Episode Title: TSCA Regulation of Articles: The Saga Continues -- A Conversation with Richard E. Engler, Ph.D.

Episode Number: 20221208
Publication Date: December 8, 2022

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Lynn L. Bergeson (LLB): Hello, and welcome to All Things Chemical, a podcast produced by Bergeson & Campbell (B&C®), a Washington, D.C., law firm focusing on chemical law, business, and litigation matters. I'm Lynn Bergeson.

This week, Dr. Richard Engler, Director of Chemistry for Bergeson & Campbell and The Acta Group, our consulting affiliate, returned to the studio to discuss the stubbornly vexatious problem of the Toxic Substances Control Act's (TSCA) regulation of articles, a fancy name for products or finished goods. Most listeners to the podcast appreciate that this U.S. Environmental Protection Agency (EPA) has specifically applied TSCA regulations to articles far more than in decades past. This policy pivot has caused a significant amount of commercial disruption and business uncertainty. This will not abate in the years ahead. Dr. Engler explains this, why this is the case, and suggests some steps regulated entities may wish to consider to comply with current regulations and prepare for the future. Now, here is my conversation with Dr. Richard Engler.

Rich, it is so good to have you back in the studio today. I just adore speaking with you.

Richard E. Engler (REE): It's a real pleasure. I'm always very happy to be here.

LLB: We're going to dive into articles, a topic that we have discussed before and one that continues to both frustrate and amaze and --

REE: -- Bedevil?

LLB: Right. Yes, it's just been a problem. What's happened at EPA in the commercial space since we last spoke about this, which is about a year ago?

REE: Yes, it's about a year ago that we were talking about the [persistent, bioaccumulative, and toxic] PBT rules in [phenol, isopropylated phosphate (3:1)] PIP (3:1), when EPA did the PBT rulemaking that put a hard stop on the distribution and processing of articles that

contain PIP 3:1, 60 days after the final date of the rule, which would have been mid- to late March 2021. But EPA reluctantly granted relief to that rule when EPA became aware, because industry, especially the article manufacturers and wholesalers and retailers, made it clear to EPA that there was no way for them to know in that timeframe whether or not PIP was in the articles that were in commerce. PIP is, again, just to remind listeners, PIP was frequently used as a flame retardant and a plasticizer in wire coatings and wire harnesses, so in plastic parts, in electronics to reduce the risk of fire.

LLB: You say reluctantly; I think EPA recognized that it had an enforceable obligation and used the convenience of the no action assurance, which is the Office of Enforcement and Compliance Assurance's way of saying, "We recognize this is enforceable, but we're not going to pursue it in these cases here." Why do you think EPA is reluctant to do that?

REE: EPA proposed the rule. There was notice and comment. They promulgated the rule in final, so that was an obligation, the legal obligation attached as of the effective date. But companies could not meet the documentary -- the documentation requirements, so they basically would have had to cease distributing. Nobody wanted that. Certainly, the companies didn't want that. Customers didn't want that. Consumers would not have wanted in the middle of the pandemic to not be able to buy a computer or phone or a printer for their home office or a [universal serial bus] USB cable to connect a printer in the home office to their computer.

LLB: Or a host of other commonly used items.

Yes. Or have their [heating, ventilation, and air conditioning] HVAC repaired. The way the rule is written, it would have been impermissible to bring in a part into someone's house and put it into the HVAC in their house to make their -- repair the HVAC. It would have been extraordinarily disruptive. And EPA recognized that -- when EPA became aware of these facts, EPA said, "Okay." They gave the no action assurance, and then they reopened the rule for comment to basically let all the people that did not comment the first time around comment at this point. And there was really some criticism, some I think justified criticism that why weren't these comments brought forward during the notice comment period? And that's something we can talk about in a little bit about what companies should be doing going forward, now that more companies recognize they're under the TSCA umbrella.

