STATE OF IOWA
DEPARTMENT OF COMMERCE
BEFORE THE IOWA UTILITIES BOARD

IN RE:	:	Docket No.
	:	HLP-2021-0001
SUMMIT CARBON SOLUTIONS, LLC	:	

DEPOSITION OF JOHN GODFREY,

taken by the Sierra Club before Darcy Kriens, Certified Shorthand Reporter of the State of Iowa, at 111 East Grand Avenue, Suite 301, Des Moines, Iowa, commencing at 1:30 p.m., Thursday, June 22, 2023.

DARCY KRIENS - CERTIFIED SHORTHAND REPORTER

APPEARANCES:

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For George Cummins:

BRIAN E. JORDE, ESQ.
(Appearing via Zoom)
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Also present: JESS VILSACK, ESQ.
JAMES POWELL

I N D E X

(phonetic) indicates a phonetic spelling.
{sic} indicates the text is as stated.
Quoted text is as stated by the speaker.

P R O C E E D I N G S

JOHN GODFREY,

called as a witness by the Sierra Club, being first duly sworn by the Certified Shorthand Reporter, was examined and testified as follows:

EXAMINATION

BY MR. TAYLOR:

Q. Will you state your name, please.

A. John Godfrey.

Q. Mr. Godfrey, I'm Wally Taylor. I represent the Sierra Club.

Have you had your deposition taken before?

A. Yes, sir.

Q. So you know the routine?

A. Generally, yes.

Q. Just a couple of things specifically about this one, perhaps. If any of us ask you a question you don't understand, ask us to repeat it or rephrase it. We want to make sure you understand it.

A. Yes, sir.

Q. And also, if we ask you a question and you feel it's beyond your scope of testimony or something that is beyond your expertise, let us know, and let us know who might be a better person to ask that question of.

A. Okay.
Q. Maybe you don't know who might be a better person, but at least if you do, let us know.
According to your written testimony, you work for DNV. For the record tell us what "DNV" is.
A. DNV is an international standards organization certification and verification company. It is head quartered out of Oslo, Norway, and we operate in approximately 100 countries and have approximately 15,000 employees.
Q. And when you say that you establish standards and so on, what does that mean exactly?
A. DNV is a recognized international standards-writing body.
Q. Okay. So how do you develop these standards?
A. Standards are developed by teams of employees at DNV in the specific subject matter that the standard applies. It also incorporates research done at DNV facilities and other industry research done by other parties and can involve outside expertise and outside companies, depending on the standard that's being developed.
Q. So you might contract with somebody else, is that what you're saying, to help you develop the

standards?

A. It's more likely that it would be done through a joint industry project where other parties would join and share in the cost of developing the standard.

Q. And how long have you worked for DNV?

A. Nine years.

Q. And just kind of generally tell us what your experience was before that in the pipeline industry.

A. I was employed by Colonial Pipeline from approximately 1987 to about 2004.

Q. Is that the one that got hacked a couple years ago?

A. Yes, sir.

I was employed by Colonial Pipeline in a variety of positions, including the integrity manager, engineering manager, operations manager, district project lead for all field construction and maintenance activities in the Southeast District as well as a staff engineer, area engineer. I believe that's it.

Following Colonial I went to work for Explorer Pipeline Company for four years as their integrity leader. After Explorer I worked for two

years at Berg Steel Pipe in line pipe manufacturing as the vice president of quality control and quality assurance.

I left there and worked a year at RCP as a regulatory consultant and then worked two years at SGS Industrial Services as vice president of operations for a business unit that did mechanical integrity inspection and engineering services for upstream and downstream petrochemical facilities.

Q. When you talk about "pipeline integrity," what do you mean?

A. The inspections and activities that ensure the mechanical integrity of the pipeline. More specifically, compliance with 49 CFR Part 195.452, commonly known as the Integrity Management Rule for Liquid Pipelines.

Q. The PHMSA standards, as I understand it, apply just to the design, construction, operation and maintenance of the pipeline; is that correct?

MR. LEONARD: I'll object to the extent it calls for a legal conclusion, but go ahead.

A. PHMSA regulations are not what I would classify as standards. They're regulations, and they cover design, construction, operation and maintenance.

Also, control room management to the extent

that that includes personnel training and also personnel training and operator qualification for certain activities as well as emergency response, accident reporting, drug and alcohol testing.

I'm sure there are a few other details that I don't recall sitting here today.

BY MR. TAYLOR:

Q. You mentioned 195.452. Is that basically what your testimony in this case revolves around?

A. No.

Q. 452 is the Integrity Management Program section; is that correct?

A. That is correct.

Q. And that's basically what your testimony is about, isn't it?

A. No. My testimony is broader. It includes other elements of pipeline safety.

Q. Okay. So we'll get to those.

The first thing you talk about that I have a note on in your testimony are ductile fractures. Explain what a "ductile fracture" is.

A. It's a metallurgical term that refers to a fracture that propagates through ductal failure of the pipe. Ductal fractures can occur in the pipe body as well as in the pipe seam.

