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NTSB

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Interview Transcript – Paul Thomas Vice President, Health, Environment, Safety, and Security, Oxy Vinyls LP, May 5, 2023

UNITED STATES OF AMERICA

NATIONAL TRANSPORTATION SAFETY BOARD

Investigation of:	*	
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NORFOLK SOUTHERN TRAIN DERAILMENT	*	
IN EAST PALESTINE, OHIO	*	Accident No.: RRD23MR005
ON FEBRUARY 3, 2023	*	
	*	

Interview of: PAUL THOMAS, Vice President, Health, Environment, Safety and Security
Occidental Chemical Corporation

Via Microsoft Teams

Friday,
May 5, 2023

APPEARANCES:

MARC DOUGHERTY, Hazardous Materials Accident Investigator
National Transportation Safety Board

RUBEN PAYAN, Investigator-in-Charge
National Transportation Safety Board

PAUL CAREY, Chief (ret), Boston Fire Department
On behalf of the International Association of Fire Fighters

RON LAWLER, Senior Director, Mechanical Services
Trinity Industries

ROBERT WOOD, Assistant Manager, Hazardous Materials
Norfolk Southern Railway

KARENANNE STEGMANN, Vice President, Supply Chain
Oxy Vinyls

MARK FARLEY, Esq.
Farley & Partners, LLP
On behalf of Paul Thomas

I N D E X

I N T E R V I E W

(10:02 a.m.)

MR. DOUGHERTY: Good morning, today is May 5th, 2023 and the time is 10:02 a.m. This is a Microsoft Teams interview that is being conducted in connection with the Norfolk Southern Railway train derailment in East Palestine, Ohio, which occurred on February 3rd, 2023. The NTSB number is RRD23MR005. This is an interview of Mr. Paul Thomas of Oxy Vinyls. Mr. Thomas, if you could, please spell your last name and state your current job title.

MR. THOMAS: Sure. Last name is T-h-o-m-a-s, Thomas, and current job title is Vice President of Health, Environment, Safety and Security for OxyChem.

MR. DOUGHERTY: Thank you. Mr. Thomas, do you understand that this video is being recorded?

MR. THOMAS: I do.

MR. DOUGHERTY: Great. So the purpose of this investigation is to improve safety, not to assign fault, blame, or liability. Our sole mission is to improve transportation safety and prevent accidents. As such, the NTSB cannot offer any guarantee of confidentiality or immunity from any legal proceeding by any other agency, whether it's state, local or federal. Witnesses have the option for one representative of their choice and do you have a representative with you today?

MR. THOMAS: I do.

MR. DOUGHERTY: And representative, if you could state your name and who you are with.

MR. FARLEY: Yes, good morning. My name is Mark Farley and I am a partner with Farley & Partners, LLP.

MR. DOUGHERTY: Great. Thank you for that. So before we start the interview and questions, I'd like to go around the room and introduce ourselves. If you could please spell your last name, who you are representing, and your work title. I'd like to remind everyone to speak clearly for the recording and transcription. So we have the interviewee. If we could start with Mr. Payan, please.

MR. PAYAN: Yes, good morning. My name is Ruben Payan, P-a-y-a-n. I'm the NTSB ICC for this accident. Thank you.

MR. DOUGHERTY: Chief Carey.

MR. CAREY: Good morning, everybody. My name is Paul Carey, last name is C-a-r-e-y. I'm a retired Boston Fire Department district chief and hazmat operations chief and I'm here on behalf of the International Association of Fire Fighters.

MR. DOUGHERTY: Great, thank you.

Mr. Lawler.

MR. LAWLER: Ron Lawler, L-a-w-l-e --

(Audio malfunction.)

MR. DOUGHERTY: I'm sorry, Ron, could you repeat yourself again?

MR. LAWLER: Ron Lawler, L-a -- r, Trinity leasing, in

mechanical services.

MR. DOUGHERTY: Thank you, sir.

Mr. Wood.

MR. WOOD: Robert Wood, assistant manager, hazardous materials, Norfolk Southern Railway. Last name Wood, W-o-o-d.

MR. DOUGHERTY: Thank you. And we got Mr. Mark, as well, and then Karenanne, please.

MS. STEGMANN: Yes, good morning. Karenanne Stegmann, S-t-e-g-m-a-n-n, Vice President, Supply Chain, for Oxy Vinyls.

MR. DOUGHERTY: Okay, great. Thank you.

And myself, my name is Marc Dougherty, spelling of my last name is D-o-u-g-h-e-r-t-y, and I'm a hazardous materials accident investigator with the National Transportation Safety Board.

All right, Mr. Thomas, we welcome your responses in your own words and if you have any question that is unclear or you don't understand the question, please ask the questioner to clarify or restate the question. And if you don't know the answer to any questions, it's fully permitted to indicate that you don't know.

MR. THOMAS: Right.

MR. DOUGHERTY: We don't want you to speculate.

MR. THOMAS: Will do. Will do.

INTERVIEW OF PAUL THOMAS

BY MR. DOUGHERTY:

Q. So Mr. Thomas, if you could tell us a little bit about your background and expertise and experience, please.

A. Sure. So I'm a chemical engineer by degree and I've been with Occidental Chemical for 29 years, a little over 30 years in the industry, I had a year and a half of co-op experience before joining Oxy, but my history with OxyChem is 25 years of manufacturing, so I worked at 10 different facilities, all on the Gulf Coast, you know, inside the fence. So from our Muscle Shoals plant in North Alabama to Taft, our Geismar facilities, too, in Louisiana. Ingleside, I was plant manager over that facility, that's in the Corpus Christi area.

