June 3rd were exhausted and tied up on  
15 July 4th, and that's kind of the lesson that we're  
16 absorbing as far as mutual aid.

17 MR. LYNCH: Thank you.

18 JUDGE NOBLE: Any further questions to my  
19 right? To my left?

20 Mr. Siemann?

21 MR. SIEMANN: Thank you for being here.

22 I'm curious about training and whether  
23 additional training from, for example, the railroads or  
24 HAZMAT might have altered any of your responsibility in  
25 any way. And I ask that in part because there's been a

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1 lot of questions about how prepared are rural fire  
2 departments for events of this sort.

3 THE WITNESS: Uh-huh. I'm sorry. Can you  
4 ask your question one more time?

5 MR. SIEMANN: My question is, do you feel  
6 like you or your volunteer firefighters had sufficient  
7 training for this? I guess would be step one.

8 THE WITNESS: Uh-huh. Whether we actually  
9 took advantage of the training or not is maybe a good  
10 question. But I think the training that has happened in  
11 my region, and we did have a Union Pacific tabletop  
12 drill in March of this year that went over a scenario  
13 eerily similar to the Mosier derailment with the same  
14 spec of cars, same derailment scenario. And many of  
15 the -- many of our mutual aid people, resources, had  
16 been at that training. I skipped it because I was  
17 getting ready to go on vacation.

18 But that made a big difference, and that's  
19 the kind of training that we need from the industry is  
20 more scenarios like that that bring together people so  
21 that when in the first few minutes we're -- as we're  
22 assembling our first unified command saying who is that  
23 guy at Union Pacific that we call? And somebody says,  
24 I've been talking to him for eight minutes. Give me two  
25 more and I'll brief you over there. Everybody had

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1 everyone on speed dial because of that March drill. So  
2 more of those, please.

3 But as far as real improvements in Mosier,  
4 it really is much more basic training for us than  
5 specialized training for specific oil incidents. We're  
6 still getting our hands around being a responsible  
7 agency in a unified command, and that's -- so for us  
8 we're still not quite there as meeting oil train  
9 response as a high priority. We have other priorities  
10 that are a little more basic.

11 MR. SIEMANN: Thank you.

12 JUDGE NOBLE: Mr. Rossman?

13 MR. ROSSMAN: Thank you for your testimony.

14 Can you describe a little bit the timeline  
15 on which the evacuation proceeded? How quickly were you  
16 able to get that quarter mile zone cleared?

17 THE WITNESS: In the scheme of things, I'm  
18 going to say it happened very quickly, but there's some  
19 elements to that. The school evacuation was something  
20 that was really our first and biggest priority, because  
21 they're kids. That took a little bit of time locating  
22 buses that could actually take the kids out. So all  
23 told, I think that was a little over an hour and a half  
24 just to do that evacuation.

25 The homes, that was actually quicker. That

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1 took about 45 minutes to go from door to door in the  
2 affected homes. And that was all done pretty much with  
3 civilian resources. We didn't have very many law  
4 enforcement folks to help us at that point.

5 By the time the school was evacuating, we  
6 had a few more deputies and state troopers to help with  
7 evacuation, but it was really local, civilian and fire  
8 department people that ran the evacuation. And there's  
9 lessons for us there in the original response.

10 MR. ROSSMAN: You described sort of your  
11 general HAZMAT training was sort of sufficient to know  
12 to back off and be defensive at that point.

13 Is that required training of a person in  
14 your position?

15 THE WITNESS: Yes. HAZMAT operations and  
16 awareness is my level of training for that. That's  
17 required of all firefighters.

18 MR. ROSSMAN: So the rest of your volunteer  
19 crew had that training, HAZMAT training also?

20 THE WITNESS: Yes.

21 MR. ROSSMAN: All right. Thank you.

22 JUDGE NOBLE: Any other questions to my left  
23 for Chief Appleton? Mr. Moss?

24 MR. MOSS: You mentioned you were about to  
25 go on vacation at some point. I just wondered, what

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1 happens when you go on vacation? Do you have somebody  
2 step up and take over as an acting chief?

3 THE WITNESS: Yes.

4 MR. MOSS: So someone would have been there  
5 to coordinate this effort just as you did had you been  
6 away?

7 THE WITNESS: Yes.

8 MR. MOSS: Okay. Thank you.

9 JUDGE NOBLE: I just have one thing I wanted  
10 to ask you about, Chief Appleton.

11 You said that the issues and challenges are  
12 the same as other districts and your capabilities are  
13 fairly typical. In your group of resources that you can  
14 call upon from other districts, does that include from  
15 the Washington side?

16 THE WITNESS: Yes.

17 JUDGE NOBLE: Then you have mutual aid  
18 agreements with districts on the other side of the  
19 river?

20 THE WITNESS: Yes. That's the mutual aid  
21 pact that I mentioned. Two states, five counties, that  
22 Chief Palmer and Chief Trammell, T-r-a-m-m-e-l-l, put in  
23 place a few years ago.

24 That's a very unique piece of the puzzle,  
25 which, again, in our after action reviews I've made sure

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1 that people understand the importance of that agreement  
2 to the point where if there's any statues to be erected  
3 in this incident, it's those two men for having the  
4 foresight to see the need for that agreement. And one  
5 phone call got us every fire department in Skamania  
6 County, Klickitat County, Sherman County, Wasco County,  
7 and Hood River County got the request. One phone call.

8 JUDGE NOBLE: And when you say that your  
9 issues and challenges are typical of the other districts  
10 along the river, what geographic area are you referring  
11 to? Are you referring as far east as where the railroad  
12 comes down from the north and starts along the Columbia  
13 River Gorge to, say, Washougal? What typical area -- or  
14 what area are you calling typical?

15 THE WITNESS: Really nationwide. I think  
16 the model of a volunteer fire department is something  
17 that's hard for all of us and for various reasons. And  
18 that's what I mean.

19 Unlike, say, 40 or 50 years ago when in my  
20 community, there really wasn't an issue with the fire  
21 department. A, you didn't really need training; you  
22 just needed to show up. So we had a roster of maybe  
23 60 people that called themselves firefighters, but they  
24 didn't really have any training and just sort of did the  
25 job.

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1           Now, to be a volunteer firefighter you have  
2 to have the HAZMAT training. That's one of the most  
3 dull classes I could ever encourage anybody to attend.  
4 And we are actually an EMS department more so than a  
5 fire department, and my volunteers, bless their souls,  
6 have sat through hundreds of hours of EMT training just  
7 to be able to respond to their community.

8           And the passion and the commitment to doing  
9 that for firefighters is something that is hard for all  
10 of us to deal with now. That recruitment and retention  
11 of volunteers is something that you see seminar after  
12 seminar in the fire service, and all of us are affected  
13 nationwide, probably Canada as well. I don't really  
14 know their system.

15           But if you see volunteer fire departments,  
16 we're all dealing with some of the same issues. People  
17 have lives now that it's hard for them to find the time.

18           JUDGE NOBLE: Well, thank you,  
19 Chief Appleton for finding the time yourself.

20           Are there any questions based upon council  
21 questions?

22           MR. JOHNSON: Not from the applicant, Your  
23 Honor.

24           MR. POTTER: No, Your Honor.

25           JUDGE NOBLE: Chief Appleton, thank you for

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1 your testimony and you're excused as a witness.

2 THE WITNESS: Thank you.

3 JUDGE NOBLE: It's 2:24. Mr. Potter, do you  
4 have another witness that would be fairly short or just  
5 someone else?

6 MR. POTTER: We have another witness who  
7 will not be fairly short.

8 JUDGE NOBLE: All right. I think it's a  
9 good time for the afternoon break for 15 minutes.  
10 Twenty minutes to 3:00 we'll come back. Thank you.

11 (Recess taken from 2:24 p.m. to 2:42 p.m.)

12 JUDGE NOBLE: We are back on the record.  
13 Would you call your next witness.

14 MS. DRUMMOND: Thank you, Your Honor.

15 For the record, my name is Susan Drummond.

16 I represent the City of Vancouver. City is calling  
17 Mr. Robert Chipkevich to the stand this morning.

18 JUDGE NOBLE: Mr. Chipkevich, it's late in  
19 the afternoon. Could you raise your right hand, please.

20

21 ROBERT CHIPKEVICH,  
22 having been first duly sworn, testified as follows:

23 JUDGE NOBLE: Please proceed.

24

25 ///

## 1 DIRECT EXAMINATION

2 BY MS. DRUMMOND:

3 Q. Just for the record, can you restate your full  
4 name?

5 A. Yes. My name is Robert J. Chipkevich.

6 Q. And what is your place of employment and your  
7 title there?8 A. I am principal of Chipkevich Safety Consulting  
9 Group LLC.10 Q. And what do you do at Chipkevich Safety  
11 Consulting?12 A. I provide transportation safety consulting  
13 services for the transportation industry. It's been  
14 primarily in the railroad and pipeline areas as well as  
15 to communities often after they've had a transportation  
16 accident.17 Q. And when did you establish Chipkevich Safety  
18 Consulting?

19 A. In July of 2010.

20 Q. And what did you do before that?

21 A. Before that, for 25 years before that I was with  
22 the National Transportation Safety Board. Began there  
23 as an accident investigator, hazardous materials  
24 specialist, and launched two accident sites often to  
25 lead the investigations as an investigator in charge or

1 as support investigations as a hazardous materials  
2 specialist. Those included train accidents, aviation  
3 accidents, highway accidents, those involving HAZMAT,  
4 including tank cars, damaged tank cars, accident  
5 reconstruction.

6 For 20 years at NTSB, I led the hazardous  
7 materials accident investigation program. And then I  
8 was handed the responsibility and became the head of the  
9 pipeline accident investigation program also.

10 For the last nine years at NTSB, I headed the  
11 railroad accident investigation program in addition to  
12 the other two which included all railroad accidents, all  
13 freight trains accidents, passenger trains, freight  
14 trains, as well as transit systems.

15 **Q. Can you provide some examples of some of the**  
16 **more significant accidents that you investigated at the**  
17 **NTSB?**

18 A. Yes. Of course a lot of accidents over that  
19 period of time. But accidents, our investigation  
20 process was, as director, I would get the heads-up on a  
21 briefing every day on the accidents that were occurring  
22 every morning, and during the evening on serious  
23 accidents, I'd get a call during the night and launch  
24 investigation teams to those sites selecting for those  
25 particular accidents.

1           Those have included the New Brighton,  
2           Pennsylvania accident which was an ethanol train  
3           accident which we'll be discussing here; the Cherry  
4           Valley, Illinois accident; a Superior, Wisconsin  
5           accident back in 1992, a significant accident, hit a  
6           bridge; A Graniteville, South Carolina accident which  
7           involved a chlorine tank car that was punctured and  
8           multiple facilities in town with the release of  
9           chlorine.

10           Pipeline accidents have included the Bellingham  
11           accident near here which was release of about a quarter  
12           million gallons of gasoline from that pipeline.  
13           Carlsbad, New Mexico, which was a high-pressure natural  
14           gas pipeline failure.

15           Aviation accidents. A couple -- those primarily  
16           involved HAZMAT, in Nashville, Tennessee, American  
17           Airlines came in with the fire in the cargo department,  
18           very intense from a HAZMAT release. And subsequent to  
19           that, 1996, ValuJet crashed into the Everglades. It was  
20           HAZMAT and cargo compartment that started that fire, and  
21           it was my team that did much of the investigation on  
22           that.

23           I was also responsible for highway accidents  
24           involving cargo tanks, crash ordinance tanks, those that  
25           have been involved in accidents, safety issues, and

1 marine accidents. Those involving tank ships, barges,  
2 things of that nature, involving a particular -- Deer  
3 Park, Texas involved multiple vessels, tanks ships,  
4 barges, tugs all at the same time. Just a sample of the  
5 types of accidents.

6 JUDGE NOBLE: Mr. Chipkevich, you are  
7 speaking a little bit fast and so if I can ask you to  
8 slow down a bit, especially when you're naming things  
9 that kind of have some spelling challenges, like names  
10 and places, that would be most helpful to our court  
11 reporter. Thanks.

12 THE WITNESS: You're welcome. Thank you.

13 BY MS. DRUMMOND:

14 **Q. Mr. Chipkevich, you prepared some testimony for**  
15 **this proceeding?**

16 A. Yes, I have.

17 **Q. I'd like to point you to Page 12 of your**  
18 **testimony, Table 1.**

19 A. Okay.

20 **Q. Can you summarize what this table depicts?**

21 A. This is a table of 24 accidents that I looked at  
22 that involved train accidents involving ethanol and  
23 crude oil, and that occurred over the period from 2006  
24 to 2015. I use this period because the New Brighton  
25 accident in Pennsylvania, Accident Number 24 on the

1 table, was one of the first major unit train accidents  
2 that we investigated at the board.

3 It was my team that was sent out there to  
4 investigate it, and I was responsible for that accident.  
5 It involved 23 cars derailed and 20 of those tank cars  
6 failed, 87 percent of them, during the accident.

7 These 24 accidents, it was about 6 1/2 million  
8 gallons of cargo released which is equivalent to about  
9 722 highway gasoline cargo tanks, they hold about  
10 9,000 gallons each. And 314 of the 442 tank cars  
11 breached or failed during the accidents, that was  
12 71 percent, which averaged -- there was an average of  
13 about 270,000 gallons per accident or about the  
14 equivalent of 30 highway gasoline cargo tanks.

15 In ten of those accidents, greater than  
16 245,000 gallons of cargo was released, equivalent to  
17 about 27 highway gasoline cargo tanks. I tried to use  
18 some type of a reference to give you an idea of just the  
19 volume of product that's involved when you see an  
20 accident of this nature.

21 Seventeen of the 24 accidents occurred at  
22 40 miles per hour or less, and 8 of the 24 accidents  
23 happened at 25 miles per hour or less. And the federal  
24 maximum speed limits are 50 miles per hour -- (Court  
25 Reporter interruption.) 5-0, 50, and 40 miles an hour

1 through heavily populated areas. So I put the speed  
2 limits -- or the speed of the accidents on the table  
3 just to give you a good reference point for that. And  
4 20 of the 24 accidents resulted in fire.

5 I guess I can do just a couple of the accidents  
6 as an example. Accident Number 17, Plevna, Montana, on  
7 August 5, 2012, for example, was a BNSF accident.  
8 Seventeen cars derailed, 12 breached, released product.  
9 It was going 23 miles per hour and there was  
10 245,336 gallons of product released during that  
11 accident. So that's kind of a summary of the table.

12 **Q. Thank you.**

13 MS. DRUMMOND: Ms. Mastro, could you put  
14 Exhibit 3125 up? Thank you.

15 BY MS. DRUMMOND:

16 **Q. Have there been any accidents since you prepared**  
17 **this table that you would have added to it?**

18 A. Well, certainly the accident in Mosier which we  
19 heard the fire chief speak of today, which was a unit  
20 train accident and the railcars that came off during  
21 that accident.

22 **Q. And I believe 3125 has already been admitted.**

23 Can you speak to, just briefly summarize, we've  
24 already heard a number of the facts about Mosier, but  
25 could you describe the facts that are presented in this

1 **exhibit that's up here?**

2 A. Yes. That train was a unit train traveling  
3 about 25 miles per hour. There were 16 cars derailed,  
4 and technically a derailed car is one that actually  
5 comes off the rail, so several of those cars may have  
6 remained upright but not gone out to the side and gotten  
7 into the event itself.

8 Four of those tank cars failed. One tank car  
9 was punctured; two tank cars, according to the FRA  
10 investigation report, had bottom fittings sheared off;  
11 and a fourth tank car had gaskets that were melted in  
12 the manway, releasing product.

13 At NTSB accident investigations over the years  
14 as we've looked at the performance of tank cars in  
15 accidents, several problems have included bottom valves  
16 being sheared off and top valves being sheared off  
17 during accidents. And later I'll talk about why.  
18 That's part of the importance of protecting valves both  
19 on the top and bottom of cars.

20 **Q. What causes oil train accidents?**

21 A. Well, there's many different reasons for a train  
22 accident. And if you look and separate that for main  
23 line track versus yard tracks, track conditions, broken  
24 rails are a significant part of accidents, in particular  
25 on main lines. And it's been a cause on many of the

1 accidents that are in the list.

