IN THE UNITED STATES DISTRICT COURT

FOR THE EASTERN DISTRICT OF TEXAS

MARSHALL DIVISION

* * *

CHARLES WILSON and

LAURA WILSON,

Plaintiffs,

vs. CASE NO. 2:06-CV-286

RYCOLINE PRODUCTS, INC.,

et al.,

Defendants.

* * *

Deposition of THOMAS H. KENNAN, Witness herein, called by the Plaintiffs for cross-examination pursuant to the Rules of Civil Procedure, taken before me, Michelle A. Elam, a Notary Public in and for the State of Ohio, at the offices of Kegler, Brown, Hill & Ritter, Capitol Square, 65 East State Street, Suite 1800, Columbus, Ohio, on Wednesday, the 11th day of July, 2007, at 9:33 a.m.

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EXAMINATION CONDUCTED PAGE
BY MR. PATTON:..... 4

EXHIBITS MARKED
(Thereupon, Keenan Exhibit Numbers 1 through 4 were marked for purposes of identification.)..... 4

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ALSO PRESENT:
Richard D. Stevens, Videographer
Gail George

(Thereupon, Keenan Exhibit Numbers 1 through 4 were marked for purposes of identification.)

THE VIDEOGRAPHER: We're on the record.

THOMAS H. KENNAN

of lawful age, Witness herein, having been first duly cautioned and sworn, as hereinafter certified, was examined and said as follows:

CROSS-EXAMINATION

BY MR. PATTON:

Q. Please introduce yourself for the record.

A. My name is Thomas Harry Kennan.

Q. Mr. Kennan, what is your occupation?

A. I'm a toxicologist for Ashland.

Q. Tell us a little bit about your educational background, what type of training you received to become a toxicologist.

A. I started with a bachelor's of science in microbiology from The Ohio State University. I completed a master's of science in pharmacology from the University of South Carolina. I did my postdoctoral -- my Ph.D.

work at Purdue University. And it was a degree in pharmacy and pharmacal sciences. I did a postdoctoral in toxicology at the University of Cincinnati.

Q. Is that it?

A. For education, yes.

Q. Okay. And when did you go to work for Ashland?

A. Went to work for Ashland in 1989.

Q. And were you hired as a toxicologist?

A. Yes.

Q. Okay. And your job title is toxicologist for Ashland; is that correct?

A. Not currently.

Q. Okay. What is your current job title?

A. Current job title is manager, EH&S programs.

Q. And EH&S is environmental health and safety; is that right?

A. Yes.

Q. How many people work in the environmental health and safety department at Ashland?

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A. In North America, about fifty-five.
Q. So you have about fifty-five other science or medical or health or safety professionals similar to yourself as a toxiocologist who work for Ashland on matters including health and safety; is that a fair statement?
A. There are fifty-five people in North America. They're not all toxicologists.
Q. Okay.
A. But they're in a variety of specialities, including safety, air engineers, water engineers. But there's only health scientists, too, industrial hygienists, et cetera.
Q. Okay. Are there medical doctors who work with Ashland?
A. On a contract basis.
Q. Okay. What are your job responsibilities?
A. My job responsibilities are to oversee the programs regarding -- the programs regarding the overview of environmental health and safety, including material safety data

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sheets and labels.
Q. And your job responsibilities with Ashland also include giving testimony in cases like this; is that correct?
A. I do give testimony, yes.
Q. How many cases have you -- have you testified in for Ashland?
A. I don't know an exact count.
Q. Could you make a reasonable estimate?
A. It would be thirty or so.
Q. What kind of topics or what kind of cases have you given testimony in? This is a benzene case that we're here for today. Do you understand that?
A. I understood that it was a solvent blend case.
Q. Okay. Have you given testimony in other solvent blend cases?
A. Yes.
Q. Have you given testimony in other cases involving alleged benzene exposure as a cause of a blood disease?
A. Yes.
Q. Okay. And what percentage of the

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cases you've testified fall in the category of solvent or chemical exposure and benzene or blood diseases?
A. Quarter.
Q. What kind of other cases have you testified in that fall outside of the realm of what we're here for today?
A. Some of them have been effects on nervous system, some have been effects on developmental toxicology, such as effects to fetus or reproduction.
Q. Have you ever given testimony in a case involving the solvent blends that we're going to talk about today?
A. No.
Q. Why does Ashland employ toxicologists?
A. We provide -- most of our work is spent on developing or assessing the hazards of the chemicals so we can provide warnings to our employees and to our customers.
Q. Assessing hazards of chemicals, that is an important thing that a chemical company should do. Do you agree with that?
A. Yes.

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Q. You mentioned earlier that Ashland employs industrial hygienists, correct?
A. Yes.
Q. And how many industrial hygienists work for Ashland?
A. We have one that is specifically dedicated to industrial hygiene.
Q. So there's only one industrial hygienist?
A. Yes.
Q. You work in the Dublin, Ohio headquarters; is that right?
A. That's correct.
Q. Does the other industrial -- or does the industrial hygienist also work at that facility?
A. Yes.
Q. Okay. What other types of scientists, besides toxicologists and industrial hygienists, does Ashland employ in the environmental health and safety department?
A. We have safety engineers.
Q. What is a safety engineer?
A. That is an individual that would investigate the safe handling of materials,

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such as flammables or just the normal work practices to make sure that the people are safe as they work.
Q. How many safety engineers work for Ashland?
A. I think there are six or seven.
Q. They work in Dublin with you?
A. Not all of them.
Q. How many work in your office?
A. There are four in the Dublin office.
Q. What are their names, and how long have they been with the company?
A. Dave Druckenbroad.
Q. Can you spell that, please?
A. D R U C K E N B R O A D. He has been with the company at least as long as I have.
Q. Over fifteen years?
A. Yes. Mark Patterson.
Q. How long has he been with the company?
A. He was just recently hired. There are several others that have been recently hired, and I just can't remember their names

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right now.
Q. Okay. So we talked about toxicologists. Are you the only toxicologist employed by Ashland?
A. No.
Q. How many others are there?
A. There is one other at this point.
Q. Who -- who is he?
A. It's a she. Bernadette Lindquist.
Q. Where does she work?
A. In Dublin.
Q. How long has she been with the company?
A. She's been an employee for about three years. She's worked on contract basis prior to that since '91.
Q. What other types of environmental health and safety professionals work for Ashland?
A. We have chemists. We have engineers.
Q. Engineers different than safety engineers?
A. Yes.
Q. How many chemists work for

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Ashland?
A. I'm not going to have an exact number. I would say we have around ten.
Q. Okay. Any other categories of environmental health and safety professionals that we haven't talked about?
A. We have same training specialists.
Q. What's a training specialist do?
A. They develop the training or oversee the development of training for our facilities and for corporate.
Q. How much --
A. And then we have a management system.
Q. Computer people?
A. No. Management systems, such as procedures and programs that we follow in conducting our day-to-day activities.
Q. There are policies and procedures that govern the jobs that you do as an environmental health and safety professional, as well as the jobs that the safety engineers, chemists, and others follow within your department; is that right?
A. Yes.

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Q. Okay. How much time did you spend getting ready for this deposition?
A. I've had two meetings with counsel. Probably a total of two or three hours.
Q. Did you speak to anyone at Ashland besides lawyers about this case or about giving your deposition today?
A. Other than saying I was going to be at a deposition today, no.
Q. Okay. Did you talk to any safety engineers about these products that we're going to talk about today?
A. No.
Q. And you understand we're here to talk about the Ashland Solvent Blend 3078B, 3078C, and 7650? Do you understand that?
A. Yes.
Q. You understand those to be the products at issue in this case?
A. I do.
Q. Okay. Did you talk to any chemists about these products?
A. No.
Q. Did you talk to any industrial

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hygienists about these products?
A. No.
Q. And you didn't talk to any safety engineers about these products, correct?
A. That's correct.
Q. What documents did you review in getting ready for your deposition today?
A. I reviewed some of the experts' reports. I reviewed the notice of deposition. I reviewed the American Conference of Governmental Industrial Hygienists summary book on TLVs and PELs.
Q. Anything else?
A. I think that was it.
Q. What is benzene?
A. Benzene is an aromatic solvent. It has six carbons.
Q. What is it used for?
A. It's a solvent. It has good properties in dissolving different materials.
Q. It's a liquid, right?
A. Yes.
Q. And it's an effective solvent, isn't it?
A. It's a good solvent. I don't know

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how -- it depends on what type of use you're wanting it for.
Q. Is it a carcinogen?
A. Yes.
Q. Benzene causes cancer, that's correct, right?
A. It causes acute myelogenous leukemia.
Q. Okay. Do you agree with me that there's virtually no argument regarding benzene as a known cause of cancer in humans?
A. I would say there's no argument as a known cause of acute myelogenous leukemia.
Q. What is AML, acute myelogenous leukemia?
A. It's a form of leukemia.
Q. Is it a disease of the bone marrow?
A. Yes.
Q. What is myelodysplastic syndrome or MDS?
A. It's a depression in different bone marrow cells.
Q. It's a disease of the bone marrow, isn't it?

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A. Yes, it is.
Q. Is benzene a known hematologic poison? Would you characterize it as that?
A. I would characterize it as having effects on the hematopoietic system, yes.
Q. And what's the hematopoietic system?
A. The bone marrow.
Q. Okay. And you'd agree with me that benzene is a recognized industrial carcinogen, correct?
A. I'd agree with you that it is recognized as causing acute myelogenous leukemia in humans.
Q. So you -- you wouldn't go as far as to call it an industrial carcinogen?
A. That's too broad.
Q. Okay. Do you agree with this statement, chronic benzene poisoning affects the blood and blood-forming organs producing serious degeneration in bone marrow? Would you agree with that?
A. I'd agree that that's a possible effect of ben -- chronic benzene exposure.

