

U.S. ENVIRONMENTAL PROTECTION AGENCY (EPA)

e-MANIFEST ADVISORY BOARD MEETING

PUBLIC MEETING

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"RE-ENGINEERING ELECTRONIC SIGNATURES FOR
GENERATORS AND TRANSPORTERS TO INCREASE
ADOPTION OF ELECTRONIC MANIFEST"

LOCATION: VIRTUAL MEETING TO BE CONDUCTED
ONLINE AND OVER THE PHONE

APRIL 14-16, 2020

ATTENDEES LIST

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OPENING OF MEETING AND ADMINISTRATIVE PROCEDURES

OPERATOR: Good morning, everyone. My name is Jerome, and I'm the EPA teleconference operator for this virtual public meeting of the e-Manifest Advisory Board. This meeting is scheduled for three days and will begin at 10:00 a.m. Eastern Time each morning.

Today will entail EPA presentations to the Board. Tomorrow, Wednesday, Day 2, will open with the oral public comment period. If you have not already signed up to provide oral public comments and you are interested in providing oral public comments during the oral public comment period, Fred Jenkins, the Designated Federal Officer of the e-Manifest Advisory Board, will be providing you instructions shortly. After the oral public comment period closes, the e-Manifest Advisory Board will openly deliberate on their responses to EPA's charge questions for the remainder of the meeting.

I will now ask Fred Jenkins, the Designated Federal Officer of the e-Manifest Advisory Board, to proceed with opening this meeting at its start time at 10:00 a.m. Eastern Time. Thank you.

1 **DR. FRED JENKINS:** Thank you so much,
2 Jerome. Good morning, everyone, and I want to welcome
3 everyone to this e-Manifest Advisory Board meeting.
4 The theme of this meeting is "Re-engineering
5 Electronic Signatures for Generators and Transporters
6 to Increase Adoption of e-Manifest."

7 My name is Fred Jenkins and I am the
8 Designated Federal Officer of the e-Manifest Advisory
9 Board. Before we get started, I would like to take a
10 couple of minutes to go over a few administrative
11 items. As the DFO, I serve as the liaison between the
12 Agency and the Board, and I am responsible for
13 ensuring that the provisions of the Federal Advisory
14 Committee Act are met. I want to extend my thanks to
15 the entire Board for agreeing to serve in this meeting
16 and to the public for attending this meeting.

17 The e-Manifest Advisory Board is a
18 Federal Advisory Committee that provides independent
19 peer review and advice to the agency on operational
20 matters related to the e-Manifest system. It is
21 important to note that the Advisory Board only
22 provides advice and recommendations to EPA and that
23 all regulatory decision making and implementation
24 authority remains with the agency. The e-Manifest

1 Advisory Board is composed of nine members. In
2 accordance with the e-Manifest Act, this includes the
3 EPA administrator, or the designee, to serve as the
4 Chair of the Board. Our designated Chair is Kathleen
5 Sayler. She's the Acting Director of the Office of
6 Resource Conservation and Recovery.

7 The other members include six
8 representative members. These six representative
9 members include three members who represent industry
10 users of the manifest system to track the
11 transportation of hazardous waste under the e-Manifest
12 Act. And the three other representative members are
13 state representatives responsible for processing e-
14 Manifest.

15 There are two non-representative
16 members of the e-Manifest Advisory Board. These two
17 non-representative members are appointed solely for
18 their expertise in information technology. In our
19 case, one of those two IT expert members has been
20 appointed as a special government employee member.
21 And the other IT expert member is currently a federal
22 government employee. Thus, he is our regular
23 government employee member appointed to the Board.
24 These two expert members are speaking and providing

1 advice on behalf of themselves as experts in their
2 fields.

3 Both of these appointed IT expert
4 members are subject to the applicable ethics laws, and
5 we have worked with appropriate Agency officials to
6 ensure that all appropriate ethics regulations are
7 satisfied for this meeting. These two expert members
8 have been provided the provisions of the federal
9 Conflict of Interest laws, and both of them have filed
10 a financial disclosure report. I, along with our
11 Deputy Ethics Officer and in consultation with the
12 Office of General Counsel, have reviewed these reports
13 to ensure all ethics requirements are met.

14 This meeting also provides an
15 opportunity for public comment. We do encourage
16 interested members of the public to take advantage of
17 participating in the public comment period scheduled
18 for tomorrow morning. If you have not made prior
19 arrangements and you wish to make oral public
20 comments, please let me know no later than 2:00 p.m.
21 Eastern Time today so that I have time to send your
22 name to the operator and so that we can provide you
23 instructions on how you will be providing your oral
24 public comments during the oral public comment period

1 tomorrow morning. Without having made prior
2 arrangements, we ask that you please limit your
3 comments to five minutes.

4 There is a public docket for this
5 meeting. The docket number is listed on the agenda.
6 All background materials and other related documents
7 are available in the docket. Slides of EPA
8 presentations that you will see today will be
9 available in the docket soon.

10 This entire meeting is being
11 broadcasted via Adobe Connect and our audio
12 teleconferencing system. Participants can listen to
13 and watch as we present -- do the material live. All
14 audio for this meeting is over the phone. Please
15 adjust your local volume settings. Please report any
16 technical problems with this webcast to me directly,
17 Fred Jenkins, at jenkins.fred@epa.gov.

18 At this point, I want to introduce and
19 extend my thanks to Kathleen Sayler, the Acting
20 Director of the Office of Resource Conservation and
21 Recovery here at EPA, who is serving as the delegated
22 chair of the e-Manifest Advisory Board. Thank you and
23 I'm going to pass the old mic over to Kathleen.

24 **MS. KATHLEEN SAYLER:** Great. Thank

1 you, Fred. Good morning, everyone. And again, my
2 name is Kathleen Sayler. I'm the Acting Director of
3 the Office of Resource Conservation and Recovery here
4 at EPA. I'm also currently the Acting Delegated Chair
5 of the e-Manifest Advisory Board. And I wanted to
6 just welcome everybody to this FACA meeting.

7 I would like to begin by first thanking
8 the e-Manifest Advisory Board for their service in
9 this week's meeting and thank you all for your hard
10 work in preparing for this week's meeting. I'd like
11 for each of the members of the e-Manifest Advisory
12 Board to now introduce yourselves. Please introduce
13 yourselves in the order that your names appear on the
14 Board member roster for this meeting. Please go
15 ahead.

16
17 **INTRODUCTION AND IDENTIFICATION OF BOARD MEMBERS**
18

19 **MR. TERRY BAER:** Thank you, Kathleen.
20 This is Terry Baer. I'm the representative for
21 Arizona. I work for ADEQ. At ADEQ, I manage the
22 solid and hazardous waste program for the state of
23 Arizona. I've been with the state for three years,
24 and I've been in the industry for 15 years prior to

1 that. So thank you for having me.

2 **MR. THOMAS BAKER:** Good morning. Hi.
3 This is Tom Baker with Veolia North America. I'm the
4 Vice President of Environmental Health and Safety for
5 Veolia. I'm here as an industry representative. Our
6 company has the facilities, hazardous waste, TSDFs.
7 We also function the generators and transporters as
8 well.

9 **MR. JOSHUA BURMAN:** Joshua Burman,
10 Hazardous Waste Specialist with the Minnesota
11 Pollution Control Agency, here as a state
12 representative. The state of Minnesota has been
13 collecting and processing information from hazardous
14 waste manifests for several decades prior to the
15 introduction of e-Manifest and here to bring the
16 state's experience with that process and history to
17 the Board.

18 **MR. FRED JENKINS:** And this is Fred
19 Jenkins again. We have one member, I think, that's
20 running a little late. I spoke to him yesterday. He
21 is joining us, but he may be a little late this
22 morning. His name is Syed Hafeez. He is the Director
23 of Program Evaluation and Information Resources. He
24 is at the U.S. Department of Labor Mine Safety and

1 Health Administration. Mike, if you can go ahead and
2 introduce yourself.

3 **MR. MICHAEL HURLEY:** Sure. Absolutely.
4 Good morning. My name is Mike Hurley with the
5 Massachusetts Department of Environmental Protection.
6 I serve as the chief of the data systems branch where
7 my staff and I largely oversee all in-application
8 development, data collection, e-permitting, things of
9 that nature. And our experience, as does Joshua's,
10 goes back about 20 years on manifest data collection.

11 And Massachusetts served on the pilot
12 project back in 2007 for the e-Manifest initial test
13 case. So I'm pretty much more from the tech side of
14 the house. But I look forward to talking to you all
15 about this stuff. Thanks.

16 **DR. TEVFIK KOSAR:** Good morning. My
17 name is Tevfik Kosar. I'm one of the IT expert
18 members of the Board. I'm a professor of computer
19 science at the State University of New York at
20 Buffalo. My expertise includes data life cycle
21 management and workflow optimization. Thank you.

22 **MS. JILL MACIOCH:** Good morning,
23 everyone. My name is Jill Macioch, and I'm an
24 environmental supervisor with Xcel Energy and Xcel's

1 holding company based in Minneapolis, Minnesota. And
2 we consist of four operating companies providing
3 electric and natural gas to our customers across eight
4 states. We also operate out of our NSP Minnesota
5 company, a TSDF -- our treatment, storage, and
6 disposal facility that I manage.

7 We're specifically the storage facility
8 for hazardous waste, especially regulated waste, and
9 also PCBs, or polychlorinated biphenyls, that are
10 generated internally by our company. And we also have
11 drivers and a fleet for hauling the hazardous waste
12 and PCB equipment and oil. I'm an industry user of
13 the e-Manifest system. I have familiarity as a
14 generator, transporter, and as a receiving company.
15 Thank you.

16 **MS. CYNTHIA WALCZAK:** Good morning.
17 This is Cynthia Walczak. I'm a project manager for
18 MPS Group. We provide waste management staffing and
19 services to a variety of generator companies. And I'm
20 on the Board as an industry representative.

21 **MS. KATHLEEN SALYER:** Great. Thank you
22 all. That completes the Advisory Board introductions.
23 And thank you all again for your service. So with
24 that, I'm going to turn it over to Peter Wright, who's

1 the Assistant Administrator for the Office of Land and
2 Emergency Management for a short welcome and opening
3 remarks. Go ahead, Peter.