2 Other causes of accidents have been mechanical  
3 problems with cars such as broken wheel, a broken axle  
4 on a car. Those are two investigations that are  
5 involved in these oil train accidents.

6 Human performance issues are sometimes involved  
7 in accidents; a head-on collision between trains, for  
8 example. But from my experience, track-related problems  
9 are one of the most common problems in the main line  
10 area.

11 **Q. Okay. I'd like to discuss a few of these**  
12 **accidents.**

13 MS. DRUMMOND: Ms. Mastro, if you could put  
14 3129 up for reference.

15 MR. KISIELIUS: Your Honor, if I might.  
16 This is one that has not been admitted and there are  
17 objections.

18 JUDGE NOBLE: Correct. So let's just have  
19 some identification of the exhibit and then you can  
20 place on the record your objections and your response.

21 BY MS. DRUMMOND:

22 **Q. Mr. Chipkevich, there's a series of pictures.**  
23 **Perhaps you could speak to them, describe them?**

24 JUDGE NOBLE: The description shouldn't be  
25 too extensive because you're just identifying them so

1     **that the record can be made about the objection.**

2     BY MS. DRUMMOND:

3         **Q.     Describe the pictures and where they're from.**

4         A.     Okay.  These are pictures from the Heimdal  
5     accident in North Dakota.  It's got the NTSB Accident  
6     Investigation No. DCA15FR009.  These pictures were in  
7     the public section of the docket from the National  
8     Transportation Safety Board.

9             The first picture shows tank cars at the  
10    accident site after the derailment.  The second picture  
11    shows tank cars while the fire --

12            MR. KISIELIUS:  Your Honor, if I might,  
13    we're objecting to the entry of this exhibit and I think  
14    he's identified the document sufficient to now hear the  
15    objection.

16            JUDGE NOBLE:  I thought he was just saying  
17    what the pictures depicted, so that was just identifying  
18    them.  But go ahead with your objection.

19            MR. KISIELIUS:  At some point as he's  
20    talking through the exhibit, we're hoping to have the  
21    objection ruled upon before he gets too far into the  
22    document.

23            MS. DRUMMOND:  Understood.  This is actually  
24    a pretty short document, and I think the next pictures  
25    are fairly easily explained really quickly, I think.

1 JUDGE NOBLE: The idea is you're supposed to  
2 say what they are and then your objection.

3 MR. KISIELIUS: He's identified the document  
4 itself.

5 MS. DRUMMOND: The last two pictures are  
6 different from the first two on this exhibit.

7 JUDGE NOBLE: They are pictures of what,  
8 without the detail about what they show?

9 THE WITNESS: First two pictures are --

10 MS. DRUMMOND: Ms. Mastro, if you could move  
11 to the next page.

12 MR. KISIELIUS: Your Honor, I'm going to  
13 object --

14 JUDGE NOBLE: We don't have to see them, he  
15 just has to say what they are. And -- just a second.

16 These are pictures of what? Just broadly,  
17 what are the pictures of?

18 THE WITNESS: First two pictures are tank  
19 cars at the accident site. The next two pictures are  
20 broken pieces of rail wheel from the accident site.

21 JUDGE NOBLE: All right. Now, could I hear  
22 the objection?

23 MR. KISIELIUS: Yes, Your Honor.

24 This is the timeliness objection. We were  
25 presented with these -- with this exhibit late last week

1 at the end of our presentation of our case. They're  
2 reports -- this one is an example of several that may  
3 follow, reports of events that occurred long before the  
4 deadline for prefiled testimony, long before the  
5 deadline for identifying exhibits. Because of the time  
6 that they were offered or presented to us as potential  
7 exhibits late last week, we had largely completed our  
8 case. Our witnesses have not had a chance to talk about  
9 these. We would have presented our case differently.  
10 So it's a timeliness objection.

11 JUDGE NOBLE: Response?

12 MS. DRUMMOND: Yeah, thank you, Your Honor.

13 These exhibits were just released in June so  
14 they were not available earlier, which is why they were  
15 submitted last week. And they don't -- this is not a  
16 new accident. This accident has been undergoing  
17 investigation and so it was addressed in  
18 Mr. Chipkevich's testimony already. This just provides  
19 further explanation, further facts on the accident  
20 that's already been addressed. Just, we weren't able to  
21 provide the actual accident reports before then because  
22 of the agency release date.

23 JUDGE NOBLE: And you said that they were  
24 addressed in Mr. Chipkevich's prefiled testimony?

25 MS. DRUMMOND: Correct. He just went

1 through these, for example, on Page 12, that Table 1,  
2 the Heimdal, North Dakota accident, which these pictures  
3 are from, is Number 2 on that list.

4 JUDGE NOBLE: Did you give these -- once you  
5 acquired these pictures did you convey them to counsel?

6 MS. DRUMMOND: Yes, Your Honor. Not myself,  
7 but yes, City attorneys did.

8 JUDGE NOBLE: All right. And it's my  
9 understanding that your prejudice is that you were  
10 unable to prepare your case-in-chief satisfactorily  
11 because of the absence of knowing about these pictures?

12 MR. KISIELIUS: Yes, Your Honor.

13 JUDGE NOBLE: All right. Well, there is, I  
14 guess, going to be rebuttal testimony so there would be  
15 that opportunity. If you need some kind of leeway about  
16 that, for instance, telephone testimony or to supplement  
17 your testimony, it could be considered part of your  
18 case-in-chief.

19 We're already allowing that because of the  
20 witness that has been disabled. I think that we can  
21 find a way to allow you to supplement your  
22 case-in-chief.

23 MR. KISIELIUS: Thank you, Your Honor.

24 JUDGE NOBLE: So it appears to me that --  
25 let me quote the statute here. The APA allows evidence,

1 including hearsay, to be admitted "if in the judgment of  
2 the presiding officer it is the kind of evidence in  
3 which reasonably prudent persons are accustomed to rely  
4 on in the conduct of their affairs."

5 This witness has obviously relied on it and  
6 so it is admissible under the APA. And I think we can  
7 accommodate your need to put evidence into the record in  
8 response. So Exhibit 3129 will be admitted.

9 MS. DRUMMOND: Thank you, Your Honor.

10 BY MS. DRUMMOND:

11 **Q. Mr. Chipkevich, can you finish your explanation**  
12 **of these photos?**

13 MS. DRUMMOND: Ms. Mastro, if you could put  
14 them back up. Thank you.

15 THE WITNESS: Pardon me. So the second  
16 photograph, the photograph with the fire, shows the  
17 crude oil burning after the tank cars were breached at  
18 the accident site.

19 The third photograph shows broken wheel from  
20 one of the tank cars that was found at the accident  
21 site. And that would be the same for the final picture.

22 BY MS. DRUMMOND:

23 **Q. Okay. Thank you.**

24 MS. DRUMMOND: There are three other  
25 exhibits that are from the same accident, same reasons

1 for late submittal, and I'll have the applicant go ahead  
2 and describe the -- we'll go one by one, but they're  
3 from the NTSB.

4 JUDGE NOBLE: What are the numbers?

5 MS. DRUMMOND: The first one is 3127, the  
6 second one is 3128, and then the last, 3126.

7 THE COURT: So would you be adding anything  
8 to your basis for objection or is it the same basis?

9 MR. KISIELIUS: Your Honor, it's the same  
10 basis of objection. These are dated February 17,  
11 April 14 and May 6, again, in advance of the deadline,  
12 so it's the same timeliness objection that we're making  
13 for the record.

14 JUDGE NOBLE: Thank you, Mr. Kisielius. My  
15 ruling would be the same. They haven't been offered yet  
16 so let's get them identified.

17 MS. DRUMMOND: Thank you, Your Honor. And  
18 the release date, by the way, is different from the date  
19 on the documents.

20 BY MS. DRUMMOND:

21 **Q. Mr. Chipkevich, if you could briefly describe**  
22 **the documents.**

23 A. First document, 3126, is an event recorder  
24 document. It's a factual document prepared by the NTSB  
25 staff that provides the information that was on the

1 locomotive involved in the accident. This document  
2 shows that the train was traveling at 24 miles per hour  
3 at the time of the derailment.

4 JUDGE NOBLE: Mr. Chipkevich, are you going  
5 to be relating this accident that is the subject of  
6 these photographs to any other train accident? How are  
7 you connecting these pictures with your testimony in  
8 general then?

9 THE WITNESS: I'm sorry. The photographs on  
10 the previous exhibit we saw on the screen relate to this  
11 specific accident, the event recorder for that train  
12 which shows that the train was traveling at 24 miles per  
13 hour when it derailed.

14 JUDGE NOBLE: That is the main point of  
15 these photographs was the relationship of the damage to  
16 the speed?

17 THE WITNESS: Yes, ma'am.

18 JUDGE NOBLE: Thank you. 3126, are you  
19 going to have this witness identify all three of the --

20 MS. DRUMMOND: I think so, yes.

21 JUDGE NOBLE: Okay. 3127.

22 BY MS. DRUMMOND:

23 **Q. If you could briefly summarize the other two**  
24 **exhibits.**

25 A. 3127 is the hazardous materials group factual

1 report from the National Transportation Safety Board.  
2 It was in the public docket released. It is the report  
3 prepared by the hazardous materials group chairman who  
4 went to the accident site. And what this document does  
5 is identify the number of cars that derailed, the type  
6 of damage to those cars. And then I had used the  
7 summary on my table, so I don't have to go through all  
8 those. But that's the purpose of this.

9 **Q. And briefly, the last one, 3128.**

10 A. Oh, I'm sorry. And the last one, which is 3128,  
11 is the mechanical group chairman report. It's a factual  
12 report that was also released by the National  
13 Transportation Safety Board in the public docket. And  
14 the mechanical group chairman is the person that does  
15 the documentation on scene about the mechanical  
16 condition of cars that would include the information  
17 about the broken wheel that was found.

18 JUDGE NOBLE: Exhibits 3126 -- I'm sorry,  
19 you didn't offer them yet.

20 MS. DRUMMOND: Yes, Your Honor. The City  
21 would move to admit 3126, 3127, and 3128 into the  
22 administrative record.

23 MR. KISIELIUS: Your Honor, I'm sorry for  
24 formality, but now that they're finally being offered, I  
25 just want to formally object on the same grounds, on

1 timeliness.

2 JUDGE NOBLE: Thank you.

3 3126, 3127 and 3128 will be admitted with  
4 the proviso that Mr. Kisielius or others on his team  
5 will be allowed to reopen the direct and offer testimony  
6 related to these should they choose to do so.

7 MR. BARTZ: And the Port of Vancouver joins  
8 in that objection.

9 JUDGE NOBLE: I'm sorry. And the Port.  
10 Thank you.

11 BY MS. DRUMMOND:

12 **Q. Mr. Chipkevich, can you very briefly discuss the**  
13 **Heimdal, North Dakota accident and the exhibits that**  
14 **have just been admitted?**

15 A. This accident?

16 **Q. Yes.**

17 A. This accident, the train was traveling at  
18 24 miles per hour when it derailed. It was identified  
19 as a broken wheel in that accident from one of the cars.  
20 Six cars derailed, five cars breached and released  
21 product; that was 98,000 gallons of product that was  
22 released.

23 **Q. Thank you.**

24 MS. DRUMMOND: Ms. Mastro, if you could put  
25 3059 up. I believe this exhibit has been admitted

1 already.

2 BY MS. DRUMMOND:

3 **Q. Mr. Chipkevich, can you describe this**  
4 **Exhibit 3059 for the Casselton photo?**

5 A. Yes. This is a preliminary report that was  
6 released by the National Transportation Safety Board and  
7 it has the investigation numbers tied to that. It is a  
8 summary report for an accident in the Casselton, North  
9 Dakota, December 30, 2013.

10 **Q. And can you describe how the accident occurred,**  
11 **whether it was a collision or how the cars derailed?**

12 A. Yes. This accident involved --

13 MR. BARTZ: Your Honor, excuse me. This is  
14 Dave Bartz from the Port of Vancouver. This exhibit has  
15 not been admitted. It was objected to by the parties.

16 JUDGE NOBLE: You're right. That's what my  
17 notes indicate. I was just looking that up.

18 And what the Port of Vancouver had reserved  
19 its ruling on that and had actually made the objection.

20 MR. BARTZ: Well, we make the objection  
21 we've all been making until it was proffered. So we're  
22 making the objection now.

23 It's an NTSB report which is different from  
24 the factual reports that you've just seen. And under  
25 the statutes that protect NTSB reports, which are

1 49 U.S.C. 1154 little (b), and based on a case out of  
2 Michigan Public Service Commission which said this kind  
3 of report shouldn't be allowed. It doesn't help the  
4 trier of fact make any decisions.

5 There's judgments of the NTSB contained in  
6 that report and that's what that law is designed to  
7 protect. Facts are one thing, but the judgments and  
8 analysis of the NTSB isn't supposed to be in a kind of  
9 court like we're having here where people are fighting  
10 over this kind of an issue.

11 So for those reasons that report shouldn't  
12 be allowed both relevant as well as the statute.

13 JUDGE NOBLE: Do you have a response?

14 MS. DRUMMOND: Yes. The City disagrees with  
15 that. This is factual information that is being  
16 submitted within this document, and under RCW 5.44.040,  
17 government documents -- (Court Reporter interruption.)  
18 5.44.040, government documents can be admitted into this  
19 proceeding. There's Washington case law addressing that  
20 statute, Goodman v. Boeing, 75 Wn.App. 600. And of  
21 course, the ALJ has considerable discretion in admitting  
22 this type of material as was just referred to with the  
23 citation to the APA.

24 JUDGE NOBLE: Well, obviously I don't have  
25 those authorities right here at my fingertips, and I

1 would like to read them since you're citing them. And  
2 I'd like to know whether this witness will be coming  
3 back tomorrow morning. I don't know how long his  
4 testimony is expected to take.

5 MS. DRUMMOND: Possibly. We're hoping to  
6 finish today, but he is available tomorrow if we are not  
7 able to conclude today.

8 JUDGE NOBLE: So what I would like is for  
9 you to supply me with these authorities, if you can, or  
10 copies if it's at all possible. I can try to find them  
11 myself tonight, but if you have them readily available,  
12 each side, I would like to look at them before I rule.

13 MS. DRUMMOND: Thank you, Your Honor.

14 JUDGE NOBLE: So I'm reserving ruling on  
15 3059, which means you'll have to take the testimony on  
16 that after I rule.

17 MS. DRUMMOND: Yes, Your Honor.

18 THE WITNESS: If I may, this report doesn't  
19 have analysis. It's a report that was issued by NTSB  
20 after the on-scene accident investigation was completed  
21 to provide information about what was found at the  
22 accident scene, factual information. Just for your  
23 information.

24 JUDGE NOBLE: Of course I'll take a look at  
25 the actual exhibit as well. Thank you.

1 MS. DRUMMOND: Moving on to the Lesterville,  
2 South Dakota accident, we have two exhibits, 3133 and  
3 3134. I believe these have been objected to as well.

4 JUDGE NOBLE: We just need to get them  
5 identified so that the objection can be made.

6 MS. DRUMMOND: Yes.

7 BY MS. DRUMMOND:

8 **Q. Mr. Chipkevich, can you briefly identify these**  
9 **exhibits?**

10 A. Yes. The first is Exhibit 3133 is the factual  
11 report released by NTSB. It's the track and engineering  
12 group report. It provides the factual documentation  
13 from the track group chairman for NTSB from onsite.

14 The second, or 3134, is the operations group  
15 chairman report. Likewise, it's the report from the  
16 Lesterville, South Carolina [sic] or Bon Homme County,  
17 South Carolina accident. It's the operations factual  
18 report from the on-scene investigation.

19 JUDGE NOBLE: Thank you. Is there an  
20 objection to Exhibits 3133 and 3134?

21 MR. KISIELIUS: Yes, Your Honor, on the same  
22 grounds as the prior ones. We're objecting on the basis  
23 of the timeliness of these exhibits. They were among  
24 the batch that were shared with us late last week.

