Episode Title: The Hazard Communication Standard -- A Conversation with Lesa Rice-Jackson, CPPS®, Ph.D.

Episode Number: 20230803
Publication Date: August 3, 2023

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

This week, I had the pleasure of visiting with Dr. Lesa Rice-Jackson, Managing Principal Consultant, Rice Jackson Health, Safety, and Regulatory Compliance Consulting Services, to discuss Lesa's expertise in occupational safety and health and product stewardship related issues. We discuss Lesa's expertise in occupational safety and health and product stewardship issues. Dr. Jackson has a distinguished career in private practice as an employee of a large chemical company and is now president of her own consultancy. Lesa is both a much sought after service provider to B&C and some of its clients and a member of the Board of Directors of the Product Stewardship Society® (PSS®), on which I served for a number of years on the board and recently stepped down as president. Lesa is a seasoned, practical, and extremely efficient professional to whom I could listen all day, given her insights on all things occupational safety and health related. We discuss the pending amendments to the OSHA [Occupational Safety and Health Administration] Hazard Communication Standard (HCS), key issues likely to complicate compliance, and how best to balance occupational safety and health compliance with emerging and more rigorous best practice standards. Now, here is my conversation with Dr. Lesa Rice-Jackson.

Lesa, I am so excited about chatting with you today. Thank you so much for joining me.

Lesa Rice-Jackson (LRJ): Lynn, thank you for allowing me to speak with the audience. I'm also excited and looking forward to sharing some tidbits about the HCS and the work that I do.

LLB: Let's jump right in. Lesa, I know you. I've known you for years now. You are a current Board Member of the Product Stewardship Society, own and operate your own consultancy (yay you!), you are having and have had a stellar career in practicing occupational safety and health and product stewardship matters for a while now in the chemical industry. Can

you give our listeners a little background on yourself and what motivated you to achieve the success that you have obtained?

LRJ: Okay, great. Thanks. That's a good starting question, Lynn, so thank you. First of all, let me say it again. Thank you for inviting me to speak to your audience, and I am pleased to share a few of my hidden gems relative to the PSS and my experience within health and safety. One of the first things that I always like to say is that a few years ago I retired from my job but not from my career. To me, that's important, because I've always enjoyed the STEM [science, technology, engineering, and mathematics] bent on things and sciences, and so I've always wanted to do what I wanted to do solely in this field. Being in the career now not as a working job, but just doing what I love to do, it really makes a difference.

Something about me. I graduated from a small HBCU [historically Black colleges and universities], South Carolina State University, with a degree in chemistry. From there, I went on to obtain a doctorate degree in analytical chemistry from the University of Illinois in Champaign-Urbana. Leaving Illinois, after graduating, I secured a research and manufacturing/support role in the oil and gas industry in the Houston area. As it turned out, I managed an environmental lab, and then my group supported wastewater treatment plants and environmental facilities, and eventually it was local and then moved into a global role.

Now the thing is, the second part to that question is what has been my biggest motivation? That is and still is, I would say, my parents. Although they are no longer with us, they instilled in me and my siblings the ability and -- it's just one word -- to thrive. They really showed us that a certain amount of effort, hard work, and really a good sense of humor, you can really achieve just about anything you put your mind to. That has always helped propel me forward.

LLB: That's a great, great background, Lesa. I did not know you had -- I knew you had a Ph.D. I didn't know it was in analytical chemistry. Now I'm, like, really intimidated.

LRJ: Oh, no. Don't be.

LLB: I'm sorry you told me that, Lesa. That was never my strong suit, but I love it now. And of course, we have lots of chemists here on staff at B&C. You have had, and are practicing now, your career in industrial health and professional safety. What has been, in your mind, the most fulfilling aspect of your career to date?

LRJ: The most fulfilling part of my career in HS&E [health, safety, and environment] really has been the opportunity to use or bring all of my skills to each assignment, or job, or role. What I mean by that is that I've had the fortune --and it wasn't planned -- that in all the roles, whether it was research, operation, production, management, maintenance, supply chain, product quality, etc. In each of those roles, I was able to bring what I'd learned from before. It wasn't planned like that, because each role was distinct and separate, but because I had that skill set, in each role, I was able to build upon that. That has been, I would say, a plus, because I've been able to always build and learn from what I had from previously. And it's made for a very productive career now as an HS&E professional.

LLB: Speaking of that, as we all know and as we've been focusing on for a number of years now, OSHA proposed to amend the all-important HCS over two years ago, back in February 2021. You and I have talked about this, and our clients, both shared and separately, are very focused on it. But in your view, looking over the proposal, what are the key areas the HCS

are likely to change the most? And how might our respective clienteles be impacted by those changes?