Then I had responsibility for five sites in Houston, which include all of our technologies there, so you get both the chloralkali and the PVC and the VCM facilities in Houston, and I went through manufacturing director for a short spell, a few months, with responsibilities for our chloralkali technologies and then had the opportunity in 2019 to take on this role as the vice president of HESS for OxyChem. And I also have business unit responsibilities for government affairs and communications, so I interface with the corporate folks who run those areas on OxyChem for all of these in that space.

So that's kind of what I do and as HESS VP, certainly the emergency response folks, we've got a director in my group who manages safety, industrial hygiene, emergency response, he has an emergency response manager that works for him. Also product stewardship, you know, is in my group. So that's kind of my role right now and certainly, our engagement with -- with the incident.

Q. Okay, thank you, I appreciate that.
A. Sure.
Q. And so how long have you been in your current position?
A. Four years, 2019, yeah.
Q. All right, great, thanks.
A. It flies. It flies.
Q. Yes, it does. And so who do you currently report to?
A. Neil Ackerman, he's the president of OxyChem.
Q. Okay. Great, thank you.
A. Sure.
Q. If you don't mind, I'm just going to pull my other screen up here. One second here. So again, I just have a series of questions for you.
A. Sure.
Q. Again, if you don't know the answer, you don't know, or -- don't want you to speculate.
A. Absolutely, yeah.
Q. Okay, great.
A. I'll help as much as I can, but if I get beyond myself, for sure.
Q. Right. So regarding the East Palestine derailment and the five Oxy Vinyl cars that were involved in the derailment --
A. Yes.
Q. -- and the vent and burn, as well, can you tell me what role that Oxy played in regard -- with regard to the East Palestine

derailment on the VCM cars?

A. Yeah. So per our procedure, Marc, our emergency response procedure, you know, we -- if we have an incident that happens inside of our fence, you know, the manufacturing facility will trigger their emergency response team and then, you know, depending on the magnitude of the incident, you know, the corporate special situations team will also be triggered. We follow that same approach for events where we have product in shipment.

Where other folks are the primary drivers and have the primary responsibility, we send folks to provide technical information on our products so that the decisions that are being made can be as best informed as possible. So our role in this incident was to provide as best insight as we could to the folks on the ground, SPSI, and others on, you know, our products, things to consider as they try to navigate through the response.

So that's our role in this case. Certainly, when we're the primary owners inside the fence, you know, it's a different level of a response, but that's what we do in these cases and that's consistent, that's -- we've followed that same approach with other products and other scenarios where we're there to provide technical guidance on our products to help inform the decisions.

Q. All right, great. Thank you very much for that.

A. Sure.

Q. So did Oxy Vinyls have a say in the actual decision to vent

and burn the VCM cars involved in the East Palestine derailment?
A. No, we did not.
Q. Thank you for that. So with regard to Oxy's technical support to the VCM cars, could you walk us through, to the best of your recollection --
A. Sure.
Q. -- from the initial notification of the derailment that were involving your products up to -- through the discussions leading up to the vent and burn, if you could, please?
A. Yeah, absolutely. So I think the initial word came in Saturday morning through Tim Kelly, who, I mentioned earlier, is in the group and, you know, I think initially it wasn't clear that our cars were as involved as they were and so I think a little later we -- there was a revelation that no, our cars were involved in pool fires and it was significant and at that point, the special situations team here in Dallas was triggered and I think there was a group of about nine folks who responded, I'm going to say around noon-ish up here, to start getting up to speed on the issue.

So those folks would be our director-level personnel, they're manufacturing directors or technical director, several directors from HESS, including Joey Smith and Chris Krishna and then Tim Kelly, as well. So also, we have communications folks that are brought in at that point. So then we planned Saturday, as they were getting information on, you know, the status, engagement

of our cars, as that changed, we had set up a call for later Saturday evening. So I'm going to say maybe it was around 6:00 p.m. or something like that, we had a call that included SPSI, you know, on the call, and then Jon Simpson with Norfolk Southern, I believe, was on and that was our first engagement, you know, with the folks on scene, as it grew, I'll say, with the folks in Dallas participating. And there were several people that called in, like myself, from -- you know, from afar, not here in the special situations room, so I think we had four executive staff folks who called in to participate and, you know, that's where the -- that's where the conversations, you know, regarding what was happening on the ground started.

Q. Okay. And so can you tell us a little bit about those conversations and what type of information was relayed?

A. Sure, sure. So from what I remember Saturday, the things that stick out to me was SPSI was, you know, describing the conditions of the cars, again, specific to the VCM cars with us, right, but they were talking about, you know, the magnitude of the fire and saying you got a lazy fire, it just don't -- the rupture devices are, you know, venting as jetted flames; when they vent, you know, they're in a pool fire, significant.

So there was a lot of description, us not having eyes and, you know, ears on the ground, they were kind of walking us through what they were seeing there, right? And I think the thing that stuck out the most to me about that conversation, or maybe the

most relevant, is that SPSI indicated that they were -- they were gathering materials, as I remember, to do a hot tap and flaring and they mentioned that as they were, you know, getting ready to do that, one of the cars in the pool fire had -- had acted abnormally, from their perspective, and it gave them pause and that was the first that I heard about, you know, polymerization concerns from their perspective.

And what I remember them describing on that one particular car and the reason for their pause was that it had been venting like 30 seconds every 2 minutes through the evening, I want to say, you know, it was like an 8- to 10-hour window they were saying it had been going on for, if I remember right. So significant, you know, venting. And then it kind of subsided a little bit and it stopped that and then it vented for another like 60 minutes straight. And so, you know, as the individuals go on to do hot taps and other things close, close on the -- on the railcars, you're -- you know, you're going to give pause to that and so that was a concern.