LLB: Indeed. Well, at one level, many agree, and I will add myself to that category, that EPA probably should be critically reviewing the continuing relevance of the article exemption from most TSCA regulations. Maybe you could walk us through a historical overview of the article exemption, its origin, and how we have come to find ourselves in the situation we are.

REE: Yes. Well, I haven't gone back to the original rulemaking when the article exemption was put into place in the -- probably early '80s, when EPA came -- after TSCA was enacted and EPA was doing that fundamental rulemaking. But I'm sure the thinking was that other than [polychlorinated biphenyls] (PCB), which were specifically mentioned in original TSCA, substances that were incorporated into articles, everyday things that we buy, and wear, and interact with, that there's very limited opportunity for release and exposure of substances from articles. And the thinking was, again, I assume that at the end of their life that that risk was being managed by RCRA, the Resource Conservation and Recovery Act, which is the law that manages municipal solid waste, and hazardous waste, and how those wastes must be managed.

But even early on, EPA recognized the importance of regulating substances in articles with its asbestos rules that were proposed in the late '70s and early '80s. EPA banned the import of certain articles that were made with asbestos, and that ban survived the *Corrosion Proof Fittings* decision, even though that decision rolled back other parts of the asbestos regulations.

There wasn't a lot of action on articles for a while, but then with the [per- and polyfluoroalkyl substance] PFAS and [perfluorooctanoic acid] PFOA, the C8 perfluoro substances, EPA put some regulations in prohibiting use of those in articles in the 2000s. Then the formaldehyde rule, a little bit later, put limitations on formaldehyde in manufactured wood products, plywood, fiberboard, and other wood products that are glued together using a formaldehyde resin. We've seen step by step, EPA taking specific actions on specific substances and carving out or rolling back the article exemptions in those cases.

Then the LCPFAC [long-chain perfluoroalkyl carboxylate] rule, which went final in 2020, broadened that limitation to fit right into the class of long-chain perfluoroalkyl carboxylates, especially for use as a surface coating. Then the PBT rule, which we mentioned earlier, really put a zero hard limit on a number of the PBTs in articles, so articles containing *any* amount of some of those PBTs would be violative of the PBT rule. We've come a long way, but EPA continues to push back on that article exemption for specific substances and specific uses.

LLB: Rich, it's clear that over the years there have been incursions into the integrity of the article exemption, but we're kind of in our own little world of TSCA nerdiness, right? And we know these things. You know them off the top of your head. But to the public and to entities in the commercial space making articles, products, finished goods, there was and continues to be the perception that articles are simply beyond the scope of TSCA regulation. I think EPA -- this EPA, particularly when Dr. Freedhoff made her announcement at the 2021 Product Stewardship Society annual meeting that "No, TSCA absolutely applies to articles, and we are going to enforce that provision more than we have in the past." I still think that came as a big surprise to people, and it doesn't seem to be fully appreciated in the industrial chemical product community writ large. Agree?

REE: I would -- I'd say it's not the industrial chemical product. I think it's everyone else. If you're a furniture importer, you don't think, "I'm in the chemical business. I import sofas." Of course, everything is a chemical. Everything is made from a chemical. So that sofa is a bunch of different chemicals that are assembled into a sofa. Same thing. If your mattresses, or computers, or whatever product it is -- it's made of chemicals. Companies don't think of themselves as chemical importers. I think that's justifiable.

LLB: Sure, sure.

REE: But they are, because everything is a chemical. And if the product that you're importing is not exclusively used for an excluded use, like a medical device, if you're importing something that is a -- that will be exclusively used as a medical device, that would be excluded from TSCA. If it's not that circumstance, then the product that you're importing is a bunch of chemicals that are regulated under TSCA. All the -- TSCA applies, and only the exemption, the article exemption to the PMN (the premanufacture notice) requirements to chemical data reporting to a lot of the provisions that -- regulations provide that article exemption. That's the thing that keeps you out of appearing to be a chemical importer. But the fact of the matter is, it's true that TSCA does apply.

