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AGENCY FOR TOXIC SUBSTANCES AND DISEASE REGISTRY

convenes the

EIGHTH MEETING

PEASE COMMUNITY ASSISTANCE

PANEL (CAP) MEETING

February 7, 2019

The verbatim transcript of the
Meeting of the Pease Community Assistance
Panel held at the New Hampshire Department of
Environmental Services, Pease Tradeport, Portsmouth,
New Hampshire, on February 7, 2019, 6:00 p.m.

STEVEN RAY GREEN AND ASSOCIATES
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C O N T E N T S

February 7, 2019

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-- "*" denotes a spelling based on phonetics, without reference available.

-- ^^ represents unintelligible or unintelligible speech or speaker failure, usually failure to use a microphone or multiple speakers speaking simultaneously; also telephonic failure.
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(alphabetically)

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BREYSSE, PATRICK, NCEH/ATSDR
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DAVIS, ALAYNA, CAP MEMBER
dIPENTIMA, RICHARD, CAP MEMBER
HARBESEN, ROBERT, CAP MEMBER
LAZENBY, CLIFF, CAP MEMBER
OSGOOD, RUSSELL, CAP MEMBER
PAVUK, MARIAN, ATSDR
REH, CHRIS, ATSDR
SCHNORR, TERESA, CDC/NIOSH
SHAHEEN, STEFANY, CAP MEMBER
SOMERS, TARAH, ATSDR
SULLIVAN, MARK, CAP MEMBER
CAPT SOMERS: Usually CDR Jamie Mutter --
woops, someone’s on the phone, can you hear us on
the phone? Usually CDR Jamie Mutter helps us
through this evening but she’s not here today so you
have me and we’ll get through it.

So first we’re going to just do a few basic
housekeeping things. I have my paper from Jamie.
So we’d like to remind people to please turn off
your phones or put them on silent if you have your
phones. It’s a good reminder. Mine are turned
down.

The bathrooms are out the door as you came in;
you take a right down the hall and you’ll find rest
rooms.

The emergency exits are out the same door or
you can go out the other door.

We have a place on the agenda for audience
comments and there’s agendas over by the entrance
and we also ask you to please sign in, if you have a
chance. And on tonight’s agenda the questions from
the audience come about halfway through the meeting.
So if you would like to speak at that time, we have
a spot at the end of the table you could come up and
we’ll get you a microphone and that would be a good
time for audience questions. And for folks at the
table, when you’d like to speak if you could turn
your name tag up on end and then just remember to
speak into the microphone. And I’m just going to
ask right now, can the folks on the phone hear us
okay?

THE COURT REPORTER: It’s very faint.
CAPT SOMERS: Okay.
UNIDENTIFIED: A little bit muffled.
CAPT SOMERS: A little bit muffled.
DR. REH: Maybe get a microphone over near you?
CAPT SOMERS: I know. There’s these little
table mikes for the phone so we’ll make sure
whoever’s speaking has one near them.

WELCOME AND INTRODUCTIONS

So first, again, we’re going to do welcome and
introductions. So again, I’m Tarah Somers. I’m the
ATSDR Region One regional representative. And then
we’ll go this way.

DR. REH: I’m Chris Reh, I’m the Associate
Director for ATSDR.

DR. BREYSSE: And I’m Patrick Breysse. I’m the
Director of ATSDR.

DR. BOVE: I’m Frank Bove, senior
epidemiologist at ATSDR.
DR. PAVUK: I’m Marian Pavuk, epidemiologist with ATSDR.

MR. LAZENBY: Cliff Lazenby, assistant mayor, City of Portsmouth.

MR. OSGOOD: Russ Osgood, Portsmouth Fire, member of the CAP.

Col ALMOSARA: I’m Joel Almosara from the Secretary of the Air Force.

MR. HARBESON: I’m Rob Harbeson, Market Square Architects. I’m a member of the CAP, I’m the past board chair of Great Bay Kids at Pease and the parent of affected kids.

MS. CARMICHAEL: Lindsey Carmichael, a Portsmouth resident.

MR. SULLIVAN: Mark Sullivan, a business owner on Pease Tradeport.

MS. AMICO: Andrea Amico, Testing for Pease, impacted community member, my children and my husband were exposed here.

DR. CLAPP: And state of the union observer.

MS. AMICO: Yes.

DR. CLAPP: I’m Dick Clapp, member of the CAP advisory committee.

MR. DIPENTIMA: I’m Rich Dipentima, member of the CAP committee from Portsmouth.
CAPT SOMERS: Okay.
UNIDENTIFIED: I’m on the CAP as well, I should’ve said.
CAPT SOMERS: That’s all right. Thank you.
DR. BREYSSE: I’d like to maybe start off with a few words, Tarah.
CAPT SOMERS: Sure.
DR. BREYSSE: So first of all, I want to apologize for the hiatus we had when there was a partial government shutdown. It was unfortunate and, you know, we were -- by necessity we weren’t able to interact with you as much as we’d like and if there was any difficulties here, we apologize for that.

But I also want to publicly kind of acknowledge I think something that’s kind of important also and that is the -- this year’s EPA citizen excellence in community involvement award that went to Andrea Amico, and that award was in November since our last CAP meeting. So that’s a pretty significant award and I’m proud to be part of the group that has Andrea as part of it. So congratulations.

And with that, I think we’ll move to the action items from our September meeting.

**ACTION ITEMS FROM SEPT. 2018 CAP MEETING**
CAPT SOMERS: Yes. I have an update from Jamie. I’m trying to make sure the people on the phone can hear as well. So it was an action item from the September 2018 meeting assigned to ATSDR that ATSDR will send a link for the petition process as well as a brief description of the types of ATSDR reports. And Jamie said the email was sent out to the CAP December 10th, 2018. So that should’ve been completed. Did you get it? You have it? Did that fulfill the request or are you...

Okay. All right. So that was the only outstanding agenda item we had so now we’re --

NIOSH SUMMARY OF WORK RELATED TO FIREFIGHTERS AND CANCER, Q&A FROM CAP

DR. BREYSSE: So if we -- the next agenda item is a presentation from a discussion from NIOSH. As you recall at a number of CAP meetings you’ve asked about firefighters and possible health risks, cancer risks among firefighters, and that’s an occupational exposure and we, on a number of occasions, indicated that there’s another part of CDC that deals with occupational exposure so that’s NIOSH, National Institute for Occupational Safety and Health, and so we’re fortunate tonight to have Dr. Terri Schnorr on the phone. She couldn’t be here in person. But
Terri, if you want to say what NIOSH’s involvements and interests are, if you could maybe introduce yourself as you begin speaking.

DR. SCHNORR: Sure. First I want to make sure that everyone can hear me and understand me okay?

DR. BREYSSE: Yes. Very clear.

DR. SCHNORR: I’m clear? Okay, great. Yes.

As Dr. Breysse said, I’m Terri Schnorr and I work at NIOSH which is one of the centers in the Centers for Disease Control and I’m an epidemiologist there and we do -- in my group we do studies of cancer and other chronic disease among workers. The overall mission of NIOSH is to ensure that we have healthy and safe work places through the research that we conduct and our mission includes all workers and all industries in the U.S. So NIOSH was created in 1970 and since that time we’ve done research to identify health and safety problems in a number of -- a lot of work places and to make recommendations to reduce those risks.

So Dr. Breysse asked me to attend this meeting to give you a summary of our current work related to the PFAS compounds. And while NIOSH is not currently conducting any research in this area, we do have decades of experience in doing work with
firefighters and also in general understanding workplace exposures. So I thought I would give you some information on the work that we have done that’s most relevant to the meeting. It primarily involves two specific projects. The first was a study of cancer among 30,000 firefighters that we published in 2015 and in that study we included firefighters from San Francisco, Chicago, and Philadelphia and our analysis found that firefighters had a greater number of cancers compared to the U.S. population and that these cancers were mostly digestive, oral, respiratory, and urinary cancers.

We also found that the chance of lung cancer increased with the amount of time spent at the fires and that the chance of leukemia increased with the number of fire runs.

So as a follow up to that because we didn’t want to stop at just identifying the problem, we’re doing some detailed exposure studies of firefighters so that we can better understand what they are exposed to and how we can reduce those exposures. So for example, we’re looking at how well their turnout gear protects them from the exposures that they get while they’re fighting the fires. And
another thing we’re doing is looking at the best way for them to decontaminate the gear after they have fought the fires. So currently we don’t have active work looking at PFAS and PFOA exposures among firefighters, but we do have a proposal in to look at those exposures and we’re waiting for a decision on the funding for that project. So the other item that I wanted to let you know about is the firefighter cancer registry. So this past summer Congress passed legislation providing funds to NIOSH to begin to establish a voluntary firefighter cancer registry. And the purpose of the registry is to establish cancer incidence rates among firefighters and also to identify the causes. So our plan is to enroll at least 200,000 civilian firefighters in the registry. Military firefighters are not part of the registry, the funding was not provided for people in that category, so right now we’re working through the logistics of setting up the registry and we plan to begin enrolling firefighters next year. So once this registry is established, then we’ll be able to do those calculations to estimate the cancer incidents among firefighters. We estimate that that will take at least two to three years to get to that stage. So while -- the reason I mentioned the
registry is that while studies of exposure to PFAS and PFOA are common are not part of the basic registry, the registry would -- could be a good basis to study exposures of firefighters to those substances and the health effects if funding was available for that purpose.

So the only -- I just have one last item to mention that's related to PFAS and PFOA exposure. We currently have another proposal to conduct what we call a scoping study of PFAS compounds. We’re basically going to be looking at exposures in several industries in the U.S. So as, I’m sure all of you know, these compounds are used in many, many products in the U.S. so we’re planning to look at exposures in the manufacturing, the public safety, and the service industries. And the study isn’t yet funded, but if it is and when it is, we would visit a number of facilities and collect information on the type of compounds that are used. We’re wanting to look at both the old types of compounds and also the new types that are being introduced into industries throughout the U.S.

So that pretty much summarizes what, I think, most related to your meeting.

DR. BREYSSE: So Terri, if you don’t mind,
we’ll entertain some questions from the room. Rich.

DR. SCHNORR: Sure.

MR. DIPENTIMA: Yes. I have a couple of real quick questions. Number one, in the study that you’ve done with the firefighters from Chicago and San Francisco, et cetera, were there firefighters included in that study where you found elevated cancer or rates in some particular organ systems?

DR. BREYSSE: That was all firefighters?

DR. SCHNORR: Yeah. So those were firefighters. The 30,000 people in that study were firefighters in those three cities and we found elevated -- elevations in a number of different cancers but in particular some we found strong relationships between whether the amount of time they spent at fires or the number of fire runs that they ran. Does that answer your question?

MR. DIPENTIMA: Yeah, basically. Were you able to sort out the firefighters separately from the rest of the occupations included in those -- the non-firefighter exposure in those cities?

DR. SCHNORR: So we only looked at --

MR. DIPENTIMA: Or that didn’t have a airport or exposures to airports?

DR. SCHNORR: So what we did, we studied the
firefighters that worked at the fire departments in those three cities. So it was the -- all of the firefighters in the San Francisco Fire Department. So we didn’t do all firefighters in that city, it was those firefighters that worked for the city fire department. Does that help --

MR. DIPENTIMA: Yes.

DR. SCHNORR: -- clarify it?

MR. DIPENTIMA: Lastly, on the registry that you’re planning, in the 200,000 civilian firefighters that you plan to or hope to get in the registry, are those active firefighters or will that be cancer incidents including retired firefighters?

DR. SCHNORR: It would include fire -- retired and current firefighters. Yes. And we’re looking for not only career firefighters but also volunteer firefighters as well.

MR. DIPENTIMA: Okay, thank you.

DR. BREYSSE: Russell.

MR. OSGOOD: Yeah.

DR. BREYSSE: You might want to introduce yourself.

MR. OSGOOD: Hi. I’m Russell Osgood. I’m a lieutenant here at the Portsmouth Fire Department. One of the fire stations here on our base was the
water, basically, had the PFAS in it. So we have a concern on the front that the study that we’re doing or the research that we’re doing here doesn’t include firefighters. And I understand the reason behind that. My question to you is, you’re talking about doing exposure studies, who’s doing those studies and what do they comprise of at this point?

DR. SCHNORR: So right now relative to PFAS we aren’t doing studies but we’re planning to do studies if the studies are funded. So one study specifically looks at firefighters and the plan would be to look at, you know, their firefighting habits and also with their practices and get information on -- do biological measurements of the substances in their body. The other study is a broader study looking at a number of industries. And that’s really kind of the first step to really understand more about what types of compounds are currently being used in the various parts of the various industries in the country. So both of those are proposed to be done, they’re both NIOSH studies and we’re hoping to get those funded but we haven’t heard yet.

MR. OSGOOD: Would that include looking at AFFF foam within a certain date range and then including
like our turnout gear or any compounds that may have
been in our turnout gear over the past 15 or 20
years or even before that? Is that part of your
scope?

DR. SCHNORR: So the scope is -- so for the
firefighter study the scope is to really kind of
collect what we can about it. We want to sort of
understand what was used over time and then we’ll
also try to do some measurements of exposure but
those will necessarily be current exposures
certainly although the long reaching compounds will,
you know, will still have body burden of them but...
So I guess the answer is yes, we will by definition,
I guess, include both the old and the new compounds
in our studies.

MR. OSGOOD: Okay, good. Thank you.

MS. AMICO: Hi. And this is Andrea Amico. So
I have a couple of questions. You talked about the
study that was done finding increased rates of
urinary cancer. Can you be more specific? Is that
like prostate, testicular, bladder cancer? Like
what would you define as urinary cancer?

DR. SCHNORR: That’s a good question. I don’t
have that directly in front of me but I believe it
included kidney, bladder, and prostate cancers.
Those are cancers that previous studies had found and I know that what I have in front of me is the combined group but I can pull that paper up and let you know.

MS. AMICO: Okay.

DR. SCHNORR: I can send it back through Dr. Breysse.

MS. AMICO: Okay, that would be great. And then also if, I’m just curious if testicular was included in that.

DR. SCHNORR: All cancers were included in the analysis. I don’t know if we found an increase in that or not.

MS. AMICO: Okay.

DR. SCHNORR: But I can -- that’s all spelled out in the paper and I can get that.