Q. And by the "pipe seam," you mean the weld where the pipes come together?
A. No, sir.
Q. What's a "pipe seam"?
A. It's the weld that joins the pipe material to form the cylinder. It's a longitudinal weld along the axis of the pipe.
Q. I understand. I guess I thought the pipe was a solid circle and not welded longitudinally.
Am I incorrect in that?
A. There are multiple ways to manufacture pipe. Some pipe is seamless. The majority of pipe used in lined pipe construction and operations does contain a seam.
Q. Why would a pipe not be seamless? It seems to me that would be much safer than having a long weld that could fail.
MR. LEONARD: Objection. Calls for speculation.
Go ahead.
A. Modern pipe seams don't present any greater risk of failure than the pipe body in terms of the technology. PHMSA regulations recognize a pipe seam factor that's used when establishing operating pressure to account for different seam types.

BY MR. TAYLOR:

Q. Still, why wouldn't you manufacture a seamless pipe and not even have to worry about that weld?

MR. LEONARD: Same objection.

Go ahead.

A. Seamless pipe is more difficult to manufacture at certain diameters and wall thickness combinations. It can also -- No, strike that.

It's more difficult in general to manufacture in different wall thickness and diameter combinations.

BY MR. TAYLOR:

Q. And why is that?

A. The nature of the manufacturing process.

Q. Is it just more expensive?

A. I don't know the market price for seamless pipe at this time.

Q. You cite Section 195.111 regarding ductile fractures, and as I read it, that just says, "A carbon dioxide pipeline system must be designed to mitigate the effects of fracture propagation."

Is that your understanding of that section?

A. That's how I generally recall the section, yes. I do not have it in front of me.

Q. I'll show it to you.
A. Thank you.
Q. I'm not trying to hide anything from you.
(Brief pause.)
A. Yes, that's what the regulation says here.
Q. So there are no real standards or guidelines as far as specific actions that a pipeline company should take in order to satisfy that section? Is that a fair statement?
A. No.
Q. There are none set out in the section; correct?
A. Could you rephrase or repeat the question?
Q. Sure.
A. Know what are set out in the section? I did not understand.
Q. Okay. Sure.
Section 195.111 simply has that one sentence that I read to you; correct?
A. That's correct.
Q. In telling a pipeline company or firm that the system must be designed to mitigate the effects of fracture propagation, there's nothing to tell the pipeline company or manufacturer or whoever this is addressed to specific recommendations, standards,

guidelines that they must follow in order to satisfy that general directive of that section; is that correct?

A. There's not a reference in that specific section to another standard. I would have to go back, though, and look at the standards incorporated by reference at the beginning of Part 195 and see if any of the applicable standards that deal with fracture control and fracture propagation are, in fact, incorporated by reference at the beginning of the regulation.

Q. Generally how would you design a pipeline to mitigate the effects of fracture propagation?

A. In broad terms, it's a function of the toughness of the pipe and the yield strength of material or the ultimate tensile strength of the material and the wall thickness of the lined pipe.

Q. And in your testimony you said that Summit has submitted to installing heavier wall pipe and fracture arresters throughout the system where needed.

Do you recall that in your testimony?

A. Yes, I do.

Q. First of all, what are "fracture arresters"?

A. Fracture arresters are devices or

components that serve to arrest any running fracture at a given point along the pipeline.

Q. And what does a fracture arrester look like, or exactly what does it do?

A. It's a commonly used term that can -- that generally describes a number of different components that could be installed.

It can be a composite wrap around the pipeline. It could be a steel reinforcement sleeve on the pipeline, or it could be a heavier wall section of pipe, short-jointed pipe, or it could be a heavier wall fitting.

Q. Do you know what type of fracture arresters Summit proposes to use?

A. Through conversations with Summit, they have informed me that they plan on using composite sleeves or composite wraps.

Q. So in other words, it's an additional wrap around the pipe? Is that what you're talking about?

A. Generally it's a composite material that consists of an adhesive, a binder and several wraps of carbon fiber composites or other fibers around the circumference of the pipe. The number of wraps depend upon the desired strength that they want to achieve.

Q. And then you say they'll be used where

needed. How do you know where they're needed?

A. That's part of the design process, and I've not reviewed nor did I testify on Summit's design process.

Q. So you're relying on Summit to follow up on that; correct?

A. It's Summit's design. I was not asked to review their design.

Q. Looking on page 3 starting at line 17 in your testimony, you say, "Dispersion and over-land spread analysis allows Summit and agencies to understand the potential consequences of CO2 release."

Do you know whether Summit has done any dispersion modeling?

A. I've not been asked to review nor have I reviewed any dispersion modeling done for Summit.

Q. And what's an over-land spread analysis?

A. That's a term used in the industry to describe the spread over land or transportation by water of a spilled commodity, typically used for hazardous liquids or used in the hazardous liquid pipeline regulations.

Things such as oil spills, refined product spills, spills of fluids that would be heavier than air that would travel along the surface of the route.