25 JUDGE NOBLE: Timeliness?

1 MR. KISIELIUS: Correct.

2 MS. DRUMMOND: The City is offering -- well,  
3 first, the City received -- these were issued on  
4 June 16th. That was the reason for the timeliness  
5 issue.

6 But in addition, these are also offered for  
7 impeachment purposes. We had testimony last week I  
8 believe from Mr. Guthrie calling into question various  
9 accident scenarios that the City's witnesses,  
10 Mr. Hildebrand in particular, had put together, and the  
11 accident scenarios are based on -- to a large degree on  
12 accidents that have actually happened, and these two  
13 documents speak to that.

14 JUDGE NOBLE: Thank you. Then they will be  
15 admitted on the same condition that I had admitted the  
16 other ones that were disclosed late through what I find  
17 is no fault of counsel on either side. You need to have  
18 an opportunity to respond and present witnesses if  
19 necessary, Mr. Kisielius.

20 MR. KISIELIUS: Thank you.

21 JUDGE NOBLE: So Exhibits 3133 and 3134 are  
22 admitted.

23 MS. DRUMMOND: Thank you, Your Honor.

24 BY MS. DRUMMOND:

25 Q. Mr. Chipkevich, can you briefly describe the

1 **Lesterville, South Dakota accident that's addressed in**  
2 **these two exhibits?**

3 A. Yes. This accident occurred September 19, 2015.  
4 The accident occurred just after the train crossed a  
5 bridge. There was a broken rail that had spread, and  
6 then there's documentation from the track group chairman  
7 on a detail fracture in that rail.

8 The train was traveling 10 miles per hour. The  
9 break was just across the bridge. Seven cars derailed.  
10 Three of those tank cars released product resulting in a  
11 fire; 49,748 gallons of cargo was released in the  
12 accident.

13 **Q. Thank you, Mr. Chipkevich.**

14 **Turning to a different question, do accidents**  
15 **happen even on regularly inspected tracks?**

16 A. Yes. There's a program all railroads have and  
17 the Federal Railroad Administration does require track  
18 inspections. There's ultrasonic inspections of the  
19 rail, there's track geometry inspections, and then  
20 there's visual inspections of the track done usually  
21 multiple times during a week.

22 But doing the inspections on the track doesn't  
23 guarantee that a derailment won't occur. For that  
24 there's a defect in a rail that isn't identified and it  
25 won't grow to critical size and failure before the next

1 inspection. And so that has occurred in accidents if  
2 it's an issue that has been around a long time and  
3 there's been a lot of research put into it, but it's  
4 still continuing.

5 I think if we go back and start with Superior,  
6 Wisconsin in 1992, and that was an investigation done by  
7 my staff, involved a train that was approaching a bridge  
8 in Superior, Wisconsin. And the track had been  
9 inspected a couple months before that ultrasound  
10 inspection; however, a detail fracture wasn't found at  
11 that time. And one of the issues raised was shelling or  
12 surface condition of the rail that prevented a good  
13 ultrasonic inspection of the rail itself.

14 And it was about 150 to 200 feet before the  
15 bridge, the rail broke under the load of the train, and  
16 the momentum of the train of course carried the cars  
17 forward. One of the tank cars carrying HAZMAT fell into  
18 the river resulting in it being punctured and damaged.  
19 There was evacuation of about 40,000 people in the area.

20 Some of the recommendations were made from the  
21 safety board about improving the technology and the  
22 conditions when you're doing inspections, but we still  
23 have technology that always catches the defect before it  
24 grows.

25 In New Brighton, Pennsylvania in 2006, this was

1 an ethanol train -- a unit train that was going from  
2 west to east, and then the crew was about 200 feet on  
3 the far side of the bridge when they felt tugging and  
4 the problem. What had happened there is there was a  
5 detail fracture in that rail that had grown from a  
6 shelling surface condition that had not been identified  
7 during the previous ultrasonic inspection.

8 And one of the issues that was raised in there,  
9 in that accident, was that you want to do ultrasonic  
10 inspections on a frequency so that you find a crack  
11 before it grows to critical size and it breaks under the  
12 load of a train, so you have to try to characterize the  
13 growth rate of that crack and understand the different  
14 forces acting on it.

15 And in that accident there was a significantly  
16 worn railhead so that the stresses and forces were such  
17 that the crack grew at a faster rate because of the  
18 condition of that rail, and it was not identified before  
19 the next ultrasonic inspection.

20 And so one of the recommendations that was made  
21 from NTSB after that accident was for industry to  
22 consider in the timeliness of doing ultrasonic  
23 inspections the crack growth rate and the head wear and  
24 how that affects, as well as other factors, the growth  
25 characteristics of a crack so that you can do them and

1 hopefully find that defect before it fails under a  
2 train.

3           However, that didn't always work as far as the  
4 frequency. In Ellicott City, Maryland in 2012, there  
5 was a coal train derailment that basically was a broken  
6 rail from a detail fracture that had grown, and it was  
7 also a well-worn rail.

8           And in that case the railroad had gotten  
9 recommendations from a consultant that they should do  
10 monthly ultrasonic inspections on the rail because of  
11 the condition of the loads on the rail. And that  
12 inspection had been done just 17 days before the  
13 accident and before the crack went through to failure  
14 and had not been identified.

15           An example, Lynchburg, Virginia, which is one of  
16 the accidents that occurred in 2014, one of the crude  
17 oil train accidents, ultrasonic inspection was done on  
18 that rail the day before the accident, and a reverse  
19 detail fracture was identified during the ultrasonic  
20 inspection.

21           But historically, the size of that defect had  
22 not been considered as one that would grow to failure  
23 rapidly, but, in fact, did grow to failure and broke  
24 under a load of the crude oil train the next day.

25           Mount Carbon, West Virginia, there was a

1 sudden -- there was a railhead split that had gone  
2 undetected and failed under the load of a train.

3 So even though inspections, you know, are  
4 continuing to be done, it doesn't guarantee that you're  
5 going to find all the defects and remove them prior to  
6 failure under the load of a train.

7 **Q. Thank you.**

8 MS. DRUMMOND: We have three accident  
9 reports addressing the accidents that were just  
10 discussed; 3030, 3028, and 3029.

11 MR. BARTZ: Again, Your Honor, for the Port  
12 of Vancouver, we've got problems with 3028. It's an  
13 NTSB report that goes beyond just a factual summary.

14 JUDGE NOBLE: Is that the only one you have  
15 a problem with?

16 MR. BARTZ: And 3030. But 3029, we waive  
17 that objection.

18 JUDGE NOBLE: 3029 will be admitted?

19 MR. BARTZ: Correct. Well --

20 JUDGE NOBLE: Let's identify 3030 and 3028,  
21 and then counsel can explain his objection.

22 BY MS. DRUMMOND:

23 **Q. Mr. Chipkevich, could you first describe the one**  
24 **you're holding right there, Exhibit 3030, with the**  
25 **orange cover on it?**

1           A.     Yes.  3030 is the accident investigation report  
2 for the New Brighton, Pennsylvania accident that  
3 happened in October 2016 -- (Court Reporter  
4 interruption.)  October 20, 2006.

5           **Q.     And 3028, can you just briefly describe that?**

6                   **JUDGE NOBLE:   3028?**

7                   MS. DRUMMOND:  I think that's the one  
8 they're objecting to.

9                   MR. BARTZ:  Yes.

10                  JUDGE NOBLE:  And 3029 is being admitted.

11                  THE WITNESS:  Do you want me to describe  
12 this?

13 BY MS. DRUMMOND:

14           **Q.     Yes, if you could describe 3028 very briefly.**

15           A.     3028 is the NTSB railroad accident brief.  It's  
16 an accident report on the Lynchburg, Virginia accident,  
17 involving the crude oil tank car.

18                  JUDGE NOBLE:  Do you have an offer?

19                  MS. DRUMMOND:  Yes.  The City moves for  
20 admission of these two exhibits, 3030 and 3028.

21                  JUDGE NOBLE:  And what is the nature of the  
22 objection to those two exhibits?

23                  MR. BARTZ:  Thank you, Your Honor.

24                  Same objection I made before based on the  
25 United States code I cited and the case in Michigan

1 before a similar body. Too much of the NTSB's  
2 evaluation is in that report; it's not just about the  
3 facts.

4 MS. DRUMMOND: That was just to 3028. Do we  
5 have the same objection on 3030?

6 JUDGE NOBLE: I think so.

7 MR. BARTZ: Yes. That's what my notes  
8 reflect, yes.

9 MS. DRUMMOND: Okay. We're offering these  
10 for the facts that are in the report. The City has  
11 already elaborated on the record our arguments on this  
12 and eventually will be supplemented as you have  
13 reflected, Your Honor.

14 I would add, though, that with regard to  
15 Exhibit 3030, Mr. Chipkevich was involved in that  
16 accident and it occurred -- the investigation occurred  
17 at his agency, so he is certainly able to speak to the  
18 contents of -- all of the contents of this document.

19 JUDGE NOBLE: That's -28?

20 MS. DRUMMOND: 3030, the New Brighton,  
21 Pennsylvania accident which occurred in 2006.

22 JUDGE NOBLE: I'll consider that in thinking  
23 about what is the proper disposition of that exhibit,  
24 and then the other ones as well, so the ruling will be  
25 the same. And we'll make a ruling on the -- first thing

1 in the morning if you can supply me with the authorities  
2 soon.

3 MS. DRUMMOND: Thank you, Your Honor.

4 BY MS. DRUMMOND:

5 **Q. So Mr. Chipkevich, turning to another question,**  
6 **is track maintenance important for railroad safety?**

7 A. Track maintenance? Yes. Certainly many  
8 accidents that NTSB has investigated that I've been  
9 involved in the investigations are due to either rail  
10 breaks, detail fractures that occur, ties that aren't --  
11 that may be weak and aren't providing the adequate  
12 support for the rails. So track maintenance is  
13 important in order to, you know, keep the track level so  
14 as a train is passing through, that it's in good  
15 condition.

16 MS. DRUMMOND: Ms. Mastro, could you pull up  
17 Exhibit 3110?

18 BY MS. DRUMMOND:

19 **Q. Maybe to expedite I can ask a question.**

20 **3110 refers to the UTRC report that you had**  
21 **requested. Can you briefly describe this document?**

22 A. Yes. This is a document that I received from  
23 the Washington Transportation Utility Commission. I had  
24 requested of their public records release of information  
25 copies of any inspection reports, track inspection

1 reports for the BNSF in the City of Vancouver.

2 **Q. And was anything in that report of concern to**  
3 **you?**

4 A. Well, this is an inspection report they provided  
5 to me that shows that an inspection was conducted on the  
6 BNSF in Vancouver, and by the indication, of a Y in the  
7 Vancouver yard. And it was conducted August 11, 2015,  
8 and there were 50 items identified by the inspector that  
9 were of concern. And those included -- I won't read all  
10 of them, but I'll read a few of them to give you an  
11 idea.

12 Item 1, improper fit between switch point and  
13 stock rail; Item Number 2, insufficient fasteners in a  
14 track segment; Item Number 4, loose, worn or defective  
15 connecting rod fastening; Item Number 5, turnout or  
16 track crossing fastenings not intact or maintained; Item  
17 Number 10, no effective support ties within the  
18 prescribed distance from a joint; Item Number 11, center  
19 cracked or broken joint bar, (jointed rail [sic]); Item  
20 Number 21, crossties not effectively distributed to  
21 support a 39-foot segment of track; Item 22, loose, worn  
22 or missing frog bolts -- those are near a switch; Item  
23 Number 25, improper fit between a switch point and a  
24 stock rail; Item Number 32, unusually chipped or worn  
25 switch point.

1           And some of the others are repeats, but that's  
2 an example of what's in the report.

3           **Q. Thank you, Mr. Chipkevich.**

4           **Have you visited the City of Vancouver?**

5           A. Excuse me?

6           **Q. Have you visited the City of Vancouver?**

7           A. Yes. I visited the city in October of last  
8 year.

9                       MS. DRUMMOND: Ms. Mastro, if you could pull  
10 up 3003.

11 BY MS. DRUMMOND:

12           **Q. Did you visit various track crossings within the**  
13 **city?**

14           A. Yes.

15           **Q. Can you identify for me the photographs in this**  
16 **exhibit?**

17           A. Yes. During the visit I, along with Michael  
18 Hildebrand, traversed -- we followed the track basically  
19 through the city limits of Vancouver, and they asked us  
20 to drive down through there and get a feel for the  
21 track, see what the environment's like along the way  
22 through there. We looked at drainage, hillsides,  
23 highway cross -- or grade crossings.

24                       And at one of the grade crossings, I did note  
25 that some of the crossties were split and not supporting

1 or holding the spikes in, that there were several -- so  
2 I took some pictures of that. And some of the crossties  
3 were raising, showing that they weren't anchored down in  
4 there strong.

5 And I had noted that -- you know, I didn't do a  
6 track inspection, I didn't go down and do measurements  
7 and go down the track. It's unsafe to be out on the  
8 track without railroad having proper clearances and  
9 train control and things of that nature, so I just took  
10 photos from the siting where I was on that. But I did  
11 note that those types of conditions warrant further  
12 examination of the track.

13 **Q. We heard earlier in this proceeding from**  
14 **Mr. Hack that this isn't a 39-foot segment of track --**  
15 **(Court Reporter interruption.) That this isn't a**  
16 **39-foot segment of track, you've not illustrated federal**  
17 **law violation, so why should there be any concern, in**  
18 **rough summary.**

19 **What is your take on that?**

20 A. Well, that's correct. Federal regulations  
21 require that in a 39-foot segment that you have so many  
22 good crossties to be able to provide support. So there  
23 can be some bad crossties in there. That's a minimum  
24 standard.

25 What I noticed here was several crossties in a

1 row that were split. I didn't say it was a violation,  
2 and I don't know if it was because I didn't go through  
3 and do a detailed inspection. But I did note that the  
4 state inspector in doing the yard inspection did raise  
5 some of the same issues about the track support and the  
6 accuracy and the spread in the 39-foot section.

7 **Q. But, and these photos illustrate your concern**  
8 **that further inspection is warranted?**

9 A. Well, to me it illustrates a need for further  
10 inspection.

11 **Q. Do accidents happen at speeds close to 40 miles**  
12 **per hour or less than that?**

13 A. Yes. In my table, I took a look at the number  
14 of accidents that were happening, and the reason I  
15 looked at 40 miles per hour is because that's the  
16 maximum speed for trains traversing through populated  
17 areas. And I found that 17 of the ethanol and crude oil  
18 trains occurred at or below 40 miles per hour.

19 **Q. Accidents happen at speeds less than that. Can**  
20 **you elaborate?**

21 A. Certainly they can occur at any speed. Eight of  
22 the 24 accidents occurred at 25 miles per hour or less.  
23 Two of those accidents, one happened at 8 miles per hour  
24 and one happened at 10 miles per hour, but they can  
25 occur at lower speeds.

1           **Q. Can you briefly address the new federal railcar**  
2 **requirements and whether they eliminate the risk of**  
3 **significant accidents, the new federal railcar**  
4 **requirements going to -- we've heard testimony earlier**  
5 **in this proceeding about the 117s, the 1232s.**

6           **Could you address that issue?**

7           A. Yeah. I've spent many years looking at railcar  
8 crashworthiness and failure of railcars and how they  
9 fail and where the weak points are.

10           Basically, the DOT-117 tank car will be an  
11 improvement over the current cars. The cars will be  
12 9/16ths-of-an-inch thick instead of 7/16ths currently  
13 allowed by cars. They're going to have full head  
14 shields, whereas some of the cars only have half head  
15 shields. They'll have thermal protection improved,  
16 damage protection for the top fittings, and removal of  
17 handles on the bottom fittings. And the handles on  
18 several of the accidents had been identified as causing  
19 the valve to open.

20           The 17R, which is the rebuilt cars that are out  
21 there, the CPC-1232 cars or the DOT-111 cars that can be  
22 rebuilt, they can continue to operate with  
23 7/16ths-inch-thick steel instead of 9/16th-inch. They  
24 continue to have the same steel that they were  
25 originally manufactured with rather than the steel

1 that's required for the new 117 tank car. And it does  
2 not require improvement, improved protection for the top  
3 valves on the cars.