MS. AMICO: Okay, great. Thank you very much. And then going to the turnout gear, so you talked about doing a study if the turnout -- how the turnout gear protects firefighters but it’s been my understanding in talking to people that are advocating for the firefighting community that there’s a big concern that their turnout gear contains high levels of PFAS. So it seems like you’re looking at to see how protective their gear
is, but are you also looking at how maybe their gear could potentially be exposing them to these contaminants as well?

DR. SCHNORR: So yeah. So exposures to firefighters is very complicated. They have many exposures in addition to PFAS so one of the concerns we have is as one is fighting a fire is -- are these substances getting on the skin and being absorbed into the body which is obviously not good. Turnout gear can help protect but it can also be a problem. I know that we’re looking at this general question. I will have to look to see if we’re specifically going to measure the levels in the gear and whether that or whether we can look at how that could be absorbed. But I can follow up with staff on that question.

MS. AMICO: Okay. Great. Yeah, it just I think that’s some of the concerns I’m hearing from folks advocating from the firefighting community so I think that would be helpful if that somehow could be considered in your study design. And then you talk about the PFAS registry. I’m just curious what types of -- it sounds like a voluntary registry so what types of information are you collecting from people; is it just, you know, the type of cancer
they have and how long they’ve been a firefighter or are you drilling down on other information from people?

DR. SCHNORR: So we’re still developing it, you know, the legislation was just passed. It is a voluntary registry where firefighters can enroll. They certainly don’t have to have cancer to enroll. In fact, encourage firefighters to enroll anyway and then we will collect information on their job history, types of fires, number of fires that they fought, how long they worked as firefighters, et cetera because that would be important. And then we’ll also get information on any cancers that are diagnosed so that we can look at the relationship between firefighting and various types of cancer and various activities in firefighting and those cancers.

MS. AMICO: Okay. All right, thank you very much. Courtney Carignan wants to ask a question, so I don’t know how to, she asked me to help her figure that out over the phone.

DR. CARIGNAN: Yeah. I think it’s hard to know when to jump in without being able to see.

DR. BREYSSE: Courtney, go ahead and jump in.

DR. CARIGNAN: I’ll try and ask questions, but
I want to be rude. I had a few questions. One comment first is just that regarding the PFAS and the turnout gear, when you go to try to do exposure assessment calculations for that there really isn’t good dermal absorption data for contact with something that has high levels of PFAS like that, especially under a firefighting scenario where you have high temperatures and sweat. I’m thinking that’s really like the data gap that needs to be addressed in terms of understanding what kind of exposure would occur from the PFAS and turnout gear. But I would love to connect with you maybe by email, if possible, in part because it would be great if you could come to our upcoming PFAS conference in Boston in June because I know that the folks there would love to hear a lot of things that you have to say and the things that NIOSH has planned. You guys do great research. I love reading your studies.

So I have two technical questions. One was with regards to exposure assessment, I think you answered it though, that you’d be doing biomonitoring. I know that one of the big data gaps for the firefighters that you said that have been done, you know, nationally and also in Massachusetts are that they don’t actually have data on whether a
firefighter was using AFFF and so you get basically exposure misclassification from the (inaudible) whether those elevated cancer rates are, you know, can really be attributed to AFFF or something else or a mixture of the occupational exposure.

But I know in Massachusetts, I have a paper on it, I don’t know if you have it, I can share it. There was a suggestion of an increase for prostate cancer which is stemming to PFAS so should be interesting to see if you’re able to improve that exposure assessment, if you can, you know, if those sort of PFAS related cancers are something that you can see in the data.

And the other question I had was with regards to the registry. I was kind of interested to hear if it was a, what was the word you used, like a volunteer, like people would voluntarily enroll on the registry? And just wondering how you deal with initial sources of bias with that kind of approach or maybe I’m misunderstanding how that works.

DR. SCHNORR: Yes. That is a concern of ours so we’re -- so we’re -- what we want to do is design it so that any firefighter who would like to be included can be included but we also want to design it so that it can be representative, so we’re
working through that. One of the first things we will be doing is sending out a notice sort of asking for input on how we can best do this because we want to get input from people who know this area the best. So that will be coming out in some number of months from now. So I can let Dr. Breysse know when it is going to come out and he could let you all know so that you can be sure to see it so that you can provide that input to us. That would be very helpful.

DR. CARIGNAN: Okay, great. Thank you.

DR. SCHNORR: And he can also provide -- thank you for the comments about trying to get the dermal exposure data, that big challenge and, you know, if he can send you my email and we can talk more.

DR. CARIGNAN: That would be great. Thanks.

MR. LAZENBY: Hi Dr. Schnorr. Cliff Lazenby from the City of Portsmouth. I was encouraged to hear you’ve submitted proposals for these studies. I wanted to find out if the proposals are available to the public or something that we could see here and what you expect for a path or a time frame on pursuing funding.

DR. SCHNORR: So the proposals are still in, sir, they’re in for consideration but I think
they’re too early to release them to the public until decisions are made. The people who provide funding are careful about that. So we’re hoping to hear in the next six months as to whether those projects are funded or not and, you know, once they are we’ll get going.

MS. SHAHEEN: Thanks, Dr. Schnorr. This is Stefany Shaheen, also a community member from Portsmouth. I’m wondering if you can say more about the path. The people around this table I think believe these studies should be done so if for some reason they weren’t approved internally, can you describe what it would take or the funding that would be required in order to get these studies to happen? And can you also describe, or maybe this is for Dr. Breysse, the relationship between NIOSH and ATSDR and how the agencies work together to make these studies happen?

DR. SCHNORR: Sure. You were breaking up a bit so I think you asked me, what we would do if the study was not funded internally?

MS. SHAHEEN: Well, yes. So the -- you answered my first question which is the -- when you talk about the study being approved, are you saying that if internally there is agreement that this is a
priority, the study could be funded internally without additional appropriation?

DR. SCHNORR: No. Well that’s what -- no. What we have done is we have sent the proposal off for additional funding. We don’t have funding within the current appropriation to do that work so we have put both of these proposals in for additional funding so that we can do them. So we’re waiting to hear if that additional funding is available.

MS. SHAHEEN: And can you be as concrete and specific as possible relative to where the funding is coming from and who the request was made to?

DR. SCHNORR: Sure. One of the projects is a collaboration with the University and so it’s been submitted to another group to review and that group will determine if they fund it but I can’t say what the group is that would be providing the funding, but it’s a competitive process. So if it, you know, if it scores well and then the proposal would then be funded. And the other one is a proposal to -- actually another federal agency that we collaborate with them, we share resources with, so they’re looking at their budget to see if they can help support that.
MS. SHAHEEN: Okay. And I don’t know, again, maybe you can say a little bit more about the relationship between NIOSH and ATSDR and whether there would be any integration between the studies if this work was to be approved.

DR. BREYSSE: So obviously we’re both under the same overall umbrella, the Centers for Disease Control and Prevention, and we work closely together on a number of projects and we would add this to the list of things, I think, that we’d work closely with NIOSH on.

MS. SHAHEEN: Okay, great. And maybe one just last follow up, Dr. Schnorr. Could you, of the two proposals that you describe, do you think those proposals are encompassing enough to get at the root of exposure that firefighters may or may not be getting from these types of chemicals of PFAS PFOA that we’re working on here, or do you think there needs to be something more done or a more expansive study or the two you’ve described go far enough or don’t?

DR. SCHNORR: Yeah. Both of these studies are sort of preliminary studies, they’re not very large encompassing studies. We are taking the first steps to try to get a better sense of what we can about
exposures and then develop more methods from that so they’re not, certainly not all encompassing.

MS. SHAHEEN: Okay, thank you.

MR. HARBESON: This is Rob Harbeson from the CAP. This is sort of related to, I think, what Ms. Shaheen was asking, and that is funding. I think everybody at this table would like to see these studies proceed. And so if they don’t receive funding where can you look for funding and how can we as a CAP support your efforts to obtain funding to make sure that these studies go forward?

DR. SCHNORR: Well that’s a good question. We have our, I mean, we have appropriations that we receive every year and we do our work through those appropriations so we, you know, we work within those means. You know, other than that, other than that we do other methods that I’ve already described where we partner with others to find joint funding from other sources to get things done and that’s currently what we’re doing with the PFAS.

MR. HARBESON: So I guess would you say that where we might be able to help as a CAP is if these studies get funding, great. If they don’t then I think it would either be for us to seek private partners for the studies and/or talk to our federal
representation in terms of obtaining appropriations?

DR. SCHNORR: Certainly, yes, as citizens you’re free to ask people for what you feel you need.

MR. HARBESON: Okay, thanks.

MR. DIPENTIMA: Hi, Rich Dipentima, again. Just a quick comment. With your registry I would suggest that you include that you, once you have your volunteers included you may want to coordinate with the state cancer registries that those folks are from so you can get the data both from the state registry and what you collect in your own registry just to make sure that it’s complete.

DR. SCHNORR: Yes, exactly. That’s exactly our plan is that we plan to register the firefighters and then work with the state cancer registries around the country to confirm those diagnoses. Thank you.

DR. BREYSSE: Thank you. Any more questions for Dr. Schnorr? Terri, would you mind if I share your email address with the CAP?

DR. SCHNORR: No, that’s fine.

DR. BREYSSE: Great. And then if you could send some of the materials you mentioned to us, we’ll make sure we distribute them.
DR. SCHNORR: I will.

MR. HARBESON: I just have one last question, it’s really for this group and I don’t know, maybe we can make it an action item but I’d like to, if these are still six month out before we know they’re going to be funding, I’d like to just track that so we can understand if they do become funded or not.

MS. SHAHEEN: Just one other follow up on that point too, it’d be great to know whether or not there’s anything we can do to support or encourage the funders as part of this approval process. I don’t know if, I mean, if one is an academic institution I imagine letters of support or encouragement. And then, obviously, on the appropriations process we’ve done that before but it’d be great to have contact information for whom the CAP could send a letter of support for the funding of these studies.

DR. BREYSSE: Okay.

DR. SCHNORR: Okay. I can see about that.

DR. BREYSSE: Anything else?

DR. SCHNORR: And all back through Dr. Breysse.

DR. BREYSSE: Okay, thank you, Terri. Now we’re going to talk about the update on the Pease Proof of Concept Study.
PEASE PROOF OF CONCEPT STUDY UPDATE

DR. BOVE: Yeah. Before I start I thought it would be good to -- Abt Associates is our contractor on the study and we have two people here from Abt who you can identify yourselves and describe your roles.

MS. HUNT: Hi everyone. I’m Danielle Hunt, I am a senior epidemiologist at Abt Associates. I’ve talked to a number of you, I think, on the phone. But Abt is a company, a public health research and consulting company that’s based out of Boston. We’ve got a number of offices but we’ve been around for about 50 years and have been collaborating with CDC for about 20 years. So I am the project director and here with me also is Kate Durocher who will be leading our communications and community outreach activities during the implementation process.

DR. BOVE: And so the first thing I want to say is we’ve been working with Abt on the communication plan, we’ve reviewed some of the materials and we’re still working on that plan and they did speak to some of the CAP and also talked to Tarah today. And we visited, Marian and I visited with Danielle. We visited two potential office spaces so we’re
starting to evaluate what are options in the area. The problem being that we don’t know when we’re going to get OMB approval and so that may make it difficult for us to get the space and be able to rent it when we need to rent it. But we’re identifying at least two offices that look good.

As for OMB, we have approval for our 30-day Federal Register notice through HHS, so it should get published, we think, within the next week. So that process is moving. So even though there was a shutdown, that’s moving. OMB was also affected by the shutdown, so we’re going to have to see what happens but we think that we’ll get this notice within a week and then we’ll go from there. So you’ll be seeing, we’ll let you know when that hits the Federal Registry.

Some of the other things that we’ve been doing with Abt Associates, the Abt has done some work identifying reports and other data for the historical reconstruction aspect of the study. Again, what we’re trying to do is get information on the groundwater characteristics on the base, the soil characteristics, so we’ll be able to model from where the AFFF was used for training or where it was used for firefighting or any leaks and sort of model
it through the soil, through the groundwater to the
Haven well and the other two supply wells and be
able to then estimate over time what the
concentrations of PFAS were in those wells and then
by that the entire system. So that’s the approach.
And so they have identified a lot of documents so
far. We’re encouraging them to sit down with both
the City of Portsmouth and the state environmental
agency to make sure we’ve captured everything
relevant for the project there. And I may be coming
up with them to do this kind of a visit with these
agencies.

Oftentimes you can request state materials, but
it’s often good to go into the offices themselves
and rifle through the files if you can. We’ve done
that with the Navy and Marine Corps for Camp Lejeune
so we’ve learned a lot of lessons from that. So
it’s important to talk with them, sit down with them
and see if there are any documents that maybe we
forgot to ask about or didn’t ask about in the right
way or, you know, or whatever and identify them.
And also the same thing will probably need to happen
with the Air Force. Although they’ve been able to
get some information on AFFF on base, also there are
reports of -- on groundwater characteristics from
work that was done back in the ‘80s, I think it was in the ‘80s, around the TCE contamination of the Haven well so they have some idea there. But there are probably data that the Air Force has or the DoD has that will be relevant that we need to request. So in other words, they’ve done a lot so far, we probably need to do a little bit more to gather data.

Our next step would be to analyze what we have and present that to an expert panel along with the reports so it’s sort of a summary of the kinds of reports we have and some preliminary analysis so that the expert panel can then look at this material and advise us and Abt about what the best approach might be for modeling this. We have some initial ideas and there are methods that everyone uses, certain modeling methods, but there are also some possibilities to streamline the process. With Camp Lejeune, I think I mentioned this before, there was the usual method which took quite a bit of time and a lot of data, well a lot of obtaining the data and also working it up in order to run those models. But there was a simpler model that was developed by Georgia Tech that gave us almost the same results in much easier fashion. So it would be important to
hear if there are other approaches like that because
the Camp Lejeune modeling is eight, five, six, seven
years ago, maybe more now, and just to see if there
are additional methods that can be used that could
streamline the process.

So that’s the -- so that’s going on. Let’s
see, is there anything else? I think that’s it. So
I think that’s it. Any questions? Okay. Andrea.

MS. AMICO: Okay. So where are we at with the
timeline because I feel like last time we met with
you guys you were thinking maybe August of this year
we’d be ready to start actually drawing blood. And
are we still on track with that or because of the
shutdown are we going to expect a delay?

DR. BOVE: No, I don’t think that -- no. And
we may be sooner than that. I mean, we were being
sort of pessimistic by saying August.

MS. AMICO: Okay.

