Paul:

Over the past several years, there has been a surge in regulatory interest to address the public health and environmental risks from releases of per- and polyfluoroalkyl substances, otherwise known as PFAS, including the use of aqueous film forming foams, or AFFF, [00:00:30] for firefighting or training. This call to action has resulted in rapid development of regulations and guidance at both the federal and state level, which are impacting the airport community. Airports are faced with addressing PFAS concerns resulting from the long term use of AFFF and firefighting, that was mandated by the federal aviation administration. In fact, they are still mandated to use new foam mixtures that contain PFAS, until new fluorine [00:01:00] free foams are accepted and mandated, despite the reality of the associated liability. While the regulatory environment remains fluid, and the technologies to cost effectively address PFAS are evolving, airports are challenged to account for PFAS impacts through their operations.

These can include a dizzying array of issues that range from impacts to ground water, to increase costs associated with construction soil management, costs of equipment cleaning and replacement, [00:01:30] to storage of remaining AFFF until it can be safely destroyed or processed. All this while performing normal operations, implementing long term growth plans and maintaining strong community relations. Hello, I'm your host Paul Teese. And in this episode of If/When, we explore the environmental presence of PFASat airports from such things as emergency response, activation of fire suppression systems and hangers and firefighter training exercises. [00:02:00] I'm joined today by Steve Pelham, Jacobs' Vice President of Aviation for the Americas, Bob Cipolletti, Principal Hydrogeologist, Jacobs' Aviation Environmental Lead, and Bill Diguiseppi, Principal Hydrogeologist, Jacobs' PFAS Global Technology Leader. So Steve, Bob, and Bill, thank you all so much for joining me today. Bill, I'm going to start with you and, PFAS have many commercial and industrial uses, [00:02:30] but the question is, what application do they have in the context of airports?

Bill:

Well, in addition to what you mentioned about AFFF, firefighting foam, which again was in train

Paul:

Yeah. [00:04:00] And it's quite a nettlesome environmental challenge. I understand that, trying to clean these contaminants up and trying to manage them. Steve, what are some of the challenges that USairports face in managing PFAS contaminants?

Steve:

I think one of the big challenges is, just being aware. I think some of the large airports that usually have staff members on the environmental side, but the 450 odd USairports that do commercial service, [00:04:30] many don't have the staff to be able to take this on. So, that would be the first thing, is awareness, and then two is, to start realizing where has a AFFF been used on site and then we can go from there.

Paul:

Okay. And then Bob, within the first couple of months of the Biden Administration, we have seen a high level of attention on PFAS with potential federal regulatory actions pending, states are also demonstrating [00:05:00] increased engagement. And it's likely that several bills will be presented in state legislatures to address PFAS. So, how are airports responding to these regulatory challenges?

Bob:

Well, the regulatory situation is very fluid, which makes managing PFAS particularly challenging for airports. And they're faced with a need to balance, moving forward, their every day aspects of what they do in airport operations. It could be a capital improvement project, tax away reconfiguration, ongoing [00:05:30] fire training, while trying to keep an eye on how the regulatory changes could impact their environmental liability and the reputation, the community, which we know is important to airports. Airports are responding in a whole lot of different ways that depend, for example, on the regulatory framework where they're located, while they wait around to see what happens in Washington. And some highly regulated states, such as California, PFAS investigations have been going on for several years now and [00:06:00] airports, they're complying with the sampling mandates. They really understand what's going on in those states. Some airports are addressing PFAS management as part of their risk management strategy.

So, they're documenting past use, they're looking at what their current storage is, are there known suspected releases of foam in the past. Well ahead of any kind of regulatory push or requirement, the lack of soil standards though, in most states combined with that uncertainty around the potential hazardous substance designation [00:06:30] at the federal level, as resulted in many airports, really deciding just to stockpile their soils after site, assuming they have the room to do so. Many airports don't have that room. So, they're having to send their soils and construction debris and that sort of thing out to their current stable of landfill providers. And that can be challenging, because a lot of these landfills are not necessarily going to be taking PFAS soils, or they may start requiring sampling, prior to acceptance, but really all in all, there's [00:07:00] not a whole lot of consistency across the industry. Other than that there's an awareness of PFAS and how it might impact our operations.

Paul:

And I imagine, I don't know, but I imagine that there's probably a scale of airport readiness, where perhaps some facilities are more ready than others. Steve, from a planning and operations perspective, what actions do you think airports should consider in preparing for PFAS related [00:07:30] concerns?

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turn [00:18:00] over, dig it up for a construction project has to be dealt with in accordance with the state regulations. So, remediation treatment of that soil is pretty much mandated. In other cases, you may have a groundwater problem that is fed by a soil source area. And the regulators may look at that source area as requiring remediation. So, that's where you have to go in and do something about that soil that you might not otherwise have bothered disturbing, it's under a hanger, or [00:18:30] next to a hanger or something that's not being constructed. And there you then have to go in and figure out the best option for handling that soil.

And the options are limited, as I said before, there's not any perfect solutions actually, but there are some reasonable ways to cut the cost and make it more viable. And one of them for instance, is to separate the coarse soil from the fine grain soil, because PFAS tend to stick to the fine grained day and [00:19:00] organic material and not the pebbles and cobbles and coarse sand. So, if you wet sieved away that larger fraction, that would reduce the volume that requires treatment, substantially in some cases. And then you could do something like thermal treatment or something for the remaining soil that does need some level of treatment to eliminate liability.

Paul: And then finally, Steve, my last question is, is there anything else you'd like to add about

PFAS and AFFF, that our audience might like to know?

Steve: I [00:19:30] think as kind of a summary piece, we've been involved with Bill and Bob and PFAS and Aviation for over 12 years, we're watching what happens with joint DOD and