

THE U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES

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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TRANSCRIPT LEGEND

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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.

P A R T I C I P A N T S

(alphabetically)

ALMOSARA, JOEL, AIR FORCE
AMICO, ANDREA, CAP MEMBER
BOVE, FRANK, ATSDR
BREYSSE, PATRICK, NCEH/ATSDR
CARIGNAN, COURTNEY, CAP TECHNICAL ADVISOR (via phone)
CARMICHAEL, LINDSEY, CAP MEMBER
CLAPP, RICHARD, CAP TECHNICAL ADVISOR
DAVIS, ALAYNA, CAP MEMBER
DIPENTIMA, RICHARD, CAP MEMBER
HARBESON, 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, TARA, ATSDR
SULLIVAN, MARK, CAP MEMBER

1 time for audience questions. And for folks at the
2 table, when you'd like to speak if you could turn
3 your name tag up on end and then just remember to
4 speak into the microphone. And I'm just going to
5 ask right now, can the folks on the phone hear us
6 okay?

7 THE COURT REPORTER: It's very faint.

8 CAPT SOMERS: Okay.

9 UNIDENTIFIED: A little bit muffled.

10 CAPT SOMERS: A little bit muffled.

11 DR. REH: Maybe get a microphone over near you?

12 CAPT SOMERS: I know. There's these little
13 table mikes for the phone so we'll make sure
14 whoever's speaking has one near them.

15 **WELCOME AND INTRODUCTIONS**

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

20 DR. REH: I'm Chris Reh, I'm the Associate
21 Director for ATSDR.

22 DR. BREYSSE: And I'm Patrick Breysse. I'm the
23 Director of ATSDR.

24 DR. BOVE: I'm Frank Bove, senior
25 epidemiologist at ATSDR.

1 DR. PAVUK: I'm Marian Pavuk, epidemiologist
2 with ATSDR.

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

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

7 Col ALMOSARA: I'm Joel Almosara from the
8 Secretary of the Air Force.

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

13 MS. CARMICHAEL: Lindsey Carmichael, a
14 Portsmouth resident.

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

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

20 DR. CLAPP: And state of the union observer.

21 MS. AMICO: Yes.

22 DR. CLAPP: I'm Dick Clapp, member of the CAP
23 advisory committee.

24 MR. DIPENTIMA: I'm Rich Dipentima, member of
25 the CAP committee from Portsmouth.

1 CAPT SOMERS: Okay.

2 UNIDENTIFIED: I'm on the CAP as well, I
3 should've said.

4 CAPT SOMERS: That's all right. Thank you.

5 DR. BREYSSE: I'd like to maybe start off with
6 a few words, Tarah.

7 CAPT SOMERS: Sure.

8 DR. BREYSSE: So first of all, I want to
9 apologize for the hiatus we had when there was a
10 partial government shutdown. It was unfortunate
11 and, you know, we were -- by necessity we weren't
12 able to interact with you as much as we'd like and
13 if there was any difficulties here, we apologize for
14 that.

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

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

25 **ACTION ITEMS FROM SEPT. 2018 CAP MEETING**

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

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

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

15 DR. BREYSSE: So if we -- the next agenda item
16 is a presentation from a discussion from NIOSH. As
17 you recall at a number of CAP meetings you've asked
18 about firefighters and possible health risks, cancer
19 risks among firefighters, and that's an occupational
20 exposure and we, on a number of occasions, indicated
21 that there's another part of CDC that deals with
22 occupational exposure so that's NIOSH, National
23 Institute for Occupational Safety and Health, and so
24 we're fortunate tonight to have Dr. Terri Schnorr on
25 the phone. She couldn't be here in person. But

1 Terri, if you want to say what NIOSH's involvements
2 and interests are, if you could maybe introduce
3 yourself as you begin speaking.

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

6 DR. BREYSSE: Yes. Very clear.

7 DR. SCHNORR: I'm clear? Okay, great. Yes.
8 As Dr. Breysse said, I'm Terri Schnorr and I work at
9 NIOSH which is one of the centers in the Centers for
10 Disease Control and I'm an epidemiologist there and
11 we do -- in my group we do studies of cancer and
12 other chronic disease among workers. The overall
13 mission of NIOSH is to ensure that we have healthy
14 and safe work places through the research that we
15 conduct and our mission includes all workers and all
16 industries in the U.S. So NIOSH was created in 1970
17 and since that time we've done research to identify
18 health and safety problems in a number of -- a lot
19 of work places and to make recommendations to reduce
20 those risks.

21 So Dr. Breysse asked me to attend this meeting
22 to give you a summary of our current work related to
23 the PFAS compounds. And while NIOSH is not
24 currently conducting any research in this area, we
25 do have decades of experience in doing work with

1 firefighters and also in general understanding
2 workplace exposures. So I thought I would give you
3 some information on the work that we have done
4 that's most relevant to the meeting. It primarily
5 involves two specific projects. The first was a
6 study of cancer among 30,000 firefighters that we
7 published in 2015 and in that study we included
8 firefighters from San Francisco, Chicago, and
9 Philadelphia and our analysis found that
10 firefighters had a greater number of cancers
11 compared to the U.S. population and that these
12 cancers were mostly digestive, oral, respiratory,
13 and urinary cancers.

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

18 So as a follow up to that because we didn't
19 want to stop at just identifying the problem, we're
20 doing some detailed exposure studies of firefighters
21 so that we can better understand what they are
22 exposed to and how we can reduce those exposures.
23 So for example, we're looking at how well their
24 turnout gear protects them from the exposures that
25 they get while they're fighting the fires. And

1 another thing we're doing is looking at the best way
2 for them to decontaminate the gear after they have
3 fought the fires. So currently we don't have active
4 work looking at PFAS and PFOA exposures among
5 firefighters, but we do have a proposal in to look
6 at those exposures and we're waiting for a decision
7 on the funding for that project. So the other item
8 that I wanted to let you know about is the
9 firefighter cancer registry. So this past summer
10 Congress passed legislation providing funds to NIOSH
11 to begin to establish a voluntary firefighter cancer
12 registry. And the purpose of the registry is to
13 establish cancer incidence rates among firefighters
14 and also to identify the causes. So our plan is to
15 enroll at least 200,000 civilian firefighters in the
16 registry. Military firefighters are not part of the
17 registry, the funding was not provided for people in
18 that category, so right now we're working through
19 the logistics of setting up the registry and we plan
20 to begin enrolling firefighters next year. So once
21 this registry is established, then we'll be able to
22 do those calculations to estimate the cancer
23 incidents among firefighters. We estimate that that
24 will take at least two to three years to get to that
25 stage. So while -- the reason I mentioned the

1 registry is that while studies of exposure to PFAS
2 and PFOA are common are not part of the basic
3 registry, the registry would -- could be a good
4 basis to study exposures of firefighters to those
5 substances and the health effects if funding was
6 available for that purpose.

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

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

25 DR. BREYSSE: So Terri, if you don't mind,

1 we'll entertain some questions from the room. Rich.

2 DR. SCHNORR: Sure.

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

9 DR. BREYSSE: That was all firefighters?

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

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

22 DR. SCHNORR: So we only looked at --

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

25 DR. SCHNORR: So what we did, we studied the

1 firefighters that worked at the fire departments in
2 those three cities. So it was the -- all of the
3 firefighters in the San Francisco Fire Department.
4 So we didn't do all firefighters in that city, it
5 was those firefighters that worked for the city fire
6 department. Does that help --

7 MR. DIPENTIMA: Yes.

8 DR. SCHNORR: -- clarify it?

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

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

18 MR. DIPENTIMA: Okay, thank you.

19 DR. BREYSSE: Russell.

20 MR. OSGOOD: Yeah.

21 DR. BREYSSE: You might want to introduce
22 yourself.

23 MR. OSGOOD: Hi. I'm Russell Osgood. I'm a
24 lieutenant here at the Portsmouth Fire Department.
25 One of the fire stations here on our base was the

1 water, basically, had the PFAS in it. So we have a
2 concern on the front that the study that we're doing
3 or the research that we're doing here doesn't
4 include firefighters. And I understand the reason
5 behind that. My question to you is, you're talking
6 about doing exposure studies, who's doing those
7 studies and what do they comprise of at this point?

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

24 MR. OSGOOD: Would that include looking at AFFF
25 foam within a certain date range and then including

1 like our turnout gear or any compounds that may have
2 been in our turnout gear over the past 15 or 20
3 years or even before that? Is that part of your
4 scope?

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

16 MR. OSGOOD: Okay, good. Thank you.

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

23 DR. SCHNORR: That's a good question. I don't
24 have that directly in front of me but I believe it
25 included kidney, bladder, and prostate cancers.

1 Those are cancers that previous studies had found
2 and I know that what I have in front of me is the
3 combined group but I can pull that paper up and let
4 you know.

5 MS. AMICO: Okay.

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

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

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

14 MS. AMICO: Okay.

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

17 MS. AMICO: Okay, great. Thank you very much.
18 And then going to the turnout gear, so you talked
19 about doing a study if the turnout -- how the
20 turnout gear protects firefighters but it's been my
21 understanding in talking to people that are
22 advocating for the firefighting community that
23 there's a big concern that their turnout gear
24 contains high levels of PFAS. So it seems like
25 you're looking at to see how protective their gear

1 is, but are you also looking at how maybe their gear
2 could potentially be exposing them to these
3 contaminants as well?