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Q. Would you consider serious degeneration in bone marrow a known effect of benzene exposure, chronic benzene exposure?
A. It's definitely been correlated with aplastic anemia, which is a degenerative -- it's disease of the bone marrow.
Q. Okay. So AML, MDS and aplastic anemia, those are all benzene-related diseases. Would you agree with me?
A. I'm uncertain about MDS. I would agree with aplastic anemia and AML.
Q. And those are both bone marrow diseases, right?
A. Correct.
Q. And MDS is a bone marrow disease, too, correct?
A. That is correct.
Q. Is it true that bone marrow is the organ that is most sensitive to benzene toxicity?
A. There are other organs that have a -- that benzene can affect. As far as most sensitive, I don't know how you're defining most sensitive.

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Q. Okay. Well, as a toxicologist, you deal with the mechanism of harm or the mechanism of injury, correct?
A. That's one of the things we're concerned with, yes.
Q. And toxicology is a very broad science, and I'm not trying to box you into anything by any means; but what was the issue that we were disagreeing on as far as the sensitivity?
A. We weren't disagreeing. I'm just not sure what you're trying to ask me. The -- what -- the effects I'd have most concern about are on the bone marrow.
Q. Okay. So if you're talking about benzene and the harm it could cause to the human body and you were going to make a list of all the human organs that could be damaged by benzene exposure, bone marrow is going on the top of that list, isn't it?
A. Yes.
Q. Okay. As a toxicologist, can you explain to us the mechanism of harm for how benzene affects the bone marrow?
A. Not anymore.

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Q. Okay. And if I can just try to ask the question again to see if you can give a general description. If there were a bee and it were to sting me and I would have an allergic reaction, okay, the mechanism of harm would be the stinger going into my skin, then some effect on the cell and then some larger effect within my body that as a medical professional, I really -- as a nonmedical professional, I really couldn't articulate that process to you.
Could you give us some type of explanation about how the mechanism of harm from benzene would affect the bone marrow?
A. Well, benzene gets into the bloodstream either -- primarily through inhalation, which is breathing the benzene in; and as it would travel through the bloodstream, it could get into the bone marrow and in there it causes some issue with regeneration of -- maturation of bone marrow cells.
There is a -- one cell that all bone marrow cells or all blood cells come from, and they are formed in the bone marrow; and benzene interferes in that matrix.

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Q. And that's through inhalation?
A. Through inhalation.
Q. And dermal exposure, getting benzene on your skin, that can cause a similar effect, right?
A. It does absorb through the skin. It could get into the bloodstream, yes.
Q. Are some people more sensitized, so to speak, to experience adverse health effects at low levels of exposure to benzene?
A. All responses happen by a bell-shaped curve, which means majority of people will respond at one certain concentration or thereabouts and others could respond at lower, but they're a much fewer part of the population, just as more -- some people are more resistant to it. It's just how people respond.
Q. So if you have a known carcinogen like benzene which can damage the -- the bone marrow, there would be a bell curve -- as a toxiocologist, your opinion is that there's a bell curve and there might be some people who are more sensitive to have that toxic effect if exposed to benzene and there might be some

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people that are less sensitive and then you would also consider the general population to fall within a certain spectrum of sensitivity. Is that a fair description?
MR. PARKS: Objection to form and compound.
Q. I think it was a bad question. I'm going to try it again.
A. Okay.
Q. You would agree with me that some people are more sensitive and more likely to suffer harmful effects of benzene from benzene exposure at low levels, correct?
A. Yes, because of the bell-shaped curve, just the normal response of people are -- the majority of people respond at one level and a certain percentage of people may respond at an even lower level.
Q. Is that something of a principle of toxicology, so to speak, or a fundamental principle on how people are sensitive to substances and how they react?
A. It's a fundamental principle in dose response.
Q. That's the better phrase of it.

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And that fundamental principle of dose response also applies to other carcinogens, other allergens, for example, like pollen or something of that nature. Is that a fair statement?
A. Yes.
Q. Some people are just more sensitive to experience adverse effects from exposure to chemicals or exposure to other substances, fair statement?
A. I've called it more responsive to it.
Q. Okay. Some people are more responsive to the adverse effects from exposure to carcinogens such as benzene, true?
A. Yes.
Q. Okay. You said you did review the expert reports in this case, correct?
A. I wouldn't call it a review. I've looked at them.
Q. Did you read them?
A. Yes.
Q. Did you highlight them or underline anything in red or circle anything or take any notes on those?

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A. No.
Q. Do you always review expert reports for the cases you've testified in?
A. No.
Q. How would you characterize or if you could generalize what the conclusions in these expert reports from Ashland are?
MR. PARKS: Objection. Form. I don't know which reports you're referring to.
Q. You reviewed the report of Dr. Ethan Natelson, correct?
A. No, I didn't review that one.
Q. Okay. Did you review the report by Wayne Snodgrass, M.D., Ph.D.? He's a toxicologist.
A. No, I didn't review that one either.
Q. How about Gerald Raab? Did you report -- did you -- Dr. Raab, did you review his report?
A. Yes, I did.
Q. And did you know of Dr. Raab before seeing his report in this case?
A. Yes.
Q. How is it you knew of him?

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A. I worked with him on a -- when I was at the American Petroleum Institute. He was on a panel when he was working for Mobil.
Q. You worked for the API before; is that right?
A. Yes.
Q. What years did you work for the API?
A. 1984 to 1986.
Q. Dr. Raab has done a lot of research and he's written papers on benzene exposure and its cause of -- benzene exposure as a cause of certain blood diseases, has he not?
A. I'm not familiar with his --
Q. His body of work, so to speak?
A. Right. Correct.
Q. Okay. But you're just familiar with his name?
A. I know of Gerry.
Q. Has Dr. Raab ever been hired by Ashland directly as opposed to Ashland -- hired by Ashland's lawyers through litigation? Let me start over.
To your knowledge, has Ashland,

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outside the scope of litigation, such as what we're here for today, ever hired Dr. Raab to do any work for them?
A. Not that I'm aware of.
Q. Are you aware of Dr. Raab ever serving as an expert in other cases involving benzene exposure that also involved Ashland?
A. Not that I'm aware of.
Q. Did you review Dr. Spencer's -- or John Spencer's report?
A. Yes.
Q. Do you know of John Spencer?
A. I'm uncertain.
Q. What did you think of Dr. Raab's report?
A. I thought it was well written.
Q. Dr. Raab concludes that Charles Wilson's MDS or RARS is unrelated to any benzene exposure that he may have had. You understand that's his conclusion --
A. Yes.
Q. -- one of his conclusions? Do you agree with that statement?
A. Yes.
Q. How is it that you agree with his

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conclusion?
A. I'd have to review his report again.
Q. Okay. Have you ever reviewed -- you've reviewed other expert reports in litigation involving Ashland besides those reports, right?
A. Yes.
Q. Have you ever reviewed a report where Ashland's hired experts say that benzene did cause a person's bone marrow disease?
MR. PARKS: Objection to the -- to the form of the question.
THE WITNESS: I don't recall.
Q. Benzene is present in Stoddard solvent, correct?
A. I'd have to see the specifications. It's possible that it's there, yes.
Q. Is it probably that benzene is in Stoddard solvent?
A. It would depend upon the source of the Stoddard solvent and how -- what type of refining they did to it. But if it's traditional, typical Stoddard solvent, it could

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be in there. I would expect it to be there in some quantity.
Q. So we have glasses of water and some people have coffee with us today. And if these were all samples of Stoddard solvent, you would expect there to be some benzene in these samples, correct?
A. Correct.
Q. What about xylene? Does xylene have benzene in it?
A. Unless you've got a very high pure grade.
Q. Like a laboratory grade or a sampling grade as opposed to an industrial grade?
A. I don't know what the grades would be, but there are higher purity xylene.
Q. And there's regular xylene, too, correct?
A. Yes.
Q. Is benzene present in regular xylene?
A. It's typically present with xylene.
Q. So using my example again, if we

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were to -- instead of coffee and water, if these glasses and mugs were to be full of xylene, you'd expect there to be a little bit of benzene in those samples, correct?
A. Yes.
Q. What about Naptha?
A. Well, Naptha describes a lot of different solvents, and that's too broad to say, whether it's there or not.
Q. So you can't say whether or not benzene would be present in Naptha?
A. Naptha, there are literally twenty, fifty, a hundred different Napthas.
Q. What kind of Napthas does Ashland use in the solvent blends that we're talking about today?
A. I'd have to look at the compositions to -- to be able to tell you.
Q. I'll show you what I've marked as Exhibits 2 and 3. And you'll note that they note aromatic petroleum distillates and aliphatic petroleum distillates. And I'm not a chemist nor a toxicologist, but I understand those to be hydrocarbon solvents which are -- can also be characterized as Naptha. Is that a

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fair statement?
A. Yes.
Q. Okay. Those two types of Napthas that are cited in these MSDSs for the Ashland chemicals that were -- the Ashland solvent blends that we're talking about today, do those type of Napthas contain benzene?
A. I'm not sure because I'd have to look at the actual name description versus CAS -- or the CAS number to look up what the CAS number stood for for the solvent Naptha.
Q. What is --
A. The CAS number is the number below. It's Chemical Abstract Service. And it's a number that they assign to different chemicals to help us to understand which ones we're talking about.
And these have CAS numbers of 64742-95-6 for one and 64742-88-8 -- or 80-8, I believe. Or 89- --
Q. I think it's 89-8.
A. Yeah. It's 89-8. You're right.
Q. So you would have to look at a reference -- some type of reference material about these CAS numbers and then you could draw