4
5 **WELCOME AND OPENING REMARKS**

6
7 **MR. PETER WRIGHT:** Well, thank you,
8 Kathleen, and thank you to all of you for joining us
9 this morning and over the next couple of days. First,
10 I'd like to acknowledge the times we're in. I
11 sincerely hope that all of you listening today and
12 your families are safe and well. I want to add, in
13 times like this, it makes us appreciate our families,
14 our colleagues, and our community. And thanks to all
15 of you, our e-Manifest community, for joining us from
16 locations from across the nation to keep up this good
17 and vital work towards meeting our program's goals.

18 During these challenging times, we
19 remain committed to the greatest extent possible to
20 maintain our momentum to ensure the success of the e-
21 Manifest system. Over the last year, we've made
22 significant progress in our program, including a
23 significant reduction in our paper manifest backlog,
24 developing of new functionality that allows for both

1 signing of manifests by generators and transporters,
2 notification of manifest activities, and just recently
3 we released for user testing and feedback new
4 abilities for brokers and transporters to initiate and
5 schedule manifests.

6 Another development over the past year
7 is new FAQs, for example, focusing on PC manifests.
8 And we're working on new rulemaking which will
9 incorporate export manifest and explore how to use e-
10 Manifest with other manifest reporting requirements.
11 And we continue to provide ongoing monthly webinars
12 and biweekly user support calls.

13 During our last Advisory Board meeting,
14 we celebrated the successful launch of the system. We
15 acknowledged that the next phase of the program was
16 upon us, which was how to increase the use of
17 electronic manifests and unlock the benefits of e-
18 Manifest. Accelerating the transition from paper to
19 fully electronic submissions is a top priority for
20 EPA. Electronic manifest submissions serve to lower
21 the cost for all stakeholders and significantly reduce
22 the burden for industry users.

23 Our current situation is certainly not
24 ideal. Less than half of a percent of the submitted

1 manifests are electronic. Costs have been higher than
2 anticipated because of the need to manually input
3 data. System benefits have not yet to be fully
4 realized because of the current system's cost and
5 complexity, particularly for generators and
6 transporters. And data errors are more numerous than
7 expected, which also increases cost.

8 After our June 2019 Advisory Board
9 meeting, the Advisory Board provided us with their
10 recommendations. We found them thoughtful and
11 indispensable. Based on the Board's advice, we've
12 spent the last several months laying out the
13 groundwork for an approach towards a greater adoption
14 of electronic manifest. Today, we bring the Advisory
15 Board and the e-Manifest community our proposed
16 solution for increasing the use of electronic
17 manifests, that is streamlining the electronic signature
18 process for generators and transporters. We are
19 hopeful that the methods that we discuss over the next
20 three days will sufficiently lower the barriers of
21 entry for tens of thousands of industry users,
22 resulting in an increased use of electronic manifests
23 and greater benefits to the stakeholders from using
24 this system.

1 I want to end by thanking the Advisory
2 Board for dedicating this time to our program, for
3 doing so despite the circumstances, and for helping to
4 guide our program to be its very best. Thank you to
5 the EPA e-Manifest team for your continued commitment
6 to public service in the e-Manifest program. And
7 thank you to our user community and the public for
8 your thoughts and engagement.

9 With that, I know that the e-Manifest
10 team is eager to begin the presentation and even more
11 eager to listen and learn from our Board and our
12 stakeholders. I look forward to seeing and hearing
13 about the outcome of your time together. And again,
14 thank you so very much for your commitment and your
15 dedication for being here and over the next few days.
16 So thank you and I'll turn the program back over.

17 **MS. KATHLEEN SAYLER:** Great. Thank
18 you, Peter. So with that, we'll go ahead and start
19 with the agency presentation. So I'd like to
20 introduce Steve Donnelly, who is the e-Manifest
21 Program Manager, to provide the Agency's opening
22 presentation. Go ahead, Steve.

23 **MEETING INTRODUCTION AND PURPOSE**
24

1 **MR. STEVE DONNELLY:** Thank you very
2 much, Kathleen. This is Steve Donnelly, the e-
3 Manifest Program Manager. And I hope I am coming in
4 loud and clear, not too loud. I want to welcome you
5 all to this first virtual Advisory Board meeting. It
6 was quite a -- I think we're all on shifting sand
7 right now, so let's speak slowly and clearly. And
8 we'll get through this together. Thank you all very
9 much.

10 So yes, welcome to "Re-Engineering
11 Electronic Signatures for Generators and Transporters
12 to Increase Adoption of Electronic Manifests." As we
13 kick off this meeting, I would like to give a
14 dedication to someone we lost in the EPA family,
15 someone who was at the EPA for 30 years. Matt Leopard
16 has recently passed away.

17 He cast an incredibly large shadow and
18 did many, many wonderful things for environmental
19 data, visualization, and brokering some great
20 relationships between the regulated community, the
21 states and the EPA Headquarters, as well as regions.
22 We miss him terribly, and we just thank him for all
23 the work and all the wonderful memories. So thank you
24 very much, Matt. You will be missed.

1 Okay. We can go to the next slide.

2 Okay. Welcome to the e-Manifest Advisory Board
3 meeting. As I said, we're going to get through the
4 presentations today. And we will be discussing the
5 purpose of the system today. We're going to do a
6 quick refresher before we get into the meat of the
7 white paper and our slides.

8 And as you know, Congress directed the
9 EPA to develop the e-Manifest system to reduce the
10 administrative burden of the paper manifest process.
11 And since the system inception on June 30, 2018,
12 electronic manifests represent less than one percent
13 of all manifests received. We received about 3.1
14 million manifests to date, and we have yet to hit
15 10,000 electronic manifests. And we held an Advisory
16 Board meeting a year ago about increasing adoption of
17 the electronic manifests, and we received valuable
18 input from the Advisory Board on ways to improve use
19 of the electronic manifests. You can go to the next
20 slide.

21 We are pleased to present to the Board
22 on how we intend to dramatically increase the use of
23 electronic manifests. We are going to be presenting
24 three options for easing the burden of executing

1 electronic signatures for generators and transporters.
2 These are not a -- it's not a pick one and forget the
3 other two. This is a mix and match approach.

4 We want to hear your advice and your
5 opinions on how these methods could work together or
6 work separately. This is not a pick one and the
7 others go away. So thanks very much. All right. We
8 can proceed to the next session.

9
10 **e-MANIFEST 101**

11
12 **MS. AMANDA KOHLER:** Okay. This is
13 where I'll pick up. My name is Amanda Kohler. I'm
14 the chief of the Permits Branch, and I work in the e-
15 Manifest team on the policy implementation and
16 communication side. Steve, you sound like you could
17 be on NPR. It's kind of interesting to do this
18 meeting when we're all in our separate homes, so many
19 thanks to everyone listening today.

20 This section is just to provide some
21 brief context on our program for folks who may be new
22 to us. And if you are, welcome to e-Manifest. Just
23 going to give you some quick kind of orientation here,
24 and hopefully this will give you enough for the rest

1 of the three-day meeting.

2 Okay. So we launched on June 30th,
3 2018. We, as Steve mentioned, were directed by
4 Congress to establish a national system for tracking
5 hazardous waste shipments electronically. So prior to
6 June 30th, 2018, RCRA, our Resource Conservation
7 Recovery Act, was tracking waste from cradle to grave
8 using a very paper-intensive process. It was a six-
9 copy paper form that we used for decades.

10 Copies of that form would go to
11 generators and transporters and receiving facilities
12 and the states that were collecting those manifests.
13 So everyone had to kind of keep those manifests, and
14 it was just very paper intensive. My slides are
15 jumping around; I apologize for that. Okay. There we
16 go. Let me just back that up here. Okay. There we
17 go.

18 Anyway, so Congress directed and saw an
19 opportunity to take this very paper-intensive process
20 and make it electronic, and that is how we got to e-
21 Manifest. The goal of the program is that it will
22 save valuable time, resources, and dollars for
23 industry and states. So we estimate that, once
24 electronic manifests are widely adopted, we will save

1 industry and states up to \$50 million a year.

2 So that is the goal, and that is one of
3 the reasons that we're having our theme for this
4 meeting today, which is talking about how to get to
5 electronic manifests. But, you know, until we get
6 there, we have seen some savings as well. Just in the
7 two years since launch, e-Manifest has reduced the
8 need for industry to maintain paper manifests.

9 We are now collecting manifests
10 nationwide and making them accessible to all of
11 industry, all of the states, as well as the public.
12 So no longer will industry have to kind of keep those
13 final signed copies. They are in our system.

14 And the other benefit, as well, is
15 that, prior to the launch of our national system, some
16 states were collecting manifests. Some states were
17 not. Some states had robust manifest systems. Some
18 states were just kind of collecting the forms. But
19 now, e-Manifest kind of provides access to all of that
20 manifest data for the state programs, which really
21 helps because, certainly, shipments cross state lines
22 quite a bit. So, now all that data is housed in our
23 program. Okay. So I'm going to go to the -- okay. I
24 can advance my own slides. Okay. All right.

1 So as already mentioned, you know,
2 we're established under the 2012 e-Manifest Act.
3 Another kind of point to mention is that the act
4 require EPA to recover all of our system cost through
5 user fees. So we charge a user fee on a per manifest
6 basis to the receiving facilities that are submitting
7 those final signed manifests to EPA. EPA went through
8 a rulemaking process to determine who pays user fees
9 and what's the methodology for calculating those user
10 fees. So that's all spelled out in the RCRA
11 regulations. And then the other thing the e-Manifest
12 Act did -- and I think Fred mentioned this at the
13 beginning -- is that it required us to establish the
14 Advisory Board, which is where we are today, and
15 explain how the membership of that Board should be
16 composed.

17 Okay. So here's just to kind of recap
18 all the benefits, and I mentioned some of these
19 before. Certainly, we're looking to save everyone
20 money. But it also provides accurate and more timely
21 information on waste shipments. Prior to the national
22 system, most of the information we knew about waste
23 generated and managed came from the biennial report,
24 which is every other year and certainly required time

1 to kind of have industry submit that report and have
2 the states do their QA.