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

17 MS. AMICO: Okay. Great. Yeah, it just I
18 think that's some of the concerns I'm hearing from
19 folks advocating from the firefighting community so
20 I think that would be helpful if that somehow could
21 be considered in your study design. And then you
22 talk about the PFAS registry. I'm just curious what
23 types of -- it sounds like a voluntary registry so
24 what types of information are you collecting from
25 people; is it just, you know, the type of cancer

1 they have and how long they've been a firefighter or
2 are you drilling down on other information from
3 people?

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

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

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

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

25 DR. CARIGNAN: I'll try and ask questions, but

1 I want to be rude. I had a few questions. One
2 comment first is just that regarding the PFAS and
3 the turnout gear, when you go to try to do exposure
4 assessment calculations for that there really isn't
5 good dermal absorption data for contact with
6 something that has high levels of PFAS like that,
7 especially under a firefighting scenario where you
8 have high temperatures and sweat. I'm thinking
9 that's really like the data gap that needs to be
10 addressed in terms of understanding what kind of
11 exposure would occur from the PFAS and turnout gear.
12 But I would love to connect with you maybe by email,
13 if possible, in part because it would be great if
14 you could come to our upcoming PFAS conference in
15 Boston in June because I know that the folks there
16 would love to hear a lot of things that you have to
17 say and the things that NIOSH has planned. You guys
18 do great research. I love reading your studies.

19 So I have two technical questions. One was
20 with regards to exposure assessment, I think you
21 answered it though, that you'd be doing
22 biomonitoring. I know that one of the big data gaps
23 for the firefighters that you said that have been
24 done, you know, nationally and also in Massachusetts
25 are that they don't actually have data on whether a

1 firefighter was using AFFF and so you get basically
2 exposure misclassification from the (inaudible)
3 whether those elevated cancer rates are, you know,
4 can really be attributed to AFFF or something else
5 or a mixture of the occupational exposure.

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

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

21 DR. SCHNORR: Yes. That is a concern of ours
22 so we're -- so we're -- what we want to do is design
23 it so that any firefighter who would like to be
24 included can be included but we also want to design
25 it so that it can be representative, so we're

1 working through that. One of the first things we
2 will be doing is sending out a, you know, a notice
3 sort of asking for input on how we can best do this
4 because we want to get input from people who know
5 this area the best. So that will be coming out in
6 some number of months from now. So I can let Dr.
7 Breysse know when it is going to come out and he
8 could let you all know so that you can be sure to
9 see it so that you can provide that input to us.
10 That would be very helpful.

11 DR. CARIGNAN: Okay, great. Thank you.

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

16 DR. CARIGNAN: That would be great. Thanks.

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

24 DR. SCHNORR: So the proposals are still in,
25 sir, they're in for consideration but I think

1 they're too early to release them to the public
2 until decisions are made. The people who provide
3 funding are careful about that. So we're hoping to
4 hear in the next six months as to whether those
5 projects are funded or not and, you know, once they
6 are we'll get going.

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

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

22 MS. SHAHEEN: Well, yes. So the -- you
23 answered my first question which is the -- when you
24 talk about the study being approved, are you saying
25 that if internally there is agreement that this is a

1 priority, the study could be funded internally
2 without additional appropriation?

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

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

14 DR. SCHNORR: Sure. One of the projects is a
15 collaboration with the University and so it's been
16 submitted to another group to review and that group
17 will determine if they fund it but I can't say what
18 the group is that would be providing the funding,
19 but it's a competitive process. So if it, you know,
20 if it scores well and then the proposal would then
21 be funded. And the other one is a proposal to --
22 actually another federal agency that we collaborate
23 with them, we share resources with, so they're
24 looking at their budget to see if they can help
25 support that.

1 MS. SHAHEEN: Okay. And I don't know, again,
2 maybe you can say a little bit more about the
3 relationship between NIOSH and ATSDR and whether
4 there would be any integration between the studies
5 if this work was to be approved.

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

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

22 DR. SCHNORR: Yeah. Both of these studies are
23 sort of preliminary studies, they're not very large
24 encompassing studies. We are taking the first steps
25 to try to get a better sense of what we can about

1 exposures and then develop more methods from that so
2 they're not, certainly not all encompassing.

3 MS. SHAHEEN: Okay, thank you.

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

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

21 MR. HARBESON: So I guess would you say that
22 where we might be able to help as a CAP is if these
23 studies get funding, great. If they don't then I
24 think it would either be for us to seek private
25 partners for the studies and/or talk to our federal

1 representation in terms of obtaining appropriations?

2 DR. SCHNORR: Certainly, yes, as citizens
3 you're free to ask people for what you feel you
4 need.

5 MR. HARBESON: Okay, thanks.

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

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

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

22 DR. SCHNORR: No, that's fine.

23 DR. BREYSSE: Great. And then if you could
24 send some of the materials you mentioned to us,
25 we'll make sure we distribute them.

1 DR. SCHNORR: I will.

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

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

19 DR. BREYSSE: Okay.

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

21 DR. BREYSSE: Anything else?

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

23 DR. BREYSSE: Okay, thank you, Terri. Now
24 we're going to talk about the update on the Pease
25 Proof of Concept Study.

1 **PEASE PROOF OF CONCEPT STUDY UPDATE**

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

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

19 DR. BOVE: And so the first thing I want to say
20 is we've been working with Abt on the communication
21 plan, we've reviewed some of the materials and we're
22 still working on that plan and they did speak to
23 some of the CAP and also talked to Tarah today. And
24 we visited, Marian and I visited with Danielle. We
25 visited two potential office spaces so we're

1 starting to evaluate what are options in the area.
2 The problem being that we don't know when we're
3 going to get OMB approval and so that may make it
4 difficult for us to get the space and be able to
5 rent it when we need to rent it. But we're
6 identifying at least two offices that look good.

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

17 Some of the other things that we've been doing
18 with Abt Associates, the Abt has done some work
19 identifying reports and other data for the
20 historical reconstruction aspect of the study.
21 Again, what we're trying to do is get information on
22 the groundwater characteristics on the base, the
23 soil characteristics, so we'll be able to model from
24 where the AFFF was used for training or where it was
25 used for firefighting or any leaks and sort of model

1 it through the soil, through the groundwater to the
2 Haven well and the other two supply wells and be
3 able to then estimate over time what the
4 concentrations of PFAS were in those wells and then
5 by that the entire system. So that's the approach.
6 And so they have identified a lot of documents so
7 far. We're encouraging them to sit down with both
8 the City of Portsmouth and the state environmental
9 agency to make sure we've captured everything
10 relevant for the project there. And I may be coming
11 up with them to do this kind of a visit with these
12 agencies.

13 Oftentimes you can request state materials, but
14 it's often good to go into the offices themselves
15 and rifle through the files if you can. We've done
16 that with the Navy and Marine Corps for Camp Lejeune
17 so we've learned a lot of lessons from that. So
18 it's important to talk with them, sit down with them
19 and see if there are any documents that maybe we
20 forgot to ask about or didn't ask about in the right
21 way or, you know, or whatever and identify them.
22 And also the same thing will probably need to happen
23 with the Air Force. Although they've been able to
24 get some information on AFFF on base, also there are
25 reports of -- on groundwater characteristics from

1 work that was done back in the '80s, I think it was
2 in the '80s, around the TCE contamination of the
3 Haven well so they have some idea there. But there
4 are probably data that the Air Force has or the DoD
5 has that will be relevant that we need to request.
6 So in other words, they've done a lot so far, we
7 probably need to do a little bit more to gather
8 data.

9 Our next step would be to analyze what we have
10 and present that to an expert panel along with the
11 reports so it's sort of a summary of the kinds of
12 reports we have and some preliminary analysis so
13 that the expert panel can then look at this material
14 and advise us and Abt about what the best approach
15 might be for modeling this. We have some initial
16 ideas and there are methods that everyone uses,
17 certain modeling methods, but there are also some
18 possibilities to streamline the process. With Camp
19 Lejeune, I think I mentioned this before, there was
20 the usual method which took quite a bit of time and
21 a lot of data, well a lot of obtaining the data and
22 also working it up in order to run those models.
23 But there was a simpler model that was developed by
24 Georgia Tech that gave us almost the same results in
25 much easier fashion. So it would be important to

1 hear if there are other approaches like that because
2 the Camp Lejeune modeling is eight, five, six, seven
3 years ago, maybe more now, and just to see if there
4 are additional methods that can be used that could
5 streamline the process.

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

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

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

18 MS. AMICO: Okay.

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

24 MS. AMICO: Okay.

25 DR. BOVE: So no, it hasn't been affected.

1 DR. PAVUK: Yeah. We have found out that
2 during the shutdown HHS activity that the project
3 and the package was picked up by HHS during the
4 shutdown in about like, there was like a list of
5 about 50 different projects that they looked at
6 during that period. So it was included on that list
7 and that's why we're moving to this study they are
8 (indiscernible) so we are not waiting. If it was
9 not picked up we would have waited now another month
10 but it has been picked up so it may be -- it may be
11 published fairly soon, so we're still on.

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

16 DR. BOVE: Right. We were affected.

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

22 DR. BOVE: Yeah. Well Abt Associates are going
23 to vet possible candidates. We're going to provide
24 them with a list of people we think based on what we
25 went through with the Camp Lejeune. So for the Camp

1 Lejeune expert panels we had a few epidemiologists
2 because that's important, that's what the study's
3 all about. We had hydrogeologists on it, of course.
4 And so, and some experts on TCE and it would be good
5 to have in this expert panel some of the same
6 expertise but with expertise in PFAS instead of TCE
7 this time and PCE. So it would be similar to that.