LRJ: Yes, very good question, Lynn. That's important -- the implementation of the HCS happened in 2012, and then since then, we've all been awaiting the next update. That original update was based on the United Nations (UN) Globally Harmonized System of Classification and Labeling of Chemicals (GHS) Revision 3 (Rev 3), and now we are approaching Rev 7. Based on what I've gleaned from the updates that are to come -- and hopefully they come, they said the spring, summer, or this fall -- there are four main areas, I would say.

First they state now they are trying to clean up some of the issues relative to implementation. That would include -- and I'll discuss it as I go further -- issues around the hazards. And then they say that it's going to be an evergreen process, which we like, because that means that as things change and we really dive into understanding what the standard is, expect every two to three years and that may lag maybe two to four years. You'll see some updates and there should be more alignment or trending toward more alignment with other federal agencies and also international organizations. Because we are in a global world, that's a very important thing.

Let me discuss further what I see then are the key highlights. The first area is really around hazard definition. Initially, when it came to flammable gases, and also pyrophoric -- the sensitive explosives -- and aerosols, the categories were broad, so sometimes that meant overclassification. What OSHA is proposing now is to extend -- but make a little bit more strict -- those areas. Now there's a separate category for aerosols. They have expanded the categories for the desensitized explosives, and the flammable gases and pyrophoric gases. So you should be able to fit now your chemical components into a more stringent, but a more accurate, category.

The second area would be -- or the third area that are on the labels. The label -- it occurs relative to Section 2 of your safety data sheet (SDS), which are GHS or OSHA label elements. That's, again, in a few categories. One was around the release of shipment, which means initially when the standard was implemented, you had three months to make a change to your labels and update them all within that period. In this case, it became a problem -- or it *is* a problem. If you have long-term storage items in distributions out of this site or warehouse, it takes a minute to actually do that physical change. And you're allowing your employees to be exposed.

What they're now proposing, additionally, where you now have six months to make that additional change, but more importantly, when you send those long-term or long-distribution items, you can send them as is. However, you must now include that label, so you don't have to go in and label everything, but you just send that label with the shipment and that should ease. I would say six months may still not be enough time. It's going in the right direction; it's more than the three, so that is a good, good approach.

I think the last area, which is going to benefit those who work in laboratories or shipping small or immediate-use samples or they have small vials of material, it's very difficult to put all those label elements there. So now what they're allowing is you can use abbreviations on those labels. And then as long as the outer container now contains the full label elements -- and that's a very, very good thing.

My background, I came from working in a lab, which I so enjoy, and again, we would always -- that label on those tiny bottles that had to go off for one specific analytical test -- it was key to get the right information on, so that's going to be important. And then tied into SDS updates, which also occurred, is around in Section 2, when it comes to the precautionary statements, you can now combine or make a summary of those terms, as long as the essence of what's stated there does not change. You can now combine the precautionary statements, again, which is really moving that in the right direction.

Additionally, on SDSs, again, clarifications are on the label, that's Section 2. In Section 3, where you list the chemical components -- and they say now this is trending toward WHMIS [Workplace Hazardous Materials Information System] 2015. That's in Canada. You can now list the concentrations of those confidential or trade secret items. Again, you still can't list what those are, but you can list the concentrations, and that will help with the classification. Some of the items that will occur in Section 9, which are your physical properties, and then your toxicology properties in Section 11.

Also, there's a little bit more; in Section 9, you can now include the inclusion of particle size, as those long lists of physical properties, and then infection level, which I think is good news for those who are in the field of toxicology. And all of us, we can use predictive modeling or read-across data. And that's going to be important because, as we all know, there is not a lot of bandwidth these days to do extensive research. So being able to take data that have previously been done and do analysis on them and get a read-across or predictive model. It's also -- I think it's a good change that's coming.

Those are the three to four areas I would sum up. One around health hazards when it comes to flammable gases. Second, around label elements or small packaging release of shipments. Third area around SDS updates. That includes Sections 2, 3, 8, and 11. And then trending toward having the standard have more alignment with other federal agencies and a trend toward international alignment.

LLB: Wow! That was a super overview, Lesa. Thank you so much. I'm sure our listeners found that helpful. We've been *waiting* for this bloody statement to come out, and it hasn't come out yet. Whether it's at OMB [Office of Management and Budget] now, I'm a little unclear, but it sounds to my ear like a lot of these changes will really help communication managers of hazard, and industrial health and safety mavens. It will help them do a better job of doing what they're doing. Is that your take?