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a conclusion as to whether or not these types of Napthas used in the Ashland solvent blends in this case contain benzene, right?
A. Correct.
Q. Did you do that in this case?
A. No, I did not.
Q. If you had nothing else to do today except go find that out, how would you go about determining whether or not there's benzene in those two types of Napthas?
A. Well, first of all, I'd pull our book that we have from EPA that has the CAS numbers and the definitions for those. And then I'd look at which materials those actually correspond to. Or I would go into our computer system and pull up the -- this material, this blend, and look at the exact composition of it which would tell me which of these materials this is.
Q. So we could go to your office, get on the computer, open a book, and we could find the answer to that question?
A. We'd either open a book or we could go on the computer.
Q. Okay. How long --

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A. There's two different sources.
Q. How long would that take us?
A. A couple minutes.
Q. Okay. A couple minutes. What is a technical data sheet?
A. A technical data sheet would put -- would be outside the specifications of the solvent blend or of the raw material.
Q. Does Ashland have technical data sheets for these -- each of these solvent blends that we're talking about today?
A. I don't know.
Q. Does Ashland have technical data sheets for the raw materials used in these solvent blends?
A. I don't know with any certainty.
Q. Well, how would you be able to find out the formula of these products without going to a technical data sheet?
A. It's been transcribed into the computer.
Q. So the computer would have that information?
A. Would have the compositional information.

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Q. Do some of the technical data sheets for these products and their raw materials include benzene concentration numbers?
A. If benzene is present, yes, it would include that.
Q. And you already testified that benzene is present in Stoddard solvent, in xylene, and in some Napthas; is that right?
MR. PARKS: Objection to form.
THE WITNESS: Yes, I did.
Q. Mr. Kennan, you've -- you've written documents for Ashland, you've authored documents regarding safety and health hazards associated with solvents, haven't you?
A. Yes.
Q. Do you know if those have been produced in this case?
A. I don't know.
Q. You also provide written information and new information about changes in the warnings involving solvents and chemicals in the course of your work, don't you?
A. From time to time.

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Q. Sometimes those writings that you might make about a new chemical, regulation, or a solvent regulation, you do those in e-mails and sometimes reports, too, don't you?
A. Yes.
Q. Do you know if those documents have been produced in this case?
A. I don't know.
Q. The Ashland Solvent Blend C, it's my understanding that that's a product -- it was a new product back in the early '90s. Is that your understanding of the history of 3078C?
A. I don't know when the material was first created.
Q. When Ashland does create a new blend, the environmental health and safety department reviews that blend, don't they?
A. Yes.
Q. And you all have protocols for those reviews and those are kept on your computer and they're entitled new product introduction process; is that right?
A. Yes.
Q. Have you produced those to your

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attorneys in this case?
A. I don't know.
Q. Ashland also has policies and procedures for toxicological evaluation of existing and new products and there's a written policy stored on your computer; is that right?
A. Yes.
Q. What's that document called, those policies and procedures?
A. What I believe you're referring to is the hazard determination guidelines.
Q. That came into existence around '90 or '91; is that right?
A. Yes.
Q. Do you remember when I deposed you a couple years ago? Do you remember that?
A. I don't remember the time, and I don't remember the day.
Q. Did you review your deposition in preparing for today's deposition?
A. I glanced at it, yes.
Q. When did you read it?
A. It's probably been four or six weeks ago.
Q. When did you first learn about

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this case?
A. About four or six weeks ago. Well, maybe a little bit before that but -- other than there was a deposition trying to be scheduled.
Q. Did you see where you and I spent probably about ten or twenty minutes talking about documents such as what I'm asking you about now?
A. I'm sorry, could you repeat that?
Q. Did you see the section in your deposition where you and I talked about the documents, such as the health hazard determination guidelines and some of the new product introduction process and other protocols and policies and procedures? Do you remember that testimony?
A. I remember that we talked about it, yes.
Q. Did you then retrieve those materials and give them to your lawyers?
A. No, because I wasn't requested to do that.
Q. There's a document called product risk guidelines, correct?

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A. Yes.
Q. What's that document?
A. That document is a guideline to assess the risks of products that we sell.
Q. That would be relative to the risks of these solvent blends that we're talking about today, right?
A. Correct.
Q. And that would be relative to benzene also, correct?
A. Yes.
Q. It would be relative to Stoddard solvent, right?
A. Yes.
Q. It would be relative to xylene, correct?
A. Yes.
Q. It would be relative to bone marrow diseases, right?
A. It would be one of the things we would look at as an end point.
Q. You could go get those documents that we just talked about, the product risk guidelines, the new product introduction process? You could go get those in less than

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ten minutes if you had to, couldn't you, if we were in your office?
A. If we were in my office, yes.
Q. Nobody asked you to do that in this case, did they?
A. No.
Q. Ashland keeps documents called regulatory alerts and regulatory cautions, correct?
A. Yes.
Q. What are those documents?
A. A caution is when we are aware of a regulation that's coming out, being developed, and an alert is when the regulation has actually been published.
Q. Those would be relevant -- some of those might be relevant to these chemicals that we're talking about today, wouldn't they?
A. No. They're typically on broader regulations, such as the new security regulation for facilities is one of the most recent ones we have, and trying to get our facilities to try to understand the types of actions they're going to have to change or do to be in compliance with that new regulation.

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Q. And those regulations involve safety of chemicals, right?
A. It does involve safety of chemicals, yes. It's one of the aspects.
Q. Ashland also has a process called emerging issues process, correct?
A. Yes.
Q. What is that?
A. That's where we look at the science and trends, trying to understand what might potentially impact the company in the future so that we can make sure that we are responsive to those needs.
Q. What are the documents that encompass that emerging issues process?
A. There's issue statements that cover each issue, give a brief description of what the issue is, what's caused the issue, and -- and what the potential impact could be to the company.
Q. Is benzene one of those issues?
A. No.
Q. Ashland keeps permanent records concerning testing animals for carcinogen effects of solvents and the solvent blends,

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correct?
A. We keep permanent records on testing, yes.
Q. Would that testing include hydrocarbon solvents?
A. If it had been tested, we would have kept it, yes.
Q. Those records are kept in your department; is that right?
A. Yes.
Q. And they're on paper and they're in filing cabinets, aren't they?
A. And they're -- more recent ones are in computer.
Q. You testified before that it would take you half an hour to look for records on toxicity testing pertaining to solvent products. Is that accurate?
A. Yes.
Q. Ashland has written policies and procedures relating to its material safety data sheets; is that right?
A. Yes.
Q. Ashland has written policies and procedures relating to its warning labels; is

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that right?
A. Yes.
Q. You testified before that those policies and procedures came into place in 1972 and they changed through the early 1980s and then they changed again in the mid '90s. Does that sound right?
A. Could you repeat the dates?
Q. You testified that it was your understanding that Ashland's policies and procedures relating to material safety data sheets and warning labels came into existence in 1972 and they progressively changed through the early 1980s; is that right?
A. I'm uncertain about the dates. I'm not sure that I testified that the policies and procedures in place were in the '70s. I know that we were preparing material safety data sheets in the '70s; but as far as what type of documentation and how they put them together, I'm not familiar with that.
Q. Does Ashland throw away old material safety data sheets?
A. No.
Q. So for a product like Ashland

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Solvent Blend 3078B, Ashland would have material safety data sheets and technical data sheets for that product dating back to -- as far as -- as far as time goes back that that was created; is that right?
A. We'd have material safety data sheets. I can't speak to the technical data sheets.
Q. Do you still have an inch thick benzene file in your office in a file drawer?
A. Yes.
Q. You don't throw away documents that -- that concern benzene, do you?
A. No, I do not.
Q. And why don't you throw away documents that concern benzene?
A. Because they're subject to litigation.
Q. And Ashland has a litigation hold on those documents, don't they?
A. Yes.
MR. PATTON: Kevin, did you read his old depo?
MR. PARKS: Uh-huh.
MR. PATTON: Yes?