4 The DOT -- there's another car, it's still a  
5 DOT-117 but they refer to it as the DOT-117P because  
6 it's built to a performance standard. And the  
7 performance standard basically says that, you know,  
8 using the -- it allows you to be a little bit innovative  
9 in the type of steel you're using and how you're  
10 constructing the car, but it does require a test.

11 And it requires that the tank withstand a strike  
12 to the center side of the car, a 12-by-12-inch drive,  
13 which is about the size of a coupler on a car, of  
14 286,000 pounds, which is the weight of another tank car,  
15 at a force of 12 miles per hour. And a center head  
16 strike at the end of the car at 18 miles an hour, very  
17 similar with 286,000 pounds and 12-by-12 inch.

18 **Q. And will this eliminate serious accidents?**

19 A. Well --

20 MR. KISIELIUS: Objection, Your Honor.

21 JUDGE NOBLE: What's the basis?

22 MR. KISIELIUS: Foundation. So while it's  
23 fair to have Mr. Chipkevich talk about the design  
24 standards, as you may recall when -- he has not done any  
25 modeling, he's not an engineer. The same grounds that

1 Mr. Hack was precluded from testifying to  
2 crashworthiness and issues about the performance of  
3 those design standards hold true. He's not done any of  
4 that same work that you required of our witness.

5 JUDGE NOBLE: I'll give Ms. Drummond an  
6 opportunity to explore Mr. Chipkevich's credentials  
7 along those lines.

8 MS. DRUMMOND: Thank you.

9 Well, as we heard earlier, I can do this in  
10 question format, but Mr. Chipkevich has already  
11 testified that he has spent the last three decades,  
12 including 25 years with the NTSB, investigating railroad  
13 accidents, what causes those accidents. He is familiar  
14 with the accident histories of the 1232s, for example,  
15 so he can speak to what actually happened with the new  
16 improvements. So he definitely has the credentials and  
17 the extensive experience to discuss what's happening  
18 there -- out there in the real world.

19 MR. KISIELIUS: Your Honor, if I might just  
20 respond.

21 The difference is that he's now proceeding  
22 to projecting into what might happen with the new design  
23 of the tank car.

24 JUDGE NOBLE: I know what your objection is.

25 Mr. Chipkevich, could you please elaborate a

1 little bit more on your credentials with regard to the  
2 construction and makeup of the tank cars?

3 THE WITNESS: Yes. As director for NTSB, as  
4 an accident investigator, I responded to accident sites  
5 to do accident reconstruction, to document the damage to  
6 tank cars, where they failed, to do analysis on those  
7 failures and to prepare recommendations for the board  
8 for improving the crashworthiness and performance of  
9 tank cars.

10 JUDGE NOBLE: With regard to the  
11 construction of the tank cars?

12 THE WITNESS: With regard to -- yes, the  
13 safety enhancements to the tank cars, the thickness of  
14 the steel, the need for head shield protection to  
15 protect the tanks during accidents because of how they  
16 were damaged during derailments, the need for protecting  
17 valves during accidents, the need for thermal  
18 protection. So I was involved in documenting and  
19 evaluating all those areas.

20 JUDGE NOBLE: Was a part of your job to make  
21 specific recommendations with regard to the physical  
22 makeup of the tanks?

23 THE WITNESS: Yes.

24 JUDGE NOBLE: I will overrule the objection  
25 and let the witness answer the question.

1 MS. DRUMMOND: Thank you, Your Honor.

2 THE WITNESS: So with regard, tank cars,  
3 just the laws of physics, a thicker tank shell is going  
4 to withstand greater force. But going to 9/16ths in the  
5 tank, it's an improvement.

6 Thermal protection is an improvement. When  
7 you're in an accident and there's a fire, it's going to  
8 help keep that tank car from heating up. But depending  
9 upon how long that tank car sits in a fire will -- may  
10 determine whether it's going to release product.

11 The test requirement is for a tank car, for  
12 thermal protection for a tank to withstand a 100-minute  
13 pool fire or a 30-minute torch fire, so it may depend  
14 upon the location of a car and how the heat is affecting  
15 it during the fire. So one can't guarantee that a tank  
16 won't have a thermal failure because it has thermal  
17 insulation. Having a thicker tank and head shields  
18 doesn't guarantee that you won't have a tank puncture.

19 Accidents that I was responsible for the  
20 investigation of, including Graniteville, South  
21 Carolina, which was a chlorine tank car. It was  
22 three-quarters of an inch steel, thicker than these  
23 9/16ths. That tank car was punctured. Macdona, Texas,  
24 another chlorine tank car punctured during derailment --  
25 (Court Reporter interruption.) Macdona, M-a-c-d-o-n-a,

1 Texas, another chlorine tank car punctured during  
2 derailment. So while there's improvements to the tank  
3 car, it doesn't mean that a tank car can't be punctured  
4 or that valves won't be sheared off during a derailment.

5 So there's been questions raised about how  
6 much better would this tank car perform in an accident.  
7 Well, I think obviously it's going to perform some  
8 better because you're going to have thicker steel,  
9 you're going to have thermal protection, you're going to  
10 have full head shields.

11 But I've seen estimates of 10 to 21 percent  
12 in preliminary documents. I've seen in the Final Rule,  
13 the DOT stated that they believe that the DOT-117 tank  
14 car will perform at 7 to 40 percent better as far as a  
15 car being punctured in an accident above the CPC-1232  
16 tank car that's out there today. And they qualify that  
17 by saying it depended upon track speed and braking  
18 components and things of this nature.

19 So even if you look at the types of failures  
20 and the number of tank cars and the amount of product  
21 released in these accidents, some of these are pretty  
22 significant where you have 39 tank cars derailed and  
23 36 that failed of the 39, or 31 that derailed and all  
24 31 failed. Some of those tank cars failed because of  
25 thermal heat and probable fail because of the

1 insulation. But that doesn't mean that all of them will  
2 fail or that some of those tank cars still won't be  
3 punctured during the derailment sequence.

4 BY MS. DRUMMOND:

5 **Q. Thank you, Mr. Chipkevich.**

6 **Can you speak briefly about your understanding**  
7 **of the backlog on 117s or where things are on that**  
8 **front?**

9 A. Well, that's certainly a question as to the  
10 DOT-117 tank cars and whether they can be built fast  
11 enough to meet the deadlines. And so there were some  
12 qualifications put in place to allow cars to be used for  
13 a period of time.

14 The DOT-111 tank cars can be used until 2018 and  
15 the CPC-1232 tank cars until 2020, and then until 2025,  
16 which is nine years out, the CPC-1232 tank cars. And  
17 part of the reason on that is because of the time it's  
18 going to take to build tank cars and then retrofit cars  
19 that owners would rather retrofit, even though they  
20 won't be the same standard for the 117.

21 NTSB, I can't answer, you know, how long the  
22 backlog is or the change in oil demand or prices and the  
23 drilling, how that's going to affect. But NTSB is  
24 having tomorrow a meeting, a public meeting where they  
25 invited tank car manufacturers and regulators to come in

1 and give NTSB an update on where they are with regard to  
2 being able to meet the requirements for the DOT-117 tank  
3 car. It's a public meeting, and I know it's going to be  
4 available. It's broadcast live and on their site later.

5 **Q. Thank you.**

6 MS. DRUMMOND: Ms. Mastro, if you could put  
7 up 3109. This is the FRA accident report data.

8 BY MS. DRUMMOND:

9 **Q. Could you just briefly walk me through the data**  
10 **that is presented from these database reports?**

11 A. Yes. This is data that I retrieved from the FRA  
12 public database where you can go in and query  
13 accident -- railroad accident information. And so I  
14 went in and queried it about various accidents involving  
15 a Class I railroads, and that's the major railroads, the  
16 eight railroads; and then did some queries and broke  
17 down some for number of accidents nationally versus how  
18 many in the State of Washington just to get a feel. And  
19 it identifies the causes that were reported for the  
20 accidents, so it gives a breakdown on that.

21 **Q. Do you want to provide a little bit more detail**  
22 **on what this -- the data in here reflects?**

23 A. Sure. I can briefly mention what the different  
24 pages are. Page 1 of the exhibit is for the period 2012  
25 to 2015, and it's remained track accidents for all

1 causes for Class I railroads. And what this shows is  
2 that basically if you add up the total in the first --  
3 or it's the first column of numbers, it adds up to  
4 1764 accidents. Of those, most of the accidents were on  
5 the UP, it was 599 accidents; and the BNSF was second  
6 with 491 accidents; CSX third with 184 accidents.

7 Page 2 is for the same time period on main line  
8 track in the State of Washington. Shows in Washington  
9 there were 31 accidents. And this is on main line  
10 track.

11 Page 3 for the same time period shows it's all  
12 accidents, all class on the main, and it breaks it down  
13 by class of track. And class of track is basically in  
14 maintaining it to a certain level, allows certain speed  
15 on the track.

16 The class track that the crude oil trains will  
17 move on primarily will be through the route that we're  
18 discussing here is Class 4 track. And this shows that  
19 there were 693 of those accidents on Class 4 track, so  
20 it's not just lower class track where the accidents are  
21 happening.

22 The next page, Number 4 for the same time  
23 period, is for all track type, not just main. So this  
24 includes yard tracks, just to give you a feel. There is  
25 a difference between the number of main line and yard.

1 And yard tracks, there were 1,616 on the BNSF during  
2 this time period, Union Pacific had 2,072, and then CSX  
3 was third with 894.

4 Page 5 is for the same time period, 2012 to 2015  
5 for all track in the State of Washington, and there's  
6 110 during this four-year period.

7 The next page is the same time period for all  
8 track, not just main. All Class I railroads, shows  
9 5,913, which includes all track, not just the main. So  
10 that gives you a feel for that. And 4,195 of those were  
11 derailments.

12 Page 7 is for the BNSF only, and this is for the  
13 period 2006 to 2015, so this is a ten-year period. And  
14 it's on main track and it shows track-related accidents  
15 at 431 in that ten-year period.

16 Next page is for the same period again on the  
17 BNSF. Main line track in the State of Washington, and  
18 they were track-related, 14 accidents during that time  
19 period.

20 Page 9, 10 and 11, Page 9, what that shows is  
21 it's the same ten-year period, 2006 to 2015 on the BNSF,  
22 Washington only, all causes, main only. And this shows  
23 causes as equipment, causes for the accidents at 27;  
24 highway crossings, 26; human factor issues, 24;  
25 miscellaneous, 14, which includes snow, ice, extreme

1 weather conditions, vandalism; signals, 1; and then  
2 track causes, again, the 14. And this shows a total of  
3 106 in the ten-year period, the breakdown.

4 Page 12 is the ten-year period 2006 to 2015,  
5 BNSF only, Washington, all track, not just main, so all  
6 track and all causes. And the first table shows  
7 equipment failures that caused the accidents at 35;  
8 highway, 28; human factors on Page 113, 179.

9 And that's why I say a lot of times the human  
10 factor issues are higher in yards where they're handling  
11 the cars more. And I think, you know, of particular  
12 interest in this table, this table gives a breakdown on  
13 the cause on each of these, and it shows like in the  
14 first column are numbers, which you can go down in here  
15 and see that H018, failure to secure car hand brake;  
16 H021, failure to apply car hand brakes; H307, shutting  
17 movements, failure to control, 18 accidents; H503, buff  
18 slack action excess, 6; H601, coupling speed  
19 excessive, 2; H607, failure to comply with restricted  
20 speed, 21; switch, H702, switch improperly aligned. So  
21 those are the type of factors that are identified for  
22 human factor accidents.

23 The next table down below that is for, again,  
24 miscellaneous, and they're identified as far as what the  
25 issues are. I won't read through each of those.

1           The next page, 14, and this is the last page, it  
2 shows 5 of those accidents were signal related, and  
3 70 of those accidents were track related, which includes  
4 wide track, wide gauge defective or missing crossties,  
5 16 accidents; defective -- or detail fracture, shelling  
6 head checks, 13 accidents; vertical split head,  
7 4 accidents; switch point worn or broken, 6 accidents;  
8 for a total of 70 accidents that were track related  
9 during that period.

10           **Q.     Thank you.**

11           MS. DRUMMOND: Ms. Mastro, could you pull up  
12 Exhibit 31 -- I'm sorry, 3032.

13 BY MS. DRUMMOND:

14           **Q.     Mr. Chipkevich, have you seen accidents**  
15 **involving trains being left unattended?**

16           A.     Yes. Those responsible and my investigators  
17 were responsible for the investigation of two, I'll call  
18 them runaway trains. One was in Commerce City,  
19 California in 2003, and a crew had brought a train into  
20 the yard and cut loose 31 cars from the train which were  
21 going to be moved in the yard.

22           The hand brakes were not set on the train and  
23 the air applied to the brakes that was holding it in  
24 place and another crew was going to come over and hook  
25 up another engine to it, said it would be there in a

1 short period of time. They had done this handoff  
2 previously and one of the crewmen in the yard was  
3 releasing air on those brakes so that the cars could be  
4 moved and the 31 cars began moving and rolling.

5 The cars rolled out of the yard and rolled down  
6 the main line track for 28 miles and reached a maximum  
7 speed of 95 miles per hour before finally derailing in  
8 the City of Commerce. And it derailed and destroyed  
9 three homes and damages several other homes. It was  
10 fortunate those cars were loaded with lumber and paper.

11 The second investigation was done in Queens,  
12 New York in 2004. A crew member left a locomotive that  
13 was in the yard, again just left the air brake on to  
14 secure the locomotive, and the air bled off. Basically  
15 found that there was an air leak in a valve that was an  
16 issue.

17 The locomotive rolled out of the yard, again  
18 moved one percent grade and rolled out of the yard. It  
19 rode through seven grade crossings and hit ten vehicles,  
20 reached a speed of 31 miles an hour before it hit the  
21 back of a vehicle that actually brought it to a stop.  
22 It rode for 16 minutes.

23 So we had investigated or I was involved with  
24 the oversight and investigation of equipment -- (Court  
25 Reporter interruption.) I'm sorry. In answer to her

1 question, the answer was yes, that I had investigated or  
2 was responsible for the investigation of those  
3 accidents.

4 **Q. Did Lac-Megantic also involve a runaway train?**

5 A. Yes. That was a train that also was parked and  
6 rolled away without any crew members on it down into the  
7 city.

8 **Q. Exhibit 3032 has been put up on this screen. If**  
9 **you could briefly identify that exhibit.**

10 A. That's the Transportation Safety Board of Canada  
11 accident report on that accident.

12 **Q. On the Lac-Megantic accident?**

13 A. Yes.

14 MS. DRUMMOND: City moves to admit that  
15 exhibit if it's not already been admitted.

16 JUDGE NOBLE: It's already been admitted.

17 MS. DRUMMOND: It has been admitted?

18 JUDGE NOBLE: That's my record.

19 MR. KISIELIUS: Yes, it has.

20 BY MS. DRUMMOND:

21 **Q. Do you have any corrections to the testimony**  
22 **that you signed on May 9th?**

23 A. I do have one correction. The accident in my  
24 chart, Number 21, Cherry Valley, Illinois occurred in  
25 2009, not 2011. I had a typo in there. It shows

1 June 19, 2011. The correct date would be June 19, 2009.

2 Q. Okay. One other question.

3 Can you just very briefly discuss the accident  
4 report process? We have a number of accident reports  
5 that have been admitted into the record. In terms of  
6 how these documents are developed, can you talk just  
7 very briefly how the process works?

8 A. When NTSB launches to an accident site where  
9 there's a major accident, normally the Go Team is sent  
10 to the site. A Go Team is made up of people within the  
11 discipline that have expertise in a specific area. For  
12 example, on a railroad accident, there would be a person  
13 who has expertise in train operations, another person  
14 for track, another person for mechanical, another person  
15 for hazardous materials to look at the tank car  
16 performance damage issues, a person for human  
17 performance to look at human factor issues, and  
18 sometimes a person for survival factors if there are  
19 multiple fatalities; for to look at how the emergency  
20 response went during the accident.

21 Not always every -- the complete team, sometimes  
22 it's a partial team. Sometimes on a regional accident  
23 or smaller accident, an individual investigator. But on  
24 a major accident, you've got the full team.