LRJ: No.

LLB: On balance, if these if these changes are implemented in final, it will make life perhaps a little easier in some instances.

LRJ: No, I certainly agree. I certainly agree, because, again, just the one area when it comes to -- it may seem like a small thing -- but that label area where you can now, number one, wait until at least three more months before you go in and go through a warehouse and remove all the labels, put new labels on. That eases really the manufacturer, or the one who is pushing that product up, just to have a little bit more time in order to make sure that you're sending the right material, and the one on the receiving end -- the customers are getting now the same information but updated. That, to me, that one item around the shipping and then being able to -- it's a slight thing -- there's a lot of wording that's in each of these documents when it comes to the standards. Being able to combine words or sentences such

that it still makes sense and you just don't have to write everything, but it still makes good sense and it's good, solid science, I think is a plus.

LLB: Excellent. Apart from these changes, and the many others that have been identified in a proposed HCS, how is the chemical community adapting to industrial health and safety standards as they evolve in the 21st century? You mentioned WHMIS. We're talking about HCS here in the United States. We have CLP [Classification, Labeling, and Packaging of chemical substances and mixtures] in Europe under REACH [Registration, Evaluation, Authorization and Restriction of Chemicals regulation]. There seems to my eye to be an awful lot of change, as we learn more about chemicals and hazards and what their impacts might be on workers and others that come into contact with chemicals. But do you have a sense of how the community is acclimating themselves to these evolving standards?

LRJ: Yes, I believe the chemical world is really adapting more readily to the industry changes. And I say that because we just -- all of us, and that's a global thing; we all went through the pandemic -- and I think that made us all wake up as to say and realize we really did not have the bandwidth or capacity to linger or do extensive or extended research. When emergencies come up, we must be ready to change and make new equipment, new studies, and be nimble and yet mobile at the same time, because we will not, as we see relative even to climate change, we will not have the capacity or the bandwidth to do the extensive studies.

We have the tools, or we need to invent the tools, in order to do that. I think the society in general is looking toward us as health and safety professionals to help lead that way. I mean, in essence, that's the reason why we went to school. I think now is the time. We must be quick on our feet, put out good, solid science, make changes as needed, correct, and go forward. Because we will not have the bandwidth or capacity, as we see how the world is changing, to kind of be as slow as we were in the past.

LLB: Yes. Excellent. I had mentioned in my intro that you are a member of the Board of Directors of the Product Stewardship Society. Maybe you can refresh our listeners' recollection about what the PSS is and the role, the very important role, of a product steward in industrial health and safety today.

LRJ: One of my favorite topics, so I'm glad to see it.

LLB: I kind of knew that, Lesa.

LRJ: I'm gonna pull up and shamelessly steal the mission statement, because I think it embodies what we do. The mission of the PSS is to empower and inspire a global community of professionals, and these professionals, they work together to drive safer and more sustainable products to innovate better solutions for consumers, employees, companies, and the planet. Now, the product steward -- we are, and I would dare say if you are an analytical chemist, biological chemist, anyone who is doing work within the health and safety and environmental field, then some part of your work is being a product steward. A product steward, our key role then is to understand how the chemical is produced and every aspect of it, how it's used, stored, and disposed of. In the product stewardship language, we call this "understanding the chemical from cradle to grave."

That's important, because as we see, if we're not good community members or good neighbors with our international communities, we end up with chemicals in places for years where they should not be. As product stewards, I think part of our role is helping our companies, which we are there and supporting our sites and our local communities to help

better understand how these chemicals should be used, where they should be used, and more importantly, when they are disposed of, to cause the *least* minimum harm.

LLB: I noticed on your website and on your business listing, you have CPPS after your name, and then Ph.D. after that, so you've got a long business title, but CPPS stands for Certified Professional Product Steward®, which is a registered trademark of the PSS. What is that? What did you have to do to get certified? And how is it adding value now, both to your own career and to the clients that you serve?

LRJ: Wonderful, wonderful question. The certification, although I have to say I got mine a little wrong about. The certification -- when the Society first came out and I was kind of halfway in my role relative to being a product steward title *per se*. We were always looking for an organization where we could link up to that would provide training and opportunities to extend your knowledge in this product stewardship field. Typically, you can't necessarily go to school to be a product steward. As it turns out, many of us kind of fall into that arena based on our role. But since now the area is a true profession, this certification allows you to connect with, as always, other like-minded product stewards, so people in this field. I think it adds a little bit -- and I say it's still a growing field -- of credibility to the work that we do. Companies, I think, are lagging behind because the recognition, again, we'll have to build this as a Society. And one of the directions the Society is moving in to build up the knowledge base of those relative to those who join, attending the conferences.

