

Lowenstein Sandler's Real Estate Podcast: Terra Firma

Episode 21: How Long is Forever? PFAS Chemicals in Commercial Real Estate

By Kimberly E. Lomot, Kegan A. Brown

MAY 2025

Stacey Tyler: Welcome to the Lowenstein Sandler podcast series. Before we begin, please take a moment to subscribe to our podcast series at lowenstein.com/podcasts. Or find us on Amazon Music, Apple Podcasts, Audible, iHeartRadio, Spotify, Soundcloud, or YouTube. Now let's take a listen. **Kimberly Lomot:** Hi all, Welcome to Terra Firma: Conversations on Commercial Real Estate. I'm Kimberly Lomot, a partner in Lowenstein Sandler's real estate group. On today's episode, I'm joined by Kegan Brown, a partner in our environmental group, for a conversation about PFAS generally and the evolving regulations surrounding suit. Thanks so much for joining me today, Kegan. Just to start us off, why don't you take a moment and tell our listeners a little bit about your background in the legal field and since you joined Lowenstein? Sure. Thanks so much for having me, Kim. So, my background is in Kegan Brown: environmental and product liability matters. So, I help clients focus on their most challenging environmental toxic toward class action cases that involve exposure to chemicals or other dangerous conditions and navigate those in a way that's consistent with their business objectives. And I have been doing this for almost 17 years at this point, and I was fortunate to be able to join Lowenstein's team in January of 2024. So, happy to be here. **Kimberly Lomot:** Yes, great. We are glad you came. And I'm glad to have this on because we haven't touched on this subject yet on the podcast. So, I think it'll help the listeners if we first, kind of, cover the basics. So, what are PFAS and why are they sometimes called, you know, quote, forever chemicals? Kegan Brown: Yeah, it's a good question. And it is important to start with this sort of fundamental premise. So, PFAS, P-F-A-S, which is sort of the term that

you most often hear in the media and from government agencies, refers to a entire category of compounds and depending on which regulatory agency's website you're looking at, that category can be anywhere from 3,000 to 10,000 specific compounds.

All of these compounds have one thing in common, which is there is a carbon fluorine bond somewhere in the molecule. That particular bond, and I'm no chemistry expert, but that particular bond is apparently one of the most challenging chemical bonds for Mother Nature to break apart. And because of that, these particular compounds tend to persist and exist for a long time in the environment and in human beings, which is how they've acquired the sort of shorthand forever chemicals nomenclature.

- **Kimberly Lomot:** Okay. That's actually really helpful. So are PFAS used in common everyday things?
- **Kegan Brown:** They are used in so many different ways because, again, you're dealing with thousands of chemicals, and these chemicals have been around since the 1950s. They are in a whole host of industrial and commercial applications. So they are in packaging, clothing, electronics, cookware, adhesives, paints, you name it. There's, you know, anything that provides a functional ability to make something water resistant, stain resistant, allows, sort of, electronic touch screens.

These all require some type of PFAS chemical in order to allow that type of functionality. And there are a whole host of categories where PFAS are being used and have been used for years, including critical infrastructure things, semiconductors and otherwise. So it is a suite of chemicals that actually has a pretty broad application throughout the entire economy.

Kimberly Lomot: That's very helpful. So, in terms of health and environmental impacts, what do we know about how PFAS effects, like, human health?

Kegan Brown: So, the science on this is actively evolving. There has been a considerable amount of science with respect to two particular PFAS compounds, PFOA and PFOS. If you've seen the Dark Waters movie with Mark Ruffalo, that is a movie that was discussing PFOA. So, there's a decent amount of scientific literature about PFOA and PFOS and again, depending on what literature you're looking at and whether or not there is enough of a body of literature in order to draw causal conclusions, what I can say is that a lot of this for many PFAS compounds is very uncertain and in very early days. And a lot more research is being done and will continue to need to be done in order to better understand the exposure and risks that are presented by particular PFAS compounds. If you look at, you know, U.S. Environmental Protection Agency webpage, EPA has identified that based on the science they've reviewed, they believe that PFAS can cause reproductive effects like decreased fertility,

preeclampsia; developmental effects like low birth weight, bone variations, increased risk of developing some cancers, notably prostate cancer, kidney cancer, and testicular cancer; reduced immune system response, including having reduced efficacy of vaccines and increased cholesterol. So those are the medical conditions that EPA believes there is sufficient amount of causation research to get to that conclusion. Again, I think it does vary to some degree depending on what body of literature is being reviewed and certainly which particular PFAS compound we're talking about.