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MR. PARKS: Yes.
Q. That rule, as far as the Ashland litigation hold on benzene documents, that's been in place at least since 1989; is that right?
A. I don't know.
Q. The litigation hold on benzene-related documents, that applies to e-mails as well, correct?
A. Yes.
Q. You've gathered in other cases benzene-related documents for the legal department, have you not?
A. Yes.
Q. Ashland has a label guide, don't they?
A. Yes.
Q. Is that kept on the computer?
A. Yes.
Q. Take you a couple minutes to get that if you needed to?
A. It might take me a little bit longer. I'm not sure exactly where it is but --
Q. Does Ashland have a phrase book

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that it uses in preparing MSDSs and labels?
A. Yes.
Q. And is that phrase book something that you use on a regular basis in the course of your job duties?
A. People in my department do, yes.
Q. Ashland has textbooks as well, including IARC monographs that review the hazard assessments for benzene, right?
A. Yes.
Q. Those are kept in a library in your office?
A. Yes.
Q. Does Ashland have access to the world's literature on studies involving chemical exposure and disease?
A. We have access to literature, yes.
Q. And you've always -- Ashland has always had that access, has it not?
A. I can only speak from 1989 on.
Q. How strong does Ashland believe -- or how would Ashland characterize the evidence of an association between benzene and bone marrow diseases?
MR. PARKS: Objection. Form. It's

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vague.
THE WITNESS: What I've stated is that benzene causes aplastic anemia and acute myelogenous leukemia.
Q. It causes diseases of the bone marrow, right?
A. It causes aplastic anemia and acute myelogenous leukemia.
Q. OSHA believes that there's an association between benzene and diseases of the bone marrow, correct?
A. Can't specifically cite what OSHA states as far as whether they are as general as bone marrow diseases.
Q. What is IARC?
A. It's International Agency For Research on Cancer. It's part of the World Health Organization.
Q. And IARC and the World Health Organization, they both agree that benzene causes diseases of the bone marrow, correct?
A. IARC relates it -- classifies benzene as a known human carcinogen.
Q. Hematology and oncology textbooks, those also classify benzene as a known human

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carcinogen, right?
A. I'm not certain.
Q. Would you agree with me that the association between benzene and blood diseases has been consistently observed in multiple studies and investigations?
A. I would agree that benzene causes aplastic anemia and acute myelogenous leukemia which are blood diseases.
Q. And different investigators have performed those studies and reached that conclusion, correct?
A. Correct.
Q. And they've studied different populations and reached that conclusion, correct?
A. Correct.
Q. They've used different design methodologies and they've reached that conclusion, correct?
A. I'm not familiar enough with the literature to know whether they've used different design methodologies.
Q. There have been different sources of funding behind those various studies, like

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industry must fund certain studies or government may fund certain studies or medical research may fund different studies, correct?
A. Correct.
Q. And those studies between benzene and blood diseases, they nevertheless reached the conclusion that benzene causes cancer in humans, correct?
MR. PARKS: Objection. That's form -- the form of that question is vague and overly broad, confusing.
Q. I'll ask a different question.
A. Okay.
Q. Is there a dose response relationship between benzene exposure and blood diseases?
A. There are studies out there which do indicate that there are levels that are thought to be safe. It's what the occupational exposure limits are based on.
Q. What is a safe level of exposure to benzene?
A. For an occupational environment, the American Conference of Governmental Industrial Hygienists have a half a part per

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million. And OSHA has one PPM. And NIOSH has zero point one PPM as a time-weighted average for an eight-hour exposure.
Q. So those are safe levels of exposure to benzene?
A. Yes.
Q. What about people who work with benzene on a daily or weekly basis, do they exhibit a higher risk for blood diseases?
A. Not necessarily, if they're made -- if the occupational exposure is maintained below the exposure limit.
MR. PATTON: Let's take a short break. Off the record.
THE VIDEOGRAPHER: We're off the record.
(Thereupon, a break was had.)
THE VIDEOGRAPHER: We're on the record.
Q. Mr. Kennan, before we took a short break, we were talking about safe level of exposure to benzene; is that right?
A. Yes.
Q. Okay. My question is this, OSHA invoked an Emergency Temporary Standard in 1977

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with regard to benzene exposure; is that right?
A. It was about that time period. I don't remember the exact year.
Q. What was the Emergency Temporary Standard about?
A. It was about cancer.
Q. Was it about a safe level of exposure to benzene?
A. The occupational exposure limit at that time, I think, was ten parts per million, and they wanted to lower it to one PPM.
Q. It was ten PPM at the time, and they wanted it lowered to one PPM; is that right?
A. Yes.
Q. Is that a time-weighted average?
A. Yes. It's a time-weighted average, eight-hour time-weighted average.
Q. And that proposed reduction in the -- in the exposure limit, is that something that Ashland supported or opposed?
A. I don't know. I wasn't at Ashland at that time period.
Q. You worked with the American Petroleum Institute in the '80s, right?

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A. Yes.
Q. You're familiar with benzene?
A. Yes.
Q. You're familiar with the OSHA Emergency Temporary Standard, correct?
A. Correct.
Q. And as we sit here today, you honestly can't tell us whether Ashland supported or opposed those higher safety standards for benzene exposure in 1977?
A. That's correct. I don't know what Ashland's position was --
Q. Okay.
A. -- at that time period.
Q. Exhibit 1 here is your deposition notice. It says notice of oral deposition of Ashland. And I asked for somebody to come here today and testify about different subject areas. And your lawyer said that you were the person to testify regarding that. In item number five -- can you read number five for us?
A. Defendant's participation in regulatory, governmental, and/or industrial groups concerning standards, regulations, and/or consensus standards pertaining to

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occupational exposures to benzene. This subject includes involvement by Defendant or any agent or employee of Defendant in the course of any governmental and/or industry proceedings, including but not limited to the National Institute For Occupational Safety and Health, NIOSH, the Occupational Safety and Health Administration, OSHA.

Q. Did you do anything to prepare for that area of your testimony today?

A. Other than my past experience and background, no.

Q. And your past experience and background is not such that you can tell us or you can testify intelligently today regarding Ashland's involvement in those proceedings; is that a fair statement?

MR. PARKS: Objection to form. That mischaracterizes his testimony.

Q. Well, did -- did Ashland participate directly in the OSHA temporary -- Emergency Temporary Standards proceedings that were -- that were being undertaken in the late '70s?

A. I don't know what you mean by

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participate by directly.

Q. Did Ashland submit anything for OSHA's consideration?

A. Not that I'm aware of.

Q. Did -- was Ashland a member of any industry groups, such as the API or the Chemical Manufacturers Association, that participated in those proceedings?

A. They were a member of the API.

Q. And they were a member of the CMA too, correct?

A. I believe so.

Q. Do you know if the API or the CMA opposed the higher safety standards for benzene exposure?

A. I'm not certain about CMA's position. I know API opposed the standard.

Q. And Ashland was a member of the API?

A. Correct.

Q. So is it a fair statement then that Ashland in the 1970s opposed higher safety standards for benzene exposure?

A. I don't know what Ashland's opinion was. Just because they're a member of

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an organization doesn't mean they supported that position.

Q. Is Ashland a safe company?

A. I don't know what you mean by safe.

Q. Well, is Ashland concerned with the health and well-being of the people who use Ashland chemicals in the course of their work?

A. We -- yes, we are concerned about the safe handling of our products by both our employees and our customers.

Q. Ashland cares about the safe handling of its chemical by the end users or customers who use its solvent blends; is that correct?

A. We want our products handled safely, yes.

Q. Why would Ashland participate in industry activities that oppose higher safety regulations which would protect workers from exposure to benzene?

MR. PARKS: Objection to form.

THE WITNESS: I told you I don't know what Ashland's position was on that.

Q. But Ashland does care about safety

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and it does care about the physical well-being of people who use Ashland chemicals; is that right?

A. Yes.

Q. Ashland respects the law as well, don't they?

A. Yes.

Q. Ashland respects the rules set down by the Federal Government regarding chemicals; is that right?

A. We want to be in a hundred percent compliance as an aspirational goal, yes.

Q. And Ashland has policies and procedures in place to ensure compliance with those regulations and those safety goals, including the ones that deal with benzene; is that a fair statement?

A. It's a fair statement that we have policies and procedures in place to stay in compliance with regulations that apply to us.

Q. And those regulations, they might apply to warnings; is that fair?

A. Yes.

Q. They might apply to transporting chemicals?

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A. Yes.
Q. They might apply to formulating chemicals?
A. I'm not certain about formulating, whether there's any regulation specifically to regulate the formulation.
Q. There are federal regulations which govern labeling chemicals and packaging, correct?
A. Yes.
Q. There are federal regulations which govern testing chemicals; is that correct?
A. There are regulations that are specific to a substance that may require you to do testing. But other than that, there's just guidelines as to how the tests should be done. And it's up to the companies to decide whether the testing is necessary.
Q. Benzene is one of those chemicals for which the Federal Government requires testing, correct?
A. What is your definition of testing?
Q. If Ashland is going to package,

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blend, and sell -- strike that. If Ashland is going to blend, package, and sell solvent products, such as Blend 3078B and 3078C and 7650, Ashland has to comply with the Hazard Communication Standard with respect to those products, right?
A. Yes.
Q. And the Hazard Communication Standard provides that Ashland test those products to make some type of determination regarding benzene; is that a fair statement?
A. I don't believe the Hazard Communication Standard requires that.
Q. Okay. Exhibits 2 and 3 are 1989 and 1995 respectively MSDSs for the Blend 3078B. Do you see right at the top there where it says this MSDS complies with the Hazardous Communication Standard?
A. Yes.
Q. Okay. So that means that Ashland, because it respects the law and follows the law would have performed some type of testing or determination to make sure that those products and those MSDSs comply with the Hazardous Communication Standard; is that right?

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A. We --
MR. PARKS: Objection. Misleading.
THE WITNESS: We would do a hazard determination on these materials.
Q. Ashland conducts hazard determinations with respect to those solvent blends, correct?
A. Correct.
Q. What is the hazard determination that Ashland performs?
A. We would look at each one of the components and we have hazard assessments of those and then we would take the hazards of each one of those components and take the most severe hazards and transfer them over to the material safety data sheet.
Q. Is that it?
A. We would obviously want to know what the composition of the product is.
Q. And you would, therefore, want to know whether there's benzene in the different components of that product; is that right?
A. Yes.
Q. And how would you go about determining if there's benzene in the

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ingredients that are used in those blends?
A. We rely upon our suppliers of those materials.
Q. Okay. So every supplier that gives you a shipment of a solvent, whether it be Stoddard solvent, the different Napthas, or xylene, they go ahead and tell you how much benzene is in that product; is that right?
A. They tell us because they're meeting our specifications.
Q. Okay. So Ashland has specifications then that if somebody wants to sell Stoddard or sell xylene or sell Naptha to Ashland, that supplier has to meet those specifications with respect to benzene; is that right?
A. Yes.
Q. And where are those specifications kept at? If I wanted to put my hands on the documents and look at those specs, where are they?
A. I'm not certain.
Q. Did you review them in preparing for your deposition today?
A. No.