There's a plethora of information there relative to how do you train to be a product steward still. If you are out there and you just kind of landed in this role, there is -- the PSS is there to help support you when you may not be able to find that material. Now, obtaining the CPPS, there's an exam you take. You have to continue to get those continuing education units. But again, that's going to be key, because as I mentioned earlier, with us coming through the pandemic and then understanding the nuances to a new standard of regulatory changes, it will be key. And your role as a product steward will be key to supporting your organization and the chemicals we all work with, so join the Society -- I'm going to put in a plug.

LLB: Thank you.

LRJ: And if it meets your needs, and I'll push. Go ahead and move forward and get your certification, but become an integral part of the PSS, because I think it will help enhance your career, not only as a product steward, even if you are in health and safety or you do *any* type of work within this arena of health and safety. I think it's a positive, and it's a benefit to your career and the organizations that you serve.

LLB: Couldn't agree more, Lesa. I think the PSS does a terrific job of helping both product stewards do their job better and also helping employers understand better what this piece of real estate involves. It's chemistry; it's exposure analysis; it's toxicology; it's hazard identification; it's hazard communication -- everything that an employer, a company, and a conscientious employee wishes to know about stewarding the product they are making and then dispatching out into the world. Stewardship is a huge area, very important to me personally and to those of us here at B&C professionally. It's way beyond just compliance and understanding all aspects of the product that you make and sell. So huge believer in PSS. Thank you so much for your extraordinary service to the PSS as a Board Member. You do a terrific job.

LRJ: Thanks to you, Lynn, because I think if I remember correctly, you kind of helped push me in that direction, so, let me just say thanks also to you.

LLB: I saw a rock star, and I wanted other people to know just how great you are, Lesa, so my pleasure.

It brings up a really important topic that I know I often struggle with in my career as a lawyer, and that is, how do you advise your clients to juggle basic compliance, for example, occupational safety and health, whether at the federal level, at the state level, with best industry practices or evolving industry standards, which typically are far and above more disciplined and perhaps rigorous than an OSHA standard, which I think, as we would all agree, sometimes lag behind, perhaps often lag behind best practices? What do you tell clients, particularly those who might not have the institutional support of a large employer to strive for the best but recognize there's a minimum standard to which you *must* be held? But it's always better aspirationally to try to ascribe to a higher standard. How do you juggle that differential?

LRJ: That's really important, and one of the key things, because there is so much information that's out there. We have a global bent to everything that we do. We cannot silo ourselves in the United States anymore, or even in our own particular region. It has to be kind of a global approach, so typically what I share with them, and just the best information that I know, is that they must stay up to date on what's coming and then participate in industry groups as much as they can.

Again, there are many organizations like yours, like the work that I do, there are distribution lists, there are info servers. You can check the web updates, which is good. You can pull up any particular web update that you need. But it's going to be key that companies with their safety professionals get them the training that they need, and they need to participate in industry groups or partner with other organizations if they don't have the expertise. This is the only way I see that they can stay up to date and then be ready to advocate for change when it comes to working with OSHA, or any particular international agency, because the leverage of working with bodies that are similar to the work that you do is going to be strategic and also important. There's no one company that will have all of the information, but as we learn how to work together again across barriers regionally and globally, I think that's going to be key. The main thing is to participate, understand what's coming, and then partner with individuals who have that expertise if you do not have it.

LLB: That's terrific advice, and a logical segue into the question that I'm about to ask, which relates to the HCS here, which despite the fact that it's intended to align with the Globally Harmonized System of Classification and Labeling of Chemicals, also known as GHS. We know that the GHS and the Classification, Labeling, and Packaging regulation (CLP) in the European Union are anything but aligned. For those professionals in the space, my sense is that CLP, HCS, all of these different occupational safety and health standards are trying to achieve a sense of symmetry and alignment but don't. Recognizing that these standards are likely to change a great deal over the next several years, how do you think companies are keeping pace with hazard communication efforts in a way that satisfies these very disparate legal standards? A, is it even possible? And B, I'm guessing belonging to organizations like PSS and communicating and becoming a part of the community of like-minded professionals may help in this regard. What say you, Lesa?

