To: Garland, Jay[Garland.Jay@epa.gov]
Cc: Jahne, Michael[Jahne.Michael@epa.gov]; Morgan, Ardra[Morgan.Ardra@epa.gov]
From: Nye, Michael
Sent: Wed 11/15/2017 2:32:23 PM
Subject: RE: Skywell follow up

Well we will see what they say. I hope we can consider my idea about the scenarios as it will take the focus off of current tech and make the research angle more interesting.

Michael B. Nye PhD

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From: Garland, Jay
Sent: Tuesday, November 14, 2017 7:21 PM
To: Nye, Michael <nye.michael@epa.gov>
Cc: Jahne, Michael <Jahne.Michael@epa.gov>; Morgan, Ardra <Morgan.Ardra@epa.gov>
Subject: Re: Skywell follow up

Tx for the follow up. We need willing partners, so it does not seem viable.

Sent from my iPhone

On Nov 14, 2017, at 6:27 PM, Nye, Michael <nye.michael@epa.gov> wrote:

> I spoke with Ron Dorfman from SkyWell today to follow up about the CRADA. Unfortunately, I am not confident in our prospects for working with them.

Ron has some reservations about entering into a CRADA with us, namely what's in it for them, and what's in it for us. He's not looking for an endorsement, but at the same time he's curious about why we are interested in working with multiple COTS from different vendors if we're not picking a winner and thereby endorsing in a less straightforward way. I think this is a valid point and we need to address it for all of the participants.

On the more practical side, Ron does not think the microbial/ chemical analysis is worthwhile because they have already conducted extensive testing with SHARP who have a stake in their company. I think he will is willing to share the results of that testing, but he indicates there is nothing there, unless you leave the unit unplugged for a significant time which shuts down the self cleaning process. I think we could already assume that given what we know about microbial growth. I assume we still see a need to verify though.

On the benefits side, I suggested that the scenario analyses might reveal new uses/ deployment applications that they had not considered, which would benefit both them and us. I also talked about the challenges of our crumbling water infrastructure in cities and encouraged him to think beyond the typical disaster scenario (which he does not think his tech is appropriate for, nor are they marketing it that way). I hoped that this discussion would convey our interests in AWG as both a long term or near term solution. We also discussed the possibility on the scenario side of constructing scenarios looking at both current state of play (AWG COTS) and the potential for added gains if the units incorporated emerging or alternate technology. So we create base case, "what is the optimal deployment situation/ operating conditions for these COTS units?" scenario(s), and then work with the manufacturers to create additional scenarios that reflect changes/ improvements that could be made to their specific units using BAT or emerging tech that may currently be cost prohibitive, but that could yield new efficiency gains. Ron did seem interested in this idea because he claims he could make the unit MUCH more efficient, but at much higher costs than his current market is willing to pay. What's the optimal balance point? This problem is not unique to AWG tech, but it could be worth exploring in the scenario analysis and would give us a new angle to make recommendations that would not tie us to specific COTS units.

Our discussion also led to some further questions which I was unable to answer, and that I think we need to get answers to quickly because any company seriously considering a CRADA with us is going to want to know them. Ron wanted to know the names of the other CRADA participants and I was unsure if I could share them, so I did not. He also wanted to know what format any eventual reporting might be in. I note that the WaterGen SOW mentions reports, journal articles and webinars as possibilities, but the CRADA itself only indicates a final report and does not specify if that will be public or private. Assuming we can attract more than one participant, would we produce an overall report that compares

results for all of the companies we collaborate with, or will there be separate reports for each? Ron is not in favor of a report that compares his tech side by side with his competitors due to concerns about IP/ patents, and his general concerns about indirect endorsement, so that might be another sticking point.

So – we may need a follow up call, or shall we wait until Monday's call? Sorry to raise so many tough questions.

Mike

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