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Q. Okay. So what are the specifications then that -- that require that a given supplier tell Ashland how much benzene is in the -- in the solvent?
A. The information comes from the lab.
Q. Okay. What is the lab?
A. It would be -- in this situation, it's the distribution company, so it would be the distribution's lab group. I don't know the exact name of the group. It's essentially the chemists.
Q. The chemists at Ashland?
A. Yes.
Q. Okay. They have a group that has specifications that require that incoming shipments of a given solvent, such as xylene or Stoddard solvent, or Naptha, that those only have so much benzene in them; is that right?
A. They have specifications that define several things. Benzene could be one of them.
Q. Okay. Is benzene one of those specifications?
A. For some of those solvents, yes.

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Q. Okay. And, again, where are those documents that I could put my hands on that talk about those specifications?
A. I don't know exactly where they're kept.
Q. Okay. What is the specification for benzene, the -- the maximum allowable benzene -- let me start over.
What is the specification for the maximum allowable benzene content for xylene that Ashland receives and uses in its solvent blends?
A. I don't know the exact level. I don't know what the specification is.
Q. But there is a specification?
A. Yes.
Q. And you don't know where that specification is, right?
A. I know where I could find it. I just don't know where it's kept.
Q. Where would you find it?
A. I would go to the lab for the distribution company, the chemists.
Q. And you would ask that chemist to give you the specification for xylene?

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A. Correct.
Q. And that specification is going to say on it X amount of benzene is the most amount of benzene we can allow?
A. Correct.
Q. Have you ever seen those specifications?
A. Yes.
Q. So does Ashland -- how does Ashland determine whether a given supplier meets those specifications?
A. They -- well, the supplier provides us specification sheets, technical data sheets on -- on this -- different lots. And I think in the past, they have occasionally -- I don't know what the frequency is -- done some checks.
Q. Okay. So two areas that you just opened up there that I want to talk about a little bit. A solvent supplier, they have to meet certain specifications in order to sell Stoddard solvent to Ashland, correct?
A. Correct.
Q. Okay. And are those specifications checked with every shipment that

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comes in?
A. I don't know.
Q. Who would know the answer to that?
A. Buddy Whitlock.
Q. And then Ashland does or does not test every incoming shipment of Stoddard solvent to ensure that there's an allowable amount of benzene pursuant to the specification; is that fair?
A. Could you repeat that?
Q. That was a bad question. Does Ashland test every incoming shipment of Stoddard solvent to determine whether or not that Stoddard solvent meets the specifications with regard to benzene?
A. I don't know.
Q. Benzene causes cancer, right?
A. Benzene causes acute myelogenous leukemia.
Q. Would it be important to test incoming shipments of Stoddard solvent given that Stoddard solvent is known to contain benzene? Is it important to test those incoming shipments to make sure there's an allowable amount of benzene or a safe amount of

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benzene in those raw materials?
A. The -- it's important to have specifications out there and to know or be comfortable with your supplier that they are meeting the specifications.
Q. What types of policies and procedures does Ashland have to make sure or to check up on a regular basis that its different suppliers are meeting those specifications?
A. I don't know.
Q. Have those specifications with regard to benzene changed over the years?
A. I don't know.
Q. Does Ashland have certain approved certain suppliers of Stoddard solvent, Naptha or xylene?
A. I'm uncertain.
Q. So you don't know whether or not any old truck could pull up and unload some Naptha or whether it would have to come from a certain company?
A. I know we have contracts with companies. I don't know who they are right now for those solvents.
Q. Do those contracts include a

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benzene specification in them, that's to say that a supplier would be in breach of the contractor violating the contract if it were to provide a shipment of Stoddard solvent with more than the maximum allowable amount of benzene?
A. I don't know.
Q. Is benzene content one of the components in the determination of whether or not a company could become a supplier of raw materials to Ashland?
A. I don't know.
Q. The 3078B solvent blend that Charles Wilson used in Frankston, Texas, where was that product blended at?
MR. PARKS: Objection to form.
THE WITNESS: I don't know.
Q. How much different blending facilities for Ashland are there in the country?
A. For what time period?
Q. From 1979 through 2003.
A. It would be -- well, it's -- I wouldn't know an exact number. It would have ranged in the early time period, in the

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forties, probably up to -- I think there's seventy some sites right now.
Q. So in the earlier years, like the early 1980s, there might be approximately forty different sites in the country that are blending that product, that 3078B solvent blend?
A. I would not think so.
Q. Can you make a reasonable estimate as to how many different locations were manufacturing that solvent blend?
A. I really don't know.
Q. Did each different manufacturing location have policies and procedures to follow with regard to the maximum allowable amount of benzene in a given shipment of Stoddard solvent?
A. Could you repeat that?
MR. PATTON: Let's change the tape and then I'll ask you.
THE VIDEOGRAPHER: We're off the record.
(Thereupon, a break was had.)
THE VIDEOGRAPHER: We're on the record.

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Q. Mr. Kennan, to your knowledge, Ashland does not test each incoming shipment of raw material for benzene, correct?
A. I don't know.
Q. Do you think that's something that a reasonable and prudent, safe company would do, test incoming raw materials that are known to contain a carcinogen to determine whether or not there is a -- what the level of carcinogen in that product is?
MR. PARKS: Objection.
Q. Let me ask a better question. Mr. Kennan, you agree with me that Ashland is a reasonable and prudent and safe company, correct?
A. Yes.
Q. Would you expect a reasonable and prudent and safe company to test its incoming raw materials to determine the level of benzene, a known carcinogen present in those raw materials?
A. I wouldn't think it would be necessary to test every shipment.
Q. Why not?
A. Because you have a relationship

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and legal requirements with your suppliers and specifications you put out and you need to be able to rely upon procedure and processes.
Q. And those specifications include a maximum allowable benzene content; is that right?
A. Correct.
Q. What is the maximum allowable benzene content for Stoddard solvent?
A. I don't know.
Q. Does Ashland test any incoming shipments of Stoddard solvent to determine the level of benzene present in that shipment?
A. I don't know.
Q. Does Ashland sell its chemical solvent blends, such as the 3078B, to just anyone off the street?
A. No.
Q. So, for instance, somebody couldn't walk in off the street and say hey, I want a can of this 3078B solvent blend?
A. That's correct.
Q. So Ashland has criteria for a company or person to be allowed to buy these blends; is that right?

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A. I'm not certain about that.
Q. So how is it that you know that Ashland wouldn't sell those blends to just anyone?
A. It's just -- I don't have direct knowledge as to why they wouldn't. I just know that they don't.
Q. So you know for a fact that if a nineteen year old kid off the street walked in and said hey, I got a printing press at home and I want to clean it and I hear this 3078B solvent works good to clean my printing press, can I have a bucket of it, you don't know whether or not Ashland would sell that nineteen year old kid a bucket of it, of the solvent blend to use?
A. I would be very surprised if a nineteen year old knew that we had this blend because we don't market blends like this nationwide. So that would be surprising as we're an industrial chemical, we're not really a chemical company, we're not a household name. So I don't expect people coming in off the street.
We do have certain chemicals that we

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have restrictions on, such as those that contain Drug Enforcement Agency, List I, List II chemicals, which we would have to have venue certifications from our customers to make sure that they are valid customers and they're using them for appropriate purposes and not drug diversion.
But for a hydrocarbon blend, which is very similar to gasoline, I wouldn't think we'd have strict requirements, but would be very unlikely that we would sell to someone coming in off the street. No one is going to walk into our distribution site.
Q. But to your knowledge, there are no strict requirements for a person or a company to become a customer of the Ashland Solvent Blend 3078B, correct?
A. I do not know whether there are.
Q. What is a TLV or a threshold limit value? What is that?
A. Threshold limit value is -- it's the American Conference of Governmental Hygienists eight-hour time-weighted average level.
Q. And what is a PEL?

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A. It's a permissible exposure limit. And that is the Occupational Safety Health Administration's time-weighted average.
Q. And if you look towards the middle of the page of one of those MSDSs for the 3078B, it talks about what those PELs or TLVs are, correct?
A. Yes.
Q. Does a customer of an Ashland solvent blend have to have knowledge and sophistication as to PELs and TVLs in order to buy the product?
A. Our expectation is that they know how to handle product as intended.
Q. So Ashland would expect that the purchasers and end users of these products know enough in terms of workplace safety so that they can safely use these chemicals, right?
A. Yes.
Q. The MSDS lists the different TLVs and PELs for a number of different chemicals, such as xylene, cumene, trimethylbenzene; is this right?
A. Do you have the same one I do?
Q. I think so. It says 964 in the

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lower right-hand corner. Let me just ask a more general question.
A. Oh, 964. I see exposure limits that -- all right. Let's see the footnote.
Q. Let me start over a little bit here.
A. Okay.
Q. With respect to exposure limits, PELs or TLVs, Ashland sets forth in its MSDS what those different PELs and TLVs are; is that correct?
A. Yes. We would publish the reported values.
Q. Okay. And it says here that the PEL for aromatic petroleum distillates, for example, is a hundred PPM, correct?
A. Yes.
Q. How would a person know whether or not -- well, first of all, that PEL, that's a permissible exposure limit, correct?
A. Yes.
Q. That is something that government or industry says is a safe level of exposure to that chemical, right?
A. It's OSHA's value. Yes.