And, you know, at the time, we've got to talk through that. You know, my specific feedback to them was -- well, they asked about polymerization, you know, being the reason for, you know, that delay and then 60-minute flare and what I remember saying was well, I think it's extremely low probability that it's polymerization. It's more likely that it's either the railcar responding, you know, as it needs to through the PRD or, you know,

it could be something mechanical with the PRD. At this point, you know, I don't know how many iterations of venting that is, but it's been flexed a lot in that 10 hours. So that was the feedback we gave them then and then, you know, we're trying to think through -- I remember asking questions about -- it was clear they were worried about something going on inside the car that they couldn't see, which is very legitimate considering keeping everybody safe at this point. So the focus was how do we -- you know, how do we figure out if there's anything going on inside the car, how do we make them comfortable with that.

And so we started talking about hey, even though it seems a little absurd to talk about taking temperatures in a pool fire, we're like hey, can you -- can you use thermal -- I asked them about a thermal scan, you know, we do that on electrical equipment and so I said look, if you can take a temperature on the car, then you'll know exactly what's happening inside the car.

You know, I'm telling you, I think it's extremely low probability, but you need to know because you're going to have folks up there, so if it's -- if you can go get a temperature, then you'll know what's happening. It's a very exothermic reaction, extremely exothermic polymerization reaction, and so there's no way for that to be going on without it leaving a signature in temperature, if you can get one. So that's kind of what I remember about Saturday evening, you know, and the conversations about that one car and then, you know -- you know,

how you know if polymerization is going on, you got to get a temperature. Now, whether or not, you know, it was safe for them to do that and at one point, you know, we -- they got to figure that out, but there's no way for polymerization to be going on without leaving a signature stamp, as exothermic is VMC polymerization is. So that was kind of the gist.

Q. Okay.

A. That was Saturday evening and then, you know, we had a call, I think, early Sunday morning, about the same number of folks, I think one or two people changed out on our end, and I think Scott Gould was the Norfolk Southern rep on that call and then one of our former senior VPs of manufacturing was on Saturday's, he wasn't on Sunday's, but we had our current senior VP of manufacturing on the Sunday morning call. So there were a few minor people changes like that, but I think, collectively, for the group it was, you know, the same folks and about the same numbers.

Q. Yeah, okay.

A. And then kind of to follow that call on Sunday, the relevance of kind of new folks on the call, too, is again, SPSI started talking about polymerization, you know, concerns and one of the individuals that wasn't on Saturday's call, who was our senior VP of manufacturing, was on the Sunday morning call and he heard the conversation on polymerization and I think he kind of asked hey, what are we talking about, you know, polymerization for and then, you know, recognized he wasn't on yesterday's call, right, so he

had to catch up a little bit. And then they talked through some of that and, you know, I think he said well, you know, something to the effect, you know, polymerization's not occurring, there was some more conversation and then he said, you know, let me be clear, polymerization is not occurring. Then he said my point is we're not there, we can't see what you see.

I think there had been discussions about the vent and burn at that point in the call and he's like we don't see what you're seeing, we don't -- we're not on the ground with you, so if you're talking about a vent and burn decision, don't do it because of polymerization, because polymerization is not occurring, that was the gist. So he was just trying to communicate vent and burn may have other motivators for it, but don't do it because of polymerization because it's not occurring and he was pretty absolute with that statement.

Q. Okay, thank you for that. So you mentioned thermal imaging, was thermal imaging actually used, do you know, on scene?

A. I don't think so, I'm not aware of it, Marc. It was just, you know, we were trying to spitball a way for them to figure out, you know, how to get a read on it or anything inside the car --

Q. Um-hum.

A. -- that's escalating and I think it was just, you know, a temperature --

Q. Okay.

A. -- gun is my understanding, you know, eventually, when they

started taking them. But I can't answer with a hundred percent confidence, that's my assumptions based on the numbers we saw.

Q. Okay. So let's talk about the conversations and the discussions --

A. Sure.

Q. -- from internal, where you were at your headquarters there or wherever it was, from Oxy --

A. Um-hum.

Q. -- to on-scene members. Can you tell me who was involved in those discussions? When that information that you just -- that you just stated was relayed, can you tell me who was in those conversations on the ground?

A. Yeah, sure. The same, the same groups. So Sunday night, once -- I should've mentioned that, you know, part of our response was a historical response, that we send folks to the scene, as well, because again you're handicapped from afar on the details and so we sent, as you're aware, three folks to provide the same technical insight on the ground to help facilitate the decisions.

So Steve and team, Steve Smith and team showed up Sunday, I think, had initial conversations with the folks on the ground, you know, he has a better part in the other conversations, and so then we have a call with Steve Sunday evening and it's the same groups. And so Steve's bringing back the questions that he got, you know, when he showed up, which is some of the same things, you know, hey, polymerization. I think they actually, you know, had the

temperature, first temperature data that we're aware of Sunday afternoon. And so, you know, Steve comes back to the group and says, you know, hey, there's questions about polymerization and here's some temperature data and I think he described -- you know, Steve walked through the data that he knew at that time, I think the first car, maybe it was the TILX, was at 60 PSI, and I think they had a couple data points --

Q. Okay.

A. -- where it had been there for a period of time, you know, the three railcars that are in the pool fire were, you know, 30 to 50 PSI, 60 to 85 degrees Fahrenheit, and then there was one car, I'll call it the railcar of concern, it was at a hundred and 35 degrees, maybe, with the first temperature. And so, you know, he brought that back and he was asking about hey, you know, they're asking about polymerization, what does that look like, and we talked through, you know, the fact that the car on the end, you know, wasn't in the pool fire, it certainly had warmed up, they're jacketed, they're insulated.