DR. BOVE: And again, we don’t know how slow
the process will be with OMB so that is the wild
card. But I think -- I don’t see why it would be
any later than August, and I’m hoping that it’s
sooner.

MS. AMICO: Okay.

DR. BOVE: So no, it hasn’t been affected.
DR. PAVUK: Yeah. We have found out that during the shutdown HHS activity that the project and the package was picked up by HHS during the shutdown in about like, there was like a list of about 50 different projects that they looked at during that period. So it was included on that list and that’s why we’re moving to this study they are (indiscernible) so we are not waiting. If it was not picked up we would have waited now another month but it has been picked up so it may be -- it may be published fairly soon, so we’re still on.

DR. BREYSSE: Do you remember HHS was not part of the government that was shut down, so it’s fortunate that it was in their hands when the government was shut down.

DR. BOVE: Right. We were affected.

MS. AMICO: That’s good news, that’s good to hear. Can you talk a little bit more about this expert panel that would be reviewing information, like who would be on it, how would you select it, what would they look at?

DR. BOVE: Yeah. Well Abt Associates are going to vet possible candidates. We’re going to provide them with a list of people we think based on what we went through with the Camp Lejeune. So for the Camp
Lejeune expert panels we had a few epidemiologists because that’s important, that’s what the study’s all about. We had hydrogeologists on it, of course. And so, and some experts on TCE and it would be good to have in this expert panel some of the same expertise but with expertise in PFAS instead of TCE this time and PCE. So it would be similar to that.

MS. AMICO: Okay.

DR. BOVE: We would ask -- we’re still discussing this, but we would ask both the DoD and the CAP to nominate someone. I think John Durant has shown a strong interest in being involved so he would be a possible candidate.

MS. AMICO: Okay.

DR. BOVE: And we would let you know what the, you know, the potential, I guess, I mean we would let you know who the potential candidates are.

MS. AMICO: Okay.

DR. BOVE: But I guess that’s basically what, we would try to identify both generalists in the hydrogeologic field because some of this stuff is similar across different chemicals. But then there’s some specific things about PFAS and groundwater that differ than say volatile organics in drinking water so we would want to have experts
MS. AMICO: So just to be clear, this panel is going to look at the water modeling, they’re not going to look at the health study and the protocol. This panel you’re talking about is just for the water.

DR. BOVE: Just for historical, yeah. I mean, basically the task is what can we -- how -- at what resolution can we estimate the PFAS concentrations in the drinking water at Pease. So at Camp Lejeune we were able to get down to the month level though there’s a lot of uncertainty, but we were able to do it at the month level. The C-8 studies did it at the annual level, the year level, which is, you know, that was the best they could do given the quality of the data they had. And we may end up at that level at the year level. I don’t know if we’ll get down to the month level or not but these are some of the questions an expert panel would try to grapple with. Given the information we have, given the source of the contamination and the difficulty of maybe characterizing that, how well can we estimate on an annual basis and then can we get even further resolution than that. So that -- those are the kinds of questions we would ask. So with the
idea that we’re trying to estimate, again,
concentrations in the drinking water over time.

DR. BREYSSE: And that would lead into the
health study though.

DR. BOVE: Oh, yeah. Yeah. This is -- yeah.
In the health study as was done in the C-8 study,
they used the measured PFAS serum levels in the
analyses, but they also used what they called
cumulative PFAS serum levels. So they, over time
they had estimated what the concentrations were in
the drinking water the people were drinking. They
used a model to estimate then what the serum levels
might be given that drinking water concentration,
right? And then they aggregated that in a kind of a
cumulative exposure thing and they also looked at
periods of time based on these estimates and able to
look at any difference that would occur if you used
just a measured PFAS serum level versus the
estimated for those diseases where, and like kidney
diseases where it’s not clear which way the arrow is
going, the causal arrow is going. And were able to
show that, in fact, there was some evidence of
reverse causation that the kidney problems that
people had increased their PFAS serum levels instead
of the other way around to some extent. So it’s
important to be able to estimate the PFAS serum levels, that’s why we’re doing all this.

MS. AMICO: Okay.

MS. SHAHEEN: Thanks for this update and it’s encouraging to hear we may still be on track in terms of the timeline you’ve articulated. Can you say a little bit more about the modeling because I know when we detected the elevated levels ‘cause that was the first time EPA mandated that we test for that. I also know we have identified some sources of potential contamination because we know where firefighting foam was used for the Air Force base. Can you talk about how that process for modeling is going to work? And then I have a separate question.

DR. BOVE: Well again, they have to collect enough information to be able to do the modeling in the first place. So they have to know something about the source of the contamination so where the AFFF was used, how much was used, whether there were important incidents where a lot was used like a firefight, an accident of sorts --

MS. SHAHEEN: So and I just want to interject here a little bit on the -- because of the nature of the Air Force base, are we going to have credible or
enough information to know where all the sources were and --

DR. BOVE: Well that’s a good question and that’s, I mean, they’ve been able to collect some information about AFFF use on base but they need to collect more and so we will have to see what information the Air Force has. For example, I would want to know how much they purchased over time, for one thing, how much and any usage data, how often they trained, questions, things like that you would want to know. And the more of that information you have, of course, the less uncertainty you’re going to have in the modeling, but that’s going to be one of the issues. Do we have enough information?

MS. SHAHEEN: So is there an argument to be made for inclusion of folks who have been here in the past who worked on base, who were part of the Air Force or part of the fire department or who were at the water department? I’m just trying to think about where the community perspective would be unique and may have access to information that if you looked at records you might not get the full picture.

DR. BOVE: Right. And so our experience with Camp Lejeune was that it was vital to have
information from the retired marines. And so, again, this was the CAP who were able to identify retire, and some of the people were on the CAP, actually. But the CAP also identified other people, including past water staff, the treatment plant staff at the base and also were able to identify, for example, wells that the Marine Corps thought weren’t used but the retired marines said that they knew that they were used and we found out that they were right and the Marine Corps was wrong on those things. So yes, it’s extremely important if you know people who were there at the time who participated in the training, AFFF training or use. Any firefighters that you know who worked at Pease, these are important people to get information. Local knowledge we used to -- we call it, that’s extremely important. So yes. So and that could be a role of the CAP for sure. And as I said, Camp Lejeune CAP was able to provide us with crucial information that we could not have done the work we did without them.

MS. SHAHEEN: So if I could just amplify that, and Jeff I see you in the back of the room, if we could include a call to invite community members who have perspective and history to share. I mean,
Russ, I’m looking at you, hopefully we can find some firefighters who’ve been around a long enough time to know and certainly, I think, between us with Rich and the team around here we can get at the folks who were at once Air Force. Because I think in order for that historical perspective to be most meaningful, we have to be able to include as much as we possibly can.

DR. BOVE: Yes.

MS. SHAHEEN: A separate question, just briefly. OMB, you seem to think everything is on track, that process is going to -- so how could we as a CAP make sure or help ensure that OMB moves forward as aggressively and effectively as possible, recognizing that none of us are magicians or...

DR. BREYSSE: So we’ve touched on that in the past and I’m not sure how to answer that question given my role here. What we can tell you is we will keep you appraised of the time it’s taking to move things through and if it starts looking like there’s a holdup that’s going to delay our time frame, we will let you know and I think that’s the best we can do.

MS. SHAHEEN: Okay. And but we should be sort of on point ready to advocate, if you will, when the
time comes.

      DR. BOVE: Oh, where are we? I’m not very good at this.

      MR. OSGOOD: I have a follow up.

      DR. BOVE: Oh, okay.

      MR. OSGOOD: Just on the people, like if we’re trying to find folks that for your historical perspective, what do you want? I can get you firefighters that were here that -- when do you want it, how do you want it, that’s --

      DR. BOVE: Well we’re in the process of collecting information now and sometimes this kind of information helps us decide what additional material to go ask for so, you know, as soon as possible, any information that those who work there, who are firefighters there or were trained there, to have information about any particular incidents or any information that might help us get a sense of how often the AFFF was used, where it was used. I think we have a good sense of that, but you know, any information like that is helpful.

      Yeah, well I mean, this is, again, this is what our contractor is collecting the information but if you send it to us we’ll get it to the contractor to do that.
MR. OSGOOD: Just need phone number, contact info so they can --


DR. BREYSSE: Andrea, are you done or do you have --

MS. AMICO: I have another question, but, go ahead.

MS. DAVIS: Hi. I was just wondering are you still planning on using the same water models that you mentioned before, Jason, Renee, and --

DR. BOVE: Yeah. Jason and Renee have been reviewing the draft plans that Abt has come up with so yes, Jason and Renee are very much involved.

MS. DAVIS: Okay. So are there also water models with Abt that are working on it?

DR. BOVE: Yeah. There -- Abt has also people who have experience using mod flow which is the standard method for doing groundwater fate and transport, so yeah. Yeah.

MS. DAVIS: Okay. So how can we get John Durant involved in whatever is going on right now or how soon can he become a part of the process?

DR. BOVE: I think we want to get to a point where we’re happy with the plan and then I think John can get involved then.
MS. DAVIS: Okay.

DR. BOVE: We just, in other words, we were back and forth on a few issues and I guess, you know --

MS. DAVIS: So will you reach out to --

DR. BOVE: -- we’ll keep --

MS. DAVIS: -- him directly?

DR. BOVE: Yeah, yeah, yeah.

MS. DAVIS: Will you also let the CAP know?

DR. BOVE: Yeah.

MS. DAVIS: Okay, thank you.

DR. BREYSSE: Go ahead.

MS. AMICO: Me? Okay. So sticking on the whole talking to people that have historical knowledge about the water, there are folks here from the Air National Guard right now, would they also be a helpful group for you to talk to?

DR. BOVE: Well anyone who would know something about the use of AFFF on the base.

MS. AMICO: Okay.

DR. BOVE: Okay. So historical use. I also think that one of the reasons -- we’ve mentioned this to Abt also -- is that the state environmental agency people also have a good idea of what happened there as well. When we came here over three years
ago, the first time we met with them and they seemed to know quite a bit about AFFF accidents and so on. So that’s another group, again, we’re going to talk to. But if you know people who were there who can provide information, that’s very helpful, it really is.

MS. AMICO: Okay, great. And then just one more question going back to the study. So if we’re still on track for like a summer starting, I know we’ve talked about this before but I just want to refresh my memory, what is allowed for you to do in terms of recruitment, like if there’s people interested now is there a way they can share their name with you in an email so you guys can contact them when things are ready to hit the ground? You know, Testing for Pease we’ve been starting to collect a list of people that reach out to us, but I just didn’t know what is the recruitment process going to look like and, you know, can people get in touch ahead of time or, you know, if you could talk a little bit about that.

DR. BOVE: Okay. Well we’re going to be working with the State because they have the names and addresses of the people who participated in the biomonitoring program so we’re going to send letters
to that, those people, so that’s the main
recruitment we’re going to be doing. That doesn’t
mean the people who didn’t participate can’t be
eligible, but we’re going to focus on our
recruitment first on that group and try to get as
many of those people as possible because we have two
measurements then of PFAS serum and that’s very
important. So that’s I mean I don’t think there’s
any problem with you collecting names as well, but
our main recruitment’s going to be focused on those
people.

MS. AMICO: Right, but so I guess what do we do
with all the names that we have, and do you guys
have a mechanism where people can reach out to you
ahead of time? I know there’s issues with IRB and
all that, but --

DR. BOVE: Right, no let us do --

MS. AMICO: How do we tell people to get in
touch with you if they’re interested in being in the
study? Like what if they don’t get the letter?
What if they’ve moved? You know, like I don’t think
it’s going to be that cookie-cutter, they’re going
to get the letter and they’re going to call you.
Like there’s going to be some people that don’t know
what to do, so how do we direct the community to you
and is it something that has to wait until you’re absolutely ready to like sign them up and draw blood, or is there any type of period beforehand that people can say hey I’m interested, here’s my name, here’s my address, call me when you’re ready.

DR. BOVE: Well, I think, I mean I don’t think there’s any problem with people doing that but I think we can’t reach out and collect any information ourselves until we get these approvals, so correct me if I’m wrong here. So I don’t think there’s any problem with outreach being done about the study. The only thing is it may be a little early to do that because we don’t know when we’re going to start. But certainly when we have a better sense of when we might start, any outreach and advertising and communication to -- is important for recruitment purposes. So that’s a role you definitely can play. We just have to be careful about how, you know, your involvement in the recruitment itself.

MS. AMICO: Right. So I guess the answer is right now there’s no way for communities to contact ATSDR directly about showing interest in the study.

DR. BOVE: I don’t know what we could do with that right now.

MS. AMICO: Right now, okay.
DR. BREYSSE: So to be clear. Individual people can’t contact us about participating. But if there’s a group that wants us to talk about what we’re doing, why we’re doing it, we’ll be happy to do kind of broader kind of outreach discussion-type sessions. We just can’t collect names or any kind of personal identifiers.

MS. AMICO: Okay.

DR. BOVE: We’ll think about this too.

DR. PAVUK: We’ll get back to you on that a little bit more.

DR. BOVE: We won’t know if they’re eligible or not. I mean you know --

DR. PAVUK: This is the issue, so preparing the list I mean presumably we -- these will be people contacted that actually worked you know, lived on the base, could have been you know exposed, but still you cannot necessarily review you know their eligibility for the study, so... Yes, it would be helpful if you would make the list instead of you know just using you know announcement and outreach you know in media. It’s always better to have a list and you can basically from your CAP perspective you know you already can tell some of those people. If you were not here or you didn’t work there, it’s
very unlikely that you will be considered for the study. But you will not be able to contact us at that point, or we cannot pre-review that list for you.

MS. AMICO: Sure. I guess I’m not asking that. I just, I have people reaching out to me saying, what’s going on with the study, I want to be part of it, when is it happening? And so if there was a way that people could kind of -- I don’t want to use the wrong -- register with you, contact you, so you can start getting their information --

DR. PAVUK: No, right, see they can do that with you --

MS. AMICO: Right, and that’s what we’re doing --

DR. PAVUK: They cannot do that with us.

MS. AMICO: And that’s what we’re doing. We have a list and I get that --

DR. PAVUK: So that would be helpful, right.

MS. AMICO: Okay. So there’s nothing yet on your end to receive information from people.

DR. PAVUK: No.

MS. AMICO: Okay, that’s what I’m trying to get to. Thank you.

MS. CARMICHAEL: Can you remind us again about
target enrollment numbers? I know you’ve reviewed
it, and I just can’t remember what they are.

DR. BOVE: I’ll see if I can remember.

DR. PAVUK: So it’s 1100, 1100 adults, plus
hundred reference for adults, and it’s 300 --

DR. BOVE: A thousand.

DR. PAVUK: Yeah, a thousand adults plus
hundred reference and 350 children --

DR. BOVE: 350 children and one fifty unexposed
children, right. Sorry, just...

DR. BREYSSE: Okay. If there’s no questions,
the agenda has now a ten-minute break. So if we can
start back at 7:10, I’d appreciate it. At that time
we’ll have questions from the audience, so if you
have questions maybe start formulating them in your
head. Thank you.

(Break, 7:00 till 7:10 p.m.)

QUESTIONS FROM THE AUDIENCE

DR. BREYSSE: So as we do at all our meetings,
we offer the community members who attend a chance
to question or comment or make a statement. And so
there’s a microphone set up at the end of the table.
If anybody would like to say something, now’s the
time. Please give us your name and have your say.

UNIDENTIFIED: (inaudible) My husband was a
fireman from ’61 to ’63 at Pease Air Force Base. He was also crash rescue and his job was to walk into all the chemicals that were set on fire, put on an asbestos suit before he walked in, of course, and then put out the fires every three weeks as training. He did this for three years. He is dead now, he died of bile duct cancer. He hated the job, it was a dangerous job. Everybody knew the well was polluted. A restoration project came out for Pease Air Force Base and the well, the Haven well was the number one polluted area. And you don’t have to take my word for it, it’s in writing, it’s on line, it’s everywhere. So there’s a lot of history, a lot of facts that you can get from this report, numbers, studies. It was supposed to be cleaned up before the transfer from the Air Force to Portsmouth and now a lot of people signed off on that. I think everybody should pull that up, read it, read the description. My husband hated it. He said it was very dangerous. When we went by there all the burned grass, all the pollution, all the dead trees, he would shake his fist and swear every time we went by there because he did that for three years. He never knew it would kill him, but it did. And I just want everyone here to know that the Haven well
has been polluted for a long time and the whole town of Newington, New Hampshire has been polluted. And there’s a lot of people that need to answer for it. There were people that signed off on the Superfund that never should’ve signed off on it. There’s just a lot there. I know it all because I read it and reread it and, you know, we were married for a long time and I’ve been going on for 20 years after his death. And the only thing we did different was I didn’t walk into those fires, I wasn’t a fireman. And I believe that it’s an extremely dangerous job and I think that somebody really needs to pull up all this information, there’s plenty of it. I mean, you don’t even have to do studies. It goes way, way back, 1984 is the earliest one I have, but there were Portsmouth officials as well as Air Force officials that signed off on that. And that was supposed to be cleaned up. These people have been drinking the water, they’ve been living in Newington. The daycare center, all these places were affected by that one well. And my husband walked into that with every chemical you can think of and they would set it on fire. And you would walk in there in an asbestos suit. Wonderful, right? And put out the fire. And I believe that
everybody should know about it, everybody should
read about it. I’m not trying to blame people or
ask for money or anything like that, I’m just trying
to see that everybody knows the real truth, the real
shape. You don’t have to do studies and I know you
do, I guess, to prove it, but what I’m saying is
true and is on line. I gave the information at
another meeting I was at and I gave the cover sheets
so that people could pull it up and I talked to Air
Force personnel there who were very helpful because
I had had a hard time finding it. I got it
accidently. I was looking for firemen that had died
that my husband had worked with and that’s all I
typed in was firemen from 1961 and that popped up.
And it was a gift, believe me, it was a gift. I
learned a lot from it. But please, really dig in.
I know these studies are all important now to people
that have been exposed to it, but you need to look
at the history and realize that that well was never
good, ever. If you, I don’t know what you know
about chemistry, I don’t know much but I knew
someone who was really good at it and he told me
that it never goes away. Once that’s in the soil,
one that’s in the ground, that stays in the water.
There’s no such thing as a cleanup. It should’ve
been closed then and maybe a new well dug. I don’t know what the solution would’ve been, but I know that that was a tragedy and it took my husband’s life. That training was ridiculous. The things they put there, anything burnable and just threw a match in. And he would go in there blindly with flames all around right next to the drinking water, right next to the Haven well.

I went on the Pease tour and I want to say my father was Air Force, I love the Air Force, but I went on the Pease tour and they took us to the spot where they said the well was and where the fire rescue trained and that was not the spot. And I said, we need to go out to Newington Road so these people can see, you know, the destruction from the well, the trees, the grass, everything. And they said, that’s our last stop. And of course, we didn’t have time for the last stop, that’s what they said when the tour ended, we don’t have time for the last stop. So my anger was just boiling over. My husband drove by there and we would drive by the dead trees, the gas pooling in the yard of somebody’s house, and over here they had the grass was all black, nothing ever grew there. We went there like 30 years later, the grass is still black.
Now it’s covered with plastic. I went out to take pictures and trucks were out there and they told me I could not take pictures and they were cutting down dead trees. So to me that was a cover up. And I don’t want that, I want honesty. This happened. It’s a tragedy and it happened and I just have to tell you what I know and what I’m saying is the real truth. And I’m doing it because I love my husband and he’s gone and I feel that people deserve to know what happened.

DR. BREYSSE: Thank you. Thank you for your testimony and thank you for your family’s service.

UNIDENTIFIED: Thank you.

DR BREYSSE: And I’m sorry for your loss, ma’am.

MS. BROCK: Hi. My name is Doris Brock. I’m the wife of a deceased Air National Guard member. I’m taking this as a good omen, today is his birthday, for me to attend this meeting. I want to ask you, my question probably will have something to do with the multi-site study topic that you’ll be discussing after these questions. Would you open it up to questions from the audience after we listen to the multi-site study update?

DR. BREYSSE: I’d be happy to.
MS. BROCK: Thank you very much.

DR. BREYSSE: Okay. So why don’t we move then to the multi-site study presentation.

**MULTI-SITE STUDY UPDATE**

DR. PAVUK: Thank you, Dr. Breysse. Good evening, everyone. Just to remind everybody on the scope and goals of the multi-site study from the last meeting in September, multi-site study is designed as a cross-sectional study that follows in proof of concept and closely resembles and follows Pease health study and is targeted to enroll up to 6,000 adults and 2,000 children in investigation of health outcomes, measurements of PFAS compounds and evaluation of clinical and research tests and biomarkers in their serum and potentially, urine.

We have been -- this year has been developing the protocol for the study and last year in September we reported that we were getting close to completing the protocol and submitted for external peer review. That has happened and in October the protocol was sent to additional three external peer reviewers as required by law. We also, part of the review was also submitted to National Institute of Environmental Health Sciences and they also provided their comments by the mid -- in November. The
protocol was revised, responses to reviewers that was done, completed by beginning of December and the protocol has been submitted after the shutdown to the agency clearance. We have also received additional comments from our sister agency, National Center Environmental Health and from Office of Director and made additional adjustments to the protocol. So that’s part of the external peer review that is required in our process. In parallel with that process we have been developing the funding mechanism for the study that we called NOFO, that is New Funding Opportunity acronym for this project. We are -- the mechanism will be slightly different than for the Pease health study. Instead of contract mechanism, those will be cooperative agreements. We are proposing, at this point, up to six awards in the range of 1.5 to 3 million including six different sites.

The funding mechanisms for this goes through the Center for Disease Control and Prevention office which is called extramural research program office. They administer in this program and mechanism and development of all those documents go through that office. So in parallel with developing and reviewing our protocol through the October,
November, December window, we have also been developing documents for ERPO, for External Research Program Office.

The document -- the federal government is required also to announce any or forecast any planned and projected funding activities like that and by the end of September -- by early January this forecast notice was announced on CDC grants for outside stakeholders that are able to access the CDC funding opportunities. As I said, this is just notice of forecast. It was not yet noticed and there’s number of required reviews by the CDC, by the Office of General Counsel and HHS and other entities before the actual announcement can be made.

On timeline, on projections of that, we’re still, are foreseeing that awards would be made in the window of September by the end of the fiscal government year this year. I think that we’ll be providing additional details on this process on our upcoming calls as this -- the materials and documents are with ERPO and we need to go through this internal CDC process. So we’ll provide you more details as this progresses. But I just wanted to give you a overall kind of timeline of projected announcement at this point sometimes March, April,
an award sometimes in September, that is our goal.

As we have mentioned before, we have to do all this processes in kind of parallel. So the CDC allows us to project and make these announcements even though our protocol has not yet been IRB approved and we do not have OMB approval. So in this window, it’s February now, in September they will be working on obtaining CDC IRB approval and submitting the 60-day and 30-day package the same as we did for Pease.

We are, at this point, our OMB 60-day package not complete, but the protocol, all the attachments and some other materials have been submitted to Office of Science, to agency Office of Science. This has been delayed or affected by shutdown as we would have submitted it early January instead of early February. Also, the Office of Science was really prioritizing 30-day package for Pease so that we can move on on Pease and so that documents are with OMB and with HHS and OMB. So they would not be reviewing our most site study at this point.

I just want to re-emphasize one more time that while we completed some of the steps, we need to complete the steps for multi-site study the same as for Pease. So again, do the 60-day package for OMB
first, then focus on obtaining CDC IRB and other reviews such as safety and security.

I have mentioned the Notice of Funding Opportunity that we published timelines. I think that was all that I wanted to say at this point and if you have any questions, please.

DR. BREYSSE: Andrea.

MS. AMICO: Yeah. Any updates on which sites you’re going to pick? That’s like the big question from everybody, right?

DR. PAVUK: Right, right, right. So when I was mentioning that this will be cooperative agreements and this is a Notice of Funding Opportunity, so that Notice of Funding Opportunity basically includes the criteria for who can apply for these awards. So we are not, on our side, actively picking the sites. People that are eligible which are research entities of basically there’s quite wide leverage like who can apply, can apply for this funding. So there is two-tier process of primary and secondary review done by CDC, ERPO, External Research Program Office, that will review the proposals, rank them, do the basically do the review. So those people are not ATSDR, right, or CDC. There will be a special review panel that will review and rank the
proposals, provide those to the many different offices through the CDC and ERPO, and eventually back to our center and leadership. And then in the secondary review many different factors of that process will be put under consideration and a selection of the final awards will be made. It’s quite a complicated process.

MS. AMICO: Okay. So just to be clear, when can sites start applying?

DR. PAVUK: Right. So unless you want to, I can --

DR. BREYSSE: Go ahead.

DR. PAVUK: So this will be on CDC grants. So when this notice will be published, the dates like when it will be open and when the applications have to be received, that will be all in there. So in the forecast, for example, those days were like March 19, April 20th, and you know, there’s a window of about 60 days that different research entities, the universities or private organizations can apply.

MS. AMICO: Okay.

DR. BREYSSE: Okay. So we backed up from the end of the fiscal year. We have to have the money in and out the door by the end of the fiscal year. So that gives us a pretty tight time window to write
a notice, get it approved, announce it, give people
time to apply and then give us time to review, make
the awards, transfer the money. So all that gets
done by the end of September. And recognizing that
by the end of September really means end of August
because the federal government likes to take a month
to close down its books and so they really try to
get us to get all our spending in a row by the end
of August. And so that’s what we’re working quite
aggressively to meet.

MS. AMICO: So actually that’s one of my
questions is what happens if, because that does seem
quite aggressive based on how long things have taken
with this process. So what happens if the time
comes and goes and we’re not where we need to be, do
we risk losing that funding?

DR. BREYSSE: It won’t happen.

MS. AMICO: That’s -- okay. And --

DR. BREYSSE: They said that about Apollo 13
quote is what I’m thinking of.

MS. AMICO: Okay. I’ll think positively. But
just going back to --

DR. PAVUK: You know government can spend
money, you know. It’s very good in spending money.

MS. AMICO: Right. But I also know, with all
due respect, this is taking -- this takes a long
time and there’s a lot of processes and layers of
bureaucracy and I just don’t want to risk this part
being jeopardized in any way.

DR. PAVUK: And I think maybe an important part
here is that those would be multi-year awards so the
Congress requires that the study is completed within
five years so each of the awardees will get, you
know, four or five years, you know, funding
depending on the funding, further availability of
funding. We’re going to obligate some of that, you
know, in year one and then year two and so. So we
need to obligate the funding that we have now that
we do expect to have additional funding. And as I
say, it’s a multi-year process. So it’s not like if
something goes a little bit off this year, there
will still be additional years to get this right.

MS. AMICO: Uh-huh. Okay. Can I just ask as
an action item to be sure that ATSDR updates us when
all of this is ready, you know, all this information
is on line because --

DR. PAVUK: Yeah, when it comes out, yes.

MS. AMICO: Yeah. We talk to communities all
over the country that want to be part of the study -
DR. PAVUK: Right.

MS. AMICO: -- and so I want to know as soon as this is live so we can put that out because there’s people that aggressively want to be part of this process --

DR. PAVUK: Right.

MS. AMICO: -- so we want them to know as soon as possible when it’s time. So that would be really helpful if we could get an update and then we can disperse that through our coalition of people, please and thank you.

DR. BREYSSE: So you should already send them the forecasting notice ‘cause that’s the first kind of announcement that it happened so that’s how the first formal process. So we can get the forecast notice to the CAP?

DR. CARIGNAN: I have a question. Do you hear me?

DR. BREYSSE: Yes, Courtney.

DR. CARIGNAN: And my question is, I’m wondering what your plan is for how you’re going to handle the data, I guess, the data pooling and the data analysis. I know that it sounded -- it sounds like the sample analysis is all going to be done centrally so it’s all being done at the same lab and
that’s not part of the budgeting for people making
the proposals. I’m just wondering also about the
data analysis that, you know, there’s a lot of
outcomes that you’re planning to look at and I’m
just wondering if that’s -- you’re planning to pool
the data, have a data management center at ATSDR and
then is that -- all the data analysis going to be
done at ATSDR by ATSDR epidemiologists or are you
planning to have some of that or maybe all of it
done through the (inaudible)?

DR. BREYSSE: So we envision that the
individual site awardees will have access to the
data from their site and are free to do analyses
based on those data and publish papers based on the
site-specific work. We do intend to pool all the
data and we will be the data management function for
that. But like any multi-site study, we will have a
publication committee and people can propose
publications. There will be, you know, many dozens
of papers that could be written from this. And so
we’ll handle that like many big multi-site, multi-
investigator studies handle that going forward. And
I will also say we’re trying to put some money aside
for investigator initiative in special projects if
there’s something that one team wants to add that’s
not part of our normal protocol based on some new science that might emerge or some unique capabilities they have, we hope to be able to entertain proposals to add novel components to the study as it goes forward as well. So I hope that answers your question.

DR. CARIGNAN: It does. Thank you.

DR. PAVUK: And just to add a little bit of detail on you have mentioned on data analysis and clinical tests and biomarkers. So the -- to really improve or to guarantee, really, the data and analysis validity, we’ll have central lab -- division of laboratory sciences of NCEH/CDC that will do all analysis of PFAS for all sites for all awardees so that will not be a part of the award, ATSDR will pay for that. And we’ll also be doing negotiations to do the similar thing for the clinical tests and research biomarkers so that we do not necessarily have issues of different labs doing different analysis for different awardees. So that will be also part of that work.

MS. DAVIS: Can you explain where you came up with the numbers for the 6,000 adults and 2,000 children and how you feel that’s going to be dispersed across the awards? I mean, one awardee
could want, you know, potentially want to do the
majority of those numbers, so how do you figure
that’s going to work?

DR. PAVUK: So the overall numbers have been
based on basically review of mostly epi data and
health outcomes that were either reported or
suggested strongly either in epidemiological human
studies or in other studies. So that was the basis
for our estimations on that so that we were able to
cover, you know, most of the more prevalent outcomes
for adults and children.

DR. BOVE: If you look at the feasibility
assessment, we did sample size calculations there
and the 6,000 and 2,000 are based a lot on that
work.

DR. PAVUK: So --

DR. BOVE: So it looked at a number of end
points that would be -- provide enough statistical
power, let’s say.

DR. PAVUK: Right.

DR. BOVE: Other end points that still would
require a lot more and so, you know, but the 6,000
and 2,000 figures hit most of the end points we were
interested in, so that’s where some of that came
from.
DR. PAVUK: In regard to other part of your question, we want to be flexible for the awardees to propose how much they want to be done necessarily, you know, divide it up and made the requirements for the awardees. There are different sites all around the country, there may be smaller sites that include private wells. We didn’t want to limit the number of samples or participants that the people would propose to study. So it is kind of open and as you are saying, there may be sites that they are proposing to do many more, you know, enroll many more people than the others. Hence, the role of the separate independent review panel of scoring and reviewing the applications. So it may be, you know, kind of a combination of larger and smaller sites. It may -- we are not requiring that everybody collects 1000 people. That’s something, you know, we after much discussion we decided to go with the -- to follow, you know, corporative agreement route instead of contract where we would require those things up front. The, you know, the country has many different sites. There’s many different conditions and we didn’t want to really, you know, exclude people up front that would not, you know, conform to those kind of pre-requirements.
DR. BOVE: And these figures, by the way, 6,000 and 2,000 are minimum, not maximum.

DR. PAVUK: Right. So really it’s limited by the amount of award the money, you know. If you receive two million dollars and you’re capable of enrolling 2,000 people because you have a large, you know, water system that has a complete list and it’s easy for you to enroll people, you can enroll people, you know. We’re not giving you the cap on like how many people you will be able to enroll if for the amounts that you get. So those were our guidelines for the minimum. Right.

DR. BOVE: Yeah. And again, we wanted to have a range of exposure. So if one applicant has a number of private wells that have high levels of PFAS in them, that may be an important applicant to choose because we want to make sure we have exposures at the high end that may not have a lot of people on those private wells, there may not be maybe a hundred or two hundred or three hundred maybe, but we would consider, in other words, we would consider situations like that because our goal really is a range of exposures. Okay? So if an applicant has, I mean, they’d have to have some numbers, I mean, if they have only like 50 people
maybe, you know, that wouldn’t be -- we don’t have a minimum cut off that they, you know. But I can foresee situations where there are, you know, a sizeable population with private wells with high levels of PFAS in their private wells that that would be an important applicant to consider.

MS. DAVIS: And are you still considering keeping it open for industrial as well as military?

DR. PAVUK: Yes.

DR. BOVE: Yeah, yeah, yeah.

DR. PAVUK: It’s not limited just to -- it’s not limited only to ex-military.

DR. BOVE: I was thinking about something else. Yeah. No, it’s not.

UNIDENTIFIED: I just wanted to check my notes, earlier I had written up to 6,000 adults and 2,000 children, it sounds like a maximum as opposed to minimum.

DR. BOVE: No. No.

UNIDENTIFIED: (inaudible)

DR. BOVE: No. We want to get at least 6,000 adults and 2,000 children.

UNIDENTIFIED: There’s not a limit?

DR. BOVE: No.

MS. CARMICHAEL: Is there a finite window
during which applicants can apply? So for example, following an announcement in March or April do they have 60 or 90 days?

DR. PAVUK: Yes. There’ll be -- that will be part of the notice, there’ll be deadline.

MS. CARMICHAEL: Has that been decided what that window is? I’m just curious just in looking at when the fiscal year ends --

DR. BOVE: It’s 60 days.

MS. CARMICHAEL: -- for you all.

DR. BREYSSE: Oh, you mean how much time is it or --

MS. CARMICHAEL: Yeah.

DR. BREYSSE: -- or when does the window start and stop?

MS. CARMICHAEL: Both, I think.

DR. BREYSSE: Yeah, so the start and stop dates we don’t have yet because it depends on the approval, and one of the things that we could do is we could adjust the length of time we give people to write proposals, depending on where we are in this very, very tight life we’re trying to lead here, but our goal is 60 days.

MS. CARMICHAEL: Okay. Thank you.

MR. HARBESON: I was hoping you could talk a
little bit more about the review panel, both who
makes up the review panel to rank the different
sites and then also related to the earlier question,
I would imagine that even after you rank that, if
you’re looking for multiple outcomes in a large
number of people, I would imagine that even within
that ranking you’re probably looking at -- that
review panel is going to look at the group
holistically to determine which sites will best
provide the greatest amount of data.

DR. PAVUK: Yes. We agree. I mean, I don’t
know if there’s a -- I don’t think there’s
prescribed number of exact number of people on the
panel, but --

DR. BREYSSE: This group, ERPO manages this for
us so we give them names, we suggest names, they’re
free to get their own names. They manage the peer
review themselves and, you know, we give them the
criteria that we’re looking for and the expectations
we have but they judge the value and the science of
those projects and we’re not part of that review,
purposefully.

MS. AMICO: Hi. I hope my question is easy.
The 6,000 and 2,000 numbers, will that include Pease
or is Pease separate because we’re going to do a
thousand adults so does that mean there’s 5,000 more
or is that separate?

DR. BREYSSE: I think it’s separate.
MS. AMICO: I thought it was an easy question.
DR. BREYSSE: I think -- We haven’t asked.
DR. BOVE: I mean, at the end of the day we’d
like at least 6,000 adults and 2,000 children. If
some of them are from Pease to make it that high, if
we’re having trouble finding -- getting numbers, I
guess that Pease would be considered part of that.
But no, our feeling is that it would be in addition
to Pease.
MS. AMICO: Okay.
DR. BOVE: We’d like to have at least 7,000
adults.
DR. BREYSSE: Do you have a question, ma’am,
you want to ask now?
UNIDENTIFIED: I have no questions.
DR. BREYSSE: You sure?
UNIDENTIFIED: Positive.
DR. BREYSSE: Okay. Any other questions? All
right, so now we’re going to move on to the exposure
assessment update and Dr. Chris Reh will give us an
update on that.

EXPOSURE ASSESSMENT UPDATE
DR. REH: So you may remember through the National Defense Authorization Act that ATSDR was mandated to conduct no less than eight exposure assessments in -- at sites or communities with known PFAS contamination of the drinking water that are associated with military bases. And we continue to push forward on this work. We anticipate announcing which sites will be part of this study within the next few weeks. We are in the final stages of getting the approvals that we need to make the announcements and for the rollout plans. These exposure assessments, as we’ve talked to you before, are going to involve taking blood and urine from people in these communities where their drinking water is contaminated from either former or current military bases and there’s not a health effects component to this, it is just an exposure assessment. These studies certainly support the Pease Proof of Concept study that we talked about earlier in the multi-site where the protocol we’re using for these studies are similar to the protocol that will be used to assess exposure in those two efforts.

DR. BREYSSE: If I could just add one more supplement to that is that we hope from these data
from the study to look at the relationship between what’s in the water and what’s in the blood. And that will help inform the modeling that we talked about before in the Pease Proof of Concept and the multi-site study. So understanding that relationship allows us to estimate what’s in the water and predict what would’ve been in the blood based on those estimates, once we know those kinetics, we call that in toxicology terms.

MS. SHAHEEN: Thank you for being here. Can I ask, when you talk about assessing exposure for bases that are currently open or were once in existence, how are you handling or how might you reach the folks who could have been exposed in a situation like we have here where the base has been closed and yet we know from the data that people were likely exposed years and years ago. How are you going to find them and is there a plan for that?

DR. REH: So in this study, we’re looking at just current members of the communities and we do have some criteria around how we select people and how we select sites that we’ll be using for this.

MS. SHAHEEN: So does that mean you’re less likely to select sites that are no longer operating a military base?
DR. REH: Not necessarily.

MS. SHAHEEN: And -- but I would assume if you’re talking only about the current members of the community where that base may once have been operable, that constrains your ability to reach, I mean, how many Air Force base families who lived here in the ’70s and ’80s are you going to be able to find in Portsmouth today?

DR. REH: The sites that are being selected are sites where we have known PFAS contamination in the drinking water and so the people are not just necessarily people who are military families, they’re people that are in those communities that are associated with those bases.

DR. BREYSSE: Stefany, there’s an important point in that our goal here is to collect a representative sample in the community so that will inform everybody whether they moved or not. And so the data will be useful for everybody and we’re not trying to -- we couldn’t possibly try and get everybody, but we think if we have a statistical basis for doing a representative sample we’ll get a distribution to exposures for the community that will inform everybody.

MS. SHAHEEN: Thank you.
MS. AMICO: Okay. Can you tell us how the exposed -- will you be using -- okay, I guess, let me start with when do you anticipate you’re going to get the data back from the exposure assessments?

DR. REH: It will probably be a year or two.

MS. AMICO: Okay. So we can’t -- and so it’s not likely that anything you get from the exposure assessment will help you inform -- make informed decisions on who will be in the multi-site study?

DR. REH: Unfortunately, no.

DR. BREYSSE: Unfortunately, no.

MS. AMICO: Okay. So those will be going on at the same time?

DR. REH: That’s right.

MS. AMICO: So but it is likely that perhaps where you’re doing exposure assessments could also be the same places that you choose for the multi-site study?

DR. BREYSSE: Yes.

DR. REH: Possibly, yes.

MS. AMICO: Okay. I’m just curious like how all this information is going to come together and I don’t know if you can speak on that a little bit and so when do you expect -- so you said a year or two for the exposure assessment, the multi-site study,
when do you expect data to come back from those --
that?

DR. REH: From the multi-site?

MS. AMICO: Uh-huh.

DR. BREYSSE: Marian had said before.

DR. PAVUK: Right. So in conjunction to
exposure assessment at the sites, once they announce
the sites, you know, the process is really designed
to, you know, to obtain the exposure data probably
within a year. On the multi-site awards I think, as
I mentioned earlier, because of the variety of the
conditions that may be different sites, we would be
probably requiring them to complete the enrollment
within two years instead of one year. I mean, that
would be in a sense up to two years. I mean, a lot
of different sites depending like who will end up
being awardee can complete, they can complete
enrollment as fast as they want to but I think
though we’ll be requiring that it will not take
longer than two years.

MS. AMICO: But in terms of getting results
back from the multi-site study, like you’re talking
about enrollment but then do you have a cut-off
period of time as to when you require this data to
be reported back to you and then --
DR. PAVUK: Right. That would be -- that would include enrollment and reporting. Completing means that the data sent with all the information would be available --

DR. BREYSSE: Four to five years.

DR. PAVUK: Right. For --

MS. AMICO: Four to five years for us to get a report back from you on what the multi-site studies show.

DR. PAVUK: Correct.

DR. BREYSSE: Yeah.

DR. PAVUK: Yeah.

MS. AMICO: But the exposure assessments, you would expect to report, which I understand is less comprehensive --

DR. BREYSSE: Right.

MS. AMICO: -- than the multi-site but you would be getting that information back in about a year?

DR. BREYSSE: Well what we’re planning right now is to visit sites in the order and so we can’t do all eight sites at once so obviously the first sites that we visit we’ll have data earlier than the last sites we visit. So our goal is to try and come up with a national profile of PFAS biological levels
of communities with drinking water contamination and that will -- that final report will have a distillation across all eight sites and in fact there’s two other sites that we’ve already started and it will include their data as well. But you know, some of the first sites we have we’ll have some data out earlier. So you know, you won’t have to wait till we’re done with all eight to start looking at what we’re finding.

MS. AMICO: And the two sites that you’re already -- I’m aware that other communities have recently released blood testing data, so is that part of the work that you’re doing with the exposure assessments?

DR. BREYSSE: So we have previously funded two communities to use our exposure assessment methods to assess PFAS and this representative sample way, one’s in New York and one’s in Pennsylvania. And the data from those two efforts will be included in this national picture that we’re trying to pull together.

MS. AMICO: Right. And how about Colorado, does that have anything to do with you?

DR. BREYSSE: No. That was funding from NIEHS to Colorado.
MS. AMICO: Okay. I think those are all my questions for right now. Thank you.

DR. PAVUK: So just to add on that a little bit, just keep in mind so altogether this is about 3,000 samples, give or take.

MS. AMICO: Okay. I thought of my other question. So will -- is it -- is the exposure assessment also working on the same tight time frame as the multi-site study, same thing you need to get this out and awarded by September?

DR. REH: The -- so the contracts have already been awarded for this.

MS. AMICO: Oh they have? Okay.

DR. REH: Yes, they have. And so and the contractor for the exposure assessment so it’s a consulting firm like Abt, ERG, that we work with and they will be conducting the exposure assessment. So once we’re able to announce sites, which again, is going to be in a matter of just a few weeks, they will be able to start doing their recruitment in those communities and collecting the serum and urine.

MS. AMICO: Okay. So that’s helpful to know. So there’s no risk of losing the funding or anything for this, this is much further along.
DR. REH: That’s correct.
MS. AMICO: And you already know the sites, you just can’t tell us yet.
DR. REH: That’s correct.
MS. AMICO: Okay, thank you.
MS. DAVIS: So you partly answered one of my questions. First, how are you going to be making the announcement?
DR. REH: We have quite a roll-out plan. They’re all -- it will be announced on line, there will be some media content that will go out so there is a whole roll-out plan that we can probably share with you at some point this week.
DR. BREYSSE: We -- our roll-out plan is still under agency and HHS review.
DR. REH: Right. Yeah.
DR. BREYSSE: So it’s obviously getting a lot of scrutiny. There’s a lot of people who are going to need to be alerted in advance and there’s a lot of political interest from all levels of government and there’s a lot of communities who are -- who may not be part of the exposure assessment that also need some discussions. And so that roll-out plan is what we’re -- the last thing we’re waiting for, that final vetting of that approval, who’s going to be
notified, when they’re going to be notified, how
they’re going to be notified. And then once that
gets approved then we’ll -- then we’re ready to
start with the announcement.

MS. DAVIS: Okay. So part -- the part of the
question that you already partially answered was the
next steps after the announcement is made, so you
already have contractors for each of the eight sites
and they’re ready on the ground to get started and
recruit and they have their own procedures that they
have set forth for that recruitment?

DR. REH: So it is the same contractor that
will do the exposure assessment collection at each
site and we will be setting these up in a sequential
fashion --

MS. DAVIS: Oh, okay.

DR. REH: -- so there will be --

MS. DAVIS: One contractor.

DR. REH: Right. And so they will start with
one site and then after a period of time then we’ll
start another until we finish through all eight.
The recruitment part of it and the community
engagement is being -- we have a contract for that
also through Abt and they will be conducting the
community engagement with our support.
MS. DAVIS: Okay. Because we had talked about community assistance panels possibly for exposure assessments and the multi-site study so that’s really not needed for exposure assessment?

DR. REH: I would say that’s correct.

MS. DAVIS: And then what, I think, Marian answered this already, so you’re looking for 3,000 samples total across the eight sites?

DR. PAVUK: Yeah. It’s about 450 per site.

MS. DAVIS: Okay. That’s all my questions.

MS. SHAHEEN: So can you help us understand what we will be missing by having gone first and collected samples that weren’t collected in the context of the framework for the exposure assessment? We’re going to have this multi-site study that Portsmouth is going to get to be a part of; at the same time there are going to be these exposure assessments. What would you learn in these other communities that we might not learn here about Portsmouth through the multi-site study? Is there anything you can differentiate for us relative to what you might learn from a different community that’s not part of a multi-site study that we may not learn about Portsmouth because we’re not part of the exposure assessment?
DR. REH: So all of these studies build on themselves and so the protocol that we used in the PEATT studies which were the New York and the Pennsylvania studies was the pilot test for the exposure assessment protocol that we’re using in this study, the exposure assessment. And then that exposure assessment will be the central part of the Pease proof of concept and then further on the multi-site. So these studies all build on each other.

DR. BREYSSE: Also remember, there’s been extensive biomonitoring already here. Many communities we’re going to be going to have had none.

DR. REH: None.

MS. SHAHEEN: No, I understand. I just was wondering, the building on that study to the multi-site explains it.

DR. REH: Okay.

MS. SHAHEEN: Thank you.

DR. DURANT: Can you comment at all about the protocol that you’re going to use to estimate exposure to the chemicals in the drinking water? So I understand what you’re trying to do with the blood and urine protocols, you’re trying to standardize
that across all of these different studies which, of course is laudable. What are you going to do about water, how are you going to do the same kind of rigorous protocol development to make sure you quantified exposure to chemicals in the water?

DR. PAVUK: Well even meanwhile -- they’re discussing basically each awardee is required to provide some measure of historical reconstruction at the site so there’ll be -- their proposal needs to include some information how they want to -- how they want to propose -- how they propose to historically reconstruct at each particular site.

DR. BOVE: All right, let’s get a couple of things straight. There’s the exposure assessments, right? And there we’re still discussing exactly what we’re going to do in terms of if we’re going to do modeling at all there or we’re going to do it at a few sites or what. Okay. The multi-site study which, and back to your question, Stefany, I mean, they sort of build on each other but they don’t actually go that closely. I mean, the multi-site study is important to do because doing the study just at Pease is not -- does not give you the statistical power to look at a lot of the end points we really want to look at. So that’s why -- and
that’s -- we’ve been talking about that for years now, that Pease was important to do a study here but it was important to do it at other sites so we could combine that data and have more statistical power. So that’s what multi -- and given -- and we’re doing the same thing or trying to do the same thing at Pease that we’re going to do in the multi-site study which is historical reconstruction and we’re going to have an expert panel that will both inform what we do at Pease but will also provide recommendations or suggestions or whatever language I can use here for the applicants to also use those methods to model it at their site. Okay. So the multi-site study will include historical reconstruction of drinking water contamination. But hopefully we’ll be able to use some of the same methods across all the studies, although it really depends on the site characteristics and so on, which models may work better than others. And whether they have to do distribution system modeling as well. We don’t have to do that at Pease but you might have to do that in other sites. So that’s -- so that’s where that is.

As for the exposure assessments, we’ve been mulling this over because it is a lot of work to do this modeling. And so, you know, our thoughts at
this point, but we’re still discussing this, is maybe to pick a site where the -- it would be a simple approach to model it. Maybe it’ll be a surface water system or something of that sort, something that wouldn’t require a lot of work to at least estimate what the water concentrations were over time and then compare that to the serum levels. Okay? And so both through modeling and also the PBPK modeling necessary to go from the drinking water to the serum estimate. Okay.

So and then maybe pick a more complex one so that may be what we’ll do. But we’re into the initial discussions as to adding that component to the exposure assessment. And the value is to calibrate these PBPK models that we want to use and also to calibrate, to some extent, the water modeling too. So that would be why we would try to do that at some of these sites, the exposure assessment sites.

MS. SHAHEEN: Can I just ask you a follow up on the end points clarification? So I guess the key question for me is, will the exposure assessments be looking at different end points or outcomes than you would consider in the multi-site?

DR. BOVE: The exposure assessment is not
looking at outcomes.

MS. SHAHEEN: Oh.

DR. REH: No health outcome.

MS. SHAHEEN: No health outcome, so no end point?

DR. BOVE: PFAS serum levels.

MS. SHAHEEN: Got it.

DR. BOVE: So did I answer... Probably not.

UNIDENTIFIED: Yeah, I guess, I mean, maybe it’s so obvious that it doesn’t need to be stated but I’ll state it anyway, you know, you’re doing all this work to characterize what people are being exposed to in terms of PFAS. It would seem to me that if you really want to nationalize the profile that you’d want to expend some degree of thought and investment resources to really do a bang up job on the water characterization. Maybe you can’t do it at all the sites but if you get the same protocol at whatever sites you’re going to look at, then the results will be that much more robust and nationally applicable.

DR. BREYSSE: So we agree. So we’re looking at picking a couple of sites, at least, to do that at and then, you know, depending on availability of resources we may expand it or not.
MS. AMICO: So you guys had mentioned at the multi-site study that all the PFAS samples would be analyzed at the same lab. Is that going to be the case with the exposure assessments; are you requiring them to be all analyzed, and the urine as well?

DR. REH: That’s correct.

MS. AMICO: And can you remind me, because we didn’t have -- oh --

DR. PAVUK: Urine will be subset. It will not be all, not from all participants.

MS. AMICO: I’m sorry, what?

DR. PAVUK: Everybody will have the serum analyzed from exposure assessment, but only a subset of participants, I think 10 percent, will have the urine analyzed at first because the levels are so low in urine at this point, the methods that they’re using they’re getting a lot of below limit of detection so they’re going to test it first instead of spending all the money on analyzing all the urines.

MS. AMICO: Okay.

DR. PAVUK: So they’ll be a subset.

MS. AMICO: Will all the urine be analyzed in one place, too, though?
DR. PAVUK: Correct.

MS. AMICO: Even though it’s not everybody?

DR. PAVUK: Correct. Same lab.

MS. AMICO: And can you just remind us again, ‘cause we didn’t have urine testing here, what is it the short chain PFAS that you see in the urine? Like what are you going to see in urine? I’m just not familiar with it.

DR. PAVUK: That’s the hundred million dollar question.

DR. REH: Yeah, that’s what we want to know.

DR. PAVUK: So --

DR. BOVE: We’re not seeing anything.

MS. AMICO: Okay.

DR. PAVUK: So there --

DR. BOVE: We don’t see much.

DR. PAVUK: So there has been new methods in testing and develop, you know, are looking at, you know, similar and different compounds and so that’s why we are not trying to use all the urine all at once, using the methodology that doesn’t look promising at this point. So those samples will be stored and will be continuously re-evaluating the matters as they come up and if there is more promising method, we’ll use it. But at this point,
you know, the lab at CDC has different methods. There’s another method by access that is a little bit more promising, but we’re not there yet on like what exactly would be -- would be the set of PFAS compounds that is best to be looked at in urine at this point.

MS. AMICO: And will the multi-site study include urine?

DR. PAVUK: Correct. We will collect but we will not analyze at this point.

MS. AMICO: On every person though in the multi-site --

DR. PAVUK: We’ll collect -- we’ll try to collect from everyone. Yes.

MS. AMICO: Okay. And then the -- I just want to be clear, the information, the biomonitoring that you’ve received from Pennsylvania and New York, is that part of your eight sites?

DR. BOVE: No.

DR. PAVUK: No.

DR. REH: Two additional.

DR. BREYSSE: So all total, will have 10.

DR. REH: Right.

MS. AMICO: Okay. So you’re still going to find eight more on top of those two? Okay, thank
you very much.

DR. BREYSSE: Any other questions? All right, can we turn to the health consultations?

PEASE HEALTH CONSULTATIONS UPDATE

CAPT SOMERS: Back to me. So as you know, on the CAP and some folks in the audience who’ve been here several times, the ATSDR has two health consultations that are related to the Pease Tradeport site. So there is one health consultation that focuses on the public drinking water system here at the Pease Tradeport, and the other is a health consultation that focused on the private wells that were contaminated that are off the base but are related to the base contamination. So the first one, on the public drinking water system it has -- the document for public release has cleared our internal ATSDR clearance and now the communication materials that go along with it which are like the fact sheets and then our plan to how we’re going to roll the materials out is going to go to clearance through CDC and then HHS. And when we get approval then we can have those meetings we’ve talked about before. We would try to set up a series of meetings for the public drinking water system. We’d likely do it here on the Tradeport and
we would try to have meetings spread over, you know, maybe a day or so where we could do morning, noon, and early evening meetings, try to catch folks because we know people don’t live here, they work here. So we’ll try to get to that working population. So that’s where we are on that.

And then the public drinking, I mean sorry, the private well health consultation, that is still within our ATSDR clearance and hopefully can follow along the same path where the materials would then get cleared through CDC and HHS.

Initially we wanted to have them released at the same time so we could, you know, have a different set of meetings for the folks who have the private drinking water wells and we would target those residents specifically, but the way it’s tracking now I think we’re likely going to go ahead as soon as we have the approval for the public drinking water and have that out and get it to people. And then we’ll have a second series of meetings when we can get the private well health consult out.

And so we are also coordinating with the communicators from Abt who are working on the study because we realize there’s going to be a lot of
information coming out and to avoid, you know, confusing the general public about what is this meeting for that ATSDR is having or that meeting for, we’ll work to make sure we can try to keep those messages clear and we know what meetings they’re having for the study and we know what -- everyone’s on the same page. So do you have questions, you go ahead. Are you going to ask me when? I feel it coming.

MS. AMICO: Okay. When -- I feel like I’ve been asking this question for two years, so.

CAPT SOMERS: I feel like I’ve been giving you answers for that long as well.

MS. AMICO: When can we expect it to be released?

CAPT SOMERS: Well my current understanding is if all went well through HHS and -- so the CDC person, HHS and the communication materials and again my understanding is they’re just looking at the communication materials and not going to read the whole health consult, that it could be done within about six, eight weeks, so April?

MS. AMICO: Okay.

CAPT SOMERS: But don’t, like I’m not going to hold my breath.
DR. BREYSSE: So.

CAPT SOMERS: Let’s be optimistic, let’s say May and we can, if we’re right that would then --

DR. BREYSSE: So we release public health consultations all the time.

CAPT SOMERS: Yeah.

DR. BREYSSE: Without a lot of scrutiny, ‘cause I guess, they have their local interests but you know PFAS has such a national profile to it that, you know, any report like this we’re reaching has to be scrutinized, you know, at higher levels up through HHS and so that’s -- and that’s the process that we don’t -- we can’t predict.

MS. AMICO: So can you explain why there’s different timelines though? ‘Cause I feel like you started -- you’ve been working concurrently on the private wells and the public wells so why -- why would the private wells be delayed?

CAPT SOMERS: Well, yeah. So they were a little bit behind the public drinking water one. I think the -- within ATSDR, and again ‘cause this is going to be pretty much the first health consultation that comes out nationwide about these contaminants so this -- the way the document is written is sort of setting the template, if you
will, for how ATSDR and our state cooperative agreement partners are likely going to create all other health consults moving forward. So internally it got a lot of attention and I think the idea was to focus on one, get it to a really good spot and then use that, again, to then sort of model what you’re going to say also in the private drinking water one. Not that the conclusions are necessarily exactly the same, but to make sure your methodologies -- everyone’s on board with the methodology and everyone’s on board with the messaging and so we have consistency. So it’s a little bit behind as the focus was on the first one.

MS. AMICO: My last question. Can you just remind me again when you started working on these consultations?

CAPT SOMERS: Oh gosh, that’s another good question. Okay. So going back in time, initially when the Pease Tradeport PFAS contamination first came to sort of everyone’s attention, New Hampshire was one of our ATSDR cooperative agreement APPLETREE states and under our cooperative agreement the state that we fund has usually the first dibs, if you will, the first right of refusal to start working on a document. So the state of New Hampshire as an
APPLETREE partner for us was working on these documents. And at that time, as you know, there was a lot of change happening with like, ‘cause at that -- they started and then EPA changed its lifetime health advisory number and then so their things shifted. And then in 2017, right, that was our last funding cycle, New Hampshire was no longer an ATSDR APPLETREE cooperative agreement state so it came back internal to us at ATSDR. And at that time too the new lifetime health advisory came up and we started reworking on it. So it’s been kind of in-house since 2017.

MS. AMICO: But New Hampshire started it in 2014 when the contamination was found?

CAPT SOMERS: I’m not -- it was shortly -- I don’t know the exact -- I’d have to go back and look at the exact time. ‘Cause first you had to get the data in, right? So it took a little while to get some of the data in to start the health consult so I don’t know if --

MS. AMICO: The blood data or the water data?

CAPT SOMERS: The water data. I mean, they had the first round but then, you know, I think to make a really good health conclusion you kind of want more data than just one sampling point. So there’s,
you know, as more and more samples came in.

MS. AMICO: But did they shut down the Haven well? I don’t understand. Like what are you talking about repeating water samples?

CAPT SOMERS: Well we have that one but then it does look at -- so it does try to look like back in time but then you also want to say like is there still an exposure going forward. Our health consultations, they look sort of at data we have from the past, the present, and then we also say well if this were to continue in the future what would be people’s exposures.

MS. SHAHEEN: In terms of the roll-out, once it’s ready, can you speak to the audiences we should engage aside from the folks that are directly impacted by exposure, I’m thinking the health medical community, other folks who might be asked about this? Who should be briefed and how do we make sure we get those folks in the room when it’s time?

CAPT SOMERS: Yeah, that’s a good question. So we did have as part of our roll-out plan we wanted to do some clinician awareness. I wouldn’t exactly call it clinician education ‘cause I don’t think we’re going to be able to like go and provide direct
clinician education, but we have some clinician materials and we were going to try to make sure, again, we make that known. There was a presentation at the New Hampshire Medical Society meeting in the fall, so we could reach out to them again and try to reach out to their network. It’s a little challenging to get to clinicians, really, and especially in an area where there’s people have lots of choices, you know, lots of options. We can also work with the state again and see if we could put it out through their state network. I don’t know if there would be a health advisory, you know, like the HAN system, I’m not sure it would qualify for that but we can talk to them.

MS. SHAHEEN: I was thinking the medical society or --

CAPT SOMERS: Yeah. New Hampshire Medical Society, yeah, I would. We have a connection to them now.

MS. CARMICHAEL: I have a question about whether or not, thank you, the conclusions that we read in the versions that we were asked to provide feedback on were impacted by the tox profile. I get it. I’m trying to sort out the timing, I feel like we provided feedback about a year ago and then
obviously the tox profile came out during the
summer, I believe, so --

CAPT SOMERS: Correct.

MS. CARMICHAEL: -- so really curious about the
conclusions piece.

CAPT SOMERS: Correct. So the version you had
was before the tox profile and that was what we call
the data validation version where really we’re just
making sure that the data that was included in the,
you know, when we talk about the populations exposed
and the data we have to make sure we have it in the
correct format and timeline. So you saw that
version.

MS. CARMICHAEL: Right.

CAPT SOMERS: And then we were close to having
it get all the way cleared and the tox profile came
out so we had to re-evaluate. So the conclusions do
change some but I don’t think you’re going to be --
I don’t think you’re going to be shocked by what you
see. You know, you’re not -- I don’t think there’s
anything that’s going to make you feel that somehow
the conclusions have changed so much that you’re
going to say oh my gosh, ATSDR, what did you do? I
think you’re -- they’re going along a certain line
and I think that the tox profile just pushed them
further down that line. Does that help?

MS. CARMICHAEL: Yes, thank you.

CAPT SOMERS: And this, just to be clear too, this will be a public comment version so this is not the final final version that will live forever for ATSDR. So anyone from the public, the CAP members, anyone in the public will have a chance to review these documents and send us comments. And then what we do is we take all the comments and we will address them in what will become the final version.

MS. CARMICHAEL: Right. And so we’ll be notified of that and given the opportunity --

CAPT SOMERS: Oh yeah. We’ll have meetings. That’s through our roll-out plan, we’ll have meetings for the public comment version to make people aware of what is out there now and that they have a chance to comment and to just address people’s questions about the conclusions and how we did it and what it means, so yes.

MS. CARMICHAEL: Great. Thank you.

CAPT SOMERS: Sure.

MS. AMICO: Has anybody else seen the document since like other than internal ATSDR people?

CAPT SOMERS: No.

MS. AMICO: I.e., like DoD?
CAPT SOMERS: No. So they saw the same data validation version that you saw back in, yeah, about a year ago. Right? What are we now? Yeah, it’s January. It was a little more than a year ago, but yes.

PERFLUOROALKYLS TOXICOLOGICAL PROFILE UPDATE

DR. BREYSSE: All right, if we move along. I’ll give a brief update on the tox profile. So as you know, it was submitted as a draft to public comment, and we received comments from 60 different individuals and groups and many of them required detailed addressing and we have comments in addition from the DoD, from NASA, from the FDA. And for example, DoD sent over 377 comments. So a majority, a lot of -- the single biggest commenter on that tox profile was Department of Defense. We got, not surprisingly, 144 comments from 3M; they’re interested in this. All total there was 830 comments that needed us to respond to, so that’s a hefty lift there. And we’re in the process of responding to those comments and we’re developing that response. It was held up a bit with the shutdown, but we hope to have those comments placed in the federal record and come out with a final version of that sometime this spring.
MS. SHAHEEN: Just a question on the timeline for responding to comments and whether or not that slows down the release because I can imagine a scenario where you get inundated with things you have to respond to and then time goes on and the public hasn’t gained access to this important information. So can you give us a sense of the 800 and however many comments you were bombarded with, is that going to delay things six months, two months, or not at all?

DR. BREYSSE: You know, this is, you know, I guess I want to not overstate what I know. I don’t know if this is an unreasonable number of comments for a tox profile. I suspect it’s probably greater than we normally get on a typical tox profile and so, you know, we’re required to do due diligence and carefully consider them and address them and frankly if there’s something there that causes us to say oh, we need to make a change and that change is big enough, we’d actually pull it back, revise it and resubmit it. Which we’ve done in the past with this document, by the way. So I don’t think we have anything that falls in that category but we just have to make sure that we address them all carefully.
MS. SHAHEEN: Okay. So that was a very delicate way of not answering my question. So does that mean it slows us down considerably? I totally understand ATSDR’s need to respond and read the comments. I also understand the instinct by folks who may be protecting or be care -- wanting to be especially concerned about what gets said about the chemicals they’re responsible for emitting. So what I would hate to see is that you respond to these comments and then there are another thousand comments and then we’re three months or six months or 18 months down the road and we still don’t have access to the profile.

DR. BREYSSE: These are our -- these are our final -- these are the comments we’re addressing right now so there won’t be more.

MS. SHAHEEN: Okay.

DR. BREYSSE: And it has taken us longer to address them ‘cause there’s more of them but it’s a high priority for us and we’re moving on it as quickly as possible. And I also want to remind you that we consider the MRLs to be provisional at this stage which means that we’re using them. So the application of MRLs in our normal work is not being held up by the final publication of this document.
MS. SHAHEEN: Thank you.

DR. BREYSSE: All right. So now --

MS. AMICO: I have one question, I’m sorry. Of course I do. Can you just help me understand, because my understanding is this tox profile, this is like the third round that you guys have done so why is -- I just don’t understand enough about the process. Why has there been three rounds of it and over a course of how much time? And then like you said this is it but we know the science is constantly evolving. How will there be another revision if there’s additional science?

DR. BREYSSE: So I used to know this history really well so I’m not going to put dates on things but the original one was, I want to say, I can’t even remember, 2009-ish?

MS. AMICO: Yeah, that sounds about right.

DR. BREYSSE: And the tox profile at that time said there wasn’t enough data to establish an MRL. And sometimes we write tox profiles and we conclude that there’s not enough information to establish an MRL. We sent it out for public comment and the public comment was well yes, there is, and you should reconsider that because the science is accumulating. So we pulled it back and we
reconsidered it. And in 2012-ish, ’14-ish we
produced another document that had an MRL for PFOA
and PFOS, and the comments were, I think those are
probably higher than they should be, there’s some
data to suggest they’re not as low as they perhaps
could be and you ought to consider some of these
other compounds, we now think there’s enough data to
write MRL for some of these other things. So we
agreed with those, we pulled it back, we revisited
the PFOA and the PFOS tox profile, we came up with
MRLs for now PFNA and PFHXS and that’s where we got
to right now. So the science is changing rapidly,
as you know, and we’ve made a decision in-house that
we aren’t going to hold it up for the sake of
emerging data in this case because we will never get
off that treadmill, as you just know. So we will
release it and if we think there is emerging data
we’ll just reconsider it in the future and we will
amend it going forward. So we’re keeping a very
careful eye on the emerging science about the
chemicals we have MRLs for and some new chemicals we
don’t have MRLs for. And we will continue to amend
it as we see fit.

MS. AMICO: Thank you. That answered my
question.
MR. DIPENTIMA: How will the results of your toxicology profile affect the industries material safety data sheets that they put out with these chemicals when they are sold to industry?

DR. BREYSSE: I don’t know the answer to that question. I do not believe they are on material safety data sheets, but I haven’t looked at a material safety data sheet in a long time.

MR. DIPENTIMA: So that’s where the rubber hits the road is with and with people, you know, people are going to abide by in industries and with the material data safety sheet says in terms of how you protect yourselves with all that. So I think it would be wise to look at --

DR. BREYSSE: Well these numbers are not --

MR. DIPENTIMA: -- manufacturers need to look at the material safety data sheets.

DR. BREYSSE: I just want to remind you that these numbers are not meant for routine use concern. They’re really meant for situations where there’s a hazardous materials score or hazardous waste scenario like we have here and they’re really meant to guide our public health assessments to help us target areas where we think their greatest risks exists. And so they wouldn’t fall into normal
practice as a guideline that people might use in a workplace setting or other setting.

MR. DIPENTIMA: And obviously the multi-site study will, down the road, will impact possibly the impact will with future toxicological profiles may or may not say.

DR. BREYSSE: We hope so.

MR. DIPENTIMA: Yeah.

**CAP CONCERNS**

DR. BREYSSE: So we’re remarkably on schedule. So we have the remainder of the agenda is for any additional CAP concerns that we haven’t talked about yet and I know there’s probably not going to be any. All right, Dick.

DR. CLAPP: This is actually following up something that was on our conference call which is cancer studies that are called ecological and what’s your thinking about that at this point?

DR. BREYSSE: So we began planning to conduct a national cancer study and it’s an ecological study in that we’re just looking at cancer rates in areas where there’s no contamination, compare them to cancer rates in areas without contamination. So we’re trying to identify communities we can characterize in a geographically defined way with
sufficient precision to look at cancer in those communities and compare it to other communities as well. And in fact, there’s probably a number of designs we could do. We could look across the country, we could do a more focused study within a state where we think there’s sufficient data and we have a team of scientists now who are coming up with plans to address the cancer issue that might include some state focused efforts as well as looking across the other place.

We recognize that cancer is an important concern to everybody and we’re committed to addressing that. And this is the approach we’re going to take recognizing that for those who are epidemiologists that this will really be exploratory and if we find excess cancer risks, we’ll then have to follow that up with more analytically designed epi studies to look at whether those risks are quantifiably related to PFAS exposure going forward. So that’s our thinking. And in fact, we’re also considering a variety of other outcomes that we might use this approach for, including a variety of birth outcomes as well. So we recognize that the cross sectional study with this clinical assessment is one part of the pie and we’re committed to
looking at these other parts of the pie.

DR. CLAPP: Just one more. Childhood cancer, would that be part of the ecologicals?

DR. BOVE: Yeah, definitely.

DR. BREYSSE: Frank, I don’t know if you want to add any more to that.

DR. BOVE: No. I was going to add that.

MS. AMICO: So I feel like I bring this up at every meeting under CAP concern and you’re probably sick of hearing me say it, but one of the gaps that continues to be a problem in our community is the need for medical monitoring guidelines and better physician education. And like Tarah had mentioned back in November the New Hampshire Medical Society had their annual event and they did have a panel and a presentation by a pediatrician from Boston Children’s Hospital on PFAS and then had a panel that was moderated by Dr. Ben Chan from DHHS of New Hampshire, myself, a community member from Merrimack, New Hampshire, where they have PFOA from an industrial site. And then Dr. Tom Sherman who’s a local G.I. physician but was just recently elected to the senate for New Hampshire and also was the head of the pediatric cancer cluster task force that was put in place a couple years ago and, you know, I
thought that panel went really well. I was happy there was probably about a hundred and fifty physicians in the room. I felt like people were really engaged and even afterwards a lot of physicians stayed to ask a lot of questions and I think that they are a good route for us to try to continue to engage with so we can do a better job of outreaching to providers and bringing more education. But I also think that I still want to continue to stress to ATSDR that that’s a huge gap in this community and other PFAS communities. You know, these health studies are great and I’m so excited we have the funding and the plans are rolling out but as you said, we’re talking five years before we get any meaningful data from those and so I want to know what I can do today to monitor the health of my children that have already been exposed. I don’t want to wait five years to hear oh, you know, they’re at risk for thyroid issues now. You know, I’d rather try to monitor things more closely today and moving forward to protect their health. So I just want to take that opportunity to say that again. It’s a big gap in this community, it’s a big gap in all these impacted communities across the nation. We had a good first
step with the New Hampshire Medical Society, I want
to build off that momentum and I want to ask the
ATSDR to continue to consider medical monitoring
guidelines and other ways to engage physicians
because it’s a big need in our community related to
this issue.

DR. BREYSSE: And you can say that as often as
you need to. And we will continue to look for ways
to engage the medical community and as part of our
commitment to engagement communication here, we’ll
make sure that’s a part of our focus herein and
across the country. As we said before, you know,
for CDC, it wouldn’t be ATSDR, to come up with some
official medical monitoring guidelines is a big
deal. And steps like that are not taken lightly
across CDC and it’s something that oftentimes takes
years. Just as an example, the effort that went
into CDC revising the opioid prescription guidelines
for this country was a very big deal, it took a long
time, it was very contentious. So I think the best
we can do right now is to point the community to
other sources of that information like the medical
monitoring guidelines from the C8 study. So on our
website we clearly list that as something to
consider for going forward. At some point in the
future we might be at the point where we think we could get a specific medical examination guideline approved up through the agency. We will try and pursue that but in the meantime I think the best we can do is point to what we think are authoritative sources elsewhere that seem to make sense and cite those efforts on our web pages.

It’s just a -- it’s a -- it’s a very challenging thing to do for a federal agency to come up and say now to doctors, here’s what you need to do to treat your patients, and it’s not taken lightly.

MS. AMICO: I fully understand that but, you know, PFAS contamination is becoming a widespread national issue so I hear what you’re saying. The opioid crisis is a widespread national issue. So the PFAS issues are not going away and I understand that it’s hard but just because something’s hard doesn’t mean I’m not going to ask for it, doesn’t mean that I’m not going to continue to highlight the gap in our community and across the country. There are many parents from this community that want to know what they can do to keep their children safe today and to monitor their health. That is a huge need in our community and I’m going to continue to
stress that at every meeting and I get that it’s hard but I’m not going to stop asking for it.

DR. BREYSSE: Okay. Fair enough.

DR. PAVUK: If I may, and this is in no way a rebuttal to what you’re saying, but if you step back and just take into consideration that environmental health is basically not part of curriculum at medical schools. Medical community in general does not come to a general agreement that environmental exposures do cause disease in general. If you look at the medical textbook, there’s little sections in epidemiology that may say that there may be a risk or increased risk of some disease but getting the general medical community to agree that there is a causative effect has been very hard the last 40 years. We’ve been investigating exposure to dioxins, polychlorinated biphenyls, brominated diphenyls, different pesticides. You may have noticed in October the big litigation in San Francisco in glyphosate and cancer. There’s no agreement or actual consent in medical community that are this exposure do cause or do not cause cancer. So that’s the difficulty of addressing very particular problems of different exposures.

MS. AMICO: Right, so I guess the way I see it
is because physicians aren’t given a significant amount of training in environmental exposures, they are looking to state health departments CDC for more guidance. You know, we have folks in this community who take their blood test results to physicians and they say I don’t even know what these chemicals are, I’ve never heard of them. So although I hear what you’re saying, I get it, physicians aren’t getting the training, they don’t know about these exposures, that doesn’t mean that that’s creating -- that’s, you know, it’s still a problem in our community that we need to try to address.

DR. PAVUK: I understand and I would put it, it’s not really as much a question of training, even though that would help, but it’s really the lack of consensus on part of medical community, you know, as an example, you know, of glyphosate as pesticides, you know. You have different agencies and bodies that like international, you know like IARC or friends or WHO, a health organization that may come to a consensus that something is or is not probably and possibly carcinogenic, but if the medical community, the oncologists are not on board with that as a profession that this is actually something that’s happening then it’s very difficult to get
through them to persuade them if they do not believe
or they are not persuaded by the scientific evidence
that that’s the case. And as you can see in each of
those litigations over the last 40 years, the
medical community is simply -- the evidence that
they see is not unequivocal in a sense that they
would go with this.

MS. SHAHEEN: So can I just ask a follow up on
that? Because if we wait for consensus we’re never
going to have it, right? So the question I would
ask is, from your vantage point is the issue that
there isn’t enough scientific evidence to
confidently say that the C8 protocol is what should
be in place? Are we waiting for additional data and
therefore with additional data we could make a
stronger case and once we have a stronger case we
have three-quarters of the people who need to agree
that this is going to -- I mean, I think about
climate change all the time, right? We’ve asserted
that climate change is real and it’s happening and
people are going to continue to say it isn’t
happening but they can keep shouting into that
vortex, right?

DR. PAVUK: Right.

MS. SHAHEEN: So if we’re in that same boat
here where there may always be 25 percent of the medical community who doesn’t understand that they’re --

    DR. PAVUK: Correct.

    MS. SHAHEEN: -- so we can’t wait for them.

    DR. PAVUK: Correct.

    MS. SHAHEEN: My question to you all is are we -- is there a need for addition, I mean, of course we always want more scientific evidence, we understand this is a contaminate of emerging concern, people have just in recent years clued into the potential risks of exposure and the real risks. Is there -- do you believe that ATSDR and the CDC is waiting on, for example, the multi-site study to provide further evidence or can we be advocating for this with the hope that we keep getting louder and louder and louder and somebody ultimately is going to hear it?

    DR. BREYSSE: So ATSDR in general is not in the business of setting medical examination criteria. There are medical groups that do that. What we look for authoritative sources of that and we look to cite that in our papers like the C8 study. And we look to provide the evidence base from which to inform that going forward. And in the uncertainty
that we all are struggling with right now, we try
and give communities and doctors the best advice we
think exists right now, recognizing that we’re going
to refine it as we learn more. But it’s really not,
you know, right in the lane of ATSDR to be
developing examination guidelines for the medical
community. We would look to groups like the
American Academy of Pediatrics or the American
College of Gynecology and Obstetrician --
Obstetrics, you know, or other groups to kind of who
are more authority -- authoritative in that to come
up with those sorts of things. And like I said, we
look to places that we think produce authoritative
guidelines and reference that when we talk to
communities.

MS. SHAHEEN: Right. But you are -- you give
the example of the CDC issuing guidance on the
opioid, you know --

DR. BREYSSE: That was a different part of CDC, not ATSDR.

MS. SHAHEEN: Okay, no and I --

DR. BREYSSE: Yeah, yeah.

MS. SHAHEEN: -- so that’s what I’m asking you
all, given your vantage point, given what you know
from the standpoint of ATSDR, for CDC to act, not
necessarily ATSDR but someplace else within CDC, what would they need to hear? I mean, because otherwise we just keep shouting into the vortex saying there’s a need here. And we understand you’re not maybe the right actor to address that need but we’ve got to figure out --

DR. BREYSSE: We have very few clinicians working in ATSDR --

MR. DIPENTIMA: Can I ask that question in a different way? Is there anything in the toxicological profile that would give any indication as to what medical monitoring might be indicated?

DR. BREYSSE: No. That’s not what toxicological profile is supposed to be.

So I hear you and we could reach out to other groups that might be in a better position to kind of take this on, like the American Pediatrics Association or something, and we can discuss with our other colleagues at the CDC, recognizing that CDC is, for the most part, other than opioids was an example otherwise, is an agency that’s more comfortable in the infectious disease arena than in the environmental health arena. So but and I’m totally sympathetic and understand your concern here but right now we, like I say you know, we try and
cite what we think is the best available guidance out there and we refer to that on our websites. Right now the C8 guidance is what we have on our website.

MS. AMICO: But you haven’t come out and said use the C8 as a tool for medical monitoring. You cite it --

 DR. BREYSSE: Yeah.

 MS. AMICO: -- but why -- what do you need to make that leap?

 DR. BREYSSE: I don’t think that’s -- I don’t think that’s something that we would -- is in ATSDR’s mandate to codify something like that.

 MS. AMICO: So you’re saying like AAP or American OB/GYN Council. Like for example, you shifted the firefighter stuff to NIOSH, right? And then you brought somebody in from NIOSH tonight. Is there -- can we do something like that for this? Is there someone else you can bring in --

 DR. BREYSSE: Let’s look into that. I will -- I will explore further at CDC about what the opportunities are here, and I will also talk to some other groups that might have some advice and some input.

 MS. AMICO: Okay. Thank you very much.
MS. SHAHEEN: I just wanted to raise more a question, I guess, for the community members here tonight because I have a list of takeaways I think came out of tonight’s meeting for us. You know, one is clearly we need to be doing more with NIOSH to advocate for a study that has a broader scope for firefighters and figure out how to get the funding for that. So that’s on our advocacy list. Andrea’s talked about the Testing for Pease group that’s collecting names; that will continue, it sounds like, until you all are at a point you can take that information. We’re in a holding pattern on OMB to push, if we need to, if the timeline seems to delay -- get delayed or slowed up for any reason. We will wait for news about and be willing to share the multi-site RFP, if you will, whatever that technical terminology is so we can share it with other --

DR. BREYSSE: NOFO.

MS. SHAHEEN: Thank you. And then when the time comes for the health consult to be ready we’ll figure out how best to engage other healthcare community leaders and members.

CAPT SOMERS: Right. And we’ll reach out to the CAP too to help us determine maybe like what are good days to do a public meeting to release the
document. Like there might be days here that just aren’t good for reasons I don’t know. And to get the word out especially on the Tradeport or to people that you know would have an interest here. I mean, we can try different methods. You know, we can put it on our website but people aren’t, you know, sometimes we try to put like an announcement in a local paper. We try different methods to get the word out so we can do all those things. But again, a lot of people don’t read the little announcements in the paper, they just --

MS. SHAHEEN: Right. And then the -- the last thing on my list was to make sure that anyone who might have background information on the activities here at Pease that created exposures are engaged in this process. This is the time we need as many people who have any history with what happened here. And I can think about a couple of pivotal points, obviously the time when the transition occurred from Air Force base to economic development park there were some key leaders in the mix who helped make that happen who may have some contacts. So

surfacing names, reaching out to people, anyone who might have information.

DR. BOVE: Well in particular, those who were
involved with firefighting training ‘cause that’s the source of the contamination.

MS. SHAHEEN: Yes. So Russ is on that with us. Yeah, great. So again, that’s just my list. I’m sure other people have other lists, but I wonder if for our community group whether it makes sense to have another meeting before the next full, just so we can make sure we’re ready and we’re pushing where we need to be pushing, so.

DR. BREYSSE: Any other? Russ.

UNIDENTIFIED: May I ask (inaudible; no microphone)

DR. BREYSSE: So that is a concern that’s actively being investigated and there’s evidence in some human studies and evidence in animal studies.

UNIDENTIFIED: Do you know anything about the AMAI (inaudible)? I’m asking because (inaudible).

DR. BREYSSE: You know, my training is in engineering and chemistry so that would be beyond my --

UNIDENTIFIED: (inaudible). (On microphone): I don’t understand that because we really would --

DR. BREYSSE: I don’t -- I can read up on it but I wouldn’t --

UNIDENTIFIED: Can you? Would you look into
it? AMAS 95 percent accuracy and that’s really unusual because they gave him the C8 (inaudible) and that has a five percent accuracy of detecting, that’s what they told him. And eventually that went from 19 to 4200 (inaudible). I just wanted to bring it up while I had people here that could maybe find out why that blood test is not available. Besides eliminating a lot of money, it could be part of the blood work. Just (inaudible).

MR. OSGOOD: I want to say I appreciate you having NIOSH here tonight to talk about the firefighter cancer studies that they’ve done. I am quite familiar with their studies as I do share that information across the country and I guess my concern for as a firefighter is that I don’t believe that what NIOSH is doing is quite enough, looking at the PFAS. I mean, we’ve looked at this issue here and we know it came from firefighting foam, we know that we have a separate exposure, we’ve discussed that that’s why we’re being excluded from the study. What is the avenue for me or the CAP or to establish this type of an action within the firefighter community with NIOSH?

DR. BREYSSE: Well I think that’s -- Stefany mentioned you guys might want to talk about that
amongst yourselves.

MR. OSGOOD: So it doesn’t go through you?

DR. BREYSSE: No.

MR. OSGOOD: Or CDC?

DR. BREYSSE: Well NIOSH is part of CDC.

MR. OSGOOD: Okay.

DR. BREYSSE: You have to remember, we can’t -- we’re in an odd position. We can’t look like we’re here to get money to do stuff. We’re here to address community concerns as best we can, and if there are limits to what we can do, we tell you what those limits are and if there’s something that you could do as private citizens to help us eliminate those limitations, then that’s your role but not our role.

MR. OSGOOD: Okay.

MS. SHAHEEN: Can I just jump in, because this has become much clearer to me tonight than it had been before now. In the same way that we fought for the funding for a multi-site study, we’re going to have to fight for the funding for a firefighter study and we’re going to have to figure out how to work our way into NIOSH so they understand us as an asset and a resource to get these studies done. And we’ve done it before, we’ll do it again.
MR. OSGOOD: Do it again.

MS. SHAHEEN: And in this case, we’ve got firefighters who people are going to have a hard time saying no to, so we’ve just got to figure out how to --

MR. OSGOOD: Okay.

MS. SHAHEEN: -- get in front of them and get a broader scope of a study defined.

DR. BOVE: When you think about this though, you want to try to identify firefighters who are actually exposed considerably to PFAS. So you may want, you know, NIOSH is looking at firefighters but there are firefighters who trained with AFFF, there are firefighters who used it more routinely or trained with it. And if you, you know, one of the things, you know, you might want to consider is how to identify that group of firefighters, right? If you want to focus on PFAS, because the firefighters study that NIOSH is doing and the work they’re doing, which is important work, but firefighters get exposed to all kinds of things and if they’re not using AFFF very often, which is, I think the case for the three cohorts they’re talking about, ‘cause I’ve talked to the PI, the Chicago, Philadelphia, and San Francisco firefighters, they might use it on
occasion but I don’t think that -- what I was told was they really don’t use it at all or I don’t know if that’s true.

DR. BREYSSE: Not routinely anymore.

DR. BOVE: They certainly don’t use it routinely and so that wouldn’t be the best population to study, okay, for PFAS. So what would be would be firefighters who would use it at airports and military bases. I’m not sure where else but -- the local firefighters that trained with it then --

MR. OSGOOD: I think there’s also a concern there that some of these chemicals have been impregnated in our protective equipment over time too and that’s another avenue and I think that’s where we’ve got to go and do more with NIOSH, so.

MS. SHAHEEN: Well and as you say, I think that’s very helpful insight because, you know, volunteer firefighters who may be, you know, on one day a month is a very different reality than someone who’s there every day full time training all the time. So --

DR. BOVE: And also those would -- the ones who trained with it would probably also be wearing that impregnated equipment.
MR. OSGOOD: Correct.

MS. SHAHEEN: Right.

DR. BOVE: So again, that would be, you know, if you want to isolate as much as possible a group that’s highly exposed to PFAS besides workers in the industry.

MR. OSGOOD: I just want her to be assured that there was no avenue and we would need to go in a different direction, so.

MS. SHAHEEN: So if I can just say, I don’t want to cut off any other concerns to express, but we are grateful to you all. I know you’re on the -- you seem to be always in the firing line because you’re the face we have but we are grateful for the effort to bring folks like NIOSH to the table to help us identify the folks who might be able to advance the health monitoring and to do the work you’re doing to send these studies up. So thank you for being here, thank you for the help.

DR. BREYSSE: That might be a good note to end on.

(Proceedings concluded, 9:00 p.m.)
CERTIFICATE OF COURT REPORTER

STATE OF GEORGIA
COUNTY OF FULTON

I, Steven Ray Green, Certified Merit Master Court Reporter, do hereby certify that I reported the above and foregoing on the day of Feb. 7, 2019; and it is a true and accurate transcript of the proceedings captioned herein.

I further certify that I am neither relation nor counsel to any of the parties herein, nor have any interest in the cause named herein.

WITNESS my hand and official seal this the 12th day of March, 2019.

Steven Ray Green, CCR
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