LLB: I don't know if in your practice a lot of chemical producers are now reminding their downstream customers or in-use article producers of this change in the law. Again, it's not a change; it's just a much greater emphasis on the diminished integrity of the article exemption from TSCA regulation. Do you see that going on in value chain communications at all?

REE: I don't see it coming from that side. I see it coming from the bottom, so from that end importer, that article importer is saying, "Oh, wait a minute. All this -- this is all chemicals? We've got to go figure out what these chemicals are." So really driven by the PBT rule, there's been a lot more activity of asking up the supply chain, because the original manufacturers of the chemicals that went into the sofa or the computer or the pen -- if the article is being imported, then all of those chemicals were probably produced outside the United States and assembled into the article. So those -- the chemical producers outside of the United States are probably not reminding their U.S. customers that, "Oh, yeah, you've got to worry about TSCA. It's not my problem."

LLB: Right.

REE: But the folks in the United States are asking back out.

LLB: Got it. To the uninitiated, Dr. Freedhoff's remarks back in 2021 seem, to me anyway, entirely sensible with regard to the relevance of regulation of certain commercial products that might contain PBTs, or PFAS substances, or other chemical components that upon end-of-life disposition can cause environmental or human health harm. I get all that.

What is missing from this contextual background, however, is that for decades, 45, 46 years of commercial practice, large chunks of the commercial supply chain lack the awareness, the familiarity, and frankly, the jurisdictional relevance of TSCA and the regulation or potential regulation of the products that they produce being subject to TSCA. This lack of transparency and awareness doesn't -- it's not like the flip of a switch, right? It's like, "Oh, wow!" We're just going to suddenly make products subject to a regulation with which the regulated community has little, if any, familiarity. Does the fact that we had 40-some years of that awareness that TSCA simply doesn't seem to apply to finished goods, and now they do in a lot of respects. Does that surprise you at all? Or is it just the maturation of an industrial chemical law? Or was it the 2016 amendments, was that a significant event? How do you undo 40 years of practice in the real world?

REE: You can't do it on a dime. As you say, you can't just flip a switch. But the breadth of the article exemption for decades I think really led to -- complacency is sort of a loaded term, but it's sort of -- some comfort. But it's some comfort that's like, "Okay, well, we can import these things as long as it's not these asbestos articles and as long as there's not PCBs over 50 parts per million," which people could be pretty confident about, "Then we can import, and that's okay." And then there was some -- but even the formaldehyde rule, there was a -- this is going to be the requirement, and then you had -- there was time to come into compliance. It wasn't, "You have 60 days." The industry did get some lead time to work with the supply chain to ensure that the sofa, the desk, the plywood, the things that were either -- were manufactured wood or made from manufactured wood, were compliant with the law and then could be imported lawfully.

But the supply chain isn't just going to magically have all this information, because if you don't have to pay attention, you pretty much just don't worry about it. Because paying attention to every molecule that's in an article is resource intensive. It takes a lot of

knowledge, a lot of communication in the supply chain. And there's no question that that is a cost, and companies are seeking to minimize costs. So if they're not required to, either by customers or by regulation, if there's no compelling reason to, they're not going to seek that deep information about their supply chain. Now there was a change in Europe with RoHS, the Restriction of Hazardous Substances [directive]. That required electronic and electrical equipment manufacturers to start to pay attention to components in those sorts of products. And that was really the first recognition that you could build a workable system where certain substances would be restricted, intentionally added with or without some -- typically with a de minimis threshold. Then the suppliers and article manufacturers could know what was in their products and could represent accurately both to folks in the supply chain and then to the public at large. So that was a model.

But RoHS was forward looking. The regulation came into force, and then there were actually years for the supply chain to adapt to it and develop that information. What we've seen, like with the PBT rules, was sort of the opposite. There was not a lot of work with the article manufacturers. EPA did some outreach, but it was somewhat limited. Certainly folks we spoke to were like, "We had no idea this was coming."

LLB: Right.