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Q. Okay. How would a person, such as a printer working in a print shop, know whether or not they are using that product and experiencing exposures in excess of a given PEL? How would you know?
A. The -- it would be the print shop owners who are responsible for doing hazard assessment or hazard evaluation of the work that's going on at that site. And if there was some possibility of overexposure, they should have identified or evaluated that.
Q. Okay. Let's talk again about the benzene PEL and the benzene TLV. What is the permissible exposure limit for benzene?
A. One PPM.
Q. Okay. One PPM. And then what is the TLV for benzene?
A. Zero -- zero point five PPM.
Q. Zero point five PPM. And how were those TLVs and PELs measured?
A. They would be captured in the air. Typically there's -- I think for benzene would be a badge and they would wear it for a certain time period and then the material would be evaluated to identify how much material was

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captured and they'd look at it versus the amount of time that was actually being monitored and come up with an air exposure over that time period.
Q. The Solvent Blend 3078B contains chemicals which are known to contain benzene, correct?
A. There would be trace amounts of benzene in this material.
Q. Okay. What -- what's a trace amount of benzene?
A. Low part per million.
Q. Okay. How many part per million?
A. Under ten.
Q. Under ten PPM is a trace amount of benzene?
A. Yeah.
Q. And it's your testimony that these solvent blends contained less than ten PPM of benzene?
A. Yes.
Q. And what is the basis for your opinion in that regard?
A. I rely upon the lab at Ashland's distribution --

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Q. Okay.
A. -- business.
Q. And Ashland's lab has done testing of this 3078B blend to determine how much benzene is in that blend?
A. Ashland's lab done an evaluation to come up with that amount.
Q. Okay. What's the difference between an evaluation and a test in that regard?
A. An evaluation could include a test. I don't know whether they did do a test. It could have been based upon the maximum amount of benzene allowed in these materials.
Q. Okay. What is the evaluation that you're referencing here that was done with respect to that blend which arrived at the conclusion that there's less than ten PPM of benzene in that blend? What's the evaluation?
A. I haven't seen the evaluation.
Q. But your testimony -- even though you haven't seen an evaluation, your testimony is that that product has less than ten PPM benzene in it?
A. It's because I'm relying upon

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information provided to me by the lab.
Q. Okay. So the lab gave you a piece of paper that said hey, we tested 3078B blend and it has less than ten PPM benzene, right?
A. They did not directly give it to me, no.
Q. Okay. Who did they give it to?
A. They gave it to the law department.
Q. So the law department at Ashland has a document that says Blend 3078B has less than ten PPM benzene in it, right?
A. Yes.
Q. And you've seen that document?
A. Not seen a document. I've seen the number that came -- the final number.
Q. When did you see that final number?
MR. PARKS: Keith, you're getting into privileged information here. You'll be able to go through that with Buddy next week because he works in the lab.
MR. PATTON: I want to go through it with the corporate representative that was designated to talk about the chemical content,

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including but not limited to benzene content time, of Defendant's Solvent Blend 3078B. And you designated him as a representative, right?
MR. PARKS: And that's fine to ask him what he knows about it, but you're getting into how he knows it and I'm telling you that is involving privileged communications. You're -- it's fine for you to ask him what that level is and what he's relying on for that.
Q. What are you relying --
MR. PARKS: And you've done that.
Q. Tell me again what document or what information you're relying on that tells you and tells us and tells Ashland's experts -- or would tell Ashland's experts that there's less than ten PPM benzene in Solvent Blend 3078B.
A. Relying upon a document that provides the compositional evaluation -- the compositional information on each of these blends and what the benzene concentration would be.
Q. What's the date on that document?
A. I don't know.
Q. Where did that document come from?

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A. Buddy Whitlock.
Q. Buddy Whitlock drafted it?
A. I don't know whether he drafted it.
Q. When did -- when was that document created?
A. I don't know.
Q. Why was it created?
A. I'm uncertain.
Q. Okay. So there's one document out there that says that there's less than ten PPM benzene in 3078B Ashland solvent blend, correct?
MR. PARKS: I'm going to object to the form of that. Are you saying there's one and only one or there is at least one?
Q. Mr. Kennan, you're the designated corporate representative on behalf of Ashland to testify as to the benzene content of Solvent Blend 3078B. Do you understand that?
A. Yes.
Q. Okay. I want to know every piece of paper and every document which tell us how much benzene is in that solvent blend.
A. Well, there would be the document

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that I -- the compositional information that I saw yesterday that Buddy had prepared and then I could go to the computer at Ashland and also do the assessment myself.
Q. Okay. How would you go about doing the assessment yourself?
A. Each one of these blends, so we'll take Blend 3078B, and I would go onto the -- for this time period, I'd go into the mainframe. And the mainframe would have a composition screen. And it would provide the primary composition of this material, but then we could go to another screen which then provides all the compositions of the components, which then would pull any of the materials in here.
Since benzene is not intentionally added to this product, it would pull -- it comes in as a trace in some of the other components. You would look at that, what is the maximum amount of benzene in that material, and then you'd calculate based upon the amount that it's actually in this blend to come up with a final concentration.
Q. So you could do calculations?

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A. I could, yes.
Q. And you could come up with a number of how much benzene you think is in that 30 -- 3078B blend, right?
A. As what the maximum amount could be, yes.
Q. Okay. And then Ashland also performed actual chemical testing, lab testing to determine how much benzene is in that blend, right?
A. I do not know what Buddy did to come up with that report.
Q. The Hazardous Communication Standard requires that there be some type of determination to determine whether or not carcinogenic ingredients, such as benzene, are present in a mixture at point one percent or greater, correct?
A. Yes.
Q. And that evaluation is something that could be done using the computer or using math, right?
A. Yes.
Q. Okay. What if -- and your testimony today is that Ashland did that type

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of evaluation, correct?
A. My testimony is that Buddy did some type of evaluation. Whether he used the computer or whether he tested these blends, I don't know.
Q. Federal law requires that blend, right -- or requires that determination, correct?
A. Would require us to assess the hazards of these blends, yes.
Q. Okay. So federal law requires Ashland to assess the hazards of its blend, right?
A. Yes.
Q. And Ashland cares about federal law, right?
A. Yes.
Q. And they want to comply with the law?
A. Correct.
Q. So they would perform that type of evaluation, correct?
A. Yes.
Q. And Buddy Whitlock will have the information, the documents regarding that

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evidencing that type of evaluation, correct?
MR. PARKS: Objection. Form.
THE WITNESS: I can't tell you what buddy will have or not.
Q. As the designated corporate representative, I'm -- corporate representative of Ashland, you don't have that information today, do you?
A. I have the information to relay to you that it's less than ten parts per million.
Q. You have a conclusion, right?
A. Yes.
Q. Okay. Ashland respects the law; Ashland follows the Hazardous Communication Standard, correct?
A. Yes.
Q. Okay. So if the Hazardous Communication Standard requires that if there's evidence that a carcinogenic ingredient, such as benzene, could be released from the mixture in concentrations which would exceed an established PEL or ACGIH TLV -- and those are one PPM and point five PPM, right --
A. Yes.
Q. -- or could present a health risk

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to employees, then HazCom requires that a chemical supplier perform that type of testing, correct?
A. HazCom requires us -- if it's greater than point one percent and if there is a potential for exposure to exceed the permissible exposure limit or TLV.
Q. So if Ashland does a calculation and does the math, so to speak, and determines that there's less point one percent benzene in that mixture, Ashland then does not need to warn end users, such as printers, about that danger or the presence of benzene in the product, correct?
A. That's not what I said. I said that is one of the criteria, is point one percent. The other criteria would be if there was a potential for the benzene to have exposure above the occupational exposure limit.
Q. Okay. So Ashland determines whether or not there's a danger, that there might be high exposures or exposures in excess of the PEL or TLV, Ashland performs some type of testing to determine whether or not those harmful exposures can occur, right?