8 MS. AMICO: Okay.

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

14 MS. AMICO: Okay.

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

18 MS. AMICO: Okay.

19 DR. BOVE: But I guess that's basically what,
20 we would try to identify both generalists in the
21 hydrogeologic field because some of this stuff is
22 similar across different chemicals. But then
23 there's some specific things about PFAS and
24 groundwater that differ than say volatile organics
25 in drinking water so we would want to have experts

1 on that.

2 MS. AMICO: So just to be clear, this panel is
3 going to look at the water modeling, they're not
4 going to look at the health study and the protocol.
5 This panel you're talking about is just for the
6 water.

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

1 idea that we're trying to estimate, again,
2 concentrations in the drinking water over time.

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

5 DR. BOVE: Oh, yeah. Yeah. This is -- yeah.
6 In the health study as was done in the C-8 study,
7 they used the measured PFAS serum levels in the
8 analyses, but they also used what they called
9 cumulative PFAS serum levels. So they, over time
10 they had estimated what the concentrations were in
11 the drinking water the people were drinking. They
12 used a model to estimate then what the serum levels
13 might be given that drinking water concentration,
14 right? And then they aggregated that in a kind of a
15 cumulative exposure thing and they also looked at
16 periods of time based on these estimates and able to
17 look at any difference that would occur if you used
18 just a measured PFAS serum level versus the
19 estimated for those diseases where, and like kidney
20 diseases where it's not clear which way the arrow is
21 going, the causal arrow is going. And were able to
22 show that, in fact, there was some evidence of
23 reverse causation that the kidney problems that
24 people had increased their PFAS serum levels instead
25 of the other way around to some extent. So it's

1 important to be able to estimate the PFAS serum
2 levels, that's why we're doing all this.

3 MS. AMICO: Okay.

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

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

23 MS. SHAHEEN: So and I just want to interject
24 here a little bit on the -- because of the nature of
25 the Air Force base, are we going to have credible or

1 enough information to know where all the sources
2 were and --

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

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

24 DR. BOVE: Right. And so our experience with
25 Camp Lejeune was that it was vital to have

1 information from the retired marines. And so,
2 again, this was the CAP who were able to identify
3 retire, and some of the people were on the CAP,
4 actually. But the CAP also identified other people,
5 including past water staff, the treatment plant
6 staff at the base and also were able to identify,
7 for example, wells that the Marine Corps thought
8 weren't used but the retired marines said that they
9 knew that they were used and we found out that they
10 were right and the Marine Corps was wrong on those
11 things. So yes, it's extremely important if you
12 know people who were there at the time who
13 participated in the training, AFFF training or use.
14 Any firefighters that you know who worked at Pease,
15 these are important people to get information.
16 Local knowledge we used to -- we call it, that's
17 extremely important. So yes. So and that could be
18 a role of the CAP for sure. And as I said, Camp
19 Lejeune CAP was able to provide us with crucial
20 information that we could not have done the work we
21 did without them.

22 MS. SHAHEEN: So if I could just amplify that,
23 and Jeff I see you in the back of the room, if we
24 could include a call to invite community members who
25 have perspective and history to share. I mean,

1 Russ, I'm looking at you, hopefully we can find some
2 firefighters who've been around a long enough time
3 to know and certainly, I think, between us with Rich
4 and the team around here we can get at the folks who
5 were at once Air Force. Because I think in order
6 for that historical perspective to be most
7 meaningful, we have to be able to include as much as
8 we possibly can.

9 DR. BOVE: Yes.

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

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

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

1 time comes.

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

4 MR. OSGOOD: I have a follow up.

5 DR. BOVE: Oh, okay.

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

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

22 Yeah, well I mean, this is, again, this is what
23 our contractor is collecting the information but if
24 you send it to us we'll get it to the contractor to
25 do that.

1 MR. OSGOOD: Just need phone number, contact
2 info so they can --

3 DR. BOVE: Yeah. Yeah, yeah. Yeah.

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

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

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

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

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

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

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

23 DR. BOVE: I think we want to get to a point
24 where we're happy with the plan and then I think
25 John can get involved then.

1 MS. DAVIS: Okay.

2 DR. BOVE: We just, in other words, we were
3 back and forth on a few issues and I guess, you know
4 --

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

6 DR. BOVE: -- we'll keep --

7 MS. DAVIS: -- him directly?

8 DR. BOVE: Yeah, yeah, yeah.

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

10 DR. BOVE: Yeah.

11 MS. DAVIS: Okay, thank you.

12 DR. BREYSSE: Go ahead.

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

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

20 MS. AMICO: Okay.

21 DR. BOVE: Okay. So historical use. I also
22 think that one of the reasons -- we've mentioned
23 this to Abt also -- is that the state environmental
24 agency people also have a good idea of what happened
25 there as well. When we came here over three years

1 ago, the first time we met with them and they seemed
2 to know quite a bit about AFFF accidents and so on.
3 So that's another group, again, we're going to talk
4 to. But if you know people who were there who can
5 provide information, that's very helpful, it really
6 is.

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

22 DR. BOVE: Okay. Well we're going to be
23 working with the State because they have the names
24 and addresses of the people who participated in the
25 biomonitoring program so we're going to send letters

1 to that, those people, so that's the main
2 recruitment we're going to be doing. That doesn't
3 mean the people who didn't participate can't be
4 eligible, but we're going to focus on our
5 recruitment first on that group and try to get as
6 many of those people as possible because we have two
7 measurements then of PFAS serum and that's very
8 important. So that's I mean I don't think there's
9 any problem with you collecting names as well, but
10 our main recruitment's going to be focused on those
11 people.

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

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

18 MS. AMICO: How do we tell people to get in
19 touch with you if they're interested in being in the
20 study? Like what if they don't get the letter?
21 What if they've moved? You know, like I don't think
22 it's going to be that cookie-cutter, they're going
23 to get the letter and they're going to call you.
24 Like there's going to be some people that don't know
25 what to do, so how do we direct the community to you

1 and is it something that has to wait until you're
2 absolutely ready to like sign them up and draw
3 blood, or is there any type of period beforehand
4 that people can say hey I'm interested, here's my
5 name, here's my address, call me when you're ready.

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

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

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

25 MS. AMICO: Right now, okay.

1 DR. BREYSSE: So to be clear. Individual
2 people can't contact us about participating. But if
3 there's a group that wants us to talk about what
4 we're doing, why we're doing it, we'll be happy to
5 do kind of broader kind of outreach discussion-type
6 sessions. We just can't collect names or any kind
7 of personal identifiers.

8 MS. AMICO: Okay.

9 DR. BOVE: We'll think about this too.

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

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

14 DR. PAVUK: This is the issue, so preparing the
15 list I mean presumably we -- these will be people
16 contacted that actually worked you know, lived on
17 the base, could have been you know exposed, but
18 still you cannot necessarily review you know their
19 eligibility for the study, so... Yes, it would be
20 helpful if you would make the list instead of you
21 know just using you know announcement and outreach
22 you know in media. It's always better to have a
23 list and you can basically from your CAP perspective
24 you know you already can tell some of those people.
25 If you were not here or you didn't work there, it's

1 very unlikely that you will be considered for the
2 study. But you will not be able to contact us at
3 that point, or we cannot pre-review that list for
4 you.

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

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

14 MS. AMICO: Right, and that's what we're doing
15 --

16 DR. PAVUK: They cannot do that with us.

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

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

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

22 DR. PAVUK: No.

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

25 MS. CARMICHAEL: Can you remind us again about

1 target enrollment numbers? I know you've reviewed
2 it, and I just can't remember what they are.

3 DR. BOVE: I'll see if I can remember.

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

6 DR. BOVE: A thousand.

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

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

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

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

18 **QUESTIONS FROM THE AUDIENCE**

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

25 UNIDENTIFIED: (inaudible) My husband was a

1 fireman from '61 to '63 at Pease Air Force Base. He
2 was also crash rescue and his job was to walk into
3 all the chemicals that were set on fire, put on an
4 asbestos suit before he walked in, of course, and
5 then put out the fires every three weeks as
6 training. He did this for three years. He is dead
7 now, he died of bile duct cancer. He hated the job,
8 it was a dangerous job. Everybody knew the well was
9 polluted. A restoration project came out for Pease
10 Air Force Base and the well, the Haven well was the
11 number one polluted area. And you don't have to
12 take my word for it, it's in writing, it's on line,
13 it's everywhere. So there's a lot of history, a lot
14 of facts that you can get from this report, numbers,
15 studies. It was supposed to be cleaned up before
16 the transfer from the Air Force to Portsmouth and
17 now a lot of people signed off on that. I think
18 everybody should pull that up, read it, read the
19 description. My husband hated it. He said it was
20 very dangerous. When we went by there all the
21 burned grass, all the pollution, all the dead trees,
22 he would shake his fist and swear every time we went
23 by there because he did that for three years. He
24 never knew it would kill him, but it did. And I
25 just want everyone here to know that the Haven well

1 has been polluted for a long time and the whole town
2 of Newington, New Hampshire has been polluted. And
3 there's a lot of people that need to answer for it.
4 There were people that signed off on the Superfund
5 that never should've signed off on it. There's just
6 a lot there. I know it all because I read it and
7 reread it and, you know, we were married for a long
8 time and I've been going on for 20 years after his
9 death. And the only thing we did different was I
10 didn't walk into those fires, I wasn't a fireman.
11 And I believe that it's an extremely dangerous job
12 and I think that somebody really needs to pull up
13 all this information, there's plenty of it. I mean,
14 you don't even have to do studies. It goes way, way
15 back, 1984 is the earliest one I have, but there
16 were Portsmouth officials as well as Air Force
17 officials that signed off on that. And that was
18 supposed to be cleaned up. These people have been
19 drinking the water, they've been living in
20 Newington. The daycare center, all these places
21 were affected by that one well. And my husband
22 walked into that with every chemical you can think
23 of and they would set it on fire. And you would
24 walk in there in an asbestos suit. Wonderful,
25 right? And put out the fire. And I believe that