REE: And EPA has the same challenge. They don't normally talk to sofa importers about TSCA, so they don't have those relationships. The sofa importers -- or really it was mostly the electronics industry -- didn't have the connections to EPA. EPA didn't have the connections back, so they didn't have that relationship, so there was not a fulsome development of the record on the PBT rule. And so EPA put the rule in place 60 days -- you have 60 days to comply, as opposed to, "Hey, you've got three years to get your supply chains in order." And that's really what caused the consternation.

LLB: Right. The extraordinary commercial disarray.

REE: Yes. Related to the PBT rule.

LLB: And remember, Rich, we were -- I know no one saw it coming -- but we were also in the middle of a pandemic.

REE: Right, absolutely. Supply chains were already stressed beyond recognition.

REE: Especially in the electronics industry because --

LLB: Exactly. That's why this is -- and I am definitely not trying to find blame or fault. It's just being kind of a habitual fixer.

REE: Yes.

LLB: What lessons learned can we extract from this experience? Because the relevance of the elimination of the articles exemption was pointed out in a lot of comments that were submitted to the record, but the impact of the application of the elimination of the article exemption, I think, was underestimated by EPA.

REE: Yes, I agree.

LLB: Because I remember when Dr. Freedhoff, now Assistant Administrator of the Office of Chemical Safety and Pollution Prevention, was engaged in this podcast a number of months ago, I think the prevailing wisdom from the EPA perspective is, "No, no. We *did* engage in extraordinary outreach." I think for EPA, by *its* standards, it *did* engage in extraordinary outreach. But that level of outreach was not nearly as robust, extensive, and attention-getting as it needed to be, particularly against the backdrop of the pandemic. I mean, who the hell was listening to --- "Oh, wow. This regulation might apply to your product, in the middle of -- and that was at the *height* of the pandemic, if I recall.

REE: Yes, it was January 2021, so we were in that winter surge. It was really terrible. It was a terrible, terrible time.

LLB: And, ooh, there was this insurrection going on as well.

REE: Yes, it was. Yes, I think the rule went final like two weeks after that or something.

LLB: Right. It was a very, very stressful time, but given that backdrop, and again, I probably dwell on this more than I should because we try to push information out all the time. We knew this was coming, and yet the disarray when the rule came out and before its effective date in March 2021, seldom in my years of practice have I seen such an extraordinary outcry from regulated entities that, "This will not work, and we must do something." What could have been done differently? And is it too late? Certainly with respect to the commercial products that are now subject to the PBT rule, but what lessons learned can we extract from this experience?

REE: I think there needs to be continued conversation between and among EPA, trade associations, and the regulated entities, the companies that are importing articles. And again, if you import towels, you don't think of yourself as a chemical importer. What is EPA doing to reach out to the folks that import towels? It's a -- I don't know the answer. It is a difficult relationship to establish, but it's -- I think it's the responsibility of all TSCA stakeholders to continue to talk about how TSCA applies to articles. And article importers need to be engaged -- whether they're engaged individually or through trade associations -- but you need to be cognizant of your obligations under TSCA. Now you may be exempt from the vast majority of the TSCA obligations, but there are some that -- for which you are not exempt, and that exemption is going to continue to be pushed back.

If you are importing articles, you need to be aware of your obligations. That's number one: I think it's important for industry to continue to talk about it. Number two, policymakers, both at EPA and in Congress, need to have reasonable expectations about what can be done in what timeframe. Wishing that importers had known what was in an article that was imported years ago, it's not reasonable. I'm referring here to the PFAS reporting requirements where we've got this ten-year lookback period for reporting of PFAS in imported articles.

We'll see. EPA -- the proposed PFAS reporting rule did not include an article exemption, for understandable reasons. But there is no -- there's no de minimis number; there's no intentionally added number. Just was there PFAS in an article that you imported in 2012? You can *report* that it's not known or reasonably ascertainable, but you need to be able to document that it was not known or reasonably ascertainable.