3 So we were receiving information about
4 waste management maybe one, two, two and a half-year
5 delay. Now, we get that information much more timely,
6 certainly to the states and industry users, kind of
7 almost nearly real time, and then to the public after
8 90 days, so much more timely information. And that
9 kind of rolls into the next benefit which is, because
10 we have the information that's more robust and more
11 timely, we can identify issues a lot sooner and thus
12 kind of assist in addressing those issues before they
13 kind of become bigger problems.

14 We have talked about the single hub for
15 one-stop reporting. Never before have we had this
16 national picture of waste activity until June 30th,
17 2018. So that is a huge benefit which certainly helps
18 with compliance monitoring.

19 And then this last bullet -- going back
20 to the biennial report, this has been something that
21 the Congress wanted us to look at. Certainly, there's
22 a lot of information that's similar between the
23 manifest form and the biennial reporting process under
24 RCRA.

1 So certainly leveraging those two to
2 further reduce burden in the biennial reporting
3 process is something that we have wanted to do. It's
4 on our plate to do, and I think we are looking at a
5 meeting to kind of complete some interim steps in
6 doing that. And the first step is getting to wider
7 adoption of electronic manifest.

8 We see the e-Manifest program having
9 multiple facets, and so system development certainly
10 is a huge piece of that. We did not stop developing
11 this system on June 30th. We have been enhancing and
12 adding functionality every month after.

13 Many of you know Scott Christian. He
14 is our e-Manifest Technical Lead. We use an agile
15 development process, so what this means is we are
16 building the system in small working components,
17 adding functionality. We usually do that using two-
18 week sprints, so to speak, where we kind of work on
19 these small working parts and add to the system
20 accordingly. Then I think, actually, in the next
21 section when we do our program updates, Steve will
22 talk about the functionality that we've added in the
23 last year or so.

24 I will also mention that -- yeah.

1 Okay. So regulatory policy and development, so we
2 have, certainly, a regulation side. I mentioned the
3 user fee rulemaking. We have another rulemaking in
4 queue that we'll talk about in a little bit that will
5 address export manifests and some other reporting
6 requirements. We also consider this piece when we do
7 all of the FAQs. So any questions that come up about
8 how to use e-Manifest in the current RCRA manifest
9 program and answering any questions in that comes out
10 of the policy team.

11 Key contact here is Bryan Groce from
12 our team. Many of you may remember Rich Lashier. He
13 has been a part of the e-Manifest program for two
14 decades, and he has since retired. He retired,
15 actually, on the one-year anniversary of our system
16 launch last June, so we miss him. But Bryan is the
17 key contact here.

18 Implementation and communication, so
19 this is everything from our monthly webinars, our list
20 serv management, working with the regions and states
21 on implementation questions, going through and helping
22 just individuals try to work through any issues
23 they're encountering. So we do a lot here. Many of
24 you probably hear Fred Jenkins the last Wednesday of

1 every month at 2:00 p.m. Eastern, and we do those
2 monthly webinars. We provide status updates, we
3 demonstrate functionality, and we answer questions
4 kind of in real time.

5 Contracts and billing, certainly a big
6 piece of our program. This is the program
7 administration piece. So we have key contacts here,
8 Darnell Wilson and Tammy Toney (phonetic). But this
9 is managing certainly our system development
10 contracts, our paper processing center, and then
11 making sure that invoices and billing are accurate.

12 And then our piece here is, of course,
13 the Advisory Board. This is Fred Jenkins serving as
14 Designated Federal Officer, working on hosting these
15 meetings, preparing for these meetings, holding the
16 meetings, and then certainly looking forward to the
17 recommendations that come about 90 days after, and
18 sitting down, going line by line, and determining how
19 we can respond to what the Advisory Board is telling
20 us in our future plans. So those are kind of how we
21 see the program falling out.

22 And this is my last 101 slide because
23 this is -- you will hear these terms come up over and
24 over again, probably both over the next three days, as

1 well as in many of our communications. We refer to
2 four different manifest submission types, so I just
3 wanted to spend some time explaining what these terms
4 mean. We have electronic manifests. These are
5 electronic manifests. So this is what we will be
6 talking about over the three days. This is where we
7 want to go.

8 These are manifests that originate in
9 our e-Manifest system and include manifests that are
10 signed electronically by all handlers. So this is
11 generator, transporter, receiving facility. Those are
12 fully electronic manifests. And it also includes
13 manifests that are signed electronically by the
14 initial transporter and subsequent handlers. That's
15 called a hybrid manifest. In the hybrid manifest, the
16 only kind of nuance is that the generator is the only
17 entity that can actually sign on paper. But the rest
18 of the transaction is handled electronically. So
19 that's an electronic manifest.

20 The following three are paper
21 manifests. And this is actually a question we get a
22 lot. I think the confusion might stem from paper
23 manifests can be submitted electronically to EPA, and
24 so sometimes folks get confused on what's a paper

1 manifest, what's an electronic manifest. I think a
2 nice tip is that what you can do is you can follow the
3 signatures. If you're signing on paper, you are a
4 paper manifest. If you are signing electronically,
5 you are an electronic manifest. And so that's kind of
6 a nice way to remember.

7 These last three -- data plus image,
8 image-only, mailed -- they are paper manifests. They
9 are signed on paper by all entities. So what
10 differentiates them? So data plus image is a paper
11 manifest signed on paper. The receiving facility,
12 however, when submitting that final signed manifest to
13 EPA, uploads a data file along with a scanned image of
14 that paper manifest. So it's a data plus image
15 manifest.

16 Image-only, paper manifest, all signed
17 on paper. But the receiving facility, when submitting
18 to EPA, just uploads the scanned image. So no data
19 files, just the scanned image, image only manifest.
20 And then, finally, the mailed paper. This is a paper
21 manifest, all signed on paper. But the receiving
22 facility snail mails it to EPA's paper processing
23 center, so it's actually coming through the mail to
24 our PPC in Chantilly, Virginia.

1 So hopefully that helps. I know that
2 sometimes we use these terms without kind of fully
3 describing them. So I think that's it for e-Manifest
4 101. Fred, is it okay if I pause here for any
5 questions?

6 **MS. KATHLEEN SAYLER:** Yeah. I was just
7 going to say that, Amanda.

8 **MR. FRED JENKINS:** Of course. I was
9 just going to ask you to do that.

10 **MS. KATHLEEN SAYLER:** Yeah. And if
11 there's any clarifying questions from the Board
12 members, if you can just use the raised hand function
13 on the Adobe Connect platform, we can call on you.
14 But we'll give you a few seconds to do that if you
15 have any clarifying questions for either Amanda on the
16 101 or Steve on his opening. Okay. Seeing no
17 questions, I think we can move onto the program
18 update. Steve, you want to go ahead?

19
20 **PROGRAM UPDATE**

21
22 **MR. STEVE DONNELLY:** Thank you,
23 Kathleen. Yeah. This is Steve and I am back to do
24 the program update. Just as sort of a note of how

1 things are going to go, this is -- I know we're all
2 missing basketball. We missed March Madness and the
3 NBA. We should be in the start of playoffs. It's not
4 going to be here, so Amanda and I and Scott will be
5 trying to do some three-person weaves. So if
6 something comes up during any of the program updates,
7 if they'd like to add some additional context to any
8 of these slides, please do feel welcome to join in.

9 All right. So the program update -- we
10 can go to the next slide, please. We are going to go
11 over some use and statistics and system functionality,
12 and the policy, implementation, and communication
13 work. And then we'll close out with a brief financial
14 update. So yeah. We can go to the next slide right
15 here.

16 So since the system launched, we have
17 had 3.1 million manifests come in. This is through
18 the end of February. And we have processed a total of
19 575,000 image and mail manifests. That is the images
20 coming in that are uploaded by industry, the full data
21 entered, as well as the snail mail manifests that come
22 to the paper processing center.

23 And as we can see, the largest,
24 greenest chunk is the data plus image manifest

1 uploaded by the receiving facilities, followed by the
2 image-only, and then mailed paper is a -- I think
3 that's around 10 percent. And then we can see that
4 very, very small sliver of electronic manifests right
5 there. We are looking to make that the biggest
6 section of the chart. So this is for all-time.

7 Now, through the update, through FY2020
8 -- so beginning on October 1st -- we received 809,000
9 manifests, and we processed 381,000 of those. So
10 we've done some very, very -- we've been very
11 productive at the paper processing center this fiscal
12 year. And some of the issues we've seen coming up --
13 and we've talked about these in our monthly webinars -
14 - are sort of three big areas that we feel could be
15 resolved by transitioning this to an electronic
16 manifest.

17 The number one issue we've had -- and
18 states have noticed this as well as industry -- is the
19 generator ID. Right now, there's a lot of generator
20 IDs out there. There's a lot of incorrect IDs being
21 submitted, incorrect generator addresses. There are
22 also sites that should be using an EPA ID that are
23 coming in as DS2G.

24 And bringing the generator sites into

1 the application and giving them greater visibility
2 into what is being made on the manifest in that top
3 section in that -- I have a manifest right in front of
4 me -- is in that Section 5. That generator name and
5 mailing address would go a very long way to improve
6 that data quality. The next place we're seeing the
7 most errors are Box 10, 11, and 12, which is the
8 container, quantity, and unit of the waste being
9 shipped. And the third area is PCB information.

10 Now, we've addressed some -- we've had
11 some FAQs posted to bring some additional context to
12 do how PCB -- the way it should be manifest and best
13 practices. And we're also adding a functionality in
14 our next release on Friday for users to copy a PCB
15 line. So they can just -- instead of having to type
16 it all over again, they can just hit the copy button
17 and copy those lines over and over again and adjust
18 the information to meet the requirements of the ranks.

19 All right. As Amanda said and as we've
20 been striving to do since 2014 or 2012 or however long
21 this program has been around -- is we've been using
22 agile software developed in practices to build and
23 enhance the e-Manifest system. That means we build in
24 very small workable chunks, and we depend on

1 consistent user feedback from our users to tell us if
2 what we're doing is working or not working, what are
3 enhancements, what are bugs. And we've been
4 communicating the status of our system development
5 through regular user support calls with its user
6 community.

7 And I do want to take a moment to sort
8 of pause and say we have a couple ways for users to
9 track our software progress, and we're looking for
10 ways to make it a little more digestible and more easy
11 to use. We have a GitHub site. I don't have the URL
12 in front of me, but if you just Google search "GitHub
13 e-Manifest," that'll take you right there.