1 everybody should know about it, everybody should
2 read about it. I'm not trying to blame people or
3 ask for money or anything like that, I'm just trying
4 to see that everybody knows the real truth, the real
5 shape. You don't have to do studies and I know you
6 do, I guess, to prove it, but what I'm saying is
7 true and is on line. I gave the information at
8 another meeting I was at and I gave the cover sheets
9 so that people could pull it up and I talked to Air
10 Force personnel there who were very helpful because
11 I had had a hard time finding it. I got it
12 accidentally. I was looking for firemen that had died
13 that my husband had worked with and that's all I
14 typed in was firemen from 1961 and that popped up.
15 And it was a gift, believe me, it was a gift. I
16 learned a lot from it. But please, really dig in.
17 I know these studies are all important now to people
18 that have been exposed to it, but you need to look
19 at the history and realize that that well was never
20 good, ever. If you, I don't know what you know
21 about chemistry, I don't know much but I knew
22 someone who was really good at it and he told me
23 that it never goes away. Once that's in the soil,
24 once that's in the ground, that stays in the water.
25 There's no such thing as a cleanup. It should've

1 been closed then and maybe a new well dug. I don't
2 know what the solution would've been, but I know
3 that that was a tragedy and it took my husband's
4 life. That training was ridiculous. The things
5 they put there, anything burnable and just threw a
6 match in. And he would go in there blindly with
7 flames all around right next to the drinking water,
8 right next to the Haven well.

9 I went on the Pease tour and I want to say my
10 father was Air Force, I love the Air Force, but I
11 went on the Pease tour and they took us to the spot
12 where they said the well was and where the fire
13 rescue trained and that was not the spot. And I
14 said, we need to go out to Newington Road so these
15 people can see, you know, the destruction from the
16 well, the trees, the grass, everything. And they
17 said, that's our last stop. And of course, we
18 didn't have time for the last stop, that's what they
19 said when the tour ended, we don't have time for the
20 last stop. So my anger was just boiling over. My
21 husband drove by there and we would drive by the
22 dead trees, the gas pooling in the yard of
23 somebody's house, and over here they had the grass
24 was all black, nothing ever grew there. We went
25 there like 30 years later, the grass is still black.

1 Now it's covered with plastic. I went out to take
2 pictures and trucks were out there and they told me
3 I could not take pictures and they were cutting down
4 dead trees. So to me that was a cover up. And I
5 don't want that, I want honesty. This happened.
6 It's a tragedy and it happened and I just have to
7 tell you what I know and what I'm saying is the real
8 truth. And I'm doing it because I love my husband
9 and he's gone and I feel that people deserve to know
10 what happened.

11 DR. BREYSSE: Thank you. Thank you for your
12 testimony and thank you for your family's service.

13 UNIDENTIFIED: Thank you.

14 DR BREYSSE: And I'm sorry for your loss,
15 ma'am.

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

25 DR. BREYSSE: I'd be happy to.

1 MS. BROCK: Thank you very much.

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

4 **MULTI-SITE STUDY UPDATE**

5 DR. PAVUK: Thank you, Dr. Breysse. Good
6 evening, everyone. Just to remind everybody on the
7 scope and goals of the multi-site study from the
8 last meeting in September, multi-site study is
9 designed as a cross-sectional study that follows in
10 proof of concept and closely resembles and follows
11 Pease health study and is targeted to enroll up to
12 6,000 adults and 2,000 children in investigation of
13 health outcomes, measurements of PFAS compounds and
14 evaluation of clinical and research tests and
15 biomarkers in their serum and potentially, urine.

16 We have been -- this year has been developing
17 the protocol for the study and last year in
18 September we reported that we were getting close to
19 completing the protocol and submitted for external
20 peer review. That has happened and in October the
21 protocol was sent to additional three external peer
22 reviewers as required by law. We also, part of the
23 review was also submitted to National Institute of
24 Environmental Health Sciences and they also provided
25 their comments by the mid -- in November. The

1 protocol was revised, responses to reviewers that
2 was done, completed by beginning of December and the
3 protocol has been submitted after the shutdown to
4 the agency clearance. We have also received
5 additional comments from our sister agency, National
6 Center Environmental Health and from Office of
7 Director and made additional adjustments to the
8 protocol. So that's part of the external peer
9 review that is required in our process. In parallel
10 with that process we have been developing the
11 funding mechanism for the study that we called NOFO,
12 that is New Funding Opportunity acronym for this
13 project. We are -- the mechanism will be slightly
14 different than for the Pease health study. Instead
15 of contract mechanism, those will be cooperative
16 agreements. We are proposing, at this point, up to
17 six awards in the range of 1.5 to 3 million
18 including six different sites.

19 The funding mechanisms for this goes through
20 the Center for Disease Control and Prevention office
21 which is called extramural research program office.
22 They administer in this program and mechanism and
23 development of all those documents go through that
24 office. So in parallel with developing and
25 reviewing our protocol through the October,

1 November, December window, we have also been
2 developing documents for ERPO, for External Research
3 Program Office.

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

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

1 an award sometimes in September, that is our goal.

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

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

22 I just want to re-emphasize one more time that
23 while we completed some of the steps, we need to
24 complete the steps for multi-site study the same as
25 for Pease. So again, do the 60-day package for OMB

1 first, then focus on obtaining CDC IRB and other
2 reviews such as safety and security.

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

7 DR. BREYSSE: Andrea.

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

11 DR. PAVUK: Right, right, right. So when I was
12 mentioning that this will be cooperative agreements
13 and this is a Notice of Funding Opportunity, so that
14 Notice of Funding Opportunity basically includes the
15 criteria for who can apply for these awards. So we
16 are not, on our side, actively picking the sites.
17 People that are eligible which are research entities
18 of basically there's quite wide leverage like who
19 can apply, can apply for this funding. So there is
20 two-tier process of primary and secondary review
21 done by CDC, ERPO, External Research Program Office,
22 that will review the proposals, rank them, do the
23 basically do the review. So those people are not
24 ATSDR, right, or CDC. There will be a special
25 review panel that will review and rank the

1 proposals, provide those to the many different
2 offices through the CDC and ERPO, and eventually
3 back to our center and leadership. And then in the
4 secondary review many different factors of that
5 process will be put under consideration and a
6 selection of the final awards will be made. It's
7 quite a complicated process.

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

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

12 DR. BREYSSE: Go ahead.

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

21 MS. AMICO: Okay.

22 DR. BREYSSE: Okay. So we backed up from the
23 end of the fiscal year. We have to have the money
24 in and out the door by the end of the fiscal year.
25 So that gives us a pretty tight time window to write

1 a notice, get it approved, announce it, give people
2 time to apply and then give us time to review, make
3 the awards, transfer the money. So all that gets
4 done by the end of September. And recognizing that
5 by the end of September really means end of August
6 because the federal government likes to take a month
7 to close down its books and so they really try to
8 get us to get all our spending in a row by the end
9 of August. And so that's what we're working quite
10 aggressively to meet.

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

17 DR. BREYSSE: It won't happen.

18 MS. AMICO: That's -- okay. And --

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

21 MS. AMICO: Okay. I'll think positively. But
22 just going back to --

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

25 MS. AMICO: Right. But I also know, with all

1 due respect, this is taking -- this takes a long
2 time and there's a lot of processes and layers of
3 bureaucracy and I just don't want to risk this part
4 being jeopardized in any way.

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

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

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

23 MS. AMICO: Yeah. We talk to communities all
24 over the country that want to be part of the study -
25 -

1 DR. PAVUK: Right.

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

6 DR. PAVUK: Right.

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

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

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

19 DR. BREYSSE: Yes, Courtney.

20 DR. CARIGNAN: And my question is, I'm
21 wondering what your plan is for how you're going to
22 handle the data, I guess, the data pooling and the
23 data analysis. I know that it sounded -- it sounds
24 like the sample analysis is all going to be done
25 centrally so it's all being done at the same lab and

1 that's not part of the budgeting for people making
2 the proposals. I'm just wondering also about the
3 data analysis that, you know, there's a lot of
4 outcomes that you're planning to look at and I'm
5 just wondering if that's -- you're planning to pool
6 the data, have a data management center at ATSDR and
7 then is that -- all the data analysis going to be
8 done at ATSDR by ATSDR epidemiologists or are you
9 planning to have some of that or maybe all of it
10 done through the (inaudible)?

11 DR. BREYSSE: So we envision that the
12 individual site awardees will have access to the
13 data from their site and are free to do analyses
14 based on those data and publish papers based on the
15 site-specific work. We do intend to pool all the
16 data and we will be the data management function for
17 that. But like any multi-site study, we will have a
18 publication committee and people can propose
19 publications. There will be, you know, many dozens
20 of papers that could be written from this. And so
21 we'll handle that like many big multi-site, multi-
22 investigator studies handle that going forward. And
23 I will also say we're trying to put some money aside
24 for investigator initiative in special projects if
25 there's something that one team wants to add that's

1 not part of our normal protocol based on some new
2 science that might emerge or some unique
3 capabilities they have, we hope to be able to
4 entertain proposals to add novel components to the
5 study as it goes forward as well. So I hope that
6 answers your question.

7 DR. CARIGNAN: It does. Thank you.

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

22 MS. DAVIS: Can you explain where you came up
23 with the numbers for the 6,000 adults and 2,000
24 children and how you feel that's going to be
25 dispersed across the awards? I mean, one awardee

1 could want, you know, potentially want to do the
2 majority of those numbers, so how do you figure
3 that's going to work?

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

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

16 DR. PAVUK: So --

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

20 DR. PAVUK: Right.

21 DR. BOVE: Other end points that still would
22 require a lot more and so, you know, but the 6,000
23 and 2,000 figures hit most of the end points we were
24 interested in, so that's where some of that came
25 from.

1 DR. PAVUK: In regard to other part of your
2 question, we want to be flexible for the awardees to
3 propose how much they want to be done necessarily,
4 you know, divide it up and made the requirements for
5 the awardees. There are different sites all around
6 the country, there may be smaller sites that include
7 private wells. We didn't want to limit the number
8 of samples or participants that the people would
9 propose to study. So it is kind of open and as you
10 are saying, there may be sites that they are
11 proposing to do many more, you know, enroll many
12 more people than the others. Hence, the role of the
13 separate independent review panel of scoring and
14 reviewing the applications. So it may be, you know,
15 kind of a combination of larger and smaller sites.
16 It may -- we are not requiring that everybody
17 collects 1000 people. That's something, you know,
18 we after much discussion we decided to go with the -
19 - to follow, you know, corporative agreement route
20 instead of contract where we would require those
21 things up front. The, you know, the country has
22 many different sites. There's many different
23 conditions and we didn't want to really, you know,
24 exclude people up front that would not, you know,
25 conform to those kind of pre-requirements.

1 DR. BOVE: And these figures, by the way, 6,000
2 and 2,000 are minimum, not maximum.

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

13 DR. BOVE: Yeah. And again, we wanted to have
14 a range of exposure. So if one applicant has a
15 number of private wells that have high levels of
16 PFAS in them, that may be an important applicant to
17 choose because we want to make sure we have
18 exposures at the high end that may not have a lot of
19 people on those private wells, there may not be
20 maybe a hundred or two hundred or three hundred
21 maybe, but we would consider, in other words, we
22 would consider situations like that because our goal
23 really is a range of exposures. Okay? So if an
24 applicant has, I mean, they'd have to have some
25 numbers, I mean, if they have only like 50 people

1 maybe, you know, that wouldn't be -- we don't have a
2 minimum cut off that they, you know. But I can
3 foresee situations where there are, you know, a
4 sizeable population with private wells with high
5 levels of PFAS in their private wells that that
6 would be an important applicant to consider.

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

9 DR. PAVUK: Yes.

10 DR. BOVE: Yeah, yeah, yeah.

11 DR. PAVUK: It's not limited just to -- it's
12 not limited only to ex-military.

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

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

19 DR. BOVE: No. No.

20 UNIDENTIFIED: (inaudible)

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

23 UNIDENTIFIED: There's not a limit?

24 DR. BOVE: No.

25 MS. CARMICHAEL: Is there a finite window

1 during which applicants can apply? So for example,
2 following an announcement in March or April do they
3 have 60 or 90 days?

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

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

9 DR. BOVE: It's 60 days.

10 MS. CARMICHAEL: -- for you all.

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

13 MS. CARMICHAEL: Yeah.

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

16 MS. CARMICHAEL: Both, I think.

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

24 MS. CARMICHAEL: Okay. Thank you.

25 MR. HARBESON: I was hoping you could talk a

1 little bit more about the review panel, both who
2 makes up the review panel to rank the different
3 sites and then also related to the earlier question,
4 I would imagine that even after you rank that, if
5 you're looking for multiple outcomes in a large
6 number of people, I would imagine that even within
7 that ranking you're probably looking at -- that
8 review panel is going to look at the group
9 holistically to determine which sites will best
10 provide the greatest amount of data.

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

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

23 MS. AMICO: Hi. I hope my question is easy.
24 The 6,000 and 2,000 numbers, will that include Pease
25 or is Pease separate because we're going to do a

1 thousand adults so does that mean there's 5,000 more
2 or is that separate?

3 DR. BREYSSE: I think it's separate.

4 MS. AMICO: I thought it was an easy question.

5 DR. BREYSSE: I think -- We haven't asked.

6 DR. BOVE: I mean, at the end of the day we'd
7 like at least 6,000 adults and 2,000 children. If
8 some of them are from Pease to make it that high, if
9 we're having trouble finding -- getting numbers, I
10 guess that Pease would be considered part of that.
11 But no, our feeling is that it would be in addition
12 to Pease.

13 MS. AMICO: Okay.

14 DR. BOVE: We'd like to have at least 7,000
15 adults.

16 DR. BREYSSE: Do you have a question, ma'am,
17 you want to ask now?

18 UNIDENTIFIED: I have no questions.

19 DR. BREYSSE: You sure?

20 UNIDENTIFIED: Positive.

21 DR. BREYSSE: Okay. Any other questions? All
22 right, so now we're going to move on to the exposure
23 assessment update and Dr. Chris Reh will give us an
24 update on that.

25 **EXPOSURE ASSESSMENT UPDATE**

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

24 DR. BREYSSE: If I could just add one more
25 supplement to that is that we hope from these data

1 from the study to look at the relationship between
2 what's in the water and what's in the blood. And
3 that will help inform the modeling that we talked
4 about before in the Pease Proof of Concept and the
5 multi-site study. So understanding that
6 relationship allows us to estimate what's in the
7 water and predict what would've been in the blood
8 based on those estimates, once we know those
9 kinetics, we call that in toxicology terms.

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

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

23 MS. SHAHEEN: So does that mean you're less
24 likely to select sites that are no longer operating
25 a military base?

1 DR. REH: Not necessarily.

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

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

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

25 MS. SHAHEEN: Thank you.

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

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

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

10 DR. REH: Unfortunately, no.

11 DR. BREYSSE: Unfortunately, no.

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

14 DR. REH: That's right.

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

19 DR. BREYSSE: Yes.

20 DR. REH: Possibly, yes.

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

1 when do you expect data to come back from those --
2 that?

3 DR. REH: From the multi-site?

4 MS. AMICO: Uh-huh.

5 DR. BREYSSE: Marian had said before.

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

21 MS. AMICO: But in terms of getting results
22 back from the multi-site study, like you're talking
23 about enrollment but then do you have a cut-off
24 period of time as to when you require this data to
25 be reported back to you and then --

1 DR. PAVUK: Right. That would be -- that would
2 include enrollment and reporting. Completing means
3 that the data sent with all the information would be
4 available --

5 DR. BREYSSE: Four to five years.

6 DR. PAVUK: Right. For --

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

10 DR. PAVUK: Correct.

11 DR. BREYSSE: Yeah.

12 DR. PAVUK: Yeah.

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

16 DR. BREYSSE: Right.

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

20 DR. BREYSSE: Well what we're planning right
21 now is to visit sites in the order and so we can't
22 do all eight sites at once so obviously the first
23 sites that we visit we'll have data earlier than the
24 last sites we visit. So our goal is to try and come
25 up with a national profile of PFAS biological levels

1 of communities with drinking water contamination and
2 that will -- that final report will have a
3 distillation across all eight sites and in fact
4 there's two other sites that we've already started
5 and it will include their data as well. But you
6 know, some of the first sites we have we'll have
7 some data out earlier. So you know, you won't have
8 to wait till we're done with all eight to start
9 looking at what we're finding.

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

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

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

24 DR. BREYSSE: No. That was funding from NIEHS
25 to Colorado.

1 MS. AMICO: Okay. I think those are all my
2 questions for right now. Thank you.

3 DR. PAVUK: So just to add on that a little
4 bit, just keep in mind so altogether this is about
5 3,000 samples, give or take.

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

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

13 MS. AMICO: Oh they have? Okay.

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

23 MS. AMICO: Okay. So that's helpful to know.
24 So there's no risk of losing the funding or anything
25 for this, this is much further along.

1 DR. REH: That's correct.

2 MS. AMICO: And you already know the sites, you
3 just can't tell us yet.

4 DR. REH: That's correct.

5 MS. AMICO: Okay, thank you.

6 MS. DAVIS: So you partly answered one of my
7 questions. First, how are you going to be making
8 the announcement?

9 DR. REH: We have quite a roll-out plan.
10 They're all -- it will be announced on line, there
11 will be some media content that will go out so there
12 is a whole roll-out plan that we can probably share
13 with you at some point this week.

14 DR. BREYSSE: We -- our roll-out plan is still
15 under agency and HHS review.

16 DR. REH: Right. Yeah.

17 DR. BREYSSE: So it's obviously getting a lot
18 of scrutiny. There's a lot of people who are going
19 to need to be alerted in advance and there's a lot
20 of political interest from all levels of government
21 and there's a lot of communities who are -- who may
22 not be part of the exposure assessment that also
23 need some discussions. And so that roll-out plan is
24 what we're -- the last thing we're waiting for, that
25 final vetting of that approval, who's going to be

1 notified, when they're going to be notified, how
2 they're going to be notified. And then once that
3 gets approved then we'll -- then we're ready to
4 start with the announcement.

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

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

16 MS. DAVIS: Oh, okay.

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

18 MS. DAVIS: One contractor.

19 DR. REH: Right. And so they will start with
20 one site and then after a period of time then we'll
21 start another until we finish through all eight.
22 The recruitment part of it and the community
23 engagement is being -- we have a contract for that
24 also through Abt and they will be conducting the
25 community engagement with our support.

1 MS. DAVIS: Okay. Because we had talked about
2 community assistance panels possibly for exposure
3 assessments and the multi-site study so that's
4 really not needed for exposure assessment?

5 DR. REH: I would say that's correct.

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

9 DR. PAVUK: Yeah. It's about 450 per site.

10 MS. DAVIS: Okay. That's all my questions.

11 MS. SHAHEEN: So can you help us understand
12 what we will be missing by having gone first and
13 collected samples that weren't collected in the
14 context of the framework for the exposure
15 assessment? We're going to have this multi-site
16 study that Portsmouth is going to get to be a part
17 of; at the same time there are going to be these
18 exposure assessments. What would you learn in these
19 other communities that we might not learn here about
20 Portsmouth through the multi-site study? Is there
21 anything you can differentiate for us relative to
22 what you might learn from a different community
23 that's not part of a multi-site study that we may
24 not learn about Portsmouth because we're not part of
25 the exposure assessment?

1 DR. REH: So all of these studies build on
2 themselves and so the protocol that we used in the
3 PEATT studies which were the New York and the
4 Pennsylvania studies was the pilot test for the
5 exposure assessment protocol that we're using in
6 this study, the exposure assessment. And then that
7 exposure assessment will be the central part of the
8 Pease proof of concept and then further on the
9 multi-site. So these studies all build on each
10 other.

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

15 DR. REH: None.

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

19 DR. REH: Okay.

20 MS. SHAHEEN: Thank you.

21 DR. DURANT: Can you comment at all about the
22 protocol that you're going to use to estimate
23 exposure to the chemicals in the drinking water? So
24 I understand what you're trying to do with the blood
25 and urine protocols, you're trying to standardize

1 that across all of these different studies which, of
2 course is laudable. What are you going to do about
3 water, how are you going to do the same kind of
4 rigorous protocol development to make sure you
5 quantified exposure to chemicals in the water?

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

13 DR. BOVE: All right, let's get a couple of
14 things straight. There's the exposure assessments,
15 right? And there we're still discussing exactly
16 what we're going to do in terms of if we're going to
17 do modeling at all there or we're going to do it at
18 a few sites or what. Okay. The multi-site study
19 which, and back to your question, Stefany, I mean,
20 they sort of build on each other but they don't
21 actually go that closely. I mean, the multi-site
22 study is important to do because doing the study
23 just at Pease is not -- does not give you the
24 statistical power to look at a lot of the end points
25 we really want to look at. So that's why -- and

1 that's -- we've been talking about that for years
2 now, that Pease was important to do a study here but
3 it was important to do it at other sites so we could
4 combine that data and have more statistical power.
5 So that's what multi -- and given -- and we're doing
6 the same thing or trying to do the same thing at
7 Pease that we're going to do in the multi-site study
8 which is historical reconstruction and we're going
9 to have an expert panel that will both inform what
10 we do at Pease but will also provide recommendations
11 or suggestions or whatever language I can use here
12 for the applicants to also use those methods to
13 model it at their site. Okay. So the multi-site
14 study will include historical reconstruction of
15 drinking water contamination. But hopefully we'll
16 be able to use some of the same methods across all
17 the studies, although it really depends on the site
18 characteristics and so on, which models may work
19 better than others. And whether they have to do
20 distribution system modeling as well. We don't have
21 to do that at Pease but you might have to do that in
22 other sites. So that's -- so that's where that is.

23 As for the exposure assessments, we've been
24 mulling this over because it is a lot of work to do
25 this modeling. And so, you know, our thoughts at

1 this point, but we're still discussing this, is
2 maybe to pick a site where the -- it would be a
3 simple approach to model it. Maybe it'll be a
4 surface water system or something of that sort,
5 something that wouldn't require a lot of work to at
6 least estimate what the water concentrations were
7 over time and then compare that to the serum levels.
8 Okay? And so both through modeling and also the
9 PBPK modeling necessary to go from the drinking
10 water to the serum estimate. Okay.

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

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

25 DR. BOVE: The exposure assessment is not

1 looking at outcomes.

2 MS. SHAHEEN: Oh.

3 DR. REH: No health outcome.

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

6 DR. BOVE: PFAS serum levels.

7 MS. SHAHEEN: Got it.

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

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

22 DR. BREYSSE: So we agree. So we're looking at
23 picking a couple of sites, at least, to do that at
24 and then, you know, depending on availability of
25 resources we may expand it or not.

1 MS. AMICO: So you guys had mentioned at the
2 multi-site study that all the PFAS samples would be
3 analyzed at the same lab. Is that going to be the
4 case with the exposure assessments; are you
5 requiring them to be all analyzed, and the urine as
6 well?

7 DR. REH: That's correct.

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

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

12 MS. AMICO: I'm sorry, what?

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

22 MS. AMICO: Okay.

23 DR. PAVUK: So they'll be a subset.

24 MS. AMICO: Will all the urine be analyzed in
25 one place, too, though?

1 DR. PAVUK: Correct.

2 MS. AMICO: Even though it's not everybody?

3 DR. PAVUK: Correct. Same lab.

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

9 DR. PAVUK: That's the hundred million dollar
10 question.

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

12 DR. PAVUK: So --

13 DR. BOVE: We're not seeing anything.

14 MS. AMICO: Okay.

15 DR. PAVUK: So there --

16 DR. BOVE: We don't see much.

17 DR. PAVUK: So there has been new methods in
18 testing and develop, you know, are looking at, you
19 know, similar and different compounds and so that's
20 why we are not trying to use all the urine all at
21 once, using the methodology that doesn't look
22 promising at this point. So those samples will be
23 stored and will be continuously re-evaluating the
24 matters as they come up and if there is more
25 promising method, we'll use it. But at this point,

1 you know, the lab at CDC has different methods.
2 There's another method by access that is a little
3 bit more promising, but we're not there yet on like
4 what exactly would be -- would be the set of PFAS
5 compounds that is best to be looked at in urine at
6 this point.

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

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

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

13 DR. PAVUK: We'll collect -- we'll try to
14 collect from everyone. Yes.

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

19 DR. BOVE: No.

20 DR. PAVUK: No.

21 DR. REH: Two additional.

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

23 DR. REH: Right.

24 MS. AMICO: Okay. So you're still going to
25 find eight more on top of those two? Okay, thank

1 you very much.

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

4 PEASE HEALTH CONSULTATIONS UPDATE

5 CAPT SOMERS: Back to me. So as you know, on
6 the CAP and some folks in the audience who've been
7 here several times, the ATSDR has two health
8 consultations that are related to the Pease
9 Tradeport site. So there is one health consultation
10 that focuses on the public drinking water system
11 here at the Pease Tradeport, and the other is a
12 health consultation that focused on the private
13 wells that were contaminated that are off the base
14 but are related to the base contamination. So the
15 first one, on the public drinking water system it
16 has -- the document for public release has cleared
17 our internal ATSDR clearance and now the
18 communication materials that go along with it which
19 are like the fact sheets and then our plan to how
20 we're going to roll the materials out is going to go
21 to clearance through CDC and then HHS. And when we
22 get approval then we can have those meetings we've
23 talked about before. We would try to set up a
24 series of meetings for the public drinking water
25 system. We'd likely do it here on the Tradeport and

1 we would try to have meetings spread over, you know,
2 maybe a day or so where we could do morning, noon,
3 and early evening meetings, try to catch folks
4 because we know people don't live here, they work
5 here. So we'll try to get to that working
6 population. So that's where we are on that.

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

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

23 And so we are also coordinating with the
24 communicators from Abt who are working on the study
25 because we realize there's going to be a lot of

1 information coming out and to avoid, you know,
2 confusing the general public about what is this
3 meeting for that ATSDR is having or that meeting
4 for, we'll work to make sure we can try to keep
5 those messages clear and we know what meetings
6 they're having for the study and we know what --
7 everyone's on the same page. So do you have
8 questions, you go ahead. Are you going to ask me
9 when? I feel it coming.

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

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

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

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

23 MS. AMICO: Okay.

24 CAPT SOMERS: But don't, like I'm not going to
25 hold my breath.

1 DR. BREYSSE: So.

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

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

6 CAPT SOMERS: Yeah.

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

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

19 CAPT SOMERS: Well, yeah. So they were a
20 little bit behind the public drinking water one. I
21 think the -- within ATSDR, and again 'cause this is
22 going to be pretty much the first health
23 consultation that comes out nationwide about these
24 contaminants so this -- the way the document is
25 written is sort of setting the template, if you

1 will, for how ATSDR and our state cooperative
2 agreement partners are likely going to create all
3 other health consults moving forward. So internally
4 it got a lot of attention and I think the idea was
5 to focus on one, get it to a really good spot and
6 then use that, again, to then sort of model what
7 you're going to say also in the private drinking
8 water one. Not that the conclusions are necessarily
9 exactly the same, but to make sure your
10 methodologies -- everyone's on board with the
11 methodology and everyone's on board with the
12 messaging and so we have consistency. So it's a
13 little bit behind as the focus was on the first one.

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

17 CAPT SOMERS: Oh gosh, that's another good
18 question. Okay. So going back in time, initially
19 when the Pease Tradeport PFAS contamination first
20 came to sort of everyone's attention, New Hampshire
21 was one of our ATSDR cooperative agreement APPLETREE
22 states and under our cooperative agreement the state
23 that we fund has usually the first dibs, if you
24 will, the first right of refusal to start working on
25 a document. So the state of New Hampshire as an

1 APPLETREE partner for us was working on these
2 documents. And at that time, as you know, there was
3 a lot of change happening with like, 'cause at that
4 -- they started and then EPA changed its lifetime
5 health advisory number and then so their things
6 shifted. And then in 2017, right, that was our last
7 funding cycle, New Hampshire was no longer an ATSDR
8 APPLETREE cooperative agreement state so it came
9 back internal to us at ATSDR. And at that time too
10 the new lifetime health advisory came up and we
11 started reworking on it. So it's been kind of in-
12 house since 2017.

13 MS. AMICO: But New Hampshire started it in
14 2014 when the contamination was found?

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

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

22 CAPT SOMERS: The water data. I mean, they had
23 the first round but then, you know, I think to make
24 a really good health conclusion you kind of want
25 more data than just one sampling point. So there's,

1 you know, as more and more samples came in.

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

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

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

21 CAPT SOMERS: Yeah, that's a good question. So
22 we did have as part of our roll-out plan we wanted
23 to do some clinician awareness. I wouldn't exactly
24 call it clinician education 'cause I don't think
25 we're going to be able to like go and provide direct

1 clinician education, but we have some clinician
2 materials and we were going to try to make sure,
3 again, we make that known. There was a presentation
4 at the New Hampshire Medical Society meeting in the
5 fall, so we could reach out to them again and try to
6 reach out to their network. It's a little
7 challenging to get to clinicians, really, and
8 especially in an area where there's people have lots
9 of choices, you know, lots of options. We can also
10 work with the state again and see if we could put it
11 out through their state network. I don't know if
12 there would be a health advisory, you know, like the
13 HAN system, I'm not sure it would qualify for that
14 but we can talk to them.

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

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

20 MS. CARMICHAEL: I have a question about
21 whether or not, thank you, the conclusions that we
22 read in the versions that we were asked to provide
23 feedback on were impacted by the tox profile. I get
24 it. I'm trying to sort out the timing, I feel like
25 we provided feedback about a year ago and then

1 obviously the tox profile came out during the
2 summer, I believe, so --

3 CAPT SOMERS: Correct.

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

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

14 MS. CARMICHAEL: Right.

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

1 further down that line. Does that help?

2 MS. CARMICHAEL: Yes, thank you.

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

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

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

20 MS. CARMICHAEL: Great. Thank you.

21 CAPT SOMERS: Sure.

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

24 CAPT SOMERS: No.

25 MS. AMICO: I.e., like DoD?

1 CAPT SOMERS: No. So they saw the same data
2 validation version that you saw back in, yeah, about
3 a year ago. Right? What are we now? Yeah, it's
4 January. It was a little more than a year ago, but
5 yes.

6 PERFLUOROALKYLS TOXICOLOGICAL PROFILE UPDATE

7 DR. BREYSSE: All right, if we move along.
8 I'll give a brief update on the tox profile. So as
9 you know, it was submitted as a draft to public
10 comment, and we received comments from 60 different
11 individuals and groups and many of them required
12 detailed addressing and we have comments in addition
13 from the DoD, from NASA, from the FDA. And for
14 example, DoD sent over 377 comments. So a majority,
15 a lot of -- the single biggest commenter on that tox
16 profile was Department of Defense. We got, not
17 surprisingly, 144 comments from 3M; they're
18 interested in this. All total there was 830
19 comments that needed us to respond to, so that's a
20 hefty lift there. And we're in the process of
21 responding to those comments and we're developing
22 that response. It was held up a bit with the
23 shutdown, but we hope to have those comments placed
24 in the federal record and come out with a final
25 version of that sometime this spring.

1 MS. SHAHEEN: Just a question on the timeline
2 for responding to comments and whether or not that
3 slows down the release because I can imagine a
4 scenario where you get inundated with things you
5 have to respond to and then time goes on and the
6 public hasn't gained access to this important
7 information. So can you give us a sense of the 800
8 and however many comments you were bombarded with,
9 is that going to delay things six months, two
10 months, or not at all?

11 DR. BREYSSE: You know, this is, you know, I
12 guess I want to not overstate what I know. I don't
13 know if this is an unreasonable number of comments
14 for a tox profile. I suspect it's probably greater
15 than we normally get on a typical tox profile and
16 so, you know, we're required to do due diligence and
17 carefully consider them and address them and frankly
18 if there's something there that causes us to say oh,
19 we need to make a change and that change is big
20 enough, we'd actually pull it back, revise it and
21 resubmit it. Which we've done in the past with this
22 document, by the way. So I don't think we have
23 anything that falls in that category but we just
24 have to make sure that we address them all
25 carefully.

1 MS. SHAHEEN: Okay. So that was a very
2 delicate way of not answering my question. So does
3 that mean it slows us down considerably? I totally
4 understand ATSDR's need to respond and read the
5 comments. I also understand the instinct by folks
6 who may be protecting or be care -- wanting to be
7 especially concerned about what gets said about the
8 chemicals they're responsible for emitting. So what
9 I would hate to see is that you respond to these
10 comments and then there are another thousand
11 comments and then we're three months or six months
12 or 18 months down the road and we still don't have
13 access to the profile.

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

17 MS. SHAHEEN: Okay.

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

1 MS. SHAHEEN: Thank you.

2 DR. BREYSSE: All right. So now --

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

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

17 MS. AMICO: Yeah, that sounds about right.

18 DR. BREYSSE: And the tox profile at that time
19 said there wasn't enough data to establish an MRL.
20 And sometimes we write tox profiles and we conclude
21 that there's not enough information to establish an
22 MRL. We sent it out for public comment and the
23 public comment was well yes, there is, and you
24 should reconsider that because the science is
25 accumulating. So we pulled it back and we

1 reconsidered it. And in 2012-ish, '14-ish we
2 produced another document that had an MRL for PFOA
3 and PFOS, and the comments were, I think those are
4 probably higher than they should be, there's some
5 data to suggest they're not as low as they perhaps
6 could be and you ought to consider some of these
7 other compounds, we now think there's enough data to
8 write MRL for some of these other things. So we
9 agreed with those, we pulled it back, we revisited
10 the PFOA and the PFOS tox profile, we came up with
11 MRLs for now PFNA and PFHXS and that's where we got
12 to right now. So the science is changing rapidly,
13 as you know, and we've made a decision in-house that
14 we aren't going to hold it up for the sake of
15 emerging data in this case because we will never get
16 off that treadmill, as you just know. So we will
17 release it and if we think there is emerging data
18 we'll just reconsider it in the future and we will
19 amend it going forward. So we're keeping a very
20 careful eye on the emerging science about the
21 chemicals we have MRLs for and some new chemicals we
22 don't have MRLs for. And we will continue to amend
23 it as we see fit.

24 MS. AMICO: Thank you. That answered my
25 question.

1 MR. DIPENTIMA: How will the results of your
2 toxicology profile affect the industries material
3 safety data sheets that they put out with these
4 chemicals when they are sold to industry?

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

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

15 DR. BREYSSE: Well these numbers are not --

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

18 DR. BREYSSE: I just want to remind you that
19 these numbers are not meant for routine use concern.
20 They're really meant for situations where there's a
21 hazardous materials score or hazardous waste
22 scenario like we have here and they're really meant
23 to guide our public health assessments to help us
24 target areas where we think their greatest risks
25 exists. And so they wouldn't fall into normal

1 practice as a guideline that people might use in a
2 workplace setting or other setting.

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

7 DR. BREYSSE: We hope so.

8 MR. DIPENTIMA: Yeah.

9 **CAP CONCERNS**

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

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

19 DR. BREYSSE: So we began planning to conduct a
20 national cancer study and it's an ecological study
21 in that we're just looking at cancer rates in areas
22 where there's no contamination, compare them to
23 cancer rates in areas without contamination. So
24 we're trying to identify communities we can
25 characterize in a geographically defined way with

1 sufficient precision to look at cancer in those
2 communities and compare it to other communities as
3 well. And in fact, there's probably a number of
4 designs we could do. We could look across the
5 country, we could do a more focused study within a
6 state where we think there's sufficient data and we
7 have a team of scientists now who are coming up with
8 plans to address the cancer issue that might include
9 some state focused efforts as well as looking across
10 the other place.

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

1 looking at these other parts of the pie.

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

4 DR. BOVE: Yeah, definitely.

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

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

8 MS. AMICO: So I feel like I bring this up at
9 every meeting under CAP concern and you're probably
10 sick of hearing me say it, but one of the gaps that
11 continues to be a problem in our community is the
12 need for medical monitoring guidelines and better
13 physician education. And like Tarah had mentioned
14 back in November the New Hampshire Medical Society
15 had their annual event and they did have a panel and
16 a presentation by a pediatrician from Boston
17 Children's Hospital on PFAS and then had a panel
18 that was moderated by Dr. Ben Chan from DHHS of New
19 Hampshire, myself, a community member from
20 Merrimack, New Hampshire, where they have PFOA from
21 an industrial site. And then Dr. Tom Sherman who's
22 a local G.I. physician but was just recently elected
23 to the senate for New Hampshire and also was the
24 head of the pediatric cancer cluster task force that
25 was put in place a couple years ago and, you know, I

1 thought that panel went really well. I was happy
2 there was probably about a hundred and fifty
3 physicians in the room. I felt like people were
4 really engaged and even afterwards a lot of
5 physicians stayed to ask a lot of questions and I
6 think that they are a good route for us to try to
7 continue to engage with so we can do a better job of
8 outreaching to providers and bringing more
9 education. But I also think that I still want to
10 continue to stress to ATSDR that that's a huge gap
11 in this community and other PFAS communities. You
12 know, these health studies are great and I'm so
13 excited we have the funding and the plans are
14 rolling out but as you said, we're talking five
15 years before we get any meaningful data from those
16 and so I want to know what I can do today to monitor
17 the health of my children that have already been
18 exposed. I don't want to wait five years to hear
19 oh, you know, they're at risk for thyroid issues
20 now. You know, I'd rather try to monitor things
21 more closely today and moving forward to protect
22 their health. So I just want to take that
23 opportunity to say that again. It's a big gap in
24 this community, it's a big gap in all these impacted
25 communities across the nation. We had a good first

1 step with the New Hampshire Medical Society, I want
2 to build off that momentum and I want to ask the
3 ATSDR to continue to consider medical monitoring
4 guidelines and other ways to engage physicians
5 because it's a big need in our community related to
6 this issue.