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MR. PARKS: Objection. Form. Vagueness of the terms in the question.
Q. Let me start over. Mr. Kennan, you understand you're the designated corporate representative on behalf of Ashland to testify regarding subject area number two in this deposition notice. Could you read subject area number two for us?
A. All chemical analyses and exposure testing, including but not limited to testing pursuant to the Hazardous Communication Standard conducted by Defendant concerning Defendant's Solvent Blend 3078B and Solvent Blend 7650 from 1979 through 1993.
Q. What did you do to prepare for that area of testimony?
A. My basic knowledge of what experience -- what has happened at the company in that time period.
Q. Did you look into what testing was done specific to this solvent blend?
A. Not specific to this solvent blend.
Q. You said earlier in your deposition that you didn't talk to anybody with

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Ashland in preparation for this deposition, like you didn't talk to Buddy Whitlock, did you?
A. No, I did not.
Q. My question is this, what exposure testing did Ashland conduct with respect to the Ashland Solvent Blend 3078B?
A. We didn't conduct specific testing to that. We would have relied upon our -- the history of use of these solvents in our facilities.
Q. Okay. The history of the use of solvents in your facilities. What do you mean by that?
A. Well, we obviously prepare these blends, and we would be using the materials that contain benzene at a greater concentration because you're blending, you're diluting these in the blends. As we do that, as we go out and monitor our facilities, we do what's called a hydrocarbon scan and benzene is one of the chemicals that we search for in there. We have not ever detected benzene in handling any of these chemicals.
So given the low level -- part per

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million, we would not anticipate an even lower concentration to cause an exposure.
Q. Where are the documents that support the proposition and conclusions that you just testified to?
A. It's our computerized database on the exposure monitoring for our facilities.
Q. And that --
A. There's not a specific report that covers that.
Q. Okay. But there's a collective -- there's a collective amount or body of data that indicates that when these blends are being made, there's no harmful exposures to benzene which would be experienced by Ashland's employees?
A. Correct.
Q. Okay. What about end users of the product, such as printers? You understand that printers use this product?
A. We have not evaluated the end user only because we're -- we're handling materials that have higher concentrations of benzene. When you blend it, you've diluted the amount of benzene that's in there. We have no

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expectation that at those low levels that -- of that exposure would exceed a half a part per million over eight hours or one part per million over eight hours.
Q. Okay. Where's the data and the writings to support the conclusion that you just said?
A. I told you previously that we have a body of information on exposure monitoring in our facilities where we've done hydrocarbon scans and not detected benzene.
Q. So your testimony is that because Ashland tests its own employees on occasions who are making -- who are blending chemicals, Ashland doesn't need to test whether or not actual potential uses of the product, such as putting it on a rag and cleaning a printing press, Ashland doesn't need to go as far as testing whether or not those -- those uses of the product can result in high or low levels of exposure to benzene?
A. We don't reasonably expect that that's going to cause an overexposure to benzene.
Q. So is there a formula or a

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calculation then that we could use to determine whether or not any of the Ashland solvent blends could result in significant exposures above the TLV and PEL for anyone who would be using the product?
A. There are models out there that you could use to calculate and predict exposures.
Q. Does Ashland use those models in the context of what someone like a printer using this product on a printing press would experience?
A. Not that I know of.
Q. And Ashland performs no actual testing on end users of this blend to determine what exposures they would experience to benzene when using the product to clean a printing press?
A. Not to my knowledge have we tested this blend for exposure to end users.
Q. You testified earlier that Ashland respects and complies with federal law. Does Ashland respect and comply with Proposition 65 in California?
A. Yes.

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Q. What is Proposition 65?
A. Proposition 65 is a -- what we would term a right-to-know law. It has lists of chemicals that they've identified that are either carcinogens or reproductive developmental hazards and require you to provide a warning if they are present in your products.
Q. The State of California has decided that if there are dangerous levels of benzene present in a given product, people have a right to know that, right?
A. Yes.
Q. Does Ashland agree with the State of California, that if there are dangerous levels of benzene in a product, that people have a right to know that?
A. What we agree with is that if there's benzene present and we have not conducted a risk assessment on that product, we provide the warning for Prop 65.
Q. And that risk assessment, that would be also set forth in the documents we talked about earlier, that you have access to in your department, right?

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A. Not that specific risk assessment and those documents.
Q. Okay. What's the risk assessment that you're talking about?
A. This would be a Proposition 65 risk assessment.
Q. Is there a policy and procedure, guideline that Ashland follows to ensure compliance with the Proposition 65?
A. There's not a written -- well, we comply with Prop 65. As far as doing the risk assessment, there is not a specific written procedure, but we maintain documents on the risk assessments that we do.
Q. Was a risk assessment performed with respect to these products?
A. No.
Q. Why not?
A. Well, for what time period, first of all?
Q. 1979 through 1993.
A. Well, Proposition 65 didn't take effect until 1986. So for that first time period, there would have been no reason to have done it. I'm not sure what the time periods

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are all on these blends, whether some of them were stopped before '86.
And the situation is we would have provided the warning that benzene was present, if that was appropriate, and not conducted a risk assessment on one of these specific blends unless requested to by the business.
Q. The MSDS that starts in the lower right hand corner, 964, that's dated 1989.
A. Yes.
Q. Do you see that? In 1989, Proposition 65 was in effect, correct?
A. Correct.
Q. And so Ashland because it follows the law did or did not or would not have to perform a risk assessment with respect to this product in 1989?
A. You're not required to perform a risk assessment. You're required to provide a warning. You can conduct a risk assessment if you choose, if you want to remove the Proposition 65 warning, and you'd have to be able to demonstrate that typical exposures would not lead to an overexposure based upon California's published allowable daily intake.

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Q. And Ashland did not perform that test with respect to this product in 1989, right?
A. Not that I'm aware of.
Q. Okay. This solvent blend has a PEL for aromatic petroleum distillates of a hundred PPM, right?
A. You're talking about the first line on --
Q. Yes.
A. Yes.
Q. If someone like a printer was using this product and putting it on a rag and cleaning a printing press, could they possibly experience exposures to aromatic petroleum distillates in excess of the PEL?
A. It would depend upon the conditions of the room, the ventilation, the size of the room, of how long they used it. So --
Q. Are there any conditions under which someone would experience an exposure in excess of that PEL?
A. There might be conditions that could be exceeded.

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Q. And did Ashland perform any type of studies to determine what those conditions would be?
A. No.
Q. Other than -- or with -- unless a printer's employer performed industrial hygiene monitoring, is there any other way that a printer could find out from Ashland whether or not he might be experiencing harmful exposure to any of these chemicals or to benzene when using this product?
A. There is a mechanism to call Ashland.
Q. And so a printer could call Ashland, he could call one of the numbers on this safety data sheet, an he could ask whether or not he might experience exposures in excess of a given PEL or TLV?
A. That's possible, yes.
Q. Okay. And Ashland would have the answers to that question?
A. We would discuss it with him. I don't know whether we'd have the exact answers.
Q. What if a printer called you and said hey, I just found out that one of my

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coworkers has a bone marrow disease and he used the Ashland solvent blend product and I heard that there's benzene in this product and I want to know if I might be experiencing unsafe levels of exposure to benzene by using this product? Would Ashland have an answer for that?
A. I'd probably start off by asking him about exposure conditions, how he uses the product, what's the ventilation, is he seeing other symptoms of exposure from these materials to get an idea of whether there's any validity to even an exposure to the material.
Q. What if he said he was experiencing headaches from using the product?
A. Then I'd probably recommend that he talk to his company, as far as to let them know that it's a problem. If he says -- turns around and would say that he doesn't have faith in his company, then I would tell him that the State has programs for industrial hygiene that they can bring people in to investigate whether there's an issue and they could keep themselves without having an issue of disclosing who's made the complaint to verify that.

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Q. What if --
A. Or he could ask us to -- ask his company to ask us to come in.
Q. Has Ashland ever went out to print shops or other places where these solvent blends are in use and conducted industrial hygiene monitoring?
A. I'm uncertain about print shops, but we have done exposure monitoring at customer sites.
Q. Has Ashland done exposure monitoring for benzene at customer sites with respect to these solvent blends?
A. Not that I'm aware of.
Q. Has Ashland done industrial hygiene monitoring at any customer sites with respect to benzene?
A. I don't know.
Q. Is it your testimony, Mr. Kennan, that there is no way that a printer using this product could exceed -- or could experience exposures to benzene in excess of the TLV or PEL?
MR. PARKS: What -- you said this product.

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MR. PATTON: For benzene.
Q. Let me ask a better question.
Mr. Kennan, is it your testimony that a printer using Ashland Blend 3078B under normal working conditions could not possibly experience exposures to benzene in excess of the PEL or TLV?
A. Yes.
Q. And what is the basis of your conclusion?
A. The basis of my conclusion is what I've said before, is that it's an -- they're at a very extremely low level. We've had products that we've handled before within Ashland that have higher benzene concentrations and not had an issue with exposures.
Q. But with respect to this specific blend, Ashland would have no way of knowing how much benzene is actually in this product, correct?
A. That's not true.
Q. How would Ashland know how much benzene is in a given batch of Blend 3078B?
A. Well, I've given you one example of how we could come up with it, as far as a

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calculation. Another example would be to do an actual test on it.
Q. And Ashland doesn't perform that type of actual test on given batches of 3078B solvent blend, do they?
A. I'm not -- I don't know.
MR. PATTON: Okay. Let's take a break. Off the record.
THE VIDEOGRAPHER: We're off the record.
(Thereupon, a break was had.)
THE VIDEOGRAPHER: We're on the record.
Q. Mr. Kennan, since -- from 1979 to 1993, did Ashland ever revise or revisit its policies or make any type of -- of changes to ensure or reduce -- to ensure a lower benzene content in its incoming raw materials?
Let me ask a better question.
From 1979 to 1993, did Ashland take any measures to mitigate the presence of benzene in its incoming raw materials?
A. I'm aware that there were some actions. I can't really cite them.
Q. After the Hazardous Communication

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Standard went into effect in 1986, did Ashland revisit or revise any of its policies specific to benzene now that benzene would have to be specifically accounted for in drafting MSDSs?
A. It's my impression we were accounting for Benzene prior to 1986.
Q. Was Ashland prior to 1986 accounting for benzene in the way that the Hazardous Communication requirement mandates that chemical suppliers account for benzene?
A. I'm uncertain what cutoff levels they used. And that time period is pretty broad. Their policies on how they addressed it may have changed.
Q. Prior to 1986 when HazCom came out, so from 1979 to 1986, did Ashland have any policies or procedures for calculating the amount of benzene that it would expect to be in a given solvent blend?
A. I know that they had reports of the amount of benzene in certain products.
Q. I don't -- I don't think that answers the question.
A. All right. Could you ask it again?

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Q. Yeah. Prior to 1986, did Ashland have any policies and procedures for testing incoming raw materials for benzene content?
A. I don't know.
Q. Prior to 1986, did Ashland have any policies and procedures for performing an evaluation to determine how much benzene they would expect to be in Solvent Blend 3078B?
A. They would have used similar process. I mean, the blends are -- have certain ingredients, and that's how they would have done their evaluation of the hazards. It's based upon the ingredients.
Q. Prior to 1986, did Ashland evaluate solvent blends for benzene specifically?
A. What do you mean by evaluate?
Q. Did they perform any type of calculations to determine how much benzene they would expect to be in the product?
A. I don't know the answer.
Q. Prior to 1986, did Ashland perform any exposure testing, like actual experiments or industrial hygiene sampling, actual testing of people using the solvent blend, to determine

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if they were experiencing exposures to benzene and if so, how much?
A. I'm not aware of them testing exposure monitoring for solvent blends prior to 1986.
Q. Is it Ashland's position that benzene does not cause myelodysplastic syndrome?
A. I told you I'm uncertain about the relationship between benzene exposure and myelodysplastic syndrome. MDS is a broad array of different diseases.
Q. But MDS is a bone marrow disease, right?
A. Yes.
Q. And benzene causes bone marrow diseases, right?
A. Benzene causes aplastic anemia and acute myelogenous leukemia, which are bone marrow diseases.
Q. Does Ashland have any policies or procedures in place for its salespeople to communicate the dangers of benzene to workers who are using Ashland solvent blends?
A. We would have -- they would be

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aware of the hazards of materials based upon what's on the material safety data sheet and label. We don't have anything specifically addressing benzene for the sales force for these blends.
Q. Does the sales force receive training on how MSDSs are created and how they're to be read and what's contained in them and what they mean?
A. They receive training about environmental health and safety issues. And they provide -- they obviously review MSDSs and know how to interpret the hazards.
Q. Is there a formal or written policies and training practices that are provided to salespeople?
A. There are -- there should be training that's available. I don't know whether there's written policies specifically addressing this issue; but there is training, and -- and one of the modules of our product stewardship training actually covers the material safety data sheet and then the individual modules of each business goes into more detail.

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Q. And those modules, those are documents or computer information? What is a module?
A. They're training.
Q. Okay. And that training is in writing, isn't it?
A. It's video, some of it.
Q. Does Ashland have any videos that talk about the dangers of benzene?
A. Not that I'm aware of.
Q. What do you consider to be a safe level of benzene in a given chemical product by a percentage?
A. I don't know whether I know how to answer that question. What are you -- I mean, there's so many different things to consider.
Q. Well, Ashland makes many different solvent blends, and we've talked a little bit about a couple of them today; but of all the solvent blends Ashland makes, is there a certain number that Ashland considers to be a safe percentage of benzene that it will allow in its solvent -- solvent blends?
A. Well, we report what is there, if it's above point one percent. I'm not aware of

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any product that we currently sell that is greater than -- that's -- I think there might be one that's still right around one percent, but everything else is either just above point one percent or well below point one percent.
Q. Okay. Are there any Ashland solvent blends which contain less than point one percent of benzene but still have a benzene warning on them because exposures to benzene which is being released from the mixtures could exceed the PEL or the TLV? Are there any products that that's the case for?
A. The only warning it would carry at that concentration would be a Prop 65 warning.
Q. In your professional opinion, has Ashland done a great job of ensuring that these solvent blends were safe?
A. Ashland has done a very good job.
Q. Have they done a great job?
A. Sure.
Q. Do you think there's more Ashland could do to ensure the safety in terms of benzene content with respect to these solvent blends?
A. There's -- Ashland is providing

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the information to the customer who has the responsibility to make sure that their products are handled -- that they handle these products safely.
Q. Doesn't Ashland have a responsibility, though, to provide a safe product or at least a product that can be used safely?
A. These products can be used safely.
Q. Can these products be used in an unsafe manner with respect to benzene?
A. Water can be used in an unsafe manner.
MR. PATTON: Objection. Nonresponsive.
Q. Can these solvent blends be used in a way such that there is a real appreciable danger of experiencing high levels of exposure to benzene?
A. I can't come up with a scenario, other than direct inhaling inside a small container and to the point where they pass out from unconsciousness because of the solvents present.
Q. So only if there are acute toxic

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effects of benzene exposure would you consider there to be an unsafe exposure to these products?
A. Acute toxic effects from the solvents inhaled, not from benzene.
Q. What about testing batches of the final product of this solvent blend? Ashland could test those for benzene, couldn't they?
A. They could.
Q. Would that be something that they could do to do a better job of ensuring the safety and quality of these products?
A. It's my impression that we're doing a good job of quality -- understanding what our products should contain. I'm going to rely upon Buddy Whitlock and his organization to make that assessment as to how they should do this.
Q. As a toxicologist, if you were to learn that Ashland didn't do an adequate job of testing incoming shipments of raw materials or if they didn't have a benzene specification of a maximum allowable amount of benzene that would allow in incoming solvents or if you learn something else through the course of this

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case or other litigation, would you ever take any measures to ensure that Ashland does more with regard to the dangers of benzene?
A. I would -- yes, I would follow up on -- if I felt like there was an issue.
Q. Okay. Let's say, for instance, if you found out in the context of this case that there really is no benzene specification on the technical data sheets, would you then want to instead have a benzene specification so that Ashland was determining whether or not incoming shipments had a safe level of benzene in them?
A. I would rely more about the technical data sheets for the raw materials. I would have concern that there was no -- if benzene wasn't expected to be in a raw material and we didn't have a specification for that, I'd be concerned.
Q. Would you be concerned if you found out that Ashland could show you no documents evidencing an evaluation of the benzene content of these products?
A. I would rely upon the raw materials, not these final blends.
Q. Don't chemicals synergize or

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change when they're blended?
A. No.
Q. So it's like if we were to mix oil and water, you could see the oil on one side and water on the other side?
A. They would mix, but they don't interact. I mean, it depends upon the chemicals. If you're mixing chemicals to form another product, then you get a reaction. But in these solvent blends, these blends -- these solvents just mix together. They don't interact with each other.
Q. What is an azeotrope?
A. You're asking me something I can't recall. I think it has something to do with the boiling point. I don't recall.
Q. What if Ashland were to determine that it needs to -- or that it hasn't done an adequate job of determining whether or not there are harmful exposures or whether or not end users of these solvent blends are at risk for harmful exposures to benzene? What if you learned that there's been absolutely no testing on any of these final products to determine the actual level of exposure to benzene? Would you

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become concerned?
A. I'm not sure what you're asking me.
Q. Yeah, I'm not either. Let me try again. What if you were to learn that in the history of Ashland, dating back to 1979 or earlier through the present day, that there's never been any testing to determine whether or not -- or how much benzene a printer would be exposed to in using this product on a rag to clean a printing press, there's never been any type of testing to determine how much benzene a person would experience -- or would inhale or experience from dermal exposure. Would that concern you?
MR. PARKS: Objection. Form. Are you referring to actual benzene testing performed by Ashland?
Q. Let me try to ask it again. I'm sorry I'm asking a bad question twice already.
If you were to learn that Ashland from 1979 to 1993 never tested this product to determine the level of benzene an end user, such as a printer using this product would experience, would that concern you?

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A. It would not concern me because of the amount of benzene that is in this product. I think what you're asking me, if we went out and tested the exposure at a printer to benzene in the air. And I've told you that my opinion is that I don't see the potential for an overexposure to benzene from these products.
Q. So it's your opinion as a toxicologist and as an environmental health and safety person that there is no potential exposure for dangerous exposure to benzene by using these products in the way I've described?
A. It's my expectation that they would not be overexposed to benzene.
Q. Okay. So it's your expectation that a printer using these products would never be overexposed to benzene?
A. If they're using it in a typical usage, yes.
Q. Okay. And you believe that Ashland has done a great job of ensuring that these solvent blends are safe?
A. I think that Ashland does a great job of evaluating the hazards of their materials and communicating that.

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MR. PATTON: Okay. Mr. Kennan, that's all the questions I have for you for now; however, I do want to reserve the right to continue your deposition and redepose you upon production of some of the documents that we talked about today. That's all I have.
THE WITNESS: Okay.
MR. PARKS: We'll reserve until the time of trial.
MR. ISBELL: I'll reserve mine, too.
THE VIDEOGRAPHER: We're off the record.
MR. PARKS: The witness will invoke his right to read and sign the transcript pursuant to the federal rules. Thanks.
(Thereupon, the deposition was concluded at 11:50 a.m.)

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I, THOMAS H. KENNAN, do hereby certify that the foregoing is a true and accurate transcription of my testimony.

_____

Dated _____

STATE OF OHIO)
COUNTY OF MONTGOMERY) SS: CERTIFICATE

I, Michelle A. Elam, a Notary Public within and for the State of Ohio, duly commissioned and qualified,

DO HEREBY CERTIFY that the above-named THOMAS H. KENNAN, was by me first duly sworn to testify the truth, the whole truth and nothing but the truth.

Said testimony was reduced to writing by me stenographically in the presence of the witness and thereafter reduced to typewriting.

I FURTHER CERTIFY that I am not a relative or Attorney of either party, in any manner interested in the event of this action, nor am I, or the court reporting firm with which I am affiliated, under a contract as defined in Civil Rule 28(D).

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office at Dayton, Ohio, on this _____ day of _____, 2007.

_____
MICHELLE A. ELAM
NOTARY PUBLIC, STATE OF OHIO
My commission expires 5-2-2010

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