- **Kimberly Lomot:** So how would, say, PFAS get into, like, drinking water or foods that we consume?
- **Kegan Brown:** So, because PFAS has been around as a chemistry group since at least the 1950s, there are just some amounts of PFAS that are, at this point, background concentrations. Some of these PFAS compounds become or can become airborne and then travel long distances. And when it rains, they move from the air down to the soil. And once they're in the soil, if you're growing crops in that particular area, those crops might have some uptake of that PFAS compound.

It then gets into the food in some degree. The food is then sold and then the food is consumed. So there is sort of a background component of exposure to PFAS that is just, at this point, part and parcel to just where we happen to find ourselves with the extent that this chemistry has been used historically. There are also more, you know, I think in the environmental space, what we would think of is a more traditional pathway where you have a facility that is using a PFAS compound as part of their operations.

That compound is discharged to a weather that, you know, some environmental receptor, whether that be a drinking water supply, whether it be groundwater that ultimately flows into a drinking water supply, or maybe it has a discharge that gets into soil, but in more traditional context, once the PFAS gets into the environment because of the challenges with Mother Nature breaking these compounds down naturally, which will happen, it will just take many, many years.

If people are, you know, exposed to that water or wind up drinking from that groundwater aquifer at some point, they can wind up having some exposure to that PFAS compound.

Kimberly Lomot: So, in the event that, say, there was some exposure through some of the means you just mentioned, can PFAS removed from the body once someone is exposed to it.

Kegan Brown:	Yes. So, it's not forever in that sense. The body does process PFAS and ultimately rid itself of the PFAS. Again, it's a duration issue. Depending on which particular PFAS compound is an issue, the half-life—so essentially, how long does it take to get 50 percent of that dose of PFAS out of your body—that half-life can vary from days to years. So, it really makes a difference which PFAS compound you're dealing with. But ultimately, yes, the human body is working on a mechanism to get those compounds out of the body.
Kimberly Lomot:	Well, that's good to know in terms of, like, regulation and cleanup, obviously something that, you know, you spoke a little bit earlier, are there currently regulations in place to limit them in the consumer products or drinking water? I know you said earlier that some of this, especially on the PFAS side, there seems to be more information on the PFOA side, but in terms of what the landscape is like for regulatory on this.
Kegan Brown:	So, there are some regulators at the federal level and some regulations at the state level. It's a fairly mixed patchwork across the United States. What you typically see, let me start first with the federal level. Last year, U.S. EPA promulgated a final rule to designate drinking water standards for six specific PFAS compounds. They also finalized a rule last year that would designate two compounds, PFOA and PFOS, as hazardous substances under CERCLA, which is the federal Superfund statute that generally governs the investigation and remediation of contaminated sites.
	And then on the federal level, there are some other requirements that relate to reporting of PFAS usage or discharges under the Toxic Substances Control Act, but for the most part, those are the most significant federal rules that have been passed today.
Kimberly Lomot:	Right. And those would, like for situations that you mentioned earlier where there are specific industries or businesses that are dealing with that more directly within, you know, the confines of their business. Those now are the first of its kind in place to, kind of, address that on the federal level?
Kegan Brown:	Yes. At a federal level, those are, yes, those are first of their kind regulations that, you know, to the extent they apply to certain businesses, they are now going to have to comply. There is somewhat of a grace period for both of them at present. The drinking water rule and the CERLA hazardous substance rule are both being challenged in litigation actively and the Trump administration has requested that the courts in those cases essentially stay those litigations while the new administration decides what, if anything, they're going to do with these two Biden era rules.

- **Kimberly Lomot:** And on the state level, does it differ a lot state by state, or is there some sort of continuity there, or where is that landscape at?
- **Kegan Brown:** It differs considerably. So, a lot of states have remediation standards for certain PFAS compounds. So, they might have a groundwater quality standard for PFOA and PFOS and no other PFAS compounds. You'll have some states that'll have groundwater standards for six compounds. The levels at which those groundwater standards are set are also not the same. So, in one jurisdiction, it might be you have to get it to ten parts per trillion.