We talked about a hundred and 35 degrees being half of the relief device pressure, you know, it's sitting at a hundred and 20 PSI and the relief device at 247. So, you know, certainly it warmed up, but it wasn't even at the same temperatures of the ones that had been relieving for, you know, 12 hours. Those railcars were staying in the 185 to 200 degree range in order to lift the PSVs on them, right? So yeah, we talked through all that and, you

know, he got really comfortable, yeah, that makes perfect sense. And so then he went back and had a conversation with SPSI, you know, again reiterating, even based on the data that you've given us, we don't see any signs of polymerization in the -- in the temperatures. I think part of the other conversation with the three in the pool fire, in particular, was, you know, at least the one that had been venting 30 seconds every 2 minutes, that car, at least by our quick math, was empty or near empty and just by the duration of the time they described the venting and some quick calcs on what the flow rate through the PRV is going to be.

So that same group kind of -- once Steve got there and had those conversations, he brought the concerns from the team there on the ground that, you know, he didn't want to answer initially. Certainly, with his VCM expertise, a lot of the focus was polymerization and that's our, you know, PVC folks, those are two different animals and two different technologies.

And so we had a lot of both technologies represented in probably what was, you know, 250 years of OxyChem manufacturing experience with the executives and directors that were on the call and that's not -- that's not including, you know, folks that were in communications or others that had different functions, that's just inside-the-fence manufacturing experience. So --

Q. Okay.

A. -- when Steve came back and asked us, you know, here's what they're talking about, we kind of kicked that around, talked

through the scenario, hey, that car's warmed up, it's not even at its relief temperature, it's got a long way to go, in fact, 60-something degrees to even get to where the PRD is going to lift, you know, keep monitoring the temperature and it will tell you whether anything's going on. So we weren't in -- we didn't have a combined call then, so I wasn't in the relay of that information to Steve, but that's the kind stuff that we walked through to help him go back with our input and answer the questions that he had been asked when he showed up.

Q. Okay. All right, thank you for that. So just to circle back, so the conversations go internal to your on-the-scene team for Oxy, correct, and then Steve Smith and team on the ground relay that information then to an SPSI --

A. Yes.

Q. Okay.

A. Exactly, Marc. Once we had folks on the ground, that's how it occurred Sunday evening. So the Saturday night and Sunday morning was us directly with Norfolk Southern and SPSI and then once Steve was on the ground, he's talking to them. You know, from our perspective, we hope that's more efficient for the -- for the people that are managing the scene. And so he comes back and talks to us, we had the conversation, and he goes assists them with SPSI, which he did following our call and, you know, from our conversations with him, communicated the same things that -- the highlights from our conversation, which were we don't see any sign

in the temperature data of polymerization, so that shouldn't be a concern. But monitoring the temperature data to know that is a great thing to do, so we certainly supported that.

Q. So let's talk about the temperature data and the critical temperatures and the temperature pressure curve that --

A. Um-hum.

Q. -- you know, was discussed. But also, while I was on scene, I do remember that there was a particular critical temperature that had been mentioned numerous times of between about a hundred and 80 to a hundred and 90, somewhere in that range, as far as a critical temperature goes. Can you tell me a little bit about what that critical temperature is?

A. Yeah, absolutely. So the critical temperature, 185 to 190 degrees, depending on which vapor pressure chart you use, is the temperature in the railcar that has to be reached before the equivalent vapor pressure of the vinyl will lift the relief device. So it's actually the temperature at which the relief device on the car activates.

Q. Okay, thank you.

A. So that 185 correlates to the 247.5, you know, it's got to be at least there before it will start relieving.

Q. So that critical temperature wasn't necessarily a -- would've created a catastrophic failure of the tank car, that would've been the -- the time when the pressure relief device opens and relieves the pressure, correct?

A. Yes.
Q. Okay.
A. Yes, sir, that is correct.
Q. Have you done any calculations on the actual catastrophic failure of a DOT-105 tank car and what that would look like as far as the temperature, like how high a temperature or a pressure inside a DOT-105 tank car has to get before it actually catastrophically fails?
A. Yeah. No, I have not, Marc, done any --
Q. Okay.
A. -- calculations. I know the design pressure, you know, on those or the design rating's 300 PSI. As I understand, they're protected at 247 and a half on the relief device. I know from the -- from my perspective, before you get into the threat of over-pressurization, the temperature has to be above 200 degrees and the relief device not working, from my perspective. It's going to take that kind of a temperature before and the relief device not going off, you know, that should happen at 185 to 190, so you know, I think at 200-plus degrees or around 277 PSI.
Q. Okay.
A. You know, so you got to be there and climbing to get close to 300.
Q. Right. So --
A. But I have not done calculations.
Q. Right. And then let's talk about some more temperatures.

The temperatures that were being taken -- that were taken on scene, can you tell me who was taking those temperatures, do you know, and relating that back?

A. No, I can't tell you who took the temperatures, you know.

Q. Okay.

A. Yeah, it's either SPSI or the other emergency response folks. My understanding, it's SPSI, but I don't know that for certain.

Q. And so were you kept up to date on those temperature readings as they were coming through and as they were read or can you tell me how that information was being relayed to you as far as --

A. Yeah. So the first temperature information that we heard, I believe, was on Sunday afternoon and it included the one temperature from, you know, the car of concern at 135, but we didn't have any follow-up. My understanding is that they continued to monitor that railcar's temperature through the night and even into noon, 1 o'clock the next day.

I never heard any of that temperature. After the afternoon dataset was given to Steve, we didn't receive any more information or questions or, you know, asking for our input, you know, here's what the temperature's doing, what does that mean to you, that didn't occur after that initial dataset on Sunday.

Q. Okay. But to your understanding, even that critical temperature point, as they were being read and the information was being relayed, had never actually reached a hundred and 80 degrees or anywhere close to that on scene that you know of?

A. Yeah, what I would say on that, Marc, is that all of the railcars that were relieving had to be at that 185 to 190 degrees, right, and --

Q. Okay. Internally, you're saying.

A. Yeah, absolutely. And so then they're going to relieve and what happens with a liquid VCM is it almost auto-refrigerates, you know, some as it relieves and so, you know, those cars, particularly ones that were at the point of relief, they're 185, 190 in order to make that happen. So all of the cars had been that hot. My understanding, based on the manifest data, is that all the cars were observed to have relieved from their relief devices at some point.

Q. Okay.

A. I certainly wasn't there, I can't verify it, but that's my understanding, looking at the -- I think the manifest info that had, you know, railcars, that they relieved through the PRDs and I believe they were all yes, so that means at some point in the 2-day fire, all of those cars were in the 185 to 190 range, the relief devices went off, they would've pulled back, you know, once they relieve themselves and some continued to go, like the ones in the pool fire and the others, you know, you could relieve and reset and they're insulated, so it takes a while for their temperature to drop, right?

Q. Yeah. So regarding polymerization, can you talk about --

A. Um-hum.

Q. -- what catalysts would require polymerization as far as the oxygen environment or anything that would actually, I guess, fuel that polymerization or the runaway?

A. Yeah. So the polymerization, you know, you have to have an initiator in order to trigger that and the most common one and the one that's focused on for shipping the vinyl in a stabilized form is oxygen. So, you know, your oxygen levels have to be low, below 200 parts, to ship that as a stabilized railcar. There's a lot of things that are listed that can trigger polymerization. The rate of polymerization is going to depend on the concentration of the initiators that are present, et cetera, et cetera, but you got to have something like oxygen, other metals, something to basically break the vinyl chloride double bond.

So, you know, we add things in our PVC plants that are initiators to start that reaction and then things at the end to control it. But in this space where there's -- where there's no oxygen, low oxygen present, you know, you don't have an initiator present to start the polymerization. I think the SDS that the industry uses for VCM does a pretty good job of calling out, you know, a host of potential initiators that are out there. But in a low-oxygen environment, you know, you don't have to worry about those things.

MR. DOUGHERTY: Okay, perfect. Thank you for that.

MR. THOMAS: Sure.

MR. DOUGHERTY: So I'd like to just halt my questions there

so I don't stay longwinded with the questions here and give everyone else an opportunity to go around and ask --

MR. THOMAS: Okay.

MR. DOUGHERTY: -- questions if anyone has -- and if anyone does have any questions, just feel free to reach your hand, virtual hand, here and we'll ask the questions.

MR. THOMAS: I need to learn how to do that.

MR. DOUGHERTY: Does anyone have any questions so far? Chief Carey, good morning.

BY MR. CAREY:

Q. All right. Good morning, Paul, thanks for joining us.

A. Yes, sir. Good morning, Chief.

Q. Appreciate your time.

A. Yes, sir.

Q. So most of the technical advice that you guys were providing was you were providing it to SPSI, not to the incident commander?

A. Yes, sir. The two phone calls that we had were with SPSI and Norfolk Southern reps, so we weren't plugged into the incident command structure or the incident commander. Yes, sir.

Q. Oh, okay. And as far as the -- this risk of polymerization -- and I appreciate your refresher course on polymerization. I used to teach chemistry at the National Fire Academy. It's all --

A. Well, that means -- that means you can head-check me there, did I say anything wrong or was it mostly I sounded good?

Q. No, I'm not a scientist. But anyways, we don't know who was

providing those temperature readings, right, you said that?
A. Yeah, I don't know for sure. My assumption is that it was SPSI because that's who we were on the call with and we recommended that they take those so that they would know for sure what was going on inside the -- inside the railcar.
Q. Okay, but you also stated that on Saturday there was -- you were in contact with them and --
A. Yeah.
Q. -- at that point, even sight unseen, before you had that first good temperature reading, which you said was on Sunday --
A. Right.
Q. -- for some reason you did not worry about polymerization at that point and that was based on what?
A. Right, it's based on our awareness of the state that the VCM is in, the fact that the VCM -- the railcars were still pressurized based on their descriptions, right, so they're -- you know, in order for you to have polymerization, you've got to have oxygen or something else getting in that wasn't there when you shipped the car --
Q. Right.
A. -- and everything that we were hearing was, you know, pressurized at the dome, you know, we got jetted flares. And so, you know, the comment at that time was in regards specifically to the one railcar that was acting weird that, you know, they said hey, it had been venting --

Q. Right.
A. -- 30 seconds every 2 minutes. And so for that railcar to basically deplete itself, you know, over 8 to 10 hours through the PRD, there was just no evidence of polymerization, you know, based on what they were describing and our experience that the cars were stabilized.
Q. Is it fair to say that because you think that a lot of the product had been depleted, the pressure relief device would not have been operating as it was, if there was polymerized material coming up into it and plugging it up?
A. Yeah, sure.
Q. And there was no oxygen.
A. Yes, exactly. Yes, sir. And the other thing is just the description of the length of time that that relief device had gone on, you know, it was like 8, 10 hours, something like that, it was a long period of time that, at least per their description, it was hey, 30 seconds every 2 minutes. So you do the quick math, that's several hours of venting through that relief device and --
Q. Right.
A. -- it just didn't -- it seemed like, to us, with that kind of flexing of the relief device and our awareness of PRDs, it more likely -- you know, it was something mechanical with the relief device, hey, you know, you really flexed that spring or, you know, it's just reacting as it should, it just -- polymerization. But look, we're weren't on the scene, so the guidance that we gave

them was -- you know, my specific words were highly unlikely, extremely low probability; however, if you want to know for sure if there's something going on inside the railcar that you can't see, if you can get a temperature you will know for sure. So we didn't want to be absolute, these guys' lives are at risk and they're the ones responding, so you just want to give them hey, if you go get a temperature you can know if it's safe to do that, right?

Q. Right. Do you think the critical temperature at which catastrophic failure would occur would be more up around 300?

A. Yeah, I think the critical temperature as far as the railcar, if it's a thermal expansion, you know, what I was trying to say to Marc, this isn't a polymerization temperature, this is the railcar design for 300 PSI, as I understand, the relief devices are set at 247 to go off before you hit that design pressure. And so if you look at the pressure temperature curves for vinyl, the temperature's got to be above 200 degrees in order to get above the relief device, you know, set-point pressure. So I think --

Q. Right.

A. -- when I looked at them, 200 degrees is like a 277 PSI, so you got to be north of 200 just to get up to the design pressure of the car, if the car hasn't been damaged or other things, right? So that's what I was trying to communicate.

Q. Okay. And so let's talk about a potential for not just polymerization but BLEVE.

A. Yes, sir.
Q. As far as that goes, was there any discussion about the potential for BLEVE and what the temperatures and pressures would need to be to have a BLEVE?
A. Yeah. Certainly, that's a concern, you know, with railcars and I'll say the discussions that we had were primarily around the fact that the railcars were, you know, relieving themselves through the relief devices, as best described by, you know, SPSI, and had been doing so, you know, for a while, which was a good sign. So, you know, you got more confidence that that's not going to occur as you get further into the event because, from our experience, BLEVEs are going to occur pretty fast in a pool fire explosion scenario like that, you know, and when they go --
Q. Right.
A. -- they're going to go quick. So --
Q. Yeah.
A. -- it certainly was a concern, you know, we talked about -- I think I had some confidence in the fact that the relief devices, you know, appeared to be doing their job and going off. Now, they were, you know, going off, as they described, as a jetted flame. When they were relieving, it was, you know, a blow torch, right? But the good news was, is that, you know, we were hearing hey, this -- this relief device went off all through the night, 30 seconds every 2 minutes. So, you know, in those kind of scenarios, particularly for the three in the pool fire was the

primary focus, it sounded like we were getting away from BLEVE concerns because they were responding.

Q. Right, I get it. Good.

A. Yes, sir.

Q. Good explanation, thank you.

A. Yes, sir.

MR. CAREY: I don't have anything further. Thanks again for your time, Paul.

MR. THOMAS: Yes, sir, Chief.

MR. DOUGHERTY: Thanks, Chief.

Anyone else with questions at the moment?

(No response.)

MR. DOUGHERTY: A silent crowd today, I guess.

BY MR. DOUGHERTY:

Q. Okay. So if we could, I'd like to go over some -- just for some clarification, elaboration --

A. Yes.

Q. -- on the notes that were taken, that were submitted to our Kiteworks site on April 28th. And I just had -- I have some excerpts here, but I'd just like to read them and if you could just either elaborate on them or give some clarification, that would be -- that would be great.

A. Okay.

Q. So the first one is on page Oxy/NTSB-000194 and without repeating that every time I go on this, I would just like to --

A. Okay. Okay.
Q. -- give the page number.
A. Yeah.
Q. So on the provided notes, I'd like to know more about the note that says about the momentum to vent and burn or the momentum to liquid flaring and need to sit with NS and talk about it. Do you know what that is a reference to, as far as the momentum to vent and burn?
A. No, I don't, Marc. And transparently, I haven't seen the notes that were submitted last Friday, so -- or, you know, who took them or what they were thinking. The only comment I would give is that I know that, you know, there were two different scenarios that SPSI was reviewing with us, that they were considering. The one Saturday mentioned hey, we're getting ready to do a hot tap and flare, and then that railcar acted funny and then, you know, Sunday they were talking about vent and burn and walked us through some of their experience with that. So I really can't offer much further --
Q. That's okay.
A. -- than what I heard from them directly, right, and --
Q. That's fair. And I'm sorry, let me just go -- I'm going through my notes here, a couple pages.
A. That's okay.
Q. So on page 195 of the notes, it says moving forward tonight to set up for vent and burn tomorrow, set up to move TILX tonight

and re-rail and move, TILX being the eastern-most car. Do you remember the conversations or discussion about re-railing the TILX car and why it was and why that didn't happen?

A. I don't, Marc. I do remember hearing -- I mean, I don't remember that coming up in our -- in our Saturday or Sunday morning conversation, I just don't remember that. I do remember hearing, I can't tell you when, that that was a consideration about moving that TILX car.

Q. Yeah, okay.

A. But I can't tell you, I don't remember being a part of the direct conversation where that was going on, but I do remember someone talking about they were considering that or had asked about it or --

Q. Okay.

A. Yeah.

Q. All right, thanks.

A. Not much help there, but --

Q. No, that's fine. So page 196, there was a note and I understand these are not your notes, these are someone else's notes, but --

A. Yeah. I can give you my perspective --

Q. Yeah.

A. -- if it's something that I was a part of or a conversation, yeah.

Q. Yeah, perfect. It says polymerization S/B, a runaway

transaction temp would keep rising, not starting to drop. I'm not quite sure what the S/B means. Do you happen to know what that means?

A. Polymerization, what's it say?

Q. It's an S/B. Just a question.

A. Polymerization S/B, what they were -- it sounds like what that was referring to is back to the temperatures and the temperature being critical to clearly indicate where the polymerization was going on. So if, you know, any temperature drop, you know -- by definition of exothermic polymerization, you can't have temperature drop. So I don't know what S/B -- if that's your question, what S/B means.

Q. No, it was part of the question.

A. I don't have the acronyms the folks around me use, so I'm still trying to learn some of those.

Q. Yeah.

A. But no, I don't know.

Q. It was really just more along the lines of the temperature, I guess, from what I understand, it just says polymerization, the temperature would keep rising as opposed to dropping for polymerization.

A. Yeah, yeah, that's what -- so for polymerization reaction, you know, for sure, that's one of the things we communicate, that it's going to be very exothermic and it's going to continue to rise until it, you know, reaches its endpoint, you know, whatever

that -- so it's an ongoing exothermic reaction and it gives off, you know, a tremendous amount of heat, so it's a -- I agree, that's what they seem to be saying there was, yeah, it continues to rise, it doesn't go in reverse. You know, it will rise a few degrees and then -- and then start dropping.

Q. Yeah. So were you -- given the temperatures, were you aware that the temperatures had spiked and were dropping, declining and dropping and leveling off, up until the decision to vent and burn?

A. Yeah, not until Monday morning, you know, after we heard the announcement that there was extreme, you know, temperature rise, high probability of over-pressurization or explosion and, you know, blowing shrapnel for a mile, you know, we quickly reached out to Steve and they said no, the temperature, you know, went from 135 I think to 138, you know, Sunday evening, and then back to 130 Sunday evening and then I understand it continued to drop until noon or 1 o'clock where it was, you know, maybe 126 or 127. I haven't looked at that data firsthand, but --

Q. Okay.

A. -- I understand that to be what was uploaded recently.

Q. Correct. Yeah.

A. So no, we weren't aware of that and, you know, we were aware of the 135 and, you know, provided guidance on the status, what that meant to us, you know, as far as the pressure on the railcar, half of its relief device setting, but we weren't aware or didn't have any other communications on the temperature drop that

occurred through the evening, evidently.
Q. Okay, all right. Thank you for that.
A. Sure.
Q. So just moving on, a couple -- I think I have just a few more and it's really just in reference to a temperature that was given in the notes of a hundred and 30. That was on page 197. We don't have the hundred and 30 degree and I know you haven't seen it yet, but we don't have the hundred --
A. Yeah.
Q. -- and 30 degree reading. Do you happen to know where that temperature came from or who relayed that to you? Or your group.
A. Yeah. Yeah, I guess that's from Steve, you know, it was -- what I understood was it was 135 to 138 and then dropped to 130 and stayed there. Talking to Chris, you know, he thinks maybe that was a roundup from temperatures below that, that I believe, you know, continued. So maybe if it was, you know, dropping to 126, 127 and they said --
Q. Okay.
A. -- yeah, it's about a hundred and 30 degrees, so that would be the best explanation I'd have for that. But we were communicating, you know, Monday morning when we called, it was yeah, he said it dropped to 130 and it stayed there through the evening, so no real change from -- you know, other than the -- I think maybe it was at its high at 138 and so it had dropped like 8 degrees and stayed there, is what we understood before the --

before the notes were uploaded.
Q. Okay, thank you.
A. Sure.
Q. So the next note, let me see where this is at, page 198. It says SRS, Chip, which I believe that's Chip Day from SRS, says that --
A. Um-hum.
Q. -- polymer came out of the vapor space. Do you recall any conversations about it and if there was polymer coming out of the vapor space, what that would actually look like?
A. Yeah, I don't -- can't really comment on that or don't have any firsthand, you know, knowledge. They didn't -- well, we didn't have any direct communications with them, you know, on Monday, so I'm not sure what -- what was communicated there.
Q. Okay.
A. Yeah.
Q. All right. And then my last question here is a note about updating the SDS, as far as the quantity info around phosgene. Do you know what that's in reference to?
A. No, I don't. You know, the SDS, you know, has that listed, so I'm not sure what they're referring to.
Q. Okay.
A. I think the SDS clearly, you know, talks about the potential, you know, combustion products on it, the best I remember.
Q. Okay, all right. Thanks, Paul, I appreciate that.

A. Yes, sir.

MR. DOUGHERTY: And that is -- honestly, that's all my questions. I'd like to go around again. If anyone else has any other questions, feel free to raise your hand or speak up and ask away.

Ms. Stegmann.

BY MS. STEGMANN:

Q. Yes, good morning. Paul, I just have a few questions, I don't get too many opportunities to ask you questions. Just to clarify some of your statements earlier, was Oxy part of the unified incident command, from your perspective?

A. No.

Q. And you responded to Chief Carey that you were not plugged in, I think, to -- with the incident commander. Do you know if anybody in the Dallas special situation room ever spoke directly to the incident commander?

A. No, we did not.

Q. Okay. And I think it's clear from your testimony that you do not believe that polymerization was occurring in any of the five VCM railcars. Can you make reference or recall if we did any testing at Oxy Vinyls post-incident, sampling or testing to confirm or validate polymerization presence?

A. Yes, yes. Under direction of the NTSB and with their, you know, approval, we collected samples and had them analyzed, you know, on all five railcars at our Avon Lake lab and those results

also indicated there was PVC present in any of the cars.
Q. And are you aware of anyone from Oxy communicating a different conclusion on polymerization occurring?
A. No, I'm not aware of any communication of that, ma'am.
Q. And I guess my final, just following up on that, is do you think that there's any mixed message on this point of polymerization from Oxy?
A. No, I think, you know, we were provided the right guidance on Saturday, you know, for that scenario that we described and said hey, I think that's extremely low probability, but here's how you know, you know, it's very exothermic, you know, if you can get temperatures, you'll know. And they need to know, right, they're at the tip of the spear, so those folks need to be sure and I think that was the right guidance for them.

And certainly, as we got temperature data on Sunday, you know, we were able to confirm hey, look, this one railcar of concern is at half of its relief device set-point pressure, it's not even at the point now that the others have been at, that were relieving from a temperature standpoint, it's a long ways away, right?

So I think we, you know, did everything that we could to try to provide the right insight and I think it was the right, you know, technical input to -- to inform the decisions. It was a challenging situation for them to navigate through. So we got a world of respect for SPSI and what they do and that was a -- that

was a challenging situation.

MS. STEGMANN: Okay, thank you. That concludes my questions. Thank you, Paul.

MR. THOMAS: Yeah, sure.

MR. DOUGHERTY: Thanks, Karenanne.

BY MR. DOUGHERTY:

Q. Just one more follow-up question regarding the temperature readings of the cars.

A. Yes.

Q. Do you know where they were taking the temperature readings from, being that they were jacketed and insulated cars?

A. I don't with a hundred percent confidence. It seemed like I heard a couple things, it seemed like I heard at one point, and I can't confirm this is accurate, that there was a -- that they were able to get through the internal skin, maybe through a tear in the insulation jacket on one of them and I probably assumed, Marc, that, you know, as things subsided they were able to get them off the -- of the pressure plate, but the fact of the matter is I don't know for sure where they were taking them, that was never communicated.

MR. DOUGHERTY: Okay. All right, thanks for that.

Last round of questions, anyone?

(No response.)

BY MR. DOUGHERTY:

Q. Okay, hearing none, so we've obviously -- I've obviously

asked you a lot of questions today and I always like to leave off --

A. Yeah.

Q. -- an interview with this, is there anything that we haven't asked you or any information that you may have that you think would be helpful in our investigation with this incident?

A. No, I think, Marc, honestly, we've covered that and we had a really limited role. You know, we take the response here, we sent folks to the scene and we had our executive -- half of our executive team and directors, you know, on the -- on the phone there trying to support it and I think you've all been thorough in kind of trying to get a sense on what things were communicated and what was discussed, you know, and what -- what we were hearing, the guidance we were giving.

Again, everybody on this end recognizes that, you know, we were from afar and the folks on the ground and with the responsibility to navigate through that, you know, we were all aligned in trying to give them as much info and as much technical insight as we could for them to do that accurately and I think you all thoroughly covered, you know, the information that we have to share. It's pretty limited.

Q. I understand. Yeah, appreciate that.

A. Yeah.

MR. DOUGHERTY: All right, thanks, Paul. I appreciate it.

I think this is a good time to conclude the interview. The

time is 10:54 a.m. and I will stop the recording.

(Whereupon, at 10:54 a.m., the interview concluded.)

CERTIFICATE

This is to certify that the attached proceeding before the

NATIONAL TRANSPORTATION SAFETY BOARD

IN THE MATTER OF:	NORFOLK SOUTHERN TRAIN DERAILMENT IN EAST PALESTINE, OHIO ON FEBRUARY 3, 2023 Interview of Paul Thomas
ACCIDENT NO.:	RRD23MR005
PLACE:	Via Microsoft Teams
DATE:	May 5, 2023

was held according to the record, and that this is the original, complete, true and accurate transcript which has been transcribed to the best of my skill and ability.

_____

David A. Martini
Transcriber

National Transportation Safety Board
Washington, D.C. 20594

Transcript Errata

Subj: Transcript Review Request for: Derailment of Norfolk Southern Railway Train 32N with Subsequent Fire and Hazardous Materials Release, East Palestine, Ohio, on February 3, 2023.

Accident No.: RRD23MR005

To: Paul Thomas, Oxy Vinyls

Dear Mr. Thomas,

The enclosed transcript of your interview on May 5, 2023, is provided for your review and comment to ensure its accuracy. It is not for public release.

The transcript is investigative information of the National Transportation Safety Board (NTSB) created as part of the NTSB's investigation into the derailment of Norfolk Southern Railway train 32N with subsequent fire and hazardous materials release in East Palestine, Ohio, on February 3, 2023. (NTSB Accident No. RRD23MR005).

NTSB regulations prohibit the public release of investigative information prior to release by the NTSB without the permission of the NTSB Investigator in Charge (IIC). See 49 C.F.R. § 831.13(b). The IIC has not approved public release of this information at this time. Therefore, we request that you refrain from any further dissemination of this transcript.

Kindly review this transcript for accuracy and provide corrections, if any, in the attached table. Please print, sign, and return it to me via email by close of business, **May 23, 2023.** Please return or destroy the transcript after providing your comments.

Thank you in advance for your attention to this matter. If you have any question regarding the process, please feel free to contact me.

Thank you,

Marc Dougherty
Hazardous Materials Accident Investigator (RPH-20)
National Transportation Safety Board
490 L'Enfant Plaza East, SW
Washington, DC 20594
[redacted]
[redacted]

National Transportation Safety Board

Washington, D.C. 20594

Transcript Errata

TABLE OF CORRECTIONS FOR TRANSCRIPT INTERVIEW WITH: Paul Thomas
RECORDED ON May 5, 2023

PAGE NUMBER	LINE NUMBER	CURRENT WORDING	CORRECTED WORDING
1	19	for all of these	priorities
8	19	if I	I won't
11	19	Rupture	Relief
11	19	, it just don't	at the dome
13	7	considering	concern in
13	19	so if it's -- if	so if
14	3	and at one point, you know, we-	at some point, you know,
14	5	exothermic is VMC	exothermic as VCM
16	21	has a better part in	hasn't been a part of
17	25	PSVs	PRDs
18	10	PRV	PRD
19	7	to Steve	from Steve
19	22	goes assists them	goes and sits down
21	12	300 PSI. As I understand, they're	300 PSI, as I understand. They're
21	19	degrees or around	degrees are around
27	24	it just -- polymerization	its just not likely polymerization
28	7	you can know if it's	you can know. If it's
33	8	indicate where the	indicate whether
34	4	it will rise	it won't rise
38	1	there was PVC present	there was no PVC present
38	8	we were provided	we were providing
39	14	was a -- that	was a hole that
39	15	to get through the	to get to the
40	8	take the response here,	take the response serious,

Paul A. Thomas

Printed Name of Person providing the above information

[redacted]

Signature of Person providing the above information

National Transportation Safety Board

Washington, D.C. 20594

Transcript Errata

05/22/2023

Date