Q. Is that different than a dispersion model?
A. Dispersion modeling is a general term that describes the dispersion of a released gas or vapor within atmosphere. Dispersion models are generally software programs.
Some types of programs have the capability of doing over-land spread. Others do not.
Q. I'm still trying to figure out the distinction between a dispersion model and over-land spread analysis.
MR. LEONARD: Object to form.
Go ahead.
A. Dispersion modeling produces results of concentrations of a gas in the atmosphere at distances or how readily that gas would disperse within the atmosphere. Over-land spread would figure how that gas would flow over the surface of the land.
The two can be used together in combination. Obviously, as it spreads over the land, it will disperse as well.
Q. Do you know whether Summit has done an over-land spread analysis?
A. I have not been asked to review Summit's dispersion or over-land analysis. I would not have.
Q. So when you're testifying here, you're not

asserting that Summit has or is going to do a dispersion or over-land spread analysis? You're just saying that would allow them, if they did it, to understand the potential consequences of the CO2 release; is that correct?

A. May I see my testimony, please? I don't have it in front of me.

Q. Sure. Sure. Starting at line 17.

(Brief pause.)

A. Could you repeat your question?

MR. TAYLOR: Can you read it back?

(The requested portion of the record was read.)

A. I'll just refer back to the full paragraph of my testimony beginning at line 14. "Additionally, federal regulations require that CO2 pipelines conduct an air dispersion analysis to determine how an inadvertent CO2 release from a pipeline could impact people and the environment. This analysis, which also incorporates local terrain, is prepared to comply with PHMSA's liquid Integrity Management Program regulations. Dispersion and over-land spread analysis allows Summit (and agencies) to understand the potential consequences of a CO2 release. Under PHMSA's integrity management regulations, Summit will

also use this analysis to inform its selection of appropriate preventive and mitigative measures including valve locations, emergency response planning and preparedness to reduce those potential consequences."

BY MR. TAYLOR:

Q. I'll trade you.

A. Thanks.

Q. Have you ever been involved in conducting over-land spread analyses?

A. Yes.

Q. How do you go about that?

A. As integrity manager, I was responsible for over-land spread analysis at both Colonial Pipeline and Explorer Pipeline for their systems, which were refined product, hazardous liquid systems.

We contracted with a variety of software providers and engineering firms to do the over-land spread analysis and provide us with shake vials, which were then integrated into our in-house GIS system.

Q. I sort of get the impression, from what you've been saying, that the dispersion model has to do with gases, and the over-land spread analysis has to do with liquids. Is that a fair distinction?

A. No.

Q. Why not?
A. Over-land spread analysis is applicable to any fluid with a density greater than air that would tend to stay low to the ground and flow with the ground, including fluids like propane.
Dispersion analysis can also be used for liquid volatilization and have a vapor component such as a gasoline spill. So there is overlap between liquids and gases.
Q. Thank you for the explanation. I was getting confused.
Section 452 of Part 195 talks about high-consequence areas; is that correct?
A. There are references to high-consequence areas in that section of the code, yes.
Q. And "high-consequence area" has a definition, but one part of the definition is a highly populated area; correct?
A. High population is a definition and a criteria for an HCA, that's correct.
Q. How does Section 452 relate, then, to a rural area, which we have a lot of in Iowa, where the pipeline might be close to a residence or close to a livestock facility or close to a rural school, as a matter of fact? How would the Integrity Management

Program apply to an area like that?

A. The Integrity Management Rule is intended to require operators to take certain actions in those locations that are deemed higher risk, commonly referred to as HCAs.

If locations qualify or are identified as HCAs by the operator, then the provisions of the rule would apply.

Q. But if it's a rural area that's not a highly populated area or any other definition under HCAs, the rule wouldn't apply, would it, or wouldn't it? I'm talking about Section 452.

MR. LEONARD: I'm going to object to the extent it calls for a legal conclusion.

Go ahead.

A. In my opinion, as I sit here today, the rule would not apply to non-HCA locations, unless an operator adopts provisions of the rule into their procedures, in which case, under a separate section of Part 195, operators are required to follow the procedures they put in place regardless if those procedures are specific to any particular provision of 195 or not.

BY MR. TAYLOR:

Q. Have you seen Summit's Integrity Management

Program?

A. I have not.

Q. On page 5 of your testimony at line 15, you indicate that DNV has built up a considerable experience in carrying out experimental studies and product testing for dense phase and gaseous phase CO2. Does that include dispersion modeling?

A. Yes, it does.

Q. What has DNV done in the area of dispersion modeling?

A. DNV is involved in producing and utilizing our own air dispersion or dispersion models as well as various joint industry projects and experimental projects to tune other models to provide data for validation of other models and to develop other techniques within the realm of computational fluid dynamics to model releases of CO2 that also includes instrumented, large-scale testing.

Q. In terms of CO2 pipelines, what has your testing revealed as to the average dispersion of CO2 after a rupture?

A. As I sit here today, I can't really summarize in a nutshell something or anything that it's done. There's several papers, many papers that have been published with the results of the testing

and the results of the validation work that's been done. I'd just refer you to those.

Q. Would that be on DNV's website?

A. Some. Others are in industry journals.

Q. Okay. So if I Google "DNV, carbon dioxide dispersion," I might find something?

A. Yes, sir.

Q. Okay. Thank God for Google. I forget what term you used, but you were talking about a fracture that runs along the length of the pipe.

Do you recall that?

A. Yes.

Q. What was your term for that?

A. Ductile fracture.

Q. Is it possible in a CO2 pipeline that there may be just a local rupture or break in the pipe that turns into a ductile fracture?