So you've got to go back to 2012 and find a record of your purchase. And did you know at that time that it wasn't present?

LLB: Which is now ten years ago.

REE: Right. Or more, by the time the reporting rule -- so if there's going to be that sort of requirement, it really needs to be forward-looking. Looking at RoHS again as the model of how to expand the requirement to articles, you need to give people notice, and you need to give people time to build that supply chain communication, so that people can know however many layers deep in their supply chain, yes, these things are not present or not present above some threshold or not intentionally added, whatever the requirements might be. I'm strongly of the view that there needs to be a de minimis number. Yes, we don't want -- we've got some -- maybe that these things are really nasty, but at some point there is a practical limit to what you can know.

LLB: It's diminishing returns, right?

REE: And it's diminishing returns. And PFAS are used to make computer chips. Is there some PFAS? Generally, they're destroyed during the process because of the nature of the process, but is there a little bit left, that's on the chip, that's inside the -- that's stuck to the circuit board, that's inside the assembly, that's inside your TV, that's inside the case? Maybe. I don't know. And I don't think anyone else knows. And it's not something that -- it's certainly not something I'm staring at my TV in the living room, thinking, "Oh, is there some PFAS in there that I should be worried about?"

There has to be some sort of practical limit. And I think, as you say, there's some diminishing returns about knowing to the last molecule. Can we -- when we're thinking about regulations in articles -- is there a practical limit that is both measurable and meaningful in terms of the content? Because otherwise, how would you -- how do you ensure that there is zero, right? If the number is zero, I can only measure to maybe 50 parts per billion, so I can say it's less than 50 ppb, but I can't say it's zero.

LLB: Right, exactly. I think you raise a really good point, Rich, about ensuring better than we do that policymakers, regulators, and Congress people are more attuned to some of the practical limitations and commercial realities of the application of TSCA. And we --

REE: -- and scientific realities.

LLB: And scientific. Exactly. We know that Lautenberg, the 2016 amendments to TSCA, were hatched in haste, even though the run-up to Lautenberg was ten years, but when it came down to --

REE: -- the last couple of months --

LLB: -- the making of the sausage, right? It was quick, and there were lots of things that could and should have been done differently. Certainly our experience with TSCA Section 5 and turning into the new premanufacture notification requirements instantly caused all kinds of commercial havoc, much to the detriment of, I think, United States innovation. And the same holds true here, which means things like the Chemical Caucus on Capitol Hill and more frequent engagements of industry with EPA to inform the regulatory mindsets, judgment about what is possible, what is appropriate, and what is reasonable is an ongoing dialog.

My own wish is that that would happen more regularly. I keep thinking about that FACA [Federal Advisory Committee Act] and TSCA implementation and a much more robust Chemical Caucus. And maybe with the new Congress, that will be a reality.

REE: We can hope.

LLB: We can hope. With regard to Dr. Freedhoff's 2021 articulation of the new interpretation of articles, and yes, of course, it applies to products, but EPA's decision to enforce it and apply it more regularly and more consistently and more emphatically is a policy shift. I think those invite real-world implications. What might some of them be, in your mind?

REE: There clearly needs to be better communication within the supply chain. And there's some -- the automotive industry and the aerospace industry have set up these data systems that help inform the global supply chain. So you can put a part into the -- if you're a part manufacturer, you put a part into the system, you put the composition of the part. So someone who's taking that part and putting it into an assembly can then account for the substances in the part and the substances that are included in the assembly. And then the car manufacturer can take the assembly and wrap that up to the entire vehicle level.

There are models that exist for this sort of supply chain, deep supply chain intelligence. I think there's a pretty clear need that this get broadened. There are other systems -- I don't know that particular industries have settled on a particular data system or data holder. That's still evolving, but clearly there is a need for that, an expanding need for that. But building the system and then populating the system with all the information for all the little bits and bobs that go into articles, that's going to take some time. And so the -- I hope that EPA recognizes that, yes, we want this information, but it -- we can't ask for it in March, because here we are near the end of the year. March is a blink away, so there does need to be some reasonable amount of time to adapt from the current system, whatever it is, when EPA proposes a rule to whatever that -- to the requirement when that supply chain knowledge is going to be in place. And we really do want to avoid the *mishegoss* of 2021.

LLB: That's one word for it.

REE: Because that was -- I think that was a lot of stress on -- it was a stress on our poor clients. It was a stress on us. I know it was a stress on EPA. And we've seen EPA take hits in Congressional hearings for letting industry off the hook. I think it was just a -- if EPA had taken a hard line, it would have been devastating to the economy. And I think they took the only reaction they could.

LLB: Yes, I agree. Circling back to your comment earlier about a certain complacency that has kind of set into the industrial, both chemical community and downstream processors and article manufacturers. And after 46 years of old TSCA, well, 40 years of old TSCA and now six years of new TSCA under Lautenberg, some might take the position that, isn't it about time we take a hard look at that article exemption? It has been in place for a long time. It still does exist on the books, but it's -- the universe of products to which it applies is diminishing. It makes a lot of sense to me, but the way it's been communicated and the implementation of rules that now bring in far more stakeholders has been awkward, and bumpy, and calamitous. What do you see as possible next steps to eliminate that strain?

REE: I think it would be a mistake to simply void the article exemption.

LLB: Agree.

REE: If you -- articles are a lot of the things that we import, a lot. Most of what we deal with on a day-to-day basis is an article. There are some articles that release substances. My laundry detergent -- the laundry bottle is an article, and detergent I'm pouring it out and putting it into the machine. It's not unreasonable to think about what's in articles, but we need to be cognizant of the time and the effort and how that relates to where the risk is.

And this was recognized in the Lautenberg amendments, because the -- Section 6 -- EPA does risk evaluation and risk management. There are specific provisions that require EPA to think about replacement parts and articles, so EPA can regulate those things, but it needs to be mindful of the effects of those regulations on articles. But are we really going to look at every nail, and every piece of jewelry, and every sock, the label on the towel? The label is an article, the towel is another article; together they form one larger article. Are you -- how much detail do we need, down to every molecule -- is that a good use of our time and EPA's very limited resources? How do we strike a balance between where we think there really are potential risks and trying to know everything about everything? I don't know what that answer is. I've been mulling it over since we've been planning this podcast.

LLB: -- in the space -- and also just the whole article situation. It is a very interesting topic to just think about in the abstract.

REE: Right. But I don't want to -- I guess -- last week, did you buy some stuff? I'm sure you did. Did you ask about the contents of the stuff that you bought last week? Did you ask the seller? I'm sure you didn't, whether it was on a website or in a store. You're like, "I need a new whatever." And you're like, "Well, that looks good. The price looks right."

LLB: I can get it in two days.

REE: **"**I can get it two days," and you bought it. You didn't say, "Hey, you didn't tell me if there's any PFAS in there. You didn't tell me if there's any decaBDE [decabromodiphenyl ether] in there. You didn't tell me if there's any PIP in there, or any of the other things. You didn't tell me hundred percent composition of what was in there, and if you don't tell me that stuff, I'm not going to buy it." I mean, that's sort of what the expectation is now on these article importers.

LLB: Right. At the industrial level.

REE: At the industrial level. And it's like, "Well, they should want to know." It's like, "But what if their suppliers won't tell them?" Are they supposed to just go out of business because of articles? If you couldn't get that, whatever it was, if you said, "Well, you didn't tell me, so I'm not going to buy it," now you're without whatever it was. So if you put yourself in that position -- if you're not holding yourself to that standard -- then why are you holding the sofa importer to that standard, when they may not have the market power to insist on getting that sort of detailed knowledge? I think there is a space for regulation here, if we are going to call this a market failure. Or there's also a place for market power, for people to come together, the way the auto industry did, and say, "Look, we want to know what's in the stuff that we're putting in our cars." Then there's sufficient market power to drive that supply chain intelligence.