14 What we do is we publish the work we're
15 doing in two-week intervals, and you can see what the
16 development team is currently building and what
17 they've built in the past. And you can search for the
18 -- we call them issues, which are just ways of saying
19 this is what we worked on, sort of a way of breaking
20 down the work to its component's smallest part and
21 building out from there. We also have a lot of in-
22 depth IT information on our GitHub site. And for
23 those who aren't as familiar with GitHub or are new to
24 it, such as myself and a lot of other people, we've

1 actually just posted a guide on GitHub on how to
2 navigate and maybe make it seem a lot less imposing
3 than it really is because, you know, GitHub was sort
4 of built for IT folks to share IT information. And
5 we're trying to make it a little more user-friendly.

6 Also, inside of the e-Manifest
7 application, right there on the top of the screen when
8 you log in, there is a button that says
9 "Feedback/Report an Issue." So this will allow users
10 to directly send requests for enhancements, bugs
11 they've noticed, and any other feedback that they
12 noticed inside the system. Performance issues, right
13 -- they can send that. They create an issue. It
14 goes right into the system, and it will go right to
15 the developers. And those are tagged and tracked in
16 our program project management system.

17 We've gotten a lot of value from that
18 way of communicating with users. However, we'd like
19 to continue to enhance our program visibility and
20 accountability on other aspects of the program such as
21 communication, progress towards rulemaking. And we
22 are always looking for ways to be more visible, more
23 accountable, and more transparent to our stakeholders.

24 All right. So since the beginning of

1 FY2020, we've released some very good production
2 functionality into the cloud for the general public.
3 Also, we sort of break down the program into sort of
4 four key areas. So there's software we develop for
5 the general public. This is the general public
6 information that's published on RCRAInfo Web. These
7 are the data downloads. These are the site searches.
8 This is the 90 days post receipt of the waste, the
9 material we make public for general use.

10 Then we have the industry user. So the
11 industry users are the ones submitting the manifest
12 data. Then we have our state and regulatory users who
13 use that manifest data submitted by the industry users
14 to run their programs. And then we finally have EPA
15 Headquarters functionalities. So this is
16 functionalities for the EPA Headquarters to manage the
17 system from a financial side, from a billing side,
18 from an analytic side.

19 So for industry users, we've added the
20 ability for generators and transporters to bulk sign
21 their manifests and also given the functionality for a
22 user of a transporter or generator site to filter
23 manifests to bulk sign a select few manifests based on
24 certain search conditions. And we've also had some

1 improvements to reduce the need for receiving
2 facilities to mail the paper copy of the manifest back
3 to the generators. And that includes, when a
4 generator site is added to a manifest, a little yes or
5 no comes up if that site has a registered user.

6 We've also added the ability for when
7 an industry -- when a TSDF is uploading just a blank
8 scanned image of the manifest. They can put in the
9 data of the generator ID to let the generator know
10 that, okay, most of this data from this manifest has
11 not been uploaded, but it is assigned to this
12 generator ID. And we've also added weekly
13 notifications of manifest activities to users. So if
14 you are a user and you are assigned to a site, every
15 week you get a notification of the different manifests
16 that have listed your site ID on them.

17 We've also added this year -- so
18 continuing to industry users, we've allowed users to
19 submit their partial RCRA biennial report information,
20 such as density information. We've added a "potential
21 ship date" field, which will allow for sites to plan
22 out their shipments based on their corporate
23 schedules. And we've done multiple updates to the
24 submission schema.

1 I'm going to back up a couple slides
2 here. So we go back to our big green chunk right
3 there, so the data plus image. Most of those
4 manifests are coming in through something called APIs,
5 or system-to-system connections. So these users are
6 submitting manifests to us from their system to our
7 system, but they are not logging in to the user
8 interface and typing in all the information, going
9 through the traditional workflow.

10 They're using a submission schema to
11 send the appropriate data to us, and then they go in
12 and sign them once it's all done. So the majority of
13 our manifests are coming in from users who are just
14 connecting to their system to our system, they're
15 authenticating, and then they're sending us a lot of
16 data. And then, once that's all in there, they go
17 inside.

18 We've made multiple updates to that
19 schema. And if you would like to see the submission
20 schema and some of the rules, we do have that on our
21 GitHub site as well. And there's documentation on the
22 GitHub site which will allow you to see them. And I
23 use this a lot to sort of -- it's written clear enough
24 where you can see the different validations and -- we

1 call them "business rules" for how something can be
2 uploaded successfully or what sort of errors come back
3 if you put an incorrect piece of information in there.

4 We have some upcoming system
5 functionality. We have some interesting things going
6 live on Friday. So this means that we've had some
7 functionality that has been in our pre-production test
8 environment, which is available to the public to play
9 around and test and break and enhance the
10 functionality that we are looking to add to the live
11 official system.

12 So starting on Friday, the transporter
13 and broker functionality will go live, as well as in-
14 transit shipping changes. And there's a third item
15 that is not on the slides, but it is going live on
16 Friday. It's the ability for users to copy the PCB
17 line information to make it easier to better submit
18 those PCB in -- to better fill out those manifests
19 that contain PCB waste.

20 And we're also putting in some
21 improvements to the user fee collection process. This
22 is one of those EPA Headquarters functionalities.
23 Specifically, this is going to be an automated
24 collection service. So if a site is more than three

1 months late, this will notify that we need to go
2 through the collections process.

3 We are also going to add a manifest
4 tracking number validation, so this will solve one of
5 the big problems we have with the scanned image and
6 data upload where, when an industry user is reading a
7 manifest to upload, sometimes they will incorrectly
8 enter the manifest tracking number into the system.
9 It'll be similar to the one that's on the printed
10 manifest, but it'll be slightly different. And there
11 is currently not a way to make sure that the paper
12 manifest being uploaded is going to match -- is going
13 to have the same manifest tracking number as the
14 manifest number that has been entered by the user.

15 Coming out spring/summer, we're going
16 to have a validation. We're going to use some optical
17 character recognition that will look into the PDF
18 file. It will take that manifest tracking number; it
19 knows where to look for it. Upside down, backwards,
20 it'll read it and it will compare it to the manifest
21 tracking number that has been entered by the user.

22 And if it matches, the upload can go
23 through. If it does not match, it's going to say to
24 the user, "Please take another look. Is this

1 incorrect or was the OCR wrong?" So we've been
2 testing this for a while. We're going to put this out
3 for user testing to get some feedback from our users.
4 And this will be a big help for a lot of industry as
5 well as the EPA Headquarters and states, all
6 associated, because what will happen -- what has been
7 happening for the last two years or so -- is that one
8 manifest will have an incorrect ID and another user
9 will try to upload the manifest that has that
10 incorrect ID on it. And then it's sort of a cascading
11 problem. So we hope to put a stop to some of this
12 issue because it's a labor-intensive process, and one
13 site or two sites can really change a lot of manifest
14 tracking numbers for all sorts of unrelated sites.

15 All right. And then we are going to
16 have -- of course, the big thing right here is
17 implementing options for executing the electronic
18 signatures for generators and transporters, pending
19 this Advisory Board meeting. And then, for the
20 general public, we have just released this. So we
21 should, you know -- these things -- sometimes we move
22 faster than the slides on the software development
23 side, which is good. So we have -- this general
24 public is done. We've allowed for more efficient

1 download of the public manifest data on RCRAInfo Web.
2 So this new way is more database-friendly, and it
3 breaks the data up into data tables instead of having
4 to download the entire manifest rows for each waste
5 line in a given month.

6 So if you look at a manifest -- and we
7 all have -- it's one piece of paper. But there is an
8 incredible amount of data that can be put into that,
9 especially when you get into one, two, three, four,
10 five, six waste lines. There's about 265 columns of
11 data on an individual manifest. It was becoming
12 onerous for the general public to download, and it was
13 becoming nigh unusable. So we put some enhancements
14 out there to make it much, much, much more usable.
15 And the bulk manifest data is going to be available in
16 CSVs, as well as the -- I believe there is also going
17 to be FIXWIS (phonetic) as well. Yes.

18 So please do visit RCRAInfo Web and
19 know that this is part of the user fee rule. These
20 are manifests that are 90 days post receipt at the
21 designated facility. So if a manifest was signed --
22 let's see, what's three months ago? I guess January
23 14th. Yeah. I guess January 13th. Those would be
24 available now. And for state users, we are going to

1 add updates and enhancements to the corrections of the
2 manifest as well as reporting enhancements. And here
3 is -- oh, there's the URL for the e-Manifest. We have
4 -- the GitHub's right there.

5 And also, just sort of a general plug
6 for the Environmental Protection Agency, there is a
7 lot of great EPA programs that make their data
8 available on GitHub, so please do take a look. I
9 believe we are one of, if not the largest, exporter of
10 public data, which is something I'm very proud of as
11 an EPA employee. So please, there's a ton of
12 environmental data out there. I happen to think e-
13 Manifest has the best data, but I'm sure there's other
14 programs that have good data.

15 All right. So I'm going to let -- I'm
16 going to -- so we're going to go up to the next slide,
17 and Amanda's going to talk some about our policy,
18 implementation, and communication activities.

19 **MS. AMANDA KOHLER:** I agree, Steve. E-
20 Manifest is the best. Thanks for saying that.

21 **MR. STEVE DONNELLY:** That's correct.

22 **MS. AMANDA KOHLER:** Okay. So here's
23 our update on the policy/implementation/communication
24 side. I mentioned this earlier. We are --

1 MS. KATHLEEN SAYLER: Amanda?

2 MS. AMANDA KOHLER: Sure.

3 MS. KATHLEEN SAYLER: Sorry. Before
4 you start, if we could just pause again and just see
5 if there's any clarifying questions from the Board
6 members on Steve's presentation.