25 The team upon arriving at the accident site

1 conducts an organizational meeting and invites all the  
2 parties to participate in the investigation. And by  
3 parties, it's those that have some direct involvement in  
4 that accident.

5 For example, in a railroad accident it would be  
6 the railroad. If it looked like an equipment failure,  
7 the manufacturer of the equipment such as the tank car.  
8 We'd invite the labor unions to participate in the  
9 investigation. So that you've got full identification  
10 of facts during the investigation. You invite emergency  
11 response or the city to participate in the investigation  
12 to look at the emergency response issues and how things  
13 went.

14 So you identify all the parties to participate  
15 in an investigation, you have an organizational meeting,  
16 you explain how the investigation works, that the NTSB  
17 releases the factual information, that there would be no  
18 analysis prior to it being done after the facts are  
19 agreed upon. The team will go out and do their work,  
20 the event recorder group.

21 And so each evening, then, the team comes back  
22 and identifies and shares the information of what was  
23 learned that day during the accident investigation. And  
24 that includes members on the team from the railroad,  
25 from the labor union, and they discuss what was learned,

1 what needed to be documented the next day, because the  
2 investigation process is open with the parties, it's  
3 wanting to get all the factual information accurate and  
4 correct.

5           Upon closing the on-scene investigation when  
6 it's completed, the group chairman does a factual  
7 report; for example, a track factual report or a  
8 mechanical factual report or hazardous materials factual  
9 report. So the person from the NTSB who led that group  
10 with parties participating writes the factual report,  
11 circulates it with the members of the investigation team  
12 from the parties so that they can identify as a group if  
13 there's any errors, if there's anything that hadn't been  
14 documented factually, so they can all agree upon the  
15 factual information.

16           Then the group chairman for the NTSB writes an  
17 analysis report for the investigator in charge about  
18 what he thinks, if there was a problem with track or  
19 there wasn't, if there was a mechanical problem or there  
20 wasn't. That is not public, that goes to the  
21 investigator in charge and it does not go to the public  
22 side on the docket.

23           That information, the factual reports and the  
24 analysis reports are used to put together the NTSB's  
25 accident investigation report which puts together the

1 factual information and the analysis about the accident,  
2 any conclusions, probable cause and any safety  
3 recommendations made to prevent future accidents similar  
4 to that.

5 And basically the purpose of the accident report  
6 is a lessons learned. Here's what happened in the  
7 accident, here's what we found, and here are  
8 recommendations to prevent future type accidents.

9 And the report then is prepared by staff, goes  
10 to the board. There's five board members of the NTSB;  
11 it's presented to them. They review the report and they  
12 will vote on whether to accept the report, whether, you  
13 know, question staff about what happened in the  
14 accident. If they feel something hasn't been documented  
15 adequately, they can ask staff to go back and relook at  
16 an issue before voting on it.

17 **Q. Thank you.**

18 **If the city were forced into hosting a facility**  
19 **like the one being proposed, should it be planning to**  
20 **address the types of accidents you have just described**  
21 **that have occurred over the last decade?**

22 A. Well, I can't predict where an accident is going  
23 to happen, and I think even in some of the earlier  
24 prepared testimony that even somebody doing  
25 statisticians says they can't guarantee an accident

1 won't happen at a specific location. And I don't think  
2 anybody can.

3 But certainly I think it's important for this  
4 council to at least see and understand the type of  
5 accidents in the real world that have occurred. It's  
6 not looking at statistics, but looking at the types of  
7 factors that have caused accidents, the types of  
8 accidents when they do happen, the amount of product  
9 that has been released in those accidents. Even if a  
10 tank car is improved 50 percent, some of these accidents  
11 are quite severe where you've got 36 of 39 tank cars  
12 derailed in an accident, how many of those tank cars are  
13 going to fail and be punctured?

14 Because the risk in unit train accidents, it's  
15 kind of similar to in 1971, the NTSB did a study, a risk  
16 study, to look at accidents that were occurring and how  
17 risk was being assessed after there was a change in how  
18 liquefied petroleum gases in particular were being  
19 transported. Basically they were moved to larger tank  
20 cars from 11,000-gallon tank cars roughly to  
21 30,000-gallon tank cars, 33,000-gallon tank cars.

22 The tank cars did not have insulation. It was  
23 thought that they would have adequate pressure relief in  
24 an accident. And then many of these tank cars were  
25 bunched together as they were being transported, and we

1 saw several accidents, very catastrophic accidents that  
2 occurred in the transport of LPG.

3 And in a study NTSB found that basically  
4 sometimes you don't really see the change in risk until  
5 you see the accident experience as we did in those  
6 accidents and the need for some of the safety  
7 improvements that took place after those accidents.

8 And when you move these unit trains where you  
9 have 120 tank cars all linked together compared to just  
10 a few cars dispersed throughout the train and you have a  
11 derailment, when you have 20 or 25 tank cars derailed,  
12 instead of having several box cars or other types of  
13 equipment and one or two tank cars in there, you now  
14 have all of them tank cars. So there you've got the  
15 potential for damage to all these tank cars in an  
16 accident and all the forces.

17 So I can't predict, you know, where an accident  
18 will happen or how well these tank cars are going to  
19 perform, but we haven't had a chance to look at those  
20 yet. And certainly the tank cars are going to be  
21 retrofitted won't even meet the new standards. So I  
22 guess that's kind of a summary.

23 **Q. Is there anything else that you would like to**  
24 **add to your testimony?**

25 A. No, thank you.

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1 MS. DRUMMOND: That's all that I have at  
2 present.

3 JUDGE NOBLE: Well, aside from the testimony  
4 related to the objected to exhibits, is there -- you'll  
5 be allowed to continue that testimony if those exhibits  
6 are admitted.

7 MS. DRUMMOND: Yes, Your Honor. And just to  
8 clarify, that was 3030 and 3028?

9 JUDGE NOBLE: Yes, that sounds right. Let  
10 me just confirm.

11 MR. BARTZ: And 3059, Your Honor.

12 JUDGE NOBLE: I have 3059 and 3030 and 3028.

13 MS. DRUMMOND: Thank you.

14 JUDGE NOBLE: Cross-examination?  
15

## CROSS-EXAMINATION

16  
17 BY MR. KISIELIUS:

18 Q. Mr. Chipkevich, my name is Tadas Kisielius. I'm  
19 an attorney for the applicant. And I have a couple  
20 questions for you about your prefiled testimony and your  
21 testimony here today.

22 A. Yes, sir.

23 Q. In your prefiled testimony on Page 13, you say  
24 that you didn't attempt "to do statistical analysis on  
25 the probability of a train derailment or the frequency

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1 of a cargo release," and I think what you said you  
2 instead looked at what actually happened. I'm going to  
3 ask you a couple questions about that approach.

4 A. Okay.

5 **Q. Is it fair to say you didn't apply derailment**  
6 **rates to determine or try to ascertain a derailment rate**  
7 **of these accidents?**

8 A. That would be correct.

9 **Q. Do you know how many million ton-miles of crude**  
10 **oil trains, the traffic that was sort of within that**  
11 **date range of the accidents that you explored?**

12 A. No. What I looked at was the actual accidents  
13 that had occurred and the consequences from those  
14 accidents.

15 **Q. Okay. So is it your testimony you don't need to**  
16 **think about probability?**

17 A. No. I think -- risk is probability times  
18 consequence, and so if you look at -- and I think -- I  
19 was trying to show what the consequences of these  
20 accidents can be. I can't tell you the probability of  
21 an accident occurring and whether that probability is  
22 different with a general freight train versus an oil  
23 train, although some have said that the stiffness in the  
24 tank cars may be a factor.

25 But what I tried to show is that there are

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1 accidents that happen, and I can't tell you where  
2 they're going to happen or how often, but there are a  
3 number of them that have occurred and this is what the  
4 consequences have been.

5 **Q. On that probability topic, in your prefiled**  
6 **testimony you rely on PHMSA study, a PHMSA report and**  
7 **analysis as support, and you say you agree with the**  
8 **approach that they took.**

9 A. I do agree with their approach.

10 **Q. And in that report don't they emphasize the need**  
11 **to consider the probability of the event occurring?**

12 A. I agreed with their report with regard to how  
13 they characterized the influences on the accidents.

14 **Q. Could you explain that a little bit?**

15 A. Let's find it in the testimony. I noted in  
16 there that on Page 15 of my testimony that (as read),  
17 "The PHMSA hazardous material incident database often  
18 contains inaccuracies," and I believe that is correct.  
19 I've found myself during the investigations of different  
20 accidents where there has been underreported product,  
21 sometimes those reports are found earlier.

22 **Q. Yeah. And the part that I was asking you about**  
23 **was actually earlier in your testimony where you were**  
24 **talking about the data that you're finding -- that**  
25 **you're testifying to today, you're testifying I think it**

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1 was 24 incidents, and you were talking about focusing  
2 your analysis. I guess the issue here -- well, let me  
3 ask a more direct question.

4 Of those 24 incidents, how did you pick  
5 those 24?

6 A. I looked and tried to identify those accidents  
7 that occurred where there were products released in  
8 accidents.

9 **Q. Were there derailment incidents involving crude**  
10 **oil or ethanol unit trains that you left off your list?**

11 A. Not any that I know where any product was  
12 released.

13 **Q. Do you know, were there incidents involving**  
14 **those types of trains where no product was released?**

15 A. There was -- I know of a derailment in the  
16 Seattle area that was at about five miles per hour where  
17 there was a derailment and the cars did not even turn  
18 over. And there was an accident in Philadelphia also at  
19 about say about 10 miles an hour where none of the  
20 cars -- it was a derailment off the track but none of  
21 the cars actually turned over.

22 **Q. Are those the only two you're aware of?**

23 A. Yes. I didn't intentionally go in to look and  
24 eliminate accidents.

25 **Q. So back to your analysis of what actually**

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1 happened and looking at these 24 accidents. Did you  
2 consider the type of track class when selecting these?

3 A. No, I did not. Most of these were on Class 4,  
4 some were Class 3. I just took the accident, identified  
5 the speed the train was going, number of tank cars  
6 derailed, material information.

7 But back on your question on --

8 **Q. Did --**

9 MS. DRUMMOND: If he can allow the witness  
10 to finish.

11 MR. KISIELIUS: Your Honor --

12 JUDGE NOBLE: You're talking over each  
13 other. The witness was trying to finish his answer.

14 MR. KISIELIUS: I thought I got the answer  
15 that I was requesting. I asked whether or not he  
16 considered track class and he said no, he looked and  
17 there were some that had Track 3, maybe some Track 4,  
18 but that wasn't what he looked at. That was the  
19 question I asked.

20 JUDGE NOBLE: But then he elaborated and  
21 actually said what class he thought the tracks were.

22 Did you finish your answer?

23 THE WITNESS: No. When he asked me the  
24 question about the PHMSA, why I agreed with PHMSA, I was  
25 going to read in here why I agreed with them in the

## KISIELIUS / CHIPKEVICH

1 analysis. And that's what I was going to get to,  
2 because I was on a different section of the PHMSA and  
3 just turned to the page.

4 JUDGE NOBLE: I'll overrule the objection.  
5 Let him finish his answer.

6 THE WITNESS: On Page 11, what I agreed with  
7 in PHMSA's analysis was that they said that "First, the  
8 volumes of crude oil and ethanol carried by rail are  
9 relatively large compared to rail shipments of other  
10 flammable liquid." In particular, the volume of crude  
11 oil's being increasing rapidly.

12 "Second, the crude oil originating in  
13 the" --

14 MR. KISIELIUS: Your Honor, I'm sorry. He's  
15 now just reading his testimony. I'd like to try to  
16 proceed. I don't want him to filibuster on the clock  
17 here. I've got some specific questions I'd like him to  
18 answer.

19 JUDGE NOBLE: I understand.

20 I think, Mr. Chipkevich, the objection is  
21 that you are reading from your testimony, and that's  
22 already part of the record. So why don't we just stop  
23 your answer there and allow another question?

24 THE WITNESS: Okay.

25 JUDGE NOBLE: Thank you.

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1 BY MR. KISIELIUS:

2 Q. Back to the 24 derailments, did you consider the  
3 presence of operational issues like signaling when  
4 picking your list of 24?

5 A. I looked at -- if signaling was identified as a  
6 factor in any of the documents I would have.

7 Q. So I'm trying to understand how you're comparing  
8 these 24 and trying to make a judgment about whether  
9 this compares to what might occur on this line. And did  
10 you consider whether it was a main line versus a short  
11 line as being a relevant factor?

12 A. I didn't pick lines because they were long or  
13 short or what the reason was. I identified the  
14 accidents that occurred that had the derailments, and  
15 then I tried to identify what those issues were. I  
16 didn't see any that identified a signal issue.

17 Q. Okay. Back to this question of the release of  
18 cargo. You said you picked ones that were -- that had  
19 actual release of cargo as part of a derailment event  
20 but that they were ones where you didn't look at that.

21 Do you believe it's important to think about the  
22 likelihood that a derailment incident would occur --  
23 (Court Reporter interruption.) A derailment incident  
24 would result in a release of cargo?

25 A. Well, first I went -- let me tell you where I

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1 looked at the data and gathered the data. It was from  
2 the NTSB accident investigations that they launched  
3 teams on, the investigations, reports that were filed  
4 with the FRA, and then PHMSA for the incident reports.  
5 Reports are only filed with PHMSA if there is a release  
6 of product and basically if there's not release of  
7 product from a cargo tank, there's not a requirement to  
8 file an incident report with them. And with the FRA,  
9 there's a threshold for damages before an accident or  
10 incident is even reported.

11 So your question again?

12 **Q. I think you've answered it.**

13 A. Okay.

14 **Q. I guess I'm going to ask you about the same**  
15 **question about the bullet list on Pages 8 and 9 of your**  
16 **testimony where you talk about the failure rate of tank**  
17 **cars.**

18 **And I guess I'm wondering, how can you ascertain**  
19 **a failure rate of tank cars if you only look at**  
20 **incidents in which the tank cars have failed?**

21 A. Those failure rates on this page are just the  
22 failure rates in those specific accidents. For example,  
23 Aliceville at the top of the page, there was 26 tank  
24 cars that derailed, 25 of those tank cars failed. That  
25 was a 96 percent failure rate in that accident.

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1 Q. So it's specific to the accident listed?

2 A. Yes, sir.

3 Q. Okay. And it can't be applied more generally as  
4 a predictor of what might occur elsewhere?

5 A. Not statistically, but it's a piece of  
6 information.

7 Q. Do you believe that your concerns about the  
8 incidents you describe are unique to trains traveling to  
9 this facility?

10 A. Unique to trains stopping?

11 Q. Trains traveling to the facility that we're  
12 talking about today, Vancouver Energy.

13 A. I think it would apply there as well as  
14 traveling anywhere on a rail system.

15 Q. Let's talk more generally about data. In your  
16 testimony you talk about it being, I think the word that  
17 was used, problematic to use data from other freight  
18 trains. Do you recall that?

19 A. Yes.

20 Q. And do you recall, again, relying on PHMSA's  
21 approach and suggesting that that was -- you agreed with  
22 their approach on that topic?

23 A. Yes, I did.

24 Q. Didn't PHMSA in that very same court actually  
25 rely on data from all freight to determine derailment

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1 rates that applied to crude oil trains?

2 A. Well, I think they identified what I agreed with  
3 and that is that a general freight accident has  
4 different dynamics and characteristics when you have a  
5 derailment and if you try to apply that to the number of  
6 tank cars that are failing.

7 And a general freight train derailment, may have  
8 26 tank cars derail, there may or may not be a tank car  
9 in there, there maybe two tanks cars in there. With a  
10 unit train where you've got all 26 cars as tank cars,  
11 and the opportunity for a tank car to be punctured or to  
12 fail in that type of accident I believe is greater.

13 **Q. So you're focused then on the consequence piece?**

14 A. Yes, sir.

15 **Q. But didn't PHMSA actually look at derailment**  
16 **rates to determine the probability of the incident**  
17 **occurring?**

18 A. They may have.

19 **Q. Is it fair to say that you were focused uniquely**  
20 **on the consequence of the event and didn't think about**  
21 **at all the probability of this occurring?**

22 A. I focused on what was happening in the  
23 accidents. I tried to take a look at the number of tank  
24 cars that were derailing, how many were failing in the  
25 derailment, what kind of speeds those trains were

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1 operating at, and the -- and then the amount of product  
2 released and the consequence. And the reason I looked  
3 at speed, there's a federal mandate of maximum speed.

4 Q. And I understand -- (Court Reporter  
5 interruption.) I appreciate the factors that you looked  
6 at. I am focused on the very specific question, which  
7 is did you look at all at the probability of a  
8 derailment incident occurring?

9 A. No.

10 Q. I'm not focused on the consequence part of your  
11 analysis.

12 Can you say that you have looked thoroughly and  
13 completely at the potential consequence if you only look  
14 at incidents that involve the significant release of  
15 product that you identified?

16 A. I think that's a fair look. I think that I  
17 tried to capture those accidents that were occurring  
18 that did involve the releases. Most of these accidents  
19 are referenced or many of the accidents are referenced  
20 by PHMSA in its report. But to me, it gives a fair  
21 assessment of accidents that have occurred involving  
22 these products in the volumes that they're being  
23 shipped.

24 Q. Okay. But did you look at all accidents  
25 involving crude oil freight trains to determine the

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1 potential range of consequences?

2 A. I tried to identify all those that involved  
3 releases.

4 Q. Let's talk a little bit about the Lesterville,  
5 South Dakota incident. The BNSF northern route is a key  
6 train route.

7 Do you know whether the Lesterville track was a  
8 key train route?

9 A. I do not.

10 Q. Do you know the class of track in Lesterville?

11 A. No.

12 Q. On Page 11 you talk -- you quote, again, to the  
13 PHMSA report and talk about the volatility of crude oil,  
14 and you quote from that and as sort of a factual matter  
15 about the PHMSA opinion on that.

16 Do you remember the date of that report?

17 A. No, not without looking.

18 Q. If I told you it was July 2014, does that sound  
19 about right? We can pull it up if you'd like.

20 A. I'll rely on your --

21 Q. Are you aware of the subsequent statements of  
22 the PHMSA deputy administrator about the volatility of  
23 Bakken crude?

24 A. No.

25 Q. You talked in your testimony about an incident

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1 in 1992. Do you recall that?

2 A. Yes.

3 **Q. Do you remember what the cargo was?**

4 A. No, I don't. It was a chemical that was in the  
5 tank car. It was not crude oil or ethanol.

6 **Q. And I think the purpose of that incident was to**  
7 **talk about inspections.**

8 **Is it your testimony that inspection technology**  
9 **and approaches are the same now as they were in 1992?**

10 A. No. As I stated today, there have been  
11 improvements, there's been technology, there's been  
12 research, but there are still accidents occurring  
13 involving some of the same issues where detail fractures  
14 are not found and identified and removed prior to  
15 failure from a train load.

16 **Q. Let me ask you about your testimony about track**  
17 **maintenance. I think you pulled up an inspection report**  
18 **from the City of Vancouver?**

19 A. Yes.

20 **Q. Can you confirm, was that an inspection report**  
21 **in the main rail yard?**

22 A. That's my understanding, yes.

23 **Q. And of the 50 or so listed there, how many**  
24 **resulted in violations?**

25 A. I'm not sure that they have any. I'll have to

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1 go through each one at a time. But most of the time  
2 they put no for a violation and occasionally marked  
3 optional for getting a written notification to the FRA.

4 **Q. What does that signify to you?**

5 A. I can't answer why they didn't put a violation  
6 on there.

7 **Q. Following your testimony on that document, I**  
8 **think you made a reference to or compared, tried link**  
9 **your photographs with that exhibit. There was some**  
10 **reference that you made comparing what was found in that**  
11 **study to those photographs.**

12 Can you remind us again where those photographs  
13 were taken? I'm referring now to the ones that are  
14 attached to your prefiled testimony.

15 A. The photographs that I took were adjacent to a  
16 crossing further down on the main line.

17 **Q. So is it your testimony that this report in the**  
18 **yard is proof of the violation -- a violation on the**  
19 **main line?**

20 A. No. I never said there was a violation on the  
21 main line.

22 **Q. Okay. You also talked about you went through in**  
23 **some detail about the FRA data on accidents.**

24 Do you know how accidents are defined for  
25 purposes of being tracked on that particular statistic?

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1           A.     Well, the data is filed by the railroad to the  
2 FRA.

3           Q.     I guess what I'm asking is what's the threshold?  
4 What constitutes an accident? Is it derailment always?

5           A.     I don't know what it is. Those are the reports  
6 that were filed with the FRA.

7           Q.     But you don't know what an accident is in order  
8 to make it on that list?

9           A.     No.

10          Q.     I have one more question for you.

11                   I think at the very conclusion of your testimony  
12 you said something, and I wrote down a note here, that  
13 tank cars that had been retrofitted won't meet the  
14 standard.

15                   Are you suggesting that the DOT-117Rs won't be  
16 consistent with the federal standard?

17           A.     No. I'll clarify that. The 117R car will not  
18 be constructed to the same standard as the 117 new tank  
19 car.

20          Q.     Okay.

21                   MR. KISIELIUS: I have no further questions  
22 for you.

23                   JUDGE NOBLE: Redirect?

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## REDIRECT EXAMINATION

1  
2 BY MS. DRUMMOND:

3 Q. Just briefly on the FRA database reports where  
4 you pulled the data. I think it was the 12 pages of  
5 accident data for the railroads including BNSF.

6 How did you go about obtaining that data or what  
7 do you put into the database to obtain that data?

8 A. Went to the FRA database online and entered the  
9 data that I wanted to gather. And that was how many  
10 accidents occurred during the period that was available  
11 to be able to select, such as either the four-year or  
12 the ten-year periods, so I was restricted by that.

13 And then I was able to break it down by asking  
14 them for all the accidents that reported for main line  
15 accidents, for all track accidents. So I was able to  
16 get that. Also, I was able to break down by class of  
17 tracks, so it showed whether it was Class 1, 2, 3 or 4  
18 track, so I was able to put that in here.

19 And then I was able to also identify and put in  
20 for the State of Washington versus nationally, so I did  
21 that, and pulled that information up.

22 So what I did, then the categories are just  
23 automatically in there for track accidents and how those  
24 are reported, what caused those accidents, whether they  
25 were caused by insufficient support by a crosstie or a

CHIPKEVICH

1 detail fracture in the rail, whether it's a human factor  
2 accident.

3 **Q. Okay. Those were all the four to five railroads**  
4 **in that database?**

5 A. Yes.

6 MS. DRUMMOND: Thank you. Nothing further.

7 JUDGE NOBLE: We're going to have council  
8 questions, but before we do that, I have a question  
9 about the objection about the three exhibits.

10 Let me just say that I've been able to look  
11 at 49 U.S.C. 1154(b), and I think you said that you had  
12 a case out of Michigan. Is that related to that  
13 statute?

14 MR. BARTZ: Yes, Your Honor. I thought you  
15 might have a question about its application other than  
16 damage cases. It has been applied in other than damage  
17 cases, and this was a case in front of a PUC, Public  
18 Utility Commission, about a pipeline.

19 JUDGE NOBLE: That was my question. I would  
20 like a copy of that case and I'm seeing the statute now.  
21 So I have access to that. That's the only thing I need  
22 is the case. And we have a copier here so if you can  
23 somehow -- if you have a hard copy of it, we might be  
24 able to resolve this this evening and the witness  
25 wouldn't have to come back. That's why I'm asking now.

CHIPKEVICH

1 MR. BARTZ: I have an excerpt right now, but  
2 it's a large case because it's a PUC case so --

3 JUDGE NOBLE: Just an excerpt?

4 MR. BARTZ: So I will work on getting you  
5 the case.

6 JUDGE NOBLE: I hope it's enough of an  
7 excerpt so that I can rule.

8 MR. BARTZ: The excerpt is enough to give  
9 you the evidence. I'll get to work on getting it.

10 JUDGE NOBLE: Thank you.

11 Council questions? Mr. Paulson?

12 MR. PAULSON: Thank you.

13 Mr. Chipkevich, I wanted to ask you a few  
14 more questions on this report. I think it's  
15 Exhibit 3110.

16 As I look at that, there are only two boxes.  
17 There's a finding, there's only two boxes for a  
18 violation recommended. And then two boxes for written  
19 notification to FRA for remedial action; correct?

20 THE WITNESS: Yes, sir.

21 MR. PAULSON: So if the finding is no -- or  
22 violation recommended and it's no, the other option is a  
23 written notification to the FRA is usually either  
24 required or optional; is that correct? Those are the  
25 only two?

## CHIPKEVICH

1 THE WITNESS: That's the only option, yes,  
2 sir.

3 MR. PAULSON: Options given, okay.

4 And secondly, is this the only inspection  
5 report you looked at?

6 THE WITNESS: This is the only one that they  
7 provided me, yes, sir.

8 MR. PAULSON: Who provided it?

9 THE WITNESS: This was from the Washington  
10 Transportation Utility Commission where I requested.

11 MR. PAULSON: So you don't have any broader  
12 spectrum, just one report?

13 THE WITNESS: That's all they had available  
14 to provide to me, yes, sir.

15 MR. PAULSON: Have you looked at these and  
16 other incidents before in your accident investigations?  
17 Have you looked at these kind of reports?

18 THE WITNESS: I think that accident reports,  
19 previous accident reports, yes, sir.

20 MR. PAULSON: Is this unusual or is this  
21 typical?

22 THE WITNESS: I think as far as within yards  
23 you find more, we'll say safety deficiencies, because  
24 we'll call it violation.

25 MR. PAULSON: Not to take anything away from

## CHIPKEVICH

1 the issue --

2 THE WITNESS: No, that's okay.

3 MR. PAULSON: -- what I'm saying is, is this  
4 something that you would find typical in a yard that you  
5 were looking at, a BNSF track?

6 THE WITNESS: You would find more of these  
7 issues, yes, sir, in a yard rather than on a main line  
8 track. And that could indicate -- it would have been  
9 nice if they had data for me for the main line track.  
10 But that could give you an indication of how an area is  
11 being maintained or how another yard may be maintained  
12 in the future. But usually main line track is  
13 maintained to a higher level than the general freight  
14 yard tracks.

15 MR. PAULSON: Is this for the Vancouver yard  
16 itself?

17 THE WITNESS: Yes, sir.

18 MR. PAULSON: All right. I think you said  
19 you had been to the site itself.

20 THE WITNESS: Yes, sir -- well, I said I had  
21 gone the length of the track along through there, and I  
22 have been past the site, yes, sir.

23 MR. PAULSON: So you inspected the track on  
24 one occasion?

25 THE WITNESS: I didn't inspect. I did view

CHIPKEVICH

1 it.

2 MR. PAULSON: Just walked through it?

3 THE WITNESS: I did look at it, yes, sir.

4 MR. PAULSON: Okay. No other questions.

5 JUDGE NOBLE: Mr. Shafer?

6 MR. SHAFER: Mr. Chipkevich, thank you very  
7 much for your testimony today.

8 I'm looking further on your Table 1, your  
9 prefiled testimony, your crude oil and ethanol train  
10 derailments. I know that you've made quite a bit of  
11 comment on this already, but I just want to be sure.

12 So does this represent all of the  
13 derailments which includes a release from '06 to '15?  
14 It's not just a sampling. Does that represent all the  
15 derailments? I'm trying to understand maybe some trends  
16 out of the chart.

17 THE WITNESS: I know there's some other  
18 accidents out there. It's the accidents that I  
19 identified at the time when I did the study, and so  
20 there are some others that have occurred. I don't know  
21 what those are; I didn't intentionally leave any off.  
22 And I felt this was the bulk of the accidents that had  
23 been serious accidents that NTSB had launched on, that  
24 the FRA was investigating.

25 And so I mean, there was no intent to say,

## CHIPKEVICH

1 well, I'm not going to including something because there  
2 was an alleged number of cars. I included cars at eight  
3 miles an hour and ten miles an hour that were identified  
4 that I knew of.

5 MR. SHAFER: Okay. What concerns me is that  
6 there seems to be a trend from your table here of a much  
7 higher incidents in the last three years. I'm seeing  
8 generally one derailment including a release, one per  
9 year from '06 up to '09, there was none in '10. It  
10 picks up a little bit in '11 and '12 with two each, and  
11 then it really takes off in '13, '14, '15; we've got  
12 five, five and six with 2015 being the highest year.

13 So if I'm just going by your table, I'm  
14 seeing about two-thirds or 67 percent of the derailments  
15 with a release in the last three years. Is that  
16 trend -- is that table indicative of what you would say  
17 is occurring?

18 THE WITNESS: I think it is, because it was  
19 about 2006 when we began seeing unit trains moving --  
20 and a little bit before that period with ethanol. And  
21 when we had the accident in 2006 in New Brighton, that  
22 was kind of the beginning of it. And then we had some  
23 ethanol accidents, and then there were crude oil trains  
24 began to move. And prior to that time there weren't  
25 crude oil unit trains.

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1 MR. SHAFER: So is this largely a function  
2 of a much higher volume, would you say, in the last  
3 three years especially? Or are there other factors?

4 THE WITNESS: I think it's the number of  
5 trains that are moving now, moving the product compared  
6 to earlier where they weren't.

7 MR. SHAFER: Okay. Do you see any response  
8 by -- and I know this is general, but just generally in  
9 the industry, the railroad industry, do you see a  
10 noticeable response to try to bring that number back  
11 down?

12 THE WITNESS: In 2011, the industry decided  
13 that they needed to improve the DOT-111 tank car and  
14 they put in place an Association of American Railroad  
15 standard, AAR standard, for the CPC-1232 car. They  
16 didn't require thermal protection. They didn't require  
17 a full head shield; they used a half head shield.

18 There was some effort, but it wasn't an  
19 effort -- the industry -- you know, I think the industry  
20 could have gone to full head shields. They could have  
21 gone at that time to thermal protection of the cars.  
22 But there's been some improvement with the tank cars for  
23 this initiative.

24 And I've seen some carriers say they're  
25 going to inspect track more often, do ultrasonic

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1 inspection more often. Just doing an inspection more  
2 often isn't going to mean the rail is going to break.  
3 It's going to have -- to be able to find that. But as  
4 happened in Lynchburg, Virginia, the day before the  
5 accident they had done an ultrasonic inspection. In  
6 some other locations, it was only a couple of months  
7 before an accident that had ultrasound inspection was  
8 done and you still had the crack grow to critical size  
9 of failure over a train.

10 So it's just not increasing the amount of  
11 inspections. It's doing a better job with the track and  
12 with maintenance. And am I seeing some information out  
13 there that they're doing? Yes. How effective it is? I  
14 don't know.

15 MR. SHAFER: If you were to add a  
16 year-to-date 2016, do you know how many incidents would  
17 be added to the table year-to-date?

18 THE WITNESS: No, sir, I'm sorry.

19 MR. SHAFER: Okay. Are you aware any --  
20 with an increase like this, are there any routes along  
21 the railroad system where there's been a consideration  
22 that it's through a very highly sensitive environmental  
23 area where they consider to eliminate that or reroute  
24 that in some fashion to respond to the fact that there's  
25 a high risk there?

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1 THE WITNESS: Not that I'm aware of.

2 MR. SHAFER: Okay. And then lastly, again  
3 general, but could you say, is there a higher proportion  
4 of unit trains with the oil than any other types of  
5 cargo, lumber, coal, grain? Can you help us with that  
6 proportionately? Does it stand out? Is it in the  
7 bracket of other cargo or less than, or where does that  
8 stand, do you think?

9 THE WITNESS: Well, there have been unit  
10 trains with grain for many years. There have been unit  
11 trains for automobiles and other products, but I  
12 couldn't give you an answer on that that would be  
13 useful.

14 MR. SHAFER: Okay. Thank you.

15 JUDGE NOBLE: Mr. Stone?

16 MR. STONE: Good afternoon, Mr. Chipkevich.  
17 With regard to Exhibit 3109, your train  
18 accidents by railroad groups, besides derailments, what  
19 constitutes an accident that would be reported in this  
20 data?

21 THE WITNESS: Well, these are accidents  
22 where they've had trains derailed, there's been damage  
23 that meets a certain threshold that it has to be  
24 reported to the FRA.

25 MR. STONE: But besides derailments, are

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1 there any other types of accidents that are recorded in  
2 these tables that you provided in that exhibit?

3 THE WITNESS: I don't think so.

4 MR. STONE: So your testimony would be that  
5 at least the great majority of these accidents you  
6 reported in Exhibit 3109 were in fact derailments?

7 THE WITNESS: I think most of them are.  
8 There may have been a derailment where, for example, in  
9 a yard or on the siding or on the main track where there  
10 wasn't damage that met a level for reporting that may  
11 not be in here. But I couldn't answer that for you.

12 MR. STONE: Are you aware of any accidents  
13 that were not derailments where there was a release of  
14 product?

15 THE WITNESS: There is a database; it's not  
16 in the FRA database. It's in the PHMSA database where  
17 if they release product if it's on the siding or during  
18 loading and unloading operations, that data incident  
19 report is filed with PHMSA. Yes, sir.

20 MR. STONE: Okay. Thank you.

21 JUDGE NOBLE: Mr. Snodgrass?

22 MR. SNODGRASS: Good afternoon. Just some  
23 questions quickly about the inspections.

24 What FRA or other governmental guidance is  
25 there requirements for the frequency and nature of

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1 inspections of track?

2 THE WITNESS: There's requirements that for  
3 certain classes of track, like Class 4 track, that they  
4 be inspected in line -- ultrasonic inspection, excuse  
5 me, and I think it's at least twice a year. And it  
6 depends upon the amount of gross tonnage that crosses  
7 that track over a certain period of time, whichever is  
8 shorter.

9 There's a requirement for those inspections  
10 on Class 3 track if there are a certain number of  
11 hazardous materials cars that cross those tracks, if  
12 they were a certain volume of hazardous materials or  
13 passenger trains crossing them, that they be  
14 ultrasonically inspected.

15 MR. SNODGRASS: So if a decision to inspect  
16 more than twice a year, is that strictly discretionary  
17 on the railroads?

18 THE WITNESS: Yes.

19 MR. SNODGRASS: Is a decision whether to  
20 inspect visually strictly discretionary or is there any  
21 other FRA requirements around that?

22 THE WITNESS: You know, there may be some  
23 general requirements that could pull it in. But  
24 generally the railroads that are inspecting more often  
25 are looking at their data or the recommendations of

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1 consultants.

2 Like in Ellicott City, the railroad had  
3 track -- because the rail was in the condition it was  
4 in, a consultant had recommended to them that they do it  
5 monthly, and so they did agree on the consultant's  
6 recommendations and they were doing it monthly.

7 MR. SNODGRASS: Are there any other major  
8 methods of inspection beyond ultrasonic and visual?

9 THE WITNESS: There are. There's track  
10 geometry cars that are out there. There's a  
11 signal-induced way of inspecting the track. There's  
12 driving down the track, a high rail inspection, which  
13 most carriers do on their rails two or three times a  
14 week where they're driving through and they may cover  
15 30 miles in a day.

16 But they're driving through and looking for  
17 irregularities, an issue of maybe developing. They're  
18 looking for any problems that are visible to them that  
19 may occur.

20 MR. SNODGRASS: Same question on those  
21 lines. Is that FRA required or is that at the  
22 discretion of the railroad?

23 THE WITNESS: I think the frequencies, there  
24 are some FRA requirements to look at, but I couldn't  
25 tell you the specific.

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1 MR. SNODGRASS: And I don't know if this is  
2 from your testimony or -- I think you mentioned that,  
3 perhaps the earlier one, that in some cases a detail  
4 fracture is noted and then a judgment has to be made as  
5 to whether based on the likely speed of that problem,  
6 for lack of a better word, getting worse?

7 THE WITNESS: Yes, sir.

8 MR. SNODGRASS: What guidance is there on  
9 that decision?

10 THE WITNESS: There's some guidance in the  
11 FRA requirements about the size of a detail fracture and  
12 an action that you have to take, such as slowing down a  
13 train, putting a slow order in or removing it when it  
14 gets to a certain size.

15 MR. SNODGRASS: Is that a requirement or is  
16 that discretionary?

17 THE WITNESS: Yes, sir, it's a requirement.

18 MR. SNODGRASS: It's required?

19 THE WITNESS: Yes, sir.

20 MR. SNODGRASS: I think from the prior  
21 testimony, if I'm not mistaken, a fastener was found to  
22 be the cause or a main cause of the Mosier incident. Is  
23 that your understanding?

24 THE WITNESS: In the FRA report they  
25 identified the broken lug nuts which allowed the --

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1 MR. SNODGRASS: Is that something that --  
2 and apparently it had been recently visually inspected.

3 Is that something that the inspector should  
4 have caught or is that a matter of something that you're  
5 just not going to be able to see with the naked eye?

6 THE WITNESS: I can't tell you on that  
7 specific accident. I think generally when you're  
8 looking, if you see broken lug nuts, several of them, or  
9 you see them out of the way and you stop and you look at  
10 why or what's happened to the lug, if it's a crack  
11 that's in there and it hasn't broken out yet, it would  
12 be difficult to see and to know.

13 MR. SNODGRASS: I'm sort of struck by, given  
14 the regulatory response on the cars, which certainly  
15 there are ongoing changes in the regulation there, I've  
16 not heard or I've missed, I guess, the testimony to the  
17 extent to which there have been regulatory changes in  
18 this crude-by-rail era on actual requirements for track  
19 inspections. Can you speak to that?

20 THE WITNESS: Not on the track inspection.  
21 I know that there was in the Final Rule requirement for  
22 ECP brakes, electronically-controlled pneumatic brakes,  
23 and -- (Court Reporter interruption.) ECP,  
24 electronically-controlled pneumatic brakes, and as a  
25 result of the FAST Transportation Act passed in

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1 December, that's being reviewed and examined as far as  
2 whether it's going to be required or not.

3 I know the Secretary of Transportation had  
4 asked for -- whichever secretary, not the  
5 administrator -- for additional funding for additional  
6 track inspectors for the routes over which crude oil  
7 trains will operate. I don't know if that funding was  
8 approved or if those positions have been filled.

9 MR. SNODGRASS: Okay. Just turning to the  
10 track, it's probably in the record and I forgot.

11 What's the difference between a Class 3 and  
12 4 track?

13 THE WITNESS: It's how the track is  
14 maintained, how frequently inspections are done, and  
15 then that sets the maximum speed limit for freight  
16 trains and passenger trains on the track.

17 MR. SNODGRASS: So it's more to do with the  
18 maintenance rather than original design?

19 THE WITNESS: For the most part, yes. And  
20 there could be a design issue in the track originally  
21 that wouldn't allow it to have a train operate above a  
22 certain speed through there. But it's primarily in how  
23 it's inspected and maintained to a certain level.

24 MR. SNODGRASS: You had mentioned there  
25 was -- today I think you said of -- I'm drawing a blank

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1 on the government agency that would look at -- there was  
2 going to be discussion on the availability in the  
3 marketplace of the new 117s; is that right?

4 THE WITNESS: Yes, sir.

5 MR. SNODGRASS: If you come back tomorrow,  
6 are you able to share that information with us if that's  
7 possible?

8 THE WITNESS: Their hearing is tomorrow.  
9 From what I understand, the agency will likely put that  
10 on its website for some period of time so people can  
11 view it at a later date.

12 MR. SNODGRASS: All right. In terms of the  
13 table that you provided, the 24 incidents, just so I  
14 understand it, you did do an active screening of cases,  
15 you didn't include where there was no release, but  
16 otherwise you attempted to provide -- of those cases  
17 where there was release, you attempted to provide  
18 information on the number of cars that derailed and the  
19 presence of fire and a few other things?

20 THE WITNESS: Yes, sir.

21 MR. SNODGRASS: So couldn't we infer  
22 probability that if there is a release on the likelihood  
23 of fire and the cars typically involved in a release, if  
24 there is a release the number of cars which will be  
25 derailed?

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1           THE WITNESS: I don't know if it can be  
2 applied to a probability, but it certainly can show you  
3 that -- every accident has different dynamics to it and  
4 it certainly can show you that many cars can derail in a  
5 derailment and at speeds below 40 miles an hour and at  
6 speeds below 25 miles per hour. That's what occurred in  
7 these specific accidents.

8           I never tried to tie a probability to it,  
9 the number that derailed or the probability of an  
10 accident occurring and -- but I think it does -- what I  
11 tried to show is that there are significant accidents  
12 that can occur, there are accidents that have occurred  
13 involving a large number of cars. When there's been a  
14 large number of cars derailed, there have been, some of  
15 those accidents, quite a few that have breached.

16           So I tried also to characterize that a  
17 little bit by showing at least what the speeds were,  
18 whether it was -- (Court Reporter interruption.) I  
19 apologize.

20           I tried to show that in those specific  
21 accidents you can have a certain number of cars that do  
22 derail and that a large number of those cars can in fact  
23 fail during the accident, and not trying to do a  
24 probability or statistics on it. And that in most of  
25 those accidents, 20 to 24, a fire resulted when there

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1 was a release of cargo.

2 MR. SNODGRASS: Last question.

3 Just in terms of the information the federal  
4 government uses in making its standards for cars, is  
5 there -- you're obviously familiar with the crash test  
6 dummies for automobiles.

7 What level of real world simulation is  
8 provided or is done by the federal government in  
9 determining the safety standard for a car, a train car?

10 THE WITNESS: I couldn't tell you the amount  
11 of research that they've done and the documentation and  
12 engineering. I know that they did some crash tests out  
13 at Pueblo with some cars and to show with different  
14 thickness how well a tank car would perform, and came up  
15 with some standards.

16 But these are the standards they ultimately  
17 settled on, which was 12 miles per hour and 18 miles per  
18 hour and 286,000 pound hit at a particular speed.

19 MR. SNODGRASS: This is the last question  
20 and this time I'm telling the truth.

21 In terms of causing wear and tear on a  
22 track, what are the factors that cause a track to wear,  
23 where actually it increased the probability of an  
24 accident?

25 THE WITNESS: Well, you know, I couldn't

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1 tell you as a track expert, but I can tell you from my  
2 experience I've seen that tonnage, heavy tonnage over a  
3 long period of time, moisture that degrades the ballast  
4 that allows a track to flex. If you put joint bars in  
5 where you've had a defect and moved it out where you've  
6 changed and get high stresses at particular locations,  
7 that could initiate an issue.

8 Those are some of the factors that can lead  
9 to surface conditions like shelling, checking on top of  
10 the rail, that can initiate detail fractures.

11 MR. SNODGRASS: Thank you.

12 JUDGE NOBLE: Anyone else on my right? On  
13 my left?

14 Mr. Rossman?

15 MR. ROSSMAN: Thank you for your testimony.  
16 I have a few questions.

17 The first is, you provide some statistics on  
18 the estimated improvement of the 117s over the 1232s in  
19 terms of releases. Do you know whether those statistics  
20 apply to everything in the 117 class or just the 117s  
21 that aren't retrofits?

22 THE WITNESS: I think probably today, right  
23 now, the most comfortable numbers are those numbers that  
24 were put in the Final Rule by PHMSA. And basically, the  
25 Final Rule that came out, they estimate that the DOT-117

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1 tank car will perform 7 to 40 percent better than the  
2 CPC-1232 jacketed tank car, which would include head  
3 shields, and that that would depend upon train speed and  
4 braking characteristics, the braking features on the  
5 train.

6 That is for punctures. That did not include  
7 the thermal protection and the additional increase in  
8 safety because of the thermal protection.

9 MR. ROSSMAN: So was that for all 117s or  
10 only those that haven't been retrofitted?

11 THE WITNESS: The way I read that was to the  
12 DOT-117, the new 117, and then comparing that to the  
13 CPC-1232 jacketed car and with the -- which the majority  
14 has head shields on the jacketed cars. It didn't say  
15 about the retrofitted. It was to the ones that exist  
16 today, yes, sir.

17 MR. ROSSMAN: It doesn't specify, to the  
18 best of your recollection?

19 THE WITNESS: I'm sorry?

20 MR. ROSSMAN: It doesn't specify whether  
21 it's referring to retrofits or just new built 117s, to  
22 the best of your recollection?

23 THE WITNESS: Well, no, with the new built  
24 117 was being compared to the CPC-1232. But it didn't  
25 state to the retrofitted 1232, so I'm assuming it's the

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1 1232 that's out there, the one with the jackets and the  
2 head shields.

3 MR. ROSSMAN: And, I'm sorry. I'm referring  
4 to the 117s that are either new built with the  
5 9/16th-inch or are retrofitted with the 7/16th-inch.  
6 Have you seen anything that distinguishes these  
7 improvements of those relative to the 1232s?

8 THE WITNESS: The 17R, the retrofit one  
9 compared to the 117?

10 MR. ROSSMAN: Right.

11 THE WITNESS: I haven't seen any statistics  
12 on that, no, sir.

13 MR. ROSSMAN: Okay. And similarly, have you  
14 seen any statistics either estimating the performance  
15 improvement or empirically looking at the performance  
16 improvement from the 1232s relative to the 111s?

17 THE WITNESS: I've seen some of the more  
18 recent accidents with the 1232s that had the comparable  
19 failure rates during accidents.

20 MR. ROSSMAN: That's why I asked that  
21 question. But do you know of any analysis that  
22 estimated what those failure rates would have been to  
23 compare to that?

24 THE WITNESS: No, sir, I haven't seen any.

25 MR. ROSSMAN: All right. Turning back to

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1 that table that there was a lot of discussion about with  
2 the 24 accidents involving releases, it looks like the  
3 lowest speed there was at 9 miles per hour. And so my  
4 understanding is that at the facility itself the speed  
5 of trains will be limited to 5 miles an hour.

6 So should we infer from this table that  
7 there isn't a risk of derailment and release for at  
8 least that based on real world what's actually happened,  
9 there's no cause to be concerned about that at the  
10 facility itself?

11 THE WITNESS: Well, you can never say never.  
12 During my career doing accident investigations and being  
13 responsible for it, we've investigated accidents where  
14 crews have been distracted and they exceeded speeds, and  
15 there were collisions and events that occurred. So you  
16 can never say there won't be an accident.

17 At 5 miles per hour there's less  
18 opportunity, there's less energy involved in the  
19 accident, but I don't know that you ever get -- well,  
20 you may, but anybody -- I certainly wouldn't say that  
21 you can never have an event. Is it reduced? Is it less  
22 likely? Yes.

23 Could you still have a human error? Could  
24 you hit a car, coupling cars at too fast a speed like  
25 we've seen in accidents and accidents reported? Yes.

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1           Can you have a train come in even exceeding  
2 the operational speed? Yes. We've had accidents that  
3 that occurred.

4           And there's procedures and requirements that  
5 are in place. The accident that resulted in Commerce  
6 City, California with the runaway cars, the procedures  
7 were that the crew was supposed to put the hand brakes  
8 on. They just didn't follow the procedures. So there  
9 are events that have happened.

10          MR. ROSSMAN: Another question on this  
11 table. Do you know how many of these 24 incidents  
12 resulted in an injury to a person?

13          THE WITNESS: Well, Lac-Megantic had I  
14 believe it was 47 fatalities. Cherry Valley, Illinois  
15 had at least one fatality. I don't know of any others.  
16 I don't know of any other injuries or fatalities in  
17 those accidents. There may have been, but those are the  
18 two I think of.

19          MR. ROSSMAN: I'm trying to get to the real  
20 world consequences, and it seems like most of the time  
21 these accidents happen, injuries don't result.

22                 Is that a fair conclusion?

23          THE WITNESS: In these accidents, where they  
24 happened and circumstances, you're correct, most of  
25 those accidents did not result in injuries.

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1 MR. ROSSMAN: All right. Thank you.

2 JUDGE NOBLE: Any other questions to my  
3 left? Mr. Siemann?

4 MR. SIEMANN: Just a couple. Thank you for  
5 enduring here.

6 Let me ask you a couple questions that are  
7 somewhat similar. Maybe you can't answer this, but do  
8 you believe that a 117R, retrofitted 117, would behave  
9 any differently than a 117 rebuilt in a pool fire?

10 THE WITNESS: I don't know. As long as it  
11 had the same thermal protection requirements that are  
12 mandated for it, I don't know. I can't tell you  
13 specifically, but certainly the shell thickness, it's  
14 not as thick. I don't know as far as the heat transfer,  
15 whether that will make a difference or not. But it is  
16 required to have the thermal protection, which would  
17 include the increased pressure relief.

18 MR. SIEMANN: And then is there anything  
19 unique about crude-by-rail trains in terms that would  
20 cause additional wear and tear on tracks? Things like  
21 the weight, the length, the frequency of the trains,  
22 anything that would sort of lead to more wear and tear,  
23 maybe more problems that would lead to derailments?

24 THE WITNESS: Not specifically, other than  
25 the trains would add gross tonnage across the tracks

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1 where they're operating. And it might depend on what  
2 type of operational conditions those tracks had  
3 experienced in the past where there was a significant  
4 increase in weight on those tracks and whether that may  
5 have an effect on the structure. But there's so many  
6 variables I wouldn't be able to tell you on that.

7 MR. SIEMANN: One last question.

8 The word "shelling" has come up a couple of  
9 times and I'm just not familiar with what that means.  
10 Can you describe that for me?

11 THE WITNESS: Yes. It's a condition on the  
12 top of the steel rail that where you might call it like  
13 a flaking where the steel is starting to flake a little  
14 bit, and so they call that a shelling. And then from  
15 those cracks initiate and then drive down into the  
16 steel, and they call that a detail fracture as it --  
17 that crack initiates and starts moving down into the  
18 steel.

19 MR. SIEMANN: Thank you very much.

20 THE WITNESS: Yes, sir.

21 JUDGE NOBLE: Any further questions to my  
22 left?

23 Mr. Paulson.

24 MR. PAULSON: I have a follow-up question or  
25 two, if I may.

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1           Mr. Rossman reminded me of something.  
2 Vancouver yard itself is actually north of the entrance  
3 into the Port, is it not?

4           THE WITNESS: Yes, sir.

5           MR. PAULSON: So a crude oil train would  
6 not -- at least loaded, would not even cross into the  
7 yard unless and until it was -- assuming it was calling  
8 at the Port of Vancouver, until it came back out it was  
9 going north?

10          THE WITNESS: A full train going into the  
11 Port?

12          MR. PAULSON: Correct.

13          THE WITNESS: That's correct. Yes, sir.

14          MR. PAULSON: Secondly, the yard itself,  
15 that's a collection point, is it not, for trains?

16          THE WITNESS: That's a good summary for it.  
17 Yes, sir.

18          MR. PAULSON: All right. And as a practical  
19 matter, the speeds through the yard are what? Through a  
20 rail yard.

21          THE WITNESS: Generally about 10 miles an  
22 hour, 5 miles an hour.

23          MR. PAULSON: No other questions. Thank  
24 you.

25          JUDGE NOBLE: Is that it?

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1           Ms. Drummond, I have a question for you. I  
2 was able to get a message from Mr. Bartz that I was  
3 asking him for a cite for the case that he was referring  
4 to out of Michigan, and I don't know if you had a chance  
5 to see it or not.

6           MS. DRUMMOND: I have not, Your Honor.

7           JUDGE NOBLE: All right. I have seen it,  
8 and I've also taken a look at 49 U.S.C. 1154(b). The  
9 cite, the case out of Michigan is from the Michigan  
10 Public Service Commission, Case No. 17020, I think. And  
11 so I've had a chance to look at that, and I've looked at  
12 49 U.S.C. 1154(b) which says, reports of the NTSB, that  
13 is. "No part of a report of the Board, related to an  
14 accident or an investigation of an accident, may be  
15 admitted into evidence or used in a civil action for  
16 damages resulting from a matter mentioned in the  
17 report."

18           I've seen provisions like this in federal  
19 law before, and in general they seem to be related to  
20 the need to have complete freedom to report without the  
21 fear of the report being used in civil action so that  
22 all those participating would be completely candid in  
23 their participation and reports and in the  
24 investigation.

25           In looking at that case out of Michigan, I

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1 do not believe that it's precedent at all from the  
2 Michigan Public Service Commission. And I think the  
3 facts as I've been able to read them quickly here relate  
4 to what we're doing here in this regulatory hearing,  
5 even though it is a regulatory hearing that was taking  
6 place in Michigan.

7 And so based upon 49 U.S.C. 1154(b) as it  
8 applies, its prohibition about using its reports only  
9 apply to civil action damages, which this is not, I am  
10 going to admit Exhibits 3059, 3030, and 3029 and  
11 overruling the objection. And so those exhibits having  
12 been admitted, I'll be asking Ms. Drummond if you have  
13 further testimony to elicit from Mr. Chipkevich?

14 We are almost at 5:00. It's not at 5:00,  
15 it's 5:12 already, and so I guess the question is, does  
16 Mr. Chipkevich have to return tomorrow to testify about  
17 anything arising out of those three exhibits?

18 MS. DRUMMOND: Can I confer with City's  
19 counsel for one moment?

20 JUDGE NOBLE: Yes, of course. We'll be off  
21 the record for a minute.

22 (Discussion off the record.)

23 MS. DRUMMOND: I'm prepared to go back on  
24 the record, Your Honor.

25 JUDGE NOBLE: We're back on the record.

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1 MS. DRUMMOND: I just have about one or two  
2 more questions and then we'll wrap up.

3 JUDGE NOBLE: All right. And then the  
4 questions based upon council questions, we still have  
5 that to do, so...

6 MS. DRUMMOND: I don't have any further  
7 questions on his reports.

8 JUDGE NOBLE: Oh, all right. Do you want to  
9 go first?

10 MR. KISIELIUS: It's possible that her  
11 additional testimony that she's eliciting now, I guess  
12 we're returning to direct, these might prompt some  
13 cross. So sequence-wise, I don't know if it makes sense  
14 for her to go first or not.

15 JUDGE NOBLE: When you said you had no other  
16 questions based on those reports, were you talking those  
17 exhibits?

18 MS. DRUMMOND: Right. The exhibits, right.

19 MR. KISIELIUS: Oh, I misunderstood. I'll  
20 go first.

21 RE-CROSS-EXAMINATION

22 BY MR. KISIELIUS:

23 Q. In response to Mr. Shafer's questions I was  
24 asking about whether or not those 24 accidents  
25 constituted a sampling, and I think your testimony was

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1 that you really weren't trying to pick. And the example  
2 you gave is that you didn't omit those accidents  
3 occurring at different speeds. Do you recall that  
4 testimony?

5 A. I do.

6 **Q. And, but it is the case that you omitted those**  
7 **that did not result in release?**

8 A. Just the two that I know of, yes, sir. Or the  
9 one I didn't know about in Seattle until recently, but  
10 when I put the table together I was aware of the one in  
11 Philadelphia. And the cars had not turned over and they  
12 did not include that.

13 **Q. So just to confirm your testimony, there's only**  
14 **two crude oil train derailments between 2006 and 2013**  
15 **that did not result in release?**

16 A. Those are the only two that I know of. There's  
17 others out there.

18 **Q. Also, in response to Mr. Shafer's questions, he**  
19 **asked you about whether you had an opinion with -- if**  
20 **the 24 that you had selected were a reflection of the**  
21 **volume of trains that are moving oil right now. Do you**  
22 **remember that question?**

23 A. Yes.

24 **Q. And I guess I'm wondering if you had previously**  
25 **testified that you were unaware of the volume of oil**

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1 moving in trains during that same time period, how you  
2 can reach a conclusion about the volume of oil moving?

3 A. Just generally, you know, there's data about the  
4 new movement of crude oil by train over the last few  
5 years and that the crude oil volume had increased over  
6 that period of time involving movement of crude oil by  
7 train.

8 Q. Thank you.

9 In response to Mr. Stone's question, I had asked  
10 you earlier what constitutes an accident and whether it  
11 includes more than just derailments, and you testified  
12 you don't know. In response to Mr. Stone's question,  
13 you said probably includes just derailment.

14 So I guess I'm wondering which is it, do you  
15 know?

16 A. I can't factually say that I do.

17 Q. My last question for you.

18 In response to Mr. Siemann's question, did you  
19 testify that jacketed CPC-1232s would have thermal  
20 protection?

21 A. I think they will. I think -- I'm pretty sure  
22 they do. I've got the rule. I could look at it.

23 Q. How about if I direct you to Exhibit 3125, which  
24 you just talked about, Page 3. That's the Mosier  
25 report. And I'll read you the sentence. I'm referring

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1 to CPC-1232 standard, the report reads, "The cars were  
2 equipped with full height head shields, metal jackets  
3 with insulation. The cars did not have thermal  
4 protection. These cars are commonly referred to as  
5 jacketed 1232s."

6 So is it the case that all jacketed 1232s will  
7 have thermal protection?

8 A. 1232s today that have jackets may not have  
9 thermal protection. But I've got the rule in front of  
10 me. Could I look at it so that I can be clear on that?

11 **Q. Well, I think my question is, is all 1232s that**  
12 **exist today, will they have thermal protection? And**  
13 **based on that report, can you answer the question?**

14 A. The rule for the DOT-117R states for thermal  
15 protection, "Thermal Protection System. The DOT-117R  
16 specification tank car must have a thermal protection  
17 system. The thermal protection system must conform to  
18 179.18 and include a reclosing pressure relief valve in  
19 accordance with 173.31 of this subchapter."

20 **Q. Thank you, Mr. Chipkevich.**

21 I understand that's the DOT-117R. I understood  
22 Mr. Siemann's question about jacketed 1232s and whether  
23 those would include thermal protection.

24 A. Well, the way I understood the question was  
25 that --

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1           **Q.     So just to clarify, my question is now just to**  
2 **clarify whether jacketed 1232s would have thermal**  
3 **protection.**

4           A.     Well, a CPC-1232 tank car is not a DOT tank car.  
5 It's a 111 tank car that's been modified for by AAR.  
6 And that tank car -- and some of them have been built --  
7 I don't know if they're building them today. I think  
8 most of the tank cars being built are 117s, and those  
9 are being retrofitted, would have to be retrofitted to  
10 that level. Tank cars --

11           **Q.     I'm asking a pretty simple question.**

12                   **Do the jacketed 1232s have thermal protection?**

13           A.     The 1232?

14           **Q.     Yes.**

15           A.     If it's retrofitted, it will.

16           **Q.     That's not the question. I'm asking --**

17           A.     I don't know that it -- well, I can't answer it,  
18 then, because I don't know of any that are being -- not  
19 rebuilt as a 117R, if it's being rebuilt as a 1232.

20                   MR. KISIELIUS: I have no further questions,  
21 Your Honor.

22                   JUDGE NOBLE: Ms. Drummond, you've completed  
23 your examination?

24                   MS. DRUMMOND: I had a follow-up question  
25 from council's questions.

1 REDIRECT EXAMINATION

2 BY MS. DRUMMOND:

3 Q. There was a question about the disproportionate  
4 number of accidents occurring in 2015.

5 MS. DRUMMOND: Ms. Mastro, could you pull up  
6 3058, Page 7.

7 BY MS. DRUMMOND:

8 Q. And while she's doing that, referring back to  
9 your chart on Page 12, Table 1, we've had a lot of  
10 discussion. These are accidents going back ten years?

11 A. Yes.

12 Q. And during that time period, crude oil shipment  
13 has increased?

14 A. Yes.

15 Q. And actually, the portion of the page I'm  
16 looking to, I think it's a little further down. It's  
17 Figure ES-5. This is from the PHMSA 2012 report, the  
18 draft regulatory impact analysis.

19 And is it your opinion that -- or based on the  
20 facts, is that as crude oil shipments have increased  
21 we've seen more accidents?

22 A. Yes.

23 MS. DRUMMOND: Thank you. I think that's  
24 all.

25 JUDGE NOBLE: Mr. Chipkevich, I think that

1 you're excused. You are excused as a witness. Thank  
2 you very much for your testimony.

3 THE WITNESS: Thank you.

4 JUDGE NOBLE: Is there anything we need to  
5 do other than talk about tomorrow on the record?

6 MR. KISIELIUS: Other than talking about  
7 tomorrow, we don't have anything else.

8 JUDGE NOBLE: Ms. Drummond?

9 MS. DRUMMOND: No, Your Honor.

10 JUDGE NOBLE: So Ms. Drummond, do you know  
11 what the witnesses are for tomorrow or would someone  
12 else know that?

13 MS. DRUMMOND: I believe it will be --

14 MR. POTTER: Tomorrow witnesses?

15 JUDGE NOBLE: Yes.

16 MR. POTTER: Tomorrow we'll be calling  
17 Mr. Hildebrand and Mr. Blackburn. We were anticipating  
18 doing Mr. Chipkevich tomorrow, but seeing as how we did  
19 it today, I think Mr. Hildebrand and Mr. Blackburn are  
20 the only witnesses that we have lined up to be here  
21 tomorrow.

22 JUDGE NOBLE: Would you remind me if they  
23 have prefiled testimony?

24 MR. POTTER: Both of them did.

25 MR. KISIELIUS: Your Honor, we had provided

1 as part of our description just a preview of the  
2 rebuttal testimony or the testimony that they intended  
3 to rebut to help the parties prepare, so we request the  
4 same courtesy.

5 JUDGE NOBLE: Okay. Are you able to present  
6 the names of the witnesses whose testimony, either  
7 Mr. Hildebrand or Mr. Blackburn, I hope they're both  
8 Misters, it will be rebutting? Are you able to do that  
9 at this time?

10 MR. POTTER: Mr. Hildebrand's subject area  
11 is emergency response, which is what Mr. Rhoads spoke  
12 to. And Mr. Blackburn's subject area is financial  
13 assurance, which I think have been the subject of  
14 several Proponent witnesses, including Ms. Hollingsed.  
15 Those are the only ones that come to mind.

16 JUDGE NOBLE: All right. And then for the  
17 subsequent days, maybe if you could include that  
18 information, that would be helpful. And I suppose if  
19 you think of anyone else's testimony who is going to be  
20 rebutted by these two witnesses, you can e-mail  
21 Mr. Bartz or Mr. Kisielius.

22 MR. BARTZ: Your Honor, I have a very brief  
23 evidence process of moving forward with an admission of  
24 an exhibit. Do you want to do that now?

25 JUDGE NOBLE: Yes.

1 MR. BARTZ: It's Exhibit 1037. It's a Port  
2 exhibit. It had an objection that's been waived or  
3 withdrawn.

4 JUDGE NOBLE: 1037, your objection is  
5 withdrawn?

6 MR. BARTZ: It wasn't our objection; it was  
7 the other parties. I've conferred with the other  
8 parties. They're here and they've waived the objection  
9 of 1037.

10 MS. BOYLES: Yes, Your Honor. Objection  
11 withdrawn.

12 JUDGE NOBLE: Exhibit 1037 will be admitted.

13 MR. BARTZ: Thank you, Your Honor. That's  
14 all I have.

15 JUDGE NOBLE: We are done for the day.  
16 Thank you all very much. We are adjourned for today.

17 (Proceedings adjourned at 5:24 p.m.)  
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C E R T I F I C A T E

STATE OF WASHINGTON )  
 ) ss.  
COUNTY OF SNOHOMISH )

THIS IS TO CERTIFY that I, Diane Rugh, Certified Court Reporter in and for the State of Washington, residing at Snohomish, reported the within and foregoing testimony; said testimony being taken before me as a Certified Court Reporter on the date herein set forth; that the witness was first by me duly sworn; that said examination was taken by me in shorthand and thereafter under my supervision transcribed, and that same is a full, true and correct record of the testimony of said witness, including all questions, answers and objections, if any, of counsel, to the best of my ability.

I further certify that I am not a relative, employee, attorney, counsel of any of the parties; nor am I financially interested in the outcome of the cause.

IN WITNESS WHEREOF I have set my hand this 26th day of July, 2016.

DIANE RUGH, RPR, RMR, CRR, CCR  
CCR NO. 2399