7 DR. BREYSSE: And you can say that as often as
8 you need to. And we will continue to look for ways
9 to engage the medical community and as part of our
10 commitment to engagement communication here, we'll
11 make sure that's a part of our focus herein and
12 across the country. As we said before, you know,
13 for CDC, it wouldn't be ATSDR, to come up with some
14 official medical monitoring guidelines is a big
15 deal. And steps like that are not taken lightly
16 across CDC and it's something that oftentimes takes
17 years. Just as an example, the effort that went
18 into CDC revising the opioid prescription guidelines
19 for this country was a very big deal, it took a long
20 time, it was very contentious. So I think the best
21 we can do right now is to point the community to
22 other sources of that information like the medical
23 monitoring guidelines from the C8 study. So on our
24 website we clearly list that as something to
25 consider for going forward. At some point in the

1 future we might be at the point where we think we
2 could get a specific medical examination guideline
3 approved up through the agency. We will try and
4 pursue that but in the meantime I think the best we
5 can do is point to what we think are authoritative
6 sources elsewhere that seem to make sense and cite
7 those efforts on our web pages.

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

13 MS. AMICO: I fully understand that but, you
14 know, PFAS contamination is becoming a widespread
15 national issue so I hear what you're saying. The
16 opioid crisis is a widespread national issue. So
17 the PFAS issues are not going away and I understand
18 that it's hard but just because something's hard
19 doesn't mean I'm not going to ask for it, doesn't
20 mean that I'm not going to continue to highlight the
21 gap in our community and across the country. There
22 are many parents from this community that want to
23 know what they can do to keep their children safe
24 today and to monitor their health. That is a huge
25 need in our community and I'm going to continue to

1 stress that at every meeting and I get that it's
2 hard but I'm not going to stop asking for it.

3 DR. BREYSSE: Okay. Fair enough.

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

25 MS. AMICO: Right, so I guess the way I see it

1 is because physicians aren't given a significant
2 amount of training in environmental exposures, they
3 are looking to state health departments CDC for more
4 guidance. You know, we have folks in this community
5 who take their blood test results to physicians and
6 they say I don't even know what these chemicals are,
7 I've never heard of them. So although I hear what
8 you're saying, I get it, physicians aren't getting
9 the training, they don't know about these exposures,
10 that doesn't mean that that's creating -- that's,
11 you know, it's still a problem in our community that
12 we need to try to address.

13 DR. PAVUK: I understand and I would put it,
14 it's not really as much a question of training, even
15 though that would help, but it's really the lack of
16 consensus on part of medical community, you know, as
17 an example, you know, of glyphosate as pesticides,
18 you know. You have different agencies and bodies
19 that like international, you know like IARC or
20 friends or WHO, a health organization that may come
21 to a consensus that something is or is not probably
22 and possibly carcinogenic, but if the medical
23 community, the oncologists are not on board with
24 that as a profession that this is actually something
25 that's happening then it's very difficult to get

1 through them to persuade them if they do not believe
2 or they are not persuaded by the scientific evidence
3 that that's the case. And as you can see in each of
4 those litigations over the last 40 years, the
5 medical community is simply -- the evidence that
6 they see is not unequivocal in a sense that they
7 would go with this.

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

24 DR. PAVUK: Right.

25 MS. SHAHEEN: So if we're in that same boat

1 here where there may always be 25 percent of the
2 medical community who doesn't understand that
3 they're --

4 DR. PAVUK: Correct.

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

6 DR. PAVUK: Correct.

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

19 DR. BREYSSE: So ATSDR in general is not in the
20 business of setting medical examination criteria.
21 There are medical groups that do that. What we look
22 for authoritative sources of that and we look to
23 cite that in our papers like the C8 study. And we
24 look to provide the evidence base from which to
25 inform that going forward. And in the uncertainty

1 that we all are struggling with right now, we try
2 and give communities and doctors the best advice we
3 think exists right now, recognizing that we're going
4 to refine it as we learn more. But it's really not,
5 you know, right in the lane of ATSDR to be
6 developing examination guidelines for the medical
7 community. We would look to groups like the
8 American Academy of Pediatrics or the American
9 College of Gynecology and Obstetrician --
10 Obstetrics, you know, or other groups to kind of who
11 are more authority -- authoritative in that to come
12 up with those sorts of things. And like I said, we
13 look to places that we think produce authoritative
14 guidelines and reference that when we talk to
15 communities.

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

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

21 MS. SHAHEEN: Okay, no and I --

22 DR. BREYSSE: Yeah, yeah.

23 MS. SHAHEEN: -- so that's what I'm asking you
24 all, given your vantage point, given what you know
25 from the standpoint of ATSDR, for CDC to act, not

1 necessarily ATSDR but someplace else within CDC,
2 what would they need to hear? I mean, because
3 otherwise we just keep shouting into the vortex
4 saying there's a need here. And we understand
5 you're not maybe the right actor to address that
6 need but we've got to figure out --

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

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

13 DR. BREYSSE: No. That's not what
14 toxicological profile is supposed to be.

15 So I hear you and we could reach out to other
16 groups that might be in a better position to kind of
17 take this on, like the American Pediatrics
18 Association or something, and we can discuss with
19 our other colleagues at the CDC, recognizing that
20 CDC is, for the most part, other than opioids was an
21 example otherwise, is an agency that's more
22 comfortable in the infectious disease arena than in
23 the environmental health arena. So but and I'm
24 totally sympathetic and understand your concern here
25 but right now we, like I say you know, we try and

1 cite what we think is the best available guidance
2 out there and we refer to that on our websites.
3 Right now the C8 guidance is what we have on our
4 website.

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

8 DR. BREYSSE: Yeah.

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

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

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

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

25 MS. AMICO: Okay. Thank you very much.

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

18 DR. BREYSSE: NOFO.

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

23 CAPT SOMERS: Right. And we'll reach out to
24 the CAP too to help us determine maybe like what are
25 good days to do a public meeting to release the

1 document. Like there might be days here that just
2 aren't good for reasons I don't know. And to get
3 the word out especially on the Tradeport or to
4 people that you know would have an interest here. I
5 mean, we can try different methods. You know, we
6 can put it on our website but people aren't, you
7 know, sometimes we try to put like an announcement
8 in a local paper. We try different methods to get
9 the word out so we can do all those things. But
10 again, a lot of people don't read the little
11 announcements in the paper, they just --

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

25 DR. BOVE: Well in particular, those who were

1 involved with firefighting training 'cause that's
2 the source of the contamination.

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

10 DR. BREYSSE: Any other? Russ.

11 UNIDENTIFIED: May I ask (inaudible; no
12 microphone)

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

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

18 DR. BREYSSE: You know, my training is in
19 engineering and chemistry so that would be beyond my
20 --

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

23 DR. BREYSSE: I don't -- I can read up on it
24 but I wouldn't --

25 UNIDENTIFIED: Can you? Would you look into

1 it? AMAS 95 percent accuracy and that's really
2 unusual because they gave him the C8 (inaudible) and
3 that has a five percent accuracy of detecting,
4 that's what they told him. And eventually that went
5 from 19 to 4200 (inaudible). I just wanted to bring
6 it up while I had people here that could maybe find
7 out why that blood test is not available. Besides
8 eliminating a lot of money, it could be part of the
9 blood work. Just (inaudible).

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

24 DR. BREYSSE: Well I think that's -- Stefany
25 mentioned you guys might want to talk about that

1 amongst yourselves.

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

3 DR. BREYSSE: No.

4 MR. OSGOOD: Or CDC?

5 DR. BREYSSE: Well NIOSH is part of CDC.

6 MR. OSGOOD: Okay.

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

16 MR. OSGOOD: Okay.

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

1 MR. OSGOOD: Do it again.

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

6 MR. OSGOOD: Okay.

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

9 DR. BOVE: When you think about this though,
10 you want to try to identify firefighters who are
11 actually exposed considerably to PFAS. So you may
12 want, you know, NIOSH is looking at firefighters but
13 there are firefighters who trained with AFFF, there
14 are firefighters who used it more routinely or
15 trained with it. And if you, you know, one of the
16 things, you know, you might want to consider is how
17 to identify that group of firefighters, right? If
18 you want to focus on PFAS, because the firefighters
19 study that NIOSH is doing and the work they're
20 doing, which is important work, but firefighters get
21 exposed to all kinds of things and if they're not
22 using AFFF very often, which is, I think the case
23 for the three cohorts they're talking about, 'cause
24 I've talked to the PI, the Chicago, Philadelphia,
25 and San Francisco firefighters, they might use it on

1 occasion but I don't think that -- what I was told
2 was they really don't use it at all or I don't know
3 if that's true.

4 DR. BREYSSE: Not routinely anymore.

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

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

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

23 DR. BOVE: And also those would -- the ones who
24 trained with it would probably also be wearing that
25 impregnated equipment.

1 MR. OSGOOD: Correct.

2 MS. SHAHEEN: Right.

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

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

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

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

22 (Proceedings concluded, 9:00 p.m.)

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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

STEVEN RAY GREEN, CCR, CVR-CM, PNSC

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