LLB: To some extent, a lot of people point to the fact that this is not new, certainly under [the Registration, Evaluation, Authorization and Restriction of Chemicals regulation] REACH in Europe. You already mentioned RoHS. There are global initiatives holding product manufacturers to a much higher granular standard of understanding every single chemical

component in the products that they make, sell, and are putting into a stream of commerce. To some extent, there's nothing wrong with that. If you are a product manufacturer, there are all kinds of initiatives, historic (RoHS, REACH), and more recently at the state level here, with regard to enhanced product stewardship for product manufacturers, extended producer responsibility being key among them. What's wrong with that?

REE: Well, again, if you look at RoHS, there are boundaries to what is required. There are certain products, there are certain substances in those products that are required, so it's not everything -- it's not every molecule. There are limitations. And that -- part of that is what are those practical limitations? If Congress and EPA conclude that, yes, this needs to be economy wide, that we're not just going to say -- we're not going to pick a sector or class of chemicals and say going forward, "Thou shalt know whatever about this class of products or class of chemicals," if it's really going to be everything, how much effort is that going to take? What are the costs on EPA? How much more resources is EPA going to need to implement this? And then what are the implications going to be on industry?

I'm not saying we shouldn't do it. I think we need to do it with eyes wide open of how much work this is going to take. It's not clear to me how much information -- how much that information will be used to change anything. If we're asking for every substance in every article, how will that change anybody's decision-making? And part of it is a catch-22. If you don't know what's in there, you don't know what regulations you need. But if you know what, if you know everything down to 100 percent composition and the vast majority of it is whatever, because it's really not a risk, then we've spent all this effort and gotten very little value. Again, I don't know where to strike that balance, but that's the balance that I'm hoping that people think about, is getting all that knowledge versus how will that information be used?

LLB: I think in my conversations with some of our clients at the firm, it's a question of economies of scale. If you're for the first time beginning to develop an inventory of chemical components in your products, a lot of people are taking the position, "Look, I don't know what the next big *it* is going to be. Right now, it's PFAS. PFAS is driving a lot of chemical inventory. PBTs. There are going to be other classes of chemicals and other concerns, maybe not this year and next year, but down the road. So it might behoove you to make an inventory of every chemical component, whether you're required to or not, simply because you're having -- you're better off being in a position knowing everything that's in your product, even if you're not required to do so now.

REE: Yes, there is some -- I think there is some value in companies knowing what's in their supply chain, whether there's a requirement to do it or there's some voluntary initiative. Or there's some commercial --

LLB: -- imperative.

REE: Imperative.

LLB: Your insurer, for example.

REE: Your insurer, or some supply chain limitation coming down the road. You're like, "Oh, yes, I really -- I'm worried about the availability of nickel, because so much of the nickel comes from Russia, and we don't have a great relationship with Russia. So can I find some ways to get nickel out of my supply chain? Because I'm worried about what the costs of those things are going to be going forward." There is some value there. Is it enough that that company

and its similarly situated really competitors come together in a pre-competitive space and say, "Hey, you know what? We really need to build a system so that we can all share -- what goes into our -- the stuff that we get from our suppliers."

Where does that push come from? Is that -- will they do it voluntarily? Will they do it in response to a regulation? Can they adapt something from Europe? "Oh, that's being done in Europe. Great. Let's adapt that over here." Or maybe what's being done for Europe is sufficient, and we just need to have people in the United States be relying on that same system.

LLB: Pretty much brings us up to the topic that I'd like to close out on. And that's compliance, or lack thereof, noncompliance. What are you recommending to your clients, Rich, whether they're product manufacturers or article producers, whatever, to immunize themselves from assertions of noncompliance with a growing spate of TSCA regulations pertinent to the products that five years ago they really didn't have to worry themselves about?

REE: We're both working with clients to develop and also helping clients respond to these questionnaires that they get that are now being passed back and forth, where it's like, "Oh, tell us, are there any of these?" It lists the PBTs. Are there any PFAS in there? What are the levels that you see the RoHS chemicals in there? So there are lists of specific substances. There's classes. Some may have de minimis thresholds. They'll ask, are there any [significant new use rule] SNUR substances?

There's clearly a lot more interest between and among supply chain partners in doing this, and right now, it's quite inefficient because it's -- each transaction is its own package of a checklist of the things that you have to represent. But the challenge is, well, the regs say zero level of decaBDE -- you can't have any. So can you represent to your downstream customer there's zero? Or can you only say, "We didn't add any, and our supplier says it's no more than" --I think the limit is 50 parts per million in the European standard. So they say, "Well it's less than 50 parts per million, and we didn't intentionally add any." If that's all I know, am I willing to represent that there's none in there? Then if you're receiving that, you're like, it doesn't say zero, so maybe I'm noncompliant if I take that and I distribute it in the supply chain? So that's really tough.

LLB: Yes. It's a tough question.

REE: It's a tough position for that company to be in. And in the end, you have to, well, you make your best guess. But it's about documentation. It's like, what can you document? This is the information that was provided. This is what I know. Maybe I spot-checked some things. I didn't find any, and so you can't check every part that you import, just as you can't check -- it's -- there's too much. You can't check everything. You have to pick -- you have to do some sampling. And then you make a representation to your customer. "This is what I know."

LLB: Right.

REE: And that -- you're the lawyer in this room. What are you going to do?

LLB: No. It -- like everything else in life, managing information is a major challenge. You might obtain information in response to all of these regulatory obligations and imperatives that trigger a whole host of other changes: safety data sheet content, information that your insurer is asking that you provide, workplace information that you didn't know -- a product

that you bring into the workplace was there, because you never asked before. Now you need to manage that information, so complying with the ever-increasing, cascading number of requests for information, supplier certifications, representations to downstream customers is a new normal. And managing that information carefully, and accurately, and transparently will be a major part of our practice for years to come.

Any closing thoughts you'd like to add, Rich? I know I wanted to ask you, where do you see this conversation, say, a year or two years from now? Pretty much the same?

REE: Yes, I think -- well, I think we would've made some progress. I'm hoping that, as EPA -- especially when EPA reopens the PBT rules in 2023, as they've stated that they intend to, that there's some recognition that a de minimis threshold -- something along the lines of not intentionally added and not present above some threshold. That is a reasonable compromise between "Yes, we really don't want this stuff in there" and "You can't have any ever." And that I think will make the entire construct much more workable. I hope that the article importers, article manufacturers recognize that this isn't going away.

LLB: No.

REE: That this is going to become more and more important and begin to get out ahead and look at the models of existing supply chain intelligence constructs and agree to adopt something and then work on that, work with their suppliers to get it populated, work to get the construction so that it works for that particular industry. The time to start is a couple of years ago, but now is better than a couple of years from now.

LLB: Exactly. I can't emphasize the wisdom of the point you make, Rich, that this is not going away. Every single legal and regulatory initiative that we're dealing with now suggests to me that more transparency, more understanding, and down to every single chemical component of your product, knowing it now or making efforts to obtain that information now will serve your interests well, whether they're in the court of public opinion because of consumer pressure, climate change imperatives, business imperatives. Developing that functionality is more essential now and will become increasingly essential down the road. So this ain't going away.

REE: We'll be back next year to talk about articles and TSCA.

LLB: -- with a *new* cast of cameras. But Rich, always a pleasure to chat with you. Thank you so much for coming into the studio today and having this conversation.

REE: It was my pleasure. Great. Thank you so much.

LLB: My thanks again to Dr. Richard Engler for speaking with me today about the growing inclusion of articles under TSCA regulations and the shape of things to come going forward.

All Things Chemical is produced by Jackson Bierfeldt of Bierfeldt Audio LLC.