And just to give a frame of reference for this, one part per trillion is a single drop of water in 20 Olympic sized swimming pools. So, we are talking about an unbelievably small amount of a compound in a large body of water. So, trying to get, you know, a remediation down to ten parts per trillion. Some states have lower standards, it is very challenging, especially when you are dealing with background loading of this particular chemistry due to all the historic uses of it over decades. So, you will have states that have groundwater standards, some have soil, some have surface water; the compounds vary state to state; the numerical standard you need to achieve also typically vary state to state.

And then you have some states that don't have any current cleanup standards. On top of the cleanup issue, in many states, they have begun passing laws that require disclosure of PFAS in either all consumer products or specific consumer product categories. So, you might have a law, for example, in California, that requires disclosure of any fast content in cosmetics.

And then there states like Maine that have broader laws, which both require disclosure of PFAS of any consumer product that is sold or distributed into Maine and also starts to implement essentially a plan phase out where within, you know, by 2028, you can no longer sell products in the state of Maine that have PFAS in these applications. And this approach of having a reporting obligation and then having a phase ban component, this is also becoming more common across the United States.

Again, same caveat applies depending on what jurisdiction you're in, you really need to look critically at which particular PFAS compounds are covered and for what particular applications.

Kimberly Lomot: So that kind of segues right into my next question. So, I mean, given the disparity across all the state level, what are the biggest challenges for parties trying to clean up PFAS from the environment?

Kegan Brown: Yeah, I think the biggest challenge is, you know, while there is a considerable amount of technical work going on to try to find cost effective ways to remediate PFAS from the environment, it is still unbelievably costly. For a lot of ground water or drinking water contamination, one of the most effective ways to deal with that is to have the water pumped out of the ground, run it through an activated carbon system.

The activated carbon technology will then essentially remove the PFAS from the drinking water, and so you wind up after that carbon filter with cleaner water. It's essentially like any, you know, water filter you would have in your house. But that's costly. You got to pump the water out. You got to run it through the filter. You got to change the filters on some regularity to make sure that they're still achieving the level of efficiency that you need, and you're trying to do all of that and get to a place where you are achieving low double digit or even single digit part per trillion concentrations of this particular suite of chemicals, often in a water body that is moving. So, it is not simple and it requires a lot of engineering planning. It requires a lot of time and investment. I do think that where this has come up and companies are making the efforts to address it, I think the state and federal agencies appreciate that there are real technical challenges to getting this done, and some of these things just take more time than folks would prefer.

But there is progress. It just takes some time.

- **Kimberly Lomot:** So, in terms of the legal realm, what types of litigation claims are, kind of, being asserted now relating to PFAS that you've been seeing and can speak a little bit about?
- **Kegan Brown:** So, I think the litigation landscape, similar to the regulatory landscape, continues to evolve on what feels like a weekly basis. There are thousands of PFAS litigations that are actively going on in this country. There are environmental claims, right? Claims for investigation and cleanup costs, claims for natural resource damages. So that is beyond investigation and remediation, any additional damages that a natural resource may have suffered as a result of PFAS. Then you've got personal injury, property damage claims, and some of those also have a medical monitoring component.

So, because some of the science around what diseases particular PFAS compounds may cause is uncertain, some of these claims are also asking courts to impose medical monitoring. Essentially the defendant should be ordered to put either a, you know, some certain of money into a fund that will then allow the plaintiffs to receive monitoring of their health conditions over a defined period of time so that if it turns out that they might be developing a disease that could be attributable to PFAS, that is identified

sooner rather than later. Those claims present different challenges, but that has been a more recent trend of late. You then have the, sort of, products liability bucket of claims. So, you've got "the product you sold me is defective because it has PFAS;" "the product is defective because you didn't warn me that it had PFAS." And this really dovetails, Kim, with claims that you also see in a sustainability or green sort of ESG context.

So, there are a considerable amount of PFAS claims where the allegation is, "I purchased this product off the shelf because you told me that you are a green company or a sustainable company, that these were principles that were important to you. And so I understood that to mean that your product would not contain this PFAS or any PFAS. And because of that, I paid, whatever, four dollars for the product. And if I had known that there was PFAS in this product, I would have bought a competitor's product for one dollar. And so my damage is three dollars."

That type of claim is also becoming more common. Then there is one other bucket that I want to just mention, PFAS has been used historically in firefighting foam. And the reason for that is that in order to put out a fire quickly where you have a real risk of explosion and a real risk of death or substantial property damage, you need a firefighting agent that is going to cut off the oxygen from that fire as quickly as possible. Having PFAS in the firefighting foam does that because the PFAS compounds create that barrier, which cuts off the oxygen.

So historically, PFAS-containing firefighting foams were sold, manufactured and sold to a whole host of companies, including the federal government. So, there are considerable claims. I am talking, you know, 10,000 different lawsuits relating to firefighting foam that are now part of a multidistrict litigation proceeding that is going on in federal court in South Carolina that has been going on for, I think about seven years at this point, and will continue to go on as the court there works through the sort of process of figuring out what cases are going to go in what order and if there's going to be bellwether trials for specific categories of plaintiffs. But the firefighting foam cases are a whole suite that is additive to everything else that I mentioned.

Kimberly Lomot: So in terms of state of play today, how are you seeing this impacting like the transactional process? And for instance, I had a conversation with you, you know, several weeks ago on a matter of just diligence in a commercial real estate deal where, you know, there was a somewhat recent phase one that was completed and I wanted to have a better understanding of, you know, if an update in phase one should get done now.

And you gave me a very enlightening response that I hope you can speak to here because I think a lot of our listeners too who maybe in the commercial real estate industry would like to know that piece of information, which was get a new phase one. And I hope you can speak to why that is important in light of some of the changes to the standards, over the last couple of years.

Kegan Brown: So I'd say on every transaction I've worked on over the last six years, PFAS has come up in some capacity. And the ASTM standard for phase ones was updated in the last two years, I believe. We're now investigating and evaluating to see whether you have a recognized environmental condition for PFAS is now essentially a to-be-considered scope consideration.

> That's important because if you're trying to get the benefit of liability exemptions that are based on doing all appropriate inquiry and conducting full diligence, you need to understand in a more robust way whether there are PFAS connections to the property and if so, what are they? It also, again, with the changing standards issue, if you've got a phase one from last year for a property, it may be the case that maybe PFAS was considered as part of that phase one.

But have the regulatory standards in that jurisdiction changed? Have they changed the standard? It's no longer 25 PPT. Now you have to get down to ten parts per trillion. And, you know, how does that change in the standard affect the analysis? Those are the types of issues that kind of come up all the time on the transactional side.

And then it's the other problem, I think, of are we talking about and looking into the right things? When I, you know, sort of started with this, but it's so important I want to just mention it again, you know, when we use the word PFAS, P-F-A-S, we are literally talking about thousands and thousands of chemicals. But I have been involved in transactions where we are having conversations with the counterparty and we are talking, I am saying P-F-A-S, but it becomes clear to me that they are not interpreting what I'm saying.

They are thinking that I am only talking about PFOA or only talking about PFOA and PFOS, and that needs to be better understood because if we're not, if you're not having an upfront conversation as part of transactions about what do we even mean when we use this word? It affects everything. It affects the diligence, it affects the way the reps and warranties are written, and it affects the types of indemnity coverage or price deductions that might be necessary from a business perspective to manage this particular risk.

Kimberly Lomot: Actually, I think that's a perfect way to end because those things are so important. And I really feel like this topic, obviously, is ever evolving, but we really appreciate you coming on today. I think we're just about out of time. So, we're going to wrap it up for today. But I just want to thank you again, Kegan, for coming on and helping us get smarter about this very important subject.

And thank you, listeners, for tuning in today. Be sure to like, subscribe and follow Terra Firma wherever you're listening to this episode. We would also love to hear from you, so please feel free to reach out to us at Terrafirma@lowenstein.com. Until next time, talk to you all soon.

Stacey Tyler: Thank you for listening to today's episode. Please subscribe to our podcast series at <u>lowenstein.com/podcast</u> or find us on Amazon Music, Apple Podcasts, Audible, iHeartRadio, Spotify, Soundcloud or YouTube. Lowenstein Sandler Podcast series is presented by Lowenstein Sandler and cannot be copied or rebroadcast without consent. The information provided is intended for a general audience and is not legal advice or a substitute for the advice of counsel. Prior results do not guarantee a similar outcome. Content reflects the personal views and opinions of the participants. No attorney-client relationship is being created by this podcast and all rights are reserved.