LRJ: No, I certainly absolutely agree. Again, most companies are operating globally now, which means that you are selling into companies, into countries or regions that may or may not be

as up to date on any particular regulatory change within their company or across international lines. One of the important things, I think, and I call them gatekeepers. If you don't have that expertise, you need to train up that person within your organization to have that single-minded focus on the APME [Asia Pacific and Middle East] region, on the United States, on Canada, on South America. Because in most cases, you may have to produce documents that are not only compliant with your country, but several other compliant documents. What you end up having is one product and maybe sometimes up to ten different documents compliant or SDSs in particular that applies to your product. Knowing what the rules are that would apply to that region or country is important because there are fines that will be assessed, and you know that directly because they will call you on how to mitigate those if you don't have that expertise. What I call it is, you need gatekeepers, either gatekeepers sitting in that region or gatekeepers sitting wherever that have that strategic focus on that region and those regulatory updates and stay trained up so that you're aware of what's coming and then be ready to apply and change.

LLB: With all your years of experience, both as an embedded professional in a chemical company and now as a world-class consultant on all things occupational safety and health -- and this is a tough question, Lesa -- what do you think is the biggest challenge facing industry today when it comes to hazard communication? Is there one, or are there multiple big deal challenges that you wish to share with our listeners?

LRJ: I would lump it all into one area. I think the one area really -- there are branches. The one area I think that's really a challenge for all of us is keeping professionals trained and the training evergreen. For example, we are facing climate change much faster than I think any of us anticipated. This means we'll need new ways to manufacture, store, and distribute chemicals. This is going to be a huge challenge. As we experience heat waves and then understand, you cannot necessarily manufacture products a certain way because the environment is so different. Having a trained professional who understands that they need to keep their training fresh, meaning you need to attend conferences, you need to participate in societal meetings. You need to partner with individuals who have that expertise, and this becomes a lifelong -- again, it's not a job anymore. It's your career. It's your career to become aware of what you need to help support.

The industry is moving really fast, and to stay on top of it -- just a little bit -- you have to partner and join those industry groups and then anticipate what's helped, anticipate what's coming. You don't have time now to do two- or three-year research. You give your best science guess, again, using good science techniques and knowledge. You move forward, you adapt, you correct. You move forward, you correct, you adapt. That's what I would share. Good training.

LLB: Great advice. Thank you for that. I was wondering if you have three or four, or whatever number you have, to suggest to our listeners to improve a company's industrial health and safety profile. Can you give our listeners a couple of tips before we conclude?

LRJ: I certainly can. And I've mentioned the word several times, and I'm a student of learning.

LLB: You're a lifelong learner, Lesa. How about that for triple alliteration?

LRJ: I think I'd rather be in school, and that's strange, but I love it. Let's say the first one is training and education, and I don't think you can ever have enough of that. Read, read, read. Attend conferences, partner with individuals, get on distribution info service, and get that

information out. Actually, when it comes in your inbox, read it, study it, have discussions on them.

Then the second area I would say you need to -- because again, we all don't have all the information -- partner with other professionals that are in similar industries and are different, because you can always learn. And on industry groups. Be ready to change, and that's a word we'll hear a lot. We've been hearing it a lot, but I think coming through the pandemic, we really realize that we have to be ready to change and adapt quickly. And then lastly, for employers who are working with varied individuals with varied backgrounds, get them involved from the bottom up, not top down. Employees who are seeing these chemicals and working with them and making the batches, packaging them out, storing them, shipping them, doing the paperwork on them, sometimes in spite of all of our education, they may know much more about that particular chemical than we do. Get them involved in the process, whether it comes to how it's made, how do you use it, how it's stored, how it's disposed of, because I think what we'll find out is they'll have a lot to offer to us as we create these laws and regulations and create these documents. Let's talk to the people who are actually using them.

LLB: Great tips. Lesa, you are a rock star. You are my occupational safety health hero. I so appreciate you being here today. Can you tell our listeners how they can find a little more information about you and your consultancy?

LRJ: Thank you very much. My consultancy, we focus on product stewardship and also industrial hygiene and health and safety. I can be found at www.ricejackson.com, and again, please feel free to call us. We are ready and here to support you. Thank you, Lynn, for allowing your audience to listen to us today. We are truly grateful to be, I would say, partnered with your organization for all the good work that you all do. Thank you.

LLB: You're very welcome, Lesa. For our listeners, that's Lesa with an E: L-E-S-A at ricejackson.com. Lesa, thank you so much for being with us today. Thank you for being the rock star that you are, and thank you for sharing your wisdom with our listeners. Really appreciate it.

LRJ: Thank you.

LLB: My thanks to Lesa for sharing her wisdom and time with us today. When it comes to rock solid, practical, and efficient safety and health advice, there are no professionals better than Lesa. Her insights on pending HCS changes and preparing for them are most useful.

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