A. Do you have a specific in mind? I don't want to speculate, but do you have a specific example you could refer to?

Q. Not a specific example, but I just wanted to verify it with you.

In a CO2 pipeline under the kind of pressure we're seeing with the Summit pipeline, if a local rupture -- it would open up kind of like a

zipper along the length of the pipe?

MR. LEONARD: Objection. Calls for speculation.

Go ahead and answer.

A. I'm still not getting exactly the example you're trying to provide. I'm not -- I'm happy to answer it. I just -- Can you be more specific?

BY MR. TAYLOR:

Q. I'll try. Is it possible for a CO2 pipeline to, perhaps, be breached by some object that would just put a small hole in it, and that small hole would then lead to a ductile fracture?

A. In terms of fracture mechanics, generally not because once a leak begins and the pressure equalizes across the leak, there's not energy to develop a -- or energy to drive a cracked tip.

It's something we refer to as the leak rupture boundary, at what point would a leak be more prevalent than the potential for rupture. So in that scenario, probably not.

Q. I think you mentioned earlier valve spacing. Do you recall that?

I'm not sure it's in your written testimony. I don't have a note on that, but this afternoon, as I recall, you talked about valve spacing

in some context.

Does PHMSA have requirements for valve spacing?

A. I don't recall mentioning valve spacing earlier, but it is in my written testimony on page 6 beginning at line 4 and going onto page 7.

Q. That's probably where I saw it.

So why is valve spacing important?

A. To reduce the volume of CO2 or any other commodity in a pipeline between the valves.

Q. What's the purpose of that?

A. To control the amount of product that would be released in the event of a leak.

Q. So the valves would shut off the fluid from that area of the pipe where the leak occurs?

A. It's typical for a pipeline operator, if they suspect or they know they have a leak on the pipe, to close isolation valves on either side of the known or suspected leak to limit the volume that would be released.

Q. Are the valves there for any other reason, other than in the event of a rupture?

A. Regulations also require that valves be placed on either side of certain waterways and that valves be placed on either side of pump stations and

at the inlet or outlet of certain facilities. Generally that's to facilitate maintenance as well as emergency response.

Q. Are there any integrity issues for a CO2 pipeline in relation to water crossings?

A. There's been research done on the effects of CO2 in seawater; however, I'm not aware of specific research that's been done on the effect of a CO2 release in fresh water. It would depend upon the amount of water that was flowing by and the volume of the release.

So essentially the concentration within water of CO2, the risks at that point would be that there would be formation of acids, and it would cause some level of acidification.

Q. Is that something that there's a PHMSA regulation on or no?

A. Not to my knowledge.

Q. What would be the recommended, at least, way to address the risk of a rupture at a water crossing for a CO2 pipeline?

THE WITNESS: Could you read back the question, please?

(The requested portion of the record was read.)

A. Through the prevention of a rupture through the design of the crossing itself.
BY MR. TAYLOR:
Q. And how would you design the crossing to better protect the integrity of the pipeline?
A. There are a number of industry standards and recommended practices around water crossings and risks at water crossings. The most common ways are utilization of heavier wall pipe and additional or specialty coatings as well as installation methods such as horizontal directional drilling, all of which will serve to reduce the risk or the probability of a failure within the water crossing itself.
Q. Do you have any opinion about what, in terms of the Summit pipeline, would be the proper wall thickness for the pipe?
A. I've not reviewed their design, so I have no opinion on the design wall thickness.
MR. TAYLOR: I think that's all the questions I have. Other folks may have some questions.
MR. WHIPPLE: I don't have any questions.
MR. OSTERGREN: I have no questions. Thank you.
MR. LONG: Yes, I do.

FURTHER EXAMINATION

BY MR. LONG:

Q. You discussed earlier high-consequence areas. Do you know whether Summit has identified the high-consequence areas for this proposed route in Iowa?

A. I have not been asked to review their high-consequence designations nor have I seen it.

MR. LONG: Okay. That's all.

MS. GRUENHAGEN: Hi. I'm Chris Gruenhagen with Iowa Farm Bureau, and I just have a question for you.

FURTHER EXAMINATION

BY MS. GRUENHAGEN:

Q. How are you associated with Summit?

A. DNV and myself specifically have been retained by Summit to assist their permitting process in the various states that they're proposing to operate in.

Q. So is your role limited to testimony, or are you advising on any parts of the project?

A. My individual role is limited -- it's primarily to testify, but as I work with and interact with management and leadership at Summit, if there's any questions they have about pipeline integrity,

pipeline design, anything they wish to discuss, I'm happy to do that with them as well.

MS. GRUENHAGEN: Okay. Thank you. That was all I had.

THE WITNESS: Yes, ma'am.

MR. LEONARD: Mr. Jorde, do you have questions?

MR. JORDE: I've got some questions.

FURTHER EXAMINATION

BY MR. JORDE:

Q. You talked about the high-consequence areas, and those high-consequence areas are determined solely by the operator, in this case Summit; correct?

A. That is not correct.

Q. Okay. Who determines what a high-consequence area is within a given county in Iowa?

A. PHMSA, through the National Pipeline Mapping System, publishes shapefiles that are derived from census data bureau or high-populated areas and other populated areas. They also publish data from the Bureau of Transportation Statistics for Commercially navigable waterways, and those are three categories of HCAs.

Q. So break those down. So PHMSA has, it

sounds like, only three areas that they look at. Navigable waterways, they look at if there's a lot of people, and what was the third one?

A. I referred to high-population areas, other population areas and commercially navigable waterways.

Q. All right. So what factors, beyond those three, should go into determining whether or not an area is a high-consequence area?

A. The definition of high-consequence area also incorporates unusually sensitive environmental areas or USEAs. These can be threatened and endangered species or certain drinking water resources.

That is a separate part of Part 195. That data is published at the state level by the states.

Q. Is any portion of determining a high-consequence area dependent upon difficulty of constructability of a pipeline?

A. I'm not aware of any.

Q. What is the maximum depth a CO2 pipeline could be buried underground?

A. Well, that would require me to speculate on the design of the specific CO2 pipeline, its internal pressure, its wall thickness. Also, I'd have to speculate on the ground itself.

Designers do have to consider the potential for collapse at great depth, and that includes both for below-ground and sub-C pipelines.

Q. Okay. So what's the maximum depth that a CO2 pipeline could be buried?

MR. LEONARD: Objection. Asked and answered.

Go ahead.

A. You'd have to be more specific. We'd have to know the operating pressure, the wall thickness of the pipe, the design of the pipe's steel. We'd also have to know very specifically the geology at the location.

BY MR. JORDE:

Q. Those factors you just mentioned, do you know any of those as it relates to the Summit proposed pipeline?

A. I have not been asked to nor have I reviewed Summit's design.

Q. Okay. So I'm just a little confused on what your testimony is.

You don't know what their design is. You're not opining on, you know, safety aspects or emergency response type of things.

So what exactly is the crux of your

opinions, if you don't know what the design of the pipeline is?

A. I've testified in this matter to pipeline safety issues and CO2 pipelines operated as hazardous liquid pipelines in general.

Q. Okay. And the safety issues, are there any particular safety issues? Are those confined to the design portion, or are they confined to the operation portion of a pipeline?

I don't want to stretch you, sir, where you're not prepared to go, but I need to understand kind of the limits, the boundaries of what you expect your testimony to be.

A. My testimony, my written testimony has covered PHMSA regulations and including specific requirements for CO2 pipelines, industrial standards that provide additional guidance for CO2 pipelines, safety measures that pipeline operators take for CO2 pipelines, pipeline regulations that address potential releases, how consequences of CO2 releases are determined, whether air dispersion modeling has been validated through testing, how does spacing a valve affect CO2 releases, where Summit intends to install those valves based on information from Summit employees.

What are setback requirements for CO2 guidelines and the history of CO2 pipelines in the United States including the number of miles of CO2 pipelines, how long they've been in operation, how Summit's system compares to existing CO2 pipelines, what's the performance history of CO2 pipelines in the United States, and how injurious leaks from CO2 pipelines in the U.S. have been.

Whether that data includes the release in Satartia in Mississippi and how does Summit plan on addressing safety concerns for their pipeline, and will Summit inspect the pipeline after operation and will Summit be required to make repairs if the assessments post-operation identify anything? Will the inspection and repairs be reported to PHMSA?

That's included in my testimony.

Q. So any portion of your testimony where it's a topic on what Summit will or won't do, your testimony is relying 100 percent on what employees are telling you they will or will not do; right?

A. That is correct, as well as documentation that they have provided when they provided it.

Q. Do you consider yourself to be an expert in the way of PHMSA regulations as to hazardous liquid pipelines?

A. In my role at both Colonial and Explorer in operating companies, regulatory compliance was functionally underneath my department, my group. So I managed the regulatory compliance activities.

As a member of API's operation's technical committee and chairman of the Pipeline Integrity Subcommittee, I regularly interacted with PHMSA for the purpose of proposed rules and establishing integrity rules, and I represented the industry as part of API. Most recently we've also conducted -- as DNV, we've conducted work directly for PHMSA in research and have contracted to PHMSA as well.

So throughout my career I've been involved with regulatory matters.

Q. Is that a long way of saying yes?

A. If yes answers your question, that would be correct.

Q. Well, I mean, I want your answers. I mean, I'm not saying you're not an expert. I'm just asking you if you believe you are an expert and are going to offer expert opinions or opinion testimony as to PHMSA regulations, and it appears like you are; is that fair?

A. Yes. The regulations that I'm familiar with and as they apply to this project are included in

my testimony.

Q. So you would agree, then, that PHMSA does not have any regulations on whether or not a county can develop its own Emergency Response Plan; correct?

MR. LEONARD: I'll object to the extent it calls for a legal conclusion.

Go ahead.

A. 195, Part 195 for hazardous liquids doesn't have any reference to counties. As far as anything PHMSA might do above and beyond that, I do not recall anything, as I sit here today. I just honestly can't recall anything to answer that question.

BY MR. JORDE:

Q. Would you agree that PHMSA regulates pipeline companies; it regulates the operators of hazardous pipelines?

A. Yes.

Q. Would you agree that if a county was to consider various factors, whether it be safety or other things in work that the county does, that PHMSA in no way has jurisdiction or rules that supersede what a county would do?

MR. LEONARD: Same objection.

Go ahead.

A. In my experience, I've never run across

that and seen that put into action. The federal preemption and the regulations, to the best of my understanding, give PHMSA primary authority for pipeline safety and pipeline safety regulations.

To the extent that states and any subdivisions within the states wish to regulate pipeline safety, they have to do it through an agreement with PHMSA.

BY MR. JORDE:

Q. A setback for land use purposes in any particular county, is it your opinion that that is a safety regulation as to a hazardous pipeline?

MR. LEONARD: Same objection.

Go ahead.

A. I'm not aware of any setbacks within regulations that are specifically tied to a safety case. Other than the one reference in Part 195 about additional depth of cover within a certain distance of certain structures, I'm not aware of any other safety requirements that specify setbacks.

BY MR. JORDE:

Q. And would you agree that there are no PHMSA regulations that cite or locate hazardous liquid pipelines?

MR. LEONARD: Same objection.

Go ahead.

A. PHMSA does not have siting authority. No, they do not.

BY MR. JORDE:

Q. Now, I want to go back to my depth questions. We learned yesterday that Summit at least has the intent of keeping a 1-foot buffer or 1-foot separation distance between any underground structures, whether it be tile lines or other pipelines from where it would locate its pipeline.

Is that consistent with what your discussions with Summit had revealed?

A. I have not discussed separation distances with other utilities or structures with any employees at Summit.

Q. When going under a river or, say, a river crossing, major river crossing, say the Missouri River, how far beneath the river do you go, or how does that work? How do you determine how far below the surface you need to go?

A. That's based on local geology.

Q. And in your experience, what is some of the larger depths below the river that the pipelines has constructed?

A. I'm familiar with pipelines that have been

constructed 80 to 90 feet below the mud line of a river.

Q. Are there any, to your understanding, PHMSA prohibitions on locating hazardous liquid pipelines through wetlands?

MR. LEONARD: Same objection.

Go ahead.

A. I'm not aware of any PHMSA regulations for locating pipelines through wetlands.

BY MR. JORDE:

Q. Is there a best practice, in your opinion, related to the siting and location of a pipeline relative to the soil types?

In other words, if you're constructing and locating a pipeline, would you prefer to have heavier clay type soils? Would you prefer to have sandy or lighter soils, or what are your thoughts on that?

A. If you're asking specifically for my opinion, siting a pipeline based on soils has merit from both the constructability and the maintenance perspective. It would depend upon what the options are, what the local sites are.

I hesitate to say one type of soil is generally better than another type. They all have their pluses and minuses when it comes to maintenance

and constructability, in my opinion. There's also other parties that would be involved such as the Army Corps in terms of permitting, the NRCS in terms of local conservation.

You'd want to avoid high erosion probability areas. You'd want to work with the landowner as well for their intended and future land use to best understand, you know, what areas to install the pipe in and what soils you would prefer. That's my opinion generally across the industrial.

Q. In terms of the concept of working with the landowner to understand kind of the least impact based on land use and future intentions, is it true there's no PHMSA regulation requiring a pipeline company to do that type of analysis or agree, for instance, to locate in a particular area that the landowner may specify? That's just left up to the goodwill of the pipeline company to do or not do that; right?

MR. LEONARD: Same objection.

Go ahead.

A. I'm not aware of any PHMSA requirement in that regard.

BY MR. JORDE:

Q. Are you aware of any design features that Summit has expressed that have the purpose of

preventing the pipeline or segments of the pipeline from becoming buoyant or floating or shifting in any way, depending on the different soil for different aspects?

A. I have not been asked to nor have I reviewed the details of Summit's design.

Q. Okay. So just to be clear, then, when we get to this hearing, whenever this hearing takes place, you're not going to be opining on Summit's design, whether it's good or bad, or if they followed the best practices or didn't; is that correct?

MR. LEONARD: I'll object to the extent it invades privilege, but go ahead.

A. I've not been asked to review Summit's design nor have I reviewed Summit's design to date.

BY MR. JORDE:

Q. Do you know, sir, if anyone on Summit's behalf will be testifying as to their design?

A. I do not know.

Q. Of the other witnesses that have filed testimony in this matter, do you consider any of them to be pipeline design experts?

A. I have not seen all of the testimony that's been filed in this case, and as I sit here today, I can't recall specifically who may have testified about

pipeline design.

Q. And I want to make sure I got this right. Neither you nor your employer has been asked to do any plume modeling or dispersion analysis for Summit; is that right?

A. To the best of my knowledge, we have not.

Q. Is it correct that you have not reviewed any of Summit's plume modeling or dispersion analysis to the extent that they have any?

A. I've not reviewed any of their dispersion analyses.

Q. In your expert opinion, do you believe that understanding dispersion analysis and the findings of a dispersion or plume modeling is something that is important for regulators to consider when determining whether or not a particular route or location of a hazardous pipeline should be approved, amended or disapproved?

A. That was a rather long question. Could you rephrase it, please?

Q. I can. Do you have an opinion as to whether or not a regulatory board, such as the Iowa Utilities Board, should consider whether it's the best practice for them to consider plume modeling, dispersion analysis when we know that regulatory body

is charged with siting or locating hazardous pipeline in the most appropriate locations?

MR. LEONARD: Object to the extent it calls for a legal conclusion.

Go ahead and answer.

A. I'm not familiar with the Iowa Utilities Board's authority or the statutes that grant them authority. I don't know what's in their purview or not, and to say that a dispersion model would aid them in their decision-making process would require me to speculate in areas I'm not familiar with.

BY MR. JORDE:

Q. Well, I understand your answer, but I'm not asking you whether or not the law says they can and they should or shouldn't. I'm asking you, as a proffered expert here with experience in design and safety and all of the things that you've told us about, wouldn't you agree that understanding the risks and the danger zone and the areas in which you could suffer adverse consequences from a rupture or leak or a spill-release event be information helpful for a regulatory body charged with siting to know?

MR. LEONARD: Same objection. Object to form.

Go ahead.

A. In terms of -- I don't know the scope of the regulatory body with authority over siting, nor would I want to speculate whether that information is within the scope of their review.

BY MR. JORDE:

Q. Well, I understand you don't want to answer the question, so you're answering your own question, but, I mean, I can sit here and do this all day, sir.

So the question is: Would you or would you not agree that it would be best practice for a regulatory body who is making decisions on siting, on locations, whether or not to locate a hazardous pipeline by a home with young kids, by a feed yard, by a school, by a hospital? Wouldn't you think it would be wise for them to be armed with the dispersion analysis, the plume modeling data?

MR. LEONARD: Same objection. Object to form. Asked and answered.

Go ahead.

MR. JORDE: It's never been answered, but go ahead.

A. Honestly, I don't know what their statute is. I don't know what would be considered -- you say "best practice." I don't know what that would entail or what you'd define that as.

You know, it's not within the scope of my testimony to suggest that a regulatory body should consider one thing or another. I will testify, as I do in my written testimony on the bottom of page 3 starting at line 14, that dispersion modeling is required by PHMSA regulations, and it's used by the operator to identify appropriate preventive and mitigative measures for the prevention of releases. In the highly unlikely event there is a release, to aid the operator in making decisions around response planning and emergency response preparedness.

BY MR. JORDE:

Q. All right. Do you think you answered my question there?

A. That's my answer.

Q. Okay. So let's just try this again.

Is there any reason you can think of why an agency, who has the responsibility of locating a hazardous pipeline, would not know what the plume modeling, dispersion modeling data and conclusions are in terms of the risk areas and the risk zones?

MR. LEONARD: Same objection.

Go ahead.

A. I don't know the workings of those bodies. I've not participated in one of those bodies, not been

a member of one of those bodies.

I would envision that if they wanted that information and it was within their statutory scope, they could request or have that information produced themselves.

BY MR. JORDE:

Q. All right. What question do you think you just answered there?

A. I think I was trying to answer your question to the best of my understanding of your question.

Q. Well, then you're not understanding the question. I want to be very clear.

I'm not asking you what the statutes say about the IUB, PSC, XYZ, ABC. I don't care.

I'm asking you, sir: As a self-proclaimed safety expert on hazardous pipelines -- yes or no -- would you agree with me that it would be helpful for the body, whomever it is that's going to locate a hazardous pipeline, to know what the plume and dispersion modeling and analysis says, yes or no?

MR. LEONARD: Same objection.

A. What's helpful for that body is up to that body to decide. I'm not going to speculate.

BY MR. JORDE:

Q. I'm asking for John Godfrey's opinion.

A. What's helpful for that body to decide is up to that body itself to decide. I'd be happy to provide an opinion on pipeline safety in general and pipeline safety regulations as they exist, but I won't speculate on what that regulatory body may find helpful or may not find helpful.

Q. I'm asking you what you think.

A. And that was my answer.

Q. All right. If John Godfrey had to make the decision whether or not this pipeline or any hazardous pipeline should be located somewhere, would John Godfrey think to himself, "Gosh darn it. Why don't we look at the plume model and analysis so we know how risky this pipeline is?" Would you say, John Godfrey, "I don't need that. Stick it anywhere"? Which one?

MR. LEONARD: Object to form.

Go ahead.

A. You're asking me to speculate here on an alternative regulatory scheme where I have authority that comes without any statute or requirements and allows me to pick and choose whatever information I would want or would be required.

I don't want to speculate. This is

outside -- you know, the authority of the Board is outside my scope.

BY MR. JORDE:

Q. Yes. Again, you're writing your own questions. I'm not asking about the authority of the Board. Forget the Board. There is no Board.

I'm asking you: What would you do?

MR. LEONARD: Same objection.

Go ahead.

A. Dispersion modeling and consequence in general of hazardous liquid pipelines is a useful tool for both the operators and regulators to understand risk. The primary purpose, in my mind, of understanding the risk is to mitigate that risk, to address that risk, to prevent that leak.

In my opinion, that is the primary benefit of this analysis, is to understand for the purpose of prevention what could happen. Siting in and of itself is a more complicated endeavor that involves more variables than just the potential of what could go wrong.

So I view, in my personal opinion, air dispersion modeling or over-land spread or oil spill modeling to be a useful tool for operators in both the design, the construction, the operation and

maintenance of the assets through its entire life cycle.

BY MR. JORDE:

Q. Would you agree, sir, that there are two primary ways to deal with the potential and forecasted risk of hazardous pipelines, and one is the design and construction features, and two is based on where that is located from high-consequence areas?

THE WITNESS: Could you repeat that question back please, ma'am?

(The requested portion of the record was read.)

THE WITNESS: Thank you.

A. My answer is no.

BY MR. JORDE:

Q. All right. So then what are the factors? Are those two of many factors, or are you saying you disagree that a risk mitigation tool can be the location of the particular hazardous pipeline, or are you saying you don't agree that design techniques can assist in minimizing risk?

A. That was a multi-part question. Can you break it apart for me, please?

Q. Well, why don't you tell me why you disagreed with my first question.

A. It was an oversimplification of the design and siting process, in my opinion.
Q. Okay. And that may very well be true. I don't want to keep you here all day, so what I'm trying to understand from you is: We know there's risks, okay? I understand no one wants to talk about the risks, okay?
There are risks to pipelines. Everyone can stipulate to that. Now, because we know that, do you agree that design is one way to deal with minimizing risks?
MR. LEONARD: Object to form.
Go ahead.
A. Yes.
BY MR. JORDE:
Q. Okay. And would you also agree that the location of a hazardous pipeline that has inherent risk with it is a factor that can help minimize those risks?
MR. LEONARD: Same objection.
Go ahead.
A. Yes.
BY MR. JORDE:
Q. Okay. And then what are the other factors that can help minimize risk outside of how we design a

hazardous pipeline or where we locate it?

A. How the pipeline is constructed, how the pipeline is operated, and how the pipeline is maintained.

Q. Okay. Very good. And so is the operation mainly due to operating within the right pressures, right temperatures, or what are some of the key operational aspects that we need to look at for risk mitigation?

A. There's a large list of operating parameters and considerations when you consider pipeline risk, but generally operating within established operating pressures and operating procedures is the simplest way to answer that.

Q. Okay. And then as to maintenance, obviously, PHMSA has standards on maintenance and timetables and specifications. Is that what you would rely on in terms of the best practices for maintenance?

A. No.

Q. Okay. Where would a pipeline company find those, if they're just starting out and have never done this before?

A. Regulatory requirements for maintenance of the pipeline are included in Part 195, and more

specifically Integrity Management Programs are considered part of the maintenance regime as is cathodic protection, damage prevention and right-of-way maintenance.

I would also look to the standards incorporated by reference into Part 195 and then also look at industry recommended practices and other industry standards to provide guidance to the operator; those standards that aren't specifically incorporated by reference but are available.

Q. Are there any risks to the integrity of a given segment of pipe if it is sitting out in the weather elements for a certain period of time?

MR. LEONARD: Objection. Calls for speculation.

Go ahead.

A. It depends on what you mean by "sitting out for a period of time." How long? What elements? What pipe material? What specifically are you talking about?

BY MR. JORDE:

Q. Okay. Fair point. Say Summit has a pipe yard somewhere, and they have the type of pipe that they intend to use here, and it's sitting somewhere in Iowa that has all four seasons for a couple of years.

Is there a time when, in your opinion, you need to do some testing on that pipe, or is there kind of a grace period where it's going to be fine no matter what?

How would we think about that in terms of pipe that might be outside and exposed to the weather?

A. Again, that would be dependent upon the pipe, the pipe's coating, how the pipe is stored in the weather, where specifically it's stored. I'd have to have all that information to give you any sort of opinion as to the time frame.

Q. Okay. And to be clear, do you know that information insofar as the coating and the aspects of the pipe, the type of pipe that Summit intends to install in Iowa or no?

A. I'm not familiar with the design and was not asked to review the design.

MR. JORDE: Okay. All right. I think that's it, sir. I appreciate it.

MR. LEONARD: I don't have any questions. Anyone else?

MR. TAYLOR: No.

MS. GRUENHAGEN: No.

(Brief pause.)

MR. LEONARD: I talked to Mr. Whipple. He

doesn't have any questions. Thank you.

(Deposition concluded at 2:52 p.m.)

C E R T I F I C A T E

I, the undersigned, a Certified Shorthand Reporter of the State of Iowa, do hereby certify that there came before me, at the time, date, and place hereinbefore indicated, the witness named on the caption sheet hereof who was by me duly sworn to testify to the truth of said witness's knowledge, that the witness was thereupon examined under oath, the examination taken down by me in shorthand and later reduced to a transcript through the use of a computer-aided transcript device under my supervision and direction, and that the deposition is a true record of the testimony given and of all objections interposed.

I further certify that I am neither attorney or counsel for, nor related to or employed by any of the parties to the action in which this deposition is taken, and further that I am not a relative or employee of any attorney or counsel employed by the parties hereto, or financially interested in the action.

Dated this 3rd day of July, 2023.

Darcy K. Kriens

CERTIFIED SHORTHAND REPORTER
Darcy Kriens, Iowa CSR #988

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