7 MS. AMANDA KOHLER: Oh, yeah. No
8 problem.

9 MS. KATHLEEN SAYLER: That'd give you,
10 the Board members, if you --

11 MR. FRED JENKINS: Tom Baker.

12 MS. KATHLEEN SAYLER: -- oh, go ahead
13 please.

14 MR. FRED JENKINS: Yeah. Tom Baker had
15 a question. Go ahead, Tom.

16 MS. KATHLEEN SAYLER: Great.

17 MR. THOMAS BAKER: Yeah. Good morning,
18 Steve. Thanks for the presentation so far. Just a
19 question to get a sense of where we've been with e-
20 Manifest with the submission of data plus image
21 manifests. I mean, looking at the chart that you had
22 shown, the pie chart, I think it was over 80 percent
23 of manifests -- something like that, maybe even more -
24 - where image plus data without -- there we go. I'm

1 sure you don't have it available to you right now to
2 show us, but where were we a year ago in this chart?
3 What's changed, from your experience, in these slices
4 of the pie? And has data plus image grown and image-
5 only shrunk, for example?

6 **MR. STEVE DONNELLY:** I would say the --
7 I'm looking at the pie right now. So electronic has
8 stayed fairly static at about 0.26 percent. The
9 mailed paper has leached down from about 12 to 13
10 percent, and it's going down slower. And image-only
11 is transitioning to data plus image. I'll do a
12 comparison at lunch, and I can get back with an actual
13 answer. But yeah. Data, I don't -- I would say,
14 yeah, the mail has sort of transitioned to image and
15 some of the image-only has transitioned to data plus
16 image.

17 I believe our first year or so we were
18 around 75 to 78 percent data plus image, and we've
19 grown. This year, I believe we're about 83 percent of
20 data plus image. But I'll take a note. And maybe if
21 Scott's on the line, he could start doing a query and
22 figure out sort of year by year what has been the
23 submission breakdown.

24 **MR. THOMAS BAKER:** Okay. Well, I think

1 it just helps us understand the trending of this and
2 what is happening in industry with respect to the
3 selection and the choice of how to submit data to e-
4 Manifest. It's been evolving, obviously, and just
5 understanding those trends are important, I believe.

6 **MR. STEVE DONNELLY:** Yes. We will find
7 that out, and we'll go through the proper ways of
8 submitting that information into the docket.
9 Absolutely.

10 **MR. THOMAS BAKER:** Okay. Thank you.

11 **MS. KATHLEEN SAYLER:** Great. Thank you
12 for that question, Tom. Any other Board members have
13 any clarifying questions? Okay. So Amanda, let's --

14 **MR. STEVE DONNELLY:** Oh, I did forget
15 our state user. Yes. For our state users in FY2020,
16 they were -- we put out the ability for them to
17 correct a manifest, as well as flag a manifest for
18 industry to review and correct as needed. And we've
19 also developed a tool for any additional reports for
20 our state users to use in Metabase to begin shaping
21 their programs and running their programs and finding
22 errors using Metabase. Sorry for the states. Sorry I
23 forgot that.

24 **MS. KATHLEEN SAYLER:** Okay. Thanks,

1 Steve. So Amanda, I think you can go ahead now with
2 the problem statement.

3 **MS. AMANDA KOHLER:** Okay. Oh, no
4 actually I'm -- yes. Okay. Policy update. So I
5 mentioned earlier we are working on proposed
6 rulemaking we're affectionately calling our third e-
7 Manifest rule. So this rule's going to address
8 hazardous waste export manifests.

9 If you've been following our program
10 for a couple of years now, you might remember that in
11 the 2018 user fee rule we did not address export
12 manifest. And that's because, with an export, you
13 have a foreign receiving facility, and it was unclear
14 how our RCRA jurisdiction would extend to a foreign
15 destination facility in terms of ensuring that they
16 submit the manifest and pay the user fee. So we had
17 to determine where and who in the export chain should
18 satisfy those requirements. And because we didn't do
19 that in the proposed rule, we knew it would need a
20 separate rulemaking. So for the 2018 user fee rule,
21 we clarified that e-Manifest would not extend export
22 manifest at this time and we would come back to it.

23 So we are coming back to it. So this
24 rulemaking would allow us to kind of sort out those

1 questions on export manifest and then, once the rule
2 is final, bring those export manifests into the
3 system. The other kind of big component of that
4 rulemaking is going to look at the other hazardous
5 waste manifest related reporting requirements in our
6 RCRA regulations and determine how we can best use e-
7 Manifest to update those regs and certainly try to
8 leverage the system to reduce some of the reporting
9 burden there. For example, we have discrepancy
10 reports, exception reports, and unmanifested waste
11 reports. So we're going to look at those regs and see
12 what kind of changes we need to make in light of e-
13 Manifest now being available. So Bryan Groce is the
14 lead rule writer on this, so he's the main contact for
15 this rulemaking.

16 Frequently Asked Questions, we put out
17 a whole slew of FAQs shortly before launch and then
18 shortly after launch. But we've been adding to them
19 as they've kind of been raised up in the last couple
20 of years, so there is more than 150 FAQs available on
21 our website, epa.gov/e-manifest. We, I think most
22 notably, put out, I would say, maybe a half dozen or
23 so new FAQs just in December 2019 that were focused on
24 PCB manifests. We were getting a lot of questions on

1 PCB manifests, so new content available there.

2 Certainly, a key part for our policy
3 program is looking at the theme of today's meeting,
4 which is how to streamline generator and transporter
5 electronic signatures working within the framework of
6 our RCRA manifest regulations. So we've provided
7 policy support for this meeting as well. Responding
8 to the Advisory Board's recommendations from our last
9 FACA meeting -- that was June 2019. We received the
10 recommendations from you all in September 2019, and so
11 we have formally responded to those recommendations.
12 Those recommendations are available on our website or
13 through the docket for that June meeting. We
14 published those in mid-March, I believe.

15 We've been holding public webinars now.
16 I think we're probably going on nearly three years
17 where we've been holding these every month. As I
18 mentioned, we're doing that the last Wednesday of
19 every month at 2:00 p.m. Eastern. And we do updates
20 and demonstrate functionality. And it's a good time
21 to raise a question or an issue with the team members.
22 We respond to questions both in writing and orally as
23 well.

24 We also have biweekly user support

1 calls, so these are with Scott Christian. These are
2 very technical calls. But Scott meets with that group
3 every other week. This is more providing kind of
4 technical assistance in terms of system-to-system and
5 using our services. We have a Listserv, and if you
6 want the latest information about our program, I
7 encourage you to join our Listserv. We actually have
8 two Listservs. We have a general Listserv which all
9 of our information flows through, and then we have a
10 developer's Listserv which is more technical.

11 Our e-Manifest website is our one-stop
12 shop on all of our resources. Our FAQs that I
13 mentioned, we post all of our webinar slides on that
14 website. All of the Advisory Board meeting materials,
15 both today's and past meetings, are available. We
16 have 12 factsheets that are targeted for specific
17 stakeholders. So depending on how you engage with the
18 system, whether you're a generator or a transporter or
19 an inspector or a state program contact, there is a
20 factsheet for you that kind of pavers the information
21 that you need to know.

22 And then we also have a help desk for
23 our program, and the information for the help desk is
24 also posted on our website. And then, finally, the

1 Advisory Board meetings, which is a really important
2 part of our program and the reason we're all here
3 today. I think that's it for the policy side. Back
4 to you, Steve.

5 **MR. STEVE DONNELLY:** All right. Thank
6 you, Amanda. And then I do have sort of a quick
7 answer for Tom on sort of the submission trend. So
8 looking at FY19, we had a -- let me just bring up that
9 breakdown.

10 **MR. FRED JENKINS:** And Steve, I'm sorry
11 to interrupt you. Steve, can you hear me?

12 **MR. STEVE DONNELLY:** Yeah.

13 **MR. FRED JENKINS:** This is Fred
14 Jenkins. Tom Baker has a question for Amanda as well,
15 but I'll let you finish answering his first question.
16 And then we'll let Tom ask his second question to
17 Amanda.

18 **MR. STEVE DONNELLY:** All right. Yeah.
19 So for FY19, our data plus image was 78 percent, and
20 our image was 16 percent. And our mail was 6 percent.
21 And in this year to date, our data plus image is 83
22 percent, nearly 84 percent, and our image is about 12
23 percent. And our mail is 4 percent. So we'll make
24 that look nicer and put that into the docket. Okay.

1 So I will cede back to Amanda. I'm sorry. Tom, I'm
2 sorry. You can --

3 **MR. THOMAS BAKER:** Yes. That's fine.
4 This is Tom. Thanks very much, Steve, for tracking
5 that down. It's helpful to understand. The question
6 for Amanda -- I'm trying to remember the exact timing
7 in this. But there was, I think, an advanced notice
8 that proposed rulemaking maybe a year and a half ago
9 or so that was looking at potential changes,
10 enhancements, new data fields to the paper manifest.
11 And industry commented on that.

12 There were things such as adding --
13 suggestions that we put into to add things like forum
14 codes that could then be used for biennial reporting
15 and potential to add, say, an email address for a
16 generator that could be used to communicate with them
17 more effectively with documentation. Can you tell us
18 where that stands? Is there a rulemaking being worked
19 on in light of that data collection effort?

20 **MS. AMANDA KOHLER:** Yes. Yeah. So
21 that actually was not an advanced notice of proposed
22 rulemaking. It was actually a federal register notice
23 relating to the information collection request for our
24 hazardous waste manifest form. So, yes, you are

1 right. We published that I guess it would've been a
2 year ago and, in that notice, asked for comment on
3 some options for modifying the form and public comment
4 related to that, which included the changes that we
5 saw would be necessary to move the ball forward on
6 integrating e-Manifest with the biennial report.

7 After that published, we didn't receive
8 a whole lot of comments. I think if Bryan's on, he'll
9 remember the number, maybe 10 or so. And this is
10 fairly common for an information collection request.
11 They're not kind of -- not many people, I would say,
12 would maybe look to an ICR for that type of
13 information or maybe -- we wanted more robust
14 comments. So what we are planning to do is kind of
15 revisit those changes as part of this third e-Manifest
16 rulemaking so that we can get broader input on whether
17 and how to modify the hazardous waste manifest form.
18 So you'll see that again. Thank you.

19 **MR. BRYAN GROCE:** Hi. This is Bryan
20 Groce. Amanda's correct. We didn't receive very many
21 comments to that ICR proposal, and the exact number
22 was 10, in fact.

23 **MS. AMANDA KOHLER:** Thanks, Bryan.

24 **MR. FRED JENKINS:** Okay. Before

1 Kathleen jumps back in, I just wanted to remind the
2 Board that this Day 1 of EPA presentations is the
3 Board's opportunity not only to hear everything the
4 Agency has to present -- to say, but it's the Board's
5 opportunity to be fully informed as you go on to
6 answering the charge questions after the public
7 comment period. It's really important from the
8 Agency's perspective.

9 So please don't be shy about asking
10 your questions and feel free to either raise your hand
11 in your presenter's box, or you can type in, as Tom's
12 been doing, asking questions. That's also very easy
13 for us to see who wants to ask a question. And I see
14 Tom has another question for Steve. Go ahead, Tom.

15 **MR. THOMAS BAKER:** Yes. Thank you. I
16 don't mean to monopolize all the questions here, but I
17 was going through the white paper, and I see this
18 presentation seems to follow the white paper that was
19 put out. So I was just not sure if it wasn't going to
20 be covered in the presentation or if it's coming up
21 later. But there was some data regarding the number
22 of manifests that had been uploaded into e-Manifest
23 and looking at whether or not there was a party
24 involved in that manifest shipment that was registered

1 and had a site manager identified for that
2 transaction. Is that going to be covered in this
3 presentation? I think that was something that Steve
4 was going to over, but I didn't see a slide for it.

5 **MR. STEVE DONNELLY:** Yes. That will be
6 covered in the presentation, as well as we can talk
7 about it. So right now, one of the enhancements that
8 we have in the backlog, pending the advice of the
9 Advisory Board, would be right now, when a user
10 selects a site on a manifest, they could see if they
11 had a registered user. One of the enhancements we
12 have in the backlog is we could add an additional
13 field that says a site has a site manager.

14 So you'd be able to see that, okay, you
15 have a certain generator you're going to be picking up
16 waste from. You see that their site manager is --
17 they have a registered user, but they don't have a
18 site manager. We could contact that site. We could
19 do some EPA Headquarters implementation to work with
20 our states and our industry to upgrade their access.
21 Or we could make it so you could just see that these
22 are the sites that have a site manager that are using.

23 So, yeah, this is something that we're
24 well aware of. So it just all depends on -- our

1 workflow depends on having site managers at those
2 sites with all the appropriate credentials. So we
3 would certainly make all efforts to make those people
4 on the manifest workflow aware that this site has a
5 site manager.

6 Or if they don't, alerting the people
7 on that manifest chain of custody as well as EPA
8 Headquarters and the states to see like, okay, this
9 generator's shipping a lot of waste. They don't have
10 a site manager. Maybe this would be worth a phone
11 call just to say, "Hey, here's a site for the
12 registration info." So we're aware of this.

13 **MR. THOMAS BAKER:** Okay. Yeah. No,
14 that approach makes sense and is useful. I guess
15 where I was going was -- and the white paper
16 identified 35 percent of manifests that originate have
17 a generator that has a site manager identified in the
18 system.

19 **MR. STEVE DONNELLY:** Actually, a lot --

20 **MR. THOMAS BAKER:** And my question for
21 clarification on that is are we able to identify, of
22 that 35 percent, how many of those are generators that
23 are not linked to or part of an organization that's
24 represented by, say, a TSDF?

1 So for example, as you know, TSDF's
2 function has waste generators as well quite commonly.
3 And it would be interesting to know how many
4 generators we're talking about here that are really
5 independent generators only in that situation and not
6 linked to a TSDF. So that 35 percent, I presume, is a
7 lower number that is just site generators only.

8 And then, similarly, there's a
9 statement about 77 percent of transporters have
10 identified site managers in the system. 77 percent of
11 the manifests, I guess, in a system have a transporter
12 listed as the site manager identified as well. How
13 many of those would be independent transporters that
14 are not part of a larger waste management company that
15 also has TSDFs?

16 And I think if you're going to identify
17 those percentages, it's helpful to understand how big
18 that group is today that's registered and is partaking
19 in e-Manifest that are not linked to a waste
20 management company. So again, just pure generators or
21 just pure transporters that are independent.

22 **MR. STEVE DONNELLY:** Well, the
23 transporter question is -- that's a tricky one. Yes,
24 because a lot of them are associated with a TSDF. And

1 sort of those independent transporters are an
2 implementation concern. We'd like to hear sort of
3 your thoughts on how to get in contact with them.

4 As far as the generator list we did
5 pull, we did look at sites that notified as LQGs
6 during the 2019 BR cycle. So we feel like -- I'm sure
7 there's a lot of, you know, sort of associated
8 generators from TSDFs on that list but as well as
9 there's a lot of just generators. So there's a lot of
10 -- those were baseline projections though.

11 We do have a universe of people that
12 are already there that are registered in the system
13 and can begin doing this. We understand that this is
14 probably not going to be a silver bullet, but it is a
15 good jumping off point to say, okay, we do have some
16 site managers and there are a good amount of manifests
17 where they're named about five as the generator for a
18 shipment. So we can begin there and begin moving
19 towards more electronic manifests.

20 **MR. THOMAS BAKER:** Okay. Yeah. And
21 again, the issue that I look at here is just where
22 have we been and where are we going, with respect to
23 getting independent generators and independent
24 transporters involved in e-Manifest? And I think the

1 better we can understand that group and how that's
2 grown or not grown helps us advise and make good
3 decisions. So that's all. But thanks for the
4 insight.

5 **MS. KATHLEEN SAYLER:** Great. Thank
6 you, Tom. So it looks like we have two more questions
7 before we move on. Jill and Michael. We'll start
8 with Jill.

9 **MS. JILL MACIOCH:** Sure. Thank you,
10 Kathleen. So just to be clear, are we going to cover
11 those percentages in greater detail that Tom had just
12 mentioned? One of the questions that I was thinking
13 about is -- and correct me if I didn't read this
14 correctly, but there's like 77 percent of the
15 transporters have a site manager.

16 I guess where my question is going --
17 are those just one transporter? Because I know, from
18 my experience, we work with a lot of multiple
19 transporters on a shipment. So did that number look
20 at multiple transporters as well? And I don't have
21 that in front of me, so I apologize if I'm not reading
22 that correctly. I can go back to that.

23 I didn't know if that was going to be
24 later in the presentation. Yeah. 77 percent had a

1 transporter with a site manager. So were those only a
2 single transporter, or did they have multiple
3 transporters in that calculation?

4 **MS. AMANDA KOHLER:** So this is Amanda.
5 I don't mean to jump in, Steve.

6 **MS. JILL MACIOCH:** Yes.

7 **MS. AMANDA KOHLER:** This is good
8 because I don't think we have a slide on this
9 specifically, so this is a fine timing for this. But
10 I will say that that 77 percent is 77 percent of the 3
11 million manifests have a transporter with a site
12 manager. It's not 77 percent of transporters. So I
13 think that's a --

14 **MS. JILL MACIOCH:** No, no. Correct. I
15 understand that. But when you were looking at that,
16 did they have only a single transporter in that
17 shipment of those 3,000? Or do you have a separate
18 number that looks at, okay, these particular shipments
19 had multiple transporters and, of those, every one of
20 those had a site manager for the transporter?

21 Not to throw out names, you know, but
22 if I'm transporting waste and I have transporter A,
23 transporter B, and transporter C. Did they all have
24 site managers? You know? Was there any -- do you see

1 what I'm saying? Was it a single transporter versus
2 we looked at multiple? I just was looking for a
3 breakdown for those that are single transporter versus
4 multiple transporter.

5 **MS. AMANDA KOHLER:** Steve, can you
6 respond?

7 **MR. STEVE DONNELLY:** Yes, yes. I'm
8 just bringing up the sequel right now to look at
9 exactly what we pulled. And I will -- Amanda, do you
10 want to just cover the financial slides, and I can
11 pull those up?

12 **MS. KATHLEEN SAYLER:** Well, we first
13 have another question from Michael that we could
14 cover.

15 **MR. STEVE DONNELLY:** Another question.

16 **MS. KATHLEEN SAYLER:** Yeah. Let's
17 cover that and then we can do the financial slides.

18 **MS. AMANDA KOHLER:** Yeah. And one
19 thing to --

20 **MS. KATHLEEN SAYLER:** Oh, Michael has a
21 question, too. Yeah. Oh, sorry.

22 **MS. JILL MACIOCH:** Sorry, Amanda.

23 **MS. AMANDA KOHLER:** Virtual meetings,
24 fun. Yeah. Okay. No, the one thing -- just to get

1 back to that question while Steve's pulling it up is
2 that we do, in the white paper on Page 7, kind of pull
3 out the manifest workflow where there is only one
4 transporter. So we do have percentages for that one
5 transporter scenario.

6 **MS. JILL MACIOCH:** Correct. Right. So
7 I, just in case I missed it, didn't see for multiple
8 transporter.

9 **MS. AMANDA KOHLER:** Right. Right.

10 **MS. JILL MACIOCH:** So I just wanted to
11 see if that information was available. Okay.

12 **MS. AMANDA KOHLER:** Right, okay.
13 Thanks.

14 **MR. STEVE DONNELLY:** Yeah. We kept it
15 very simple. We just looked at --

16 **MS. JILL MACIOCH:** Okay.

17 **MR. STEVE DONNELLY:** -- we sort of
18 broke it down to the simplest, like -- one
19 transporter, one generator, not a rejection, it's not
20 a discrepancy. There's nothing -- this has sort of
21 been the meat and potatoes manifest submission list.
22 We didn't want to make this harder on ourselves than
23 we did because we figured, you know, those multiple
24 shipment manifests, those million multiple

1 transporters, alternate facilities would sort of build
2 out from the simplest sort of shipment as possible.

3 **MS. JILL MACIOCH:** Got it. I just
4 wanted to make sure for clarifying purposes. But I
5 have two other simple questions when I get a chance.
6 Should I go ahead?

7 **MS. KATHLEEN SAYLER:** Do you want to go
8 ahead? Yeah. Go ahead now, Jill. Then we can do the
9 financial.

10 **MS. JILL MACIOCH:** Thank you. Sure.
11 Jill Macioch again. It's in the white paper, but it's
12 not covered in the presentation. So I wasn't sure
13 about asking it. I know we talked about this last
14 year during our Board meeting. There is the talk of
15 eliminating the mailed paper copy in 2021. Is there
16 any talk of eliminating or trying to minimize the
17 paper copies from being used by generators in the
18 future? Or will the paper copy always be available?
19 I mean, is there a talk of phasing that out at any
20 point?

21 **MS. AMANDA KOHLER:** Jill, this is
22 Amanda. So are you talking about a ban on paper
23 manifests?

24 **MS. JILL MACIOCH:** Yes. Yes. Just for

1 clarification purposes.

2 **MS. AMANDA KOHLER:** There's nothing
3 that's being actively considered, or we're not
4 actively considering that right now. I think one
5 thing we would have to look at is the e-Manifest Act.
6 I think that that act may have some limits on us
7 totally banning paper manifests. Certainly, there
8 might be some scenarios where a paper manifest is the
9 only workable solution for a site but nothing that
10 we're actively considering right now.

11 **MS. JILL MACIOCH:** Okay. And one last
12 question for Steve, I don't know -- and I apologize if
13 this is not the time to bring it up, but it had to do
14 with functionality for bulk signatures. And I do know
15 there was a written comment how there was not some
16 specific functionalities for bulk signatures. Is this
17 the time to address that or do we address that during
18 public comments tomorrow? And I can provide a little
19 bit more detail if need be.

20 **MR. STEVE DONNELLY:** Yes, yes. Please
21 do. Please, yes.

22 **MS. JILL MACIOCH:** Okay. I believe it
23 was specific to Stericycle and that we would have to
24 bring up -- I think it was on Page 2 of their public

1 comments.

2 **MR. STEVE DONNELLY:** I want to throw
3 this to Fred. Can we talk about -- I probably can't
4 talk about public comments yet, right?

5 **MR. FRED JENKINS:** No, you can. That's
6 -- yes.

7 **MS. JILL MACIOCH:** Yeah. So should we
8 wait about this?

9 **MR. FRED JENKINS:** Yeah. Those
10 arguments -- yeah, those public comments do already
11 exist.

12 **MR. STEVE DONNELLY:** Okay. I'm just
13 making sure.

14 **MS. JILL MACIOCH:** I'm sorry. Just
15 because you brought up about, you know, the
16 functionality for bulk signature. So I thought, well,
17 this was a good time to address. I'm not sure if it
18 is something that is available. So unless we can
19 bring up that paper -- I mean, otherwise, I would be
20 happy to pull it up and read it, if I can find it.

21 **MR. STEVE DONNELLY:** I'm racing it
22 right now.

23 **MS. JILL MACIOCH:** All right.

24 **MR. SCOTT CHRISTIAN:** Yeah. But I can

1 talk to bulk signatures if you want.

2 **MS. JILL MACIOCH:** So I was just
3 curious on this specific -- here. Okay. So can I go
4 ahead? I'll just read it. This is just a small
5 blurb. It says --

6 **MR. FRED JENKINS:** Oh, I'm sorry. This
7 is Fred Jenkins. Sorry to interrupt you all. I just
8 got a note from our transcriber to please -- before
9 you speak, please state your full name before you
10 speak so she can keep up in her transcription process.
11 Thank you.

12 **MS. JILL MACIOCH:** Okay. This is Jill
13 Macioch again. May I read the information from the
14 written comment? Yes? Okay. Well, this is was
15 specifically submitted.

16 **MS. KATHLEEN SAYLER:** Yes. Sorry.

17 **MS. JILL MACIOCH:** Okay. Thank you.

18 **MR. FRED JENKINS:** Yes, you may. Yes,
19 you may.

20 **MS. KATHLEEN SAYLER:** I was on mute.

21 **MS. JILL MACIOCH:** This was
22 specifically submitted by Stericycle. And it just
23 says, "Many of our 10-day transfer sites gather
24 hundreds of manifests together for transport to the

1 disposal facility and allowing group signatures would
2 greatly speed the uptake of transporters utilizing
3 electronic signatures. Will you be implementing
4 additional functionality which allows for grouping of
5 manifests for secondary transporter signatures by
6 truckload?"

7 **MR. SCOTT CHRISTIAN:** The answer is
8 yes. So that is in this Friday's release with the
9 brokers and transporters. This is Scott Christian.
10 I'm sorry, Fred. I'm sick and didn't think to say
11 Scott Christian. I apologize. But yes, those bulk
12 signatures for those intermediate transporters is
13 available in the test environment. It will be going
14 live Friday. It's just, you know, the brokers and
15 transporters thing, as you know, we've been working on
16 those for a while. And this happens to be the release
17 date that we have.

18 **MS. JILL MACIOCH:** Okay. Jill Macioch
19 again. Thank you, Scott. Thank you.

20 **MR. SCOTT CHRISTIAN:** No, thank you.

21 **MS. JILL MACIOCH:** Jill Macioch again.
22 Here ends my questions.

23 **MS. KATHLEEN SAYLER:** Great. Thank
24 you, Jill. Okay. So I think we are good on the

1 questions. Okay. Great. So I think, Steve, you were
2 up for talking about the financial program update.

3 **MR. STEVE DONNELLY:** Yes. So just a
4 brief summary of where we did end in '19. So from
5 October 1st, 2018 to September 30th, 2019, industry
6 submitted roughly 2 million manifests, about 170,000
7 manifests a month, and we collected 16 million. So
8 through the end of February, we have collected \$10
9 million, and we've received 810,000 manifests, a
10 little lower, 162,000 a month for -- so far. And I
11 don't have the March numbers in front of me, but I do
12 believe, yeah, we're sort of collecting, on average,
13 about \$2.2 to \$2.5 million a month in user fees.

14 **MS. AMANDA KOHLER:** Okay.

15 **MR. STEVE DONNELLY:** If there's no
16 questions, this is the end of the program update.

17 **MS. KATHLEEN SAYLER:** Great. So we'll
18 pause again for any questions for a moment. I think
19 we got through the one since we just finished that a
20 slide ago. I'm not seeing any questions, so we'll go
21 ahead and proceed. Amanda, you were going to do the
22 problem statement, I believe.

23 **MS. AMANDA KOHLER:** Yes.

24 **MS. KATHLEEN SAYLER:** I just actually

1 should pause and ask Fred --

2 **MS. AMANDA KOHLER:** Right.

3 **MS. KATHLEEN SAYLER:** -- did we -- I
4 think we're a little bit ahead of the schedule. Do we
5 want to go ahead and do the break now or have Amanda
6 proceed with her presentation?

7 **MR. SCOTT CHRISTIAN:** Fred, I need to
8 make a clarification. This is Scott Christian.

9 **MR. FRED JENKINS:** Okay.

10 **MR. SCOTT CHRISTIAN:** Jill, we did make
11 a change to the bulk signature page. But the
12 transporters being -- the in-line transporters being
13 able to bulk sign has actually been in there for
14 several months. The change we made was to identifying
15 the number of outstanding. So I apologize for the
16 confusion on that. But we have made a lot of changes
17 to transporters, so please do test.

18 **MS. JILL MACIOCH:** Okay. Jill Macioch.
19 Thank you. I was just asking on behalf of the written
20 public comment. I didn't know if that was going to be
21 addressed at any point. Unfortunately, I don't work
22 that much with the bulk signatures, but I'll do my
23 best in testing that. Thank you.

24 **MR. SCOTT CHRISTIAN:** Thank you. Much

1 appreciated. This is Scott Christian again.

2 **MS. KATHLEEN SAYLER:** Great. Thank
3 you, Scott. Fred, we're not that far ahead, so maybe
4 we should just go ahead with the 15-minute break?

5 **MR. FRED JENKINS:** Sure. Yes, yes.
6 That's a great idea. Let's go ahead with the break.

7 **MS. KATHLEEN SAYLER:** Do we want to
8 stick to 15 minutes and have people come back at
9 11:40? Or do you want to stick with 11:45?

10 **MR. FRED JENKINS:** Yes, 11:40's
11 perfect.

12 **MS. KATHLEEN SAYLER:** 11:40?

13 **MR. FRED JENKINS:** Yep.

14 **MS. KATHLEEN SAYLER:** Okay. Great,
15 everyone. So we'll take a 15-minute break and begin
16 again at 11:40.

17 **MR. FRED JENKINS:** Yes. Thank you.

18 **MS. KATHLEEN SAYLER:** A little over 15
19 minutes.

20 **MR. FRED JENKINS:** Yes. And I'm going
21 to ask William, can you put the break slide up for
22 11:40, please? Okay. Thanks so much, everyone. And
23 Board members, just put your phones on hold. Don't
24 hang up because it takes a while for me to get you

1 dialed back in. So we'll see you all in 15 minutes.

2 Thanks.

3 (BREAK)

4 DR. FRED JENKINS: Hello, Kathleen, are
5 you back? This is Fred Jenkins.

6 MS. KATHLEEN SALYER: I am. Thanks for
7 asking.

8 DR. FRED JENKINS: Okay. Great.

9 MS. KATHLEEN SALYER: Hello, everybody.
10 Welcome back to the e-Manifest Advisory Board meeting.
11 So we'll go ahead and pick up where we left off in our
12 presentation with Amanda Kohler going over the problem
13 statement. Amanda?

14
15 **PROBLEM STATEMENT**

16
17 MS. AMANDA KOHLER: Yes. Thanks,
18 Kathleen. Okay. So we are now going to move into the
19 substance of this meeting and starting with the
20 problem we are trying to solve. So the RCRA manifest
21 process is unique among EPA's reporting requirements.
22 And we talked a lot about this in the white paper and
23 also at our June 2019 FACA meeting as well. But we

1 have the Hazardous Waste Manifest form that requires
2 at least three signatures, if not more, that have to
3 be signed sequentially over the course of a hazardous
4 waste shipment. So it moves from site to site,
5 accordingly. Manifests are typically signed at
6 loading docks or transport vehicles, not typically the
7 environmental report that may be executed in a kind of
8 an office setting.

9 These locations do not always have
10 network access in real time. And we've also heard
11 repeatedly, and certainly at the last FACA meeting,
12 that just given the kind of community around the
13 manifest that there is very frequent staff turnover
14 sometimes. And so that's a challenge if you need
15 multiple personnel going through the current user
16 registration and training and identity proofing
17 process.

18 As we've already stated, electronic
19 manifests right now represent less than one-half of 1
20 percent. That was kind of the same proportion that it
21 was last June at our FACA meeting. This obviously
22 falls short of our Agency expectation. We would like
23 to see a wider adoption of electronic manifests.
24 That's needed if we're going to unlock the benefits of

1 this program. We foresaw this as an issue. We had
2 the public Advisory Board meeting in June to
3 specifically talk about what barriers are there to
4 moving to greater adoption of electronic manifests.

5 In September, we received the Board's
6 recommendations. And they were very helpful. And I
7 really want to thank the Board for putting a lot of
8 thought and time into developing those
9 recommendations. They were numerous but very helpful.
10 And a lot of our last six months have been spent
11 working towards the recommendations that were provided
12 in that document. So thank you so much. Some of the
13 ones that really set the context for this three-day
14 meeting is that the Board recommended that EPA
15 reconsider whether all e-Manifest system users needed
16 to adhere to the existing registration process.

17 So do they need to go through the
18 entire kind of CROMERR-compliant registration process
19 there? We talk about the -- consider changes to
20 eliminate CROMERR signature requirements for everyone
21 but the receiving facility and then just re-evaluating
22 signature requirements. So that really helped direct
23 us in terms of where we put our focus for getting to
24 electronic manifests.

1 And the last kind of point I'll make is
2 that when we were developing the system to be ready
3 for launch on June 30th, 2018, we put a lot of focus
4 on the receiving facility, the TSDF or Treatment
5 storage Disposal Facility experience. And that was
6 intentional because on June 30th receiving facilities
7 were the ones that had new obligations. They had an
8 obligation to submit the manifest to EPA and pay the
9 user fee. So we spent a lot of time kind of focusing
10 on that user experience with the intention of turning
11 towards generators and transporters next.

12 And so we're really happy to be at this
13 point because that's where we are. We are focusing
14 this meeting on how to kind of streamline and reduce
15 burdens for generators and transporters so that we can
16 sort of reach a broader community there and bring them
17 into using electronic manifests. So I'll stop there,
18 and we can take questions. But the next section Steve
19 will talk about our existing electronic signature
20 method so that everyone kind of knows what the
21 baseline is. And then we'll go further into the three
22 options that we'll be discussing today. So I guess
23 any questions on the problem statement at this point?
24 Okay.

1 **MS. KATHLEEN SALYER:** All right. Thank
2 you, Amanda. I don't see any questions right now. So
3 we'll go ahead and proceed. Steve?

4 **MS. AMANDA KOHLER:** Steve, are you on
5 mute?

6
7 **CURRENT ELECTRONIC SIGNATURE METHOD**

8
9 **MR. STEVE DONNELLY:** Sorry, I was.
10 This is Steve Donnelly again. I was just talking to
11 myself. Oh, yes. This is going to be a -- we're
12 going to give a summary of the current electronic
13 signature method for the e-Manifest system as it
14 exists since we launched in June of 2018.

15 So currently all three -- all
16 signatures on the manifest must meet compliance with
17 CROMERR. So that is 40 CFR, Part 3, Subpart D meaning
18 the generators and transporters must electronically
19 sign the electronic manifest. And receiving
20 facilities must electronically sign the manifest as
21 well as certified paper manifest upload. So there's a
22 lot packed in there right now.

23 So if there's going to be an electronic
24 manifest -- so that means that the manifest tracking

1 number has been generated from the e-Manifest system.
2 It's not starting from a stack of paper -- the
3 generator must log into the e-Manifest system, and
4 they must sign the manifest. Then all subsequent
5 transporters must do the same thing. And then
6 finally, the receiving facility must sign that
7 manifest electronically as well.

8 Now with paper manifests, those still
9 do require an electronic manifest if the industry is
10 submitting it. They need to certify the paper upload
11 to the e-Manifest system using the CROMERR-compliant
12 signature. All right. And this chart right here
13 breaks it down. So essentially that -- if you see
14 yourself in green, that means the user signing that
15 manifest needs to log into the system. They need to
16 generate a user account. They need to electronically
17 sign.

18 And then for the paper types -- so the
19 generator and the transporter are signing on paper.
20 And for the fully electronic, you see all those are in
21 green. And it is not applicable if -- if it's
22 electronic, the receiving facility does not need to
23 sign that final submission to the e-Manifest system.
24 Once they sign it when they -- when they sign

1 electronically when they receive it, that is
2 certifying the data upload.

3 And to be able to be in one of those
4 green boxes, there's three areas a user must do. Each
5 user who wishes to sign a manifest must first register
6 with RCRAInfo and get a username and password, which
7 means they need to go to the RCRAInfo application.
8 They need to click to "Register." They need to click
9 "Industry Account." And then they need to assign a
10 username, as well as an email address associated with
11 that username. Once they do that, the system will
12 send a code to that user's email address. And once
13 they verify that code in the system, they can create
14 an account.

15 Once they create an account, they need
16 to search for their site or the EPA ID in RCRAInfo and
17 then they need to request access for it. So step one
18 is getting that account and verifying that the email
19 address associated with the account is the one you're
20 registering for. And then step two is logging back
21 into the system and searching for your specific site.

22 Once you find your specific site, you
23 need to request access to it. And to sign the
24 manifest, you need to have either site manager or

1 certifier access. So you would find your site, and
2 you would click "Request Access." And then it would
3 send you -- you would request your site manager or
4 certifier permission, and you click "request." And
5 that request would either go to a state or EPA
6 headquarters if there is no site manager associated
7 with the site. Or if there is already a site manager
8 associated with the site, that request will go
9 directly to that site manager for approval.

10 So the request for access to a site has
11 been approved by either EPA headquarters, the state,
12 or a site manager. However, to be able to sign --
13 electronically sign a manifest, you need to undergo
14 identity proofing. And that can be done through a
15 LexisNexis identity check or by completing a paper
16 electronic signature agreement. Now the LexisNexis
17 identity check is when a little box will pop up into
18 your screen in RCRAInfo. And you would be verifying
19 your information, your name and address. And it would
20 search LexisNexis, and, essentially, it would give you
21 a thumbs up or thumbs down for a reason. Sometimes
22 you would -- people pass a lot electronically,
23 especially if they've been at the same address for a

1 while. They can get a quick approval, and then that
2 user can sign electronically.

3 However, if for whatever reason -- this
4 has happened to me and a lot of people. They fail an
5 electronic identify check provided by LexisNexis. So
6 there still is a way to be able to sign
7 electronically, even if you fail the LexisNexis
8 identity check. However, you need to print out a
9 paper electronic signature agreement and sign that
10 with wet ink and either mail it to your site manager
11 for approval or mail it to the state or EPA, as
12 applicable.

13 So the system will tell you where to
14 mail the paper ESA. But that could take a while for
15 that information to get approved, especially if it's
16 going to a state or to the EPA because it has to go
17 through the mailing room. It needs to be irradiated.
18 And eventually it'll end up on -- so if it comes to
19 EPA headquarters, it'll end up on my desk. And I will
20 open up the letter, and I will read it. And I will
21 find the account, and I will click on "Approve." And
22 then I will store the paper ESA.

23 So once that electronic signature
24 agreement has been approved, the user needs to log

1 back into the system and set up their personal
2 challenge questions to be able to sign a manifest. So
3 this consists of choosing and answering five questions
4 from a list of 20, such as "What is your pet's name?
5 What city did you have your first job?" These are
6 personal questions that only you would conceivably
7 know the answer to. And those come up to you when you
8 go to electronically signing a manifest.

9 All right. So we've passed step one
10 and step two. And now it's time for a user to
11 electronically sign a manifest. So it's time. You
12 wish to sign a manifest. You need to log into e-
13 Manifest using that username and password and then
14 navigate to the specific manifest you wish to sign.
15 You can do this in bulk, or you can do this
16 individually. However, to sign, you must select a
17 manifest and then click "Sign Manifest."

18 Then you need to re-authenticate. So a
19 box is going to pop up in front of you on your window.
20 And you can also do this on your phone. RCRAInfo and
21 e-Manifest are device aware. So it'll fit to your
22 phone, if you need it, or your tablet. But you need
23 to re-enter your username and password and then answer
24 one of your five challenge questions. Then you can

1 click "Sign." And then the manifest is electronically
2 signed.

3 And also, this is the process to
4 correct a manifest using the corrections process. So
5 if you are changing any data, if you're correcting any
6 data on a manifest, this is considered a new record.
7 So you will be doing that same process of clicking
8 "Correct," correcting the data, then signing in by --
9 do the re-authentication and then answer your
10 challenge question and click "Sign." And then the
11 manifest is correct. So I just walked through the
12 workflow. Does anyone have any questions before I
13 move on to the next slide? All right. So I believe
14 we're back to Amanda for the options for executing.
15 Do you have any questions?

16 **MS. KATHLEEN SALYER:** Yeah. I think
17 Tom -- I thought Tom was typing a question. But yeah.
18 Tom, you want to go ahead with your question?

19 **MR. THOMAS BAKER:** Yes. Thank you.
20 Tom Baker. Sorry, I'm a little slow at the draw here.
21 Steve, you mentioned about the paper ESAs being
22 submitted versus folks doing it online through
23 LexisNexis. What's your sense of that activity? How
24 many are being submitted -- increasing, decreasing

1 numbers? Just curious how that process is working
2 with LexisNexis and how many folks have to revert to
3 the paper process.

4 **MR. STEVE DONNELLY:** In the beginning
5 of the e-Manifest system, I would say for the first
6 six months to a year -- this is this anecdotally. So
7 at EPA headquarters we were in charge of electronic
8 signature agreements for all states that have not
9 opted into the myRCRAid or biennial report modules.
10 So we had, I believe, 10 to 13 states, and we had some
11 of the big ones when it comes to hazardous waste. We
12 had Texas, Louisiana. Those are the big ones that
13 come to mind. I've seen -- I have not received a
14 paper ESA for the last -- I think it was like -- it's
15 been about four or five months.

16 So looking at the numbers, more people
17 are passing the LexisNexis authentication, or they
18 have site managers who have passed the LexisNexis
19 authentication. And those paper ESAs are being mailed
20 and stored to those individuals who have that. So we
21 really haven't been getting so many of the paper ESAs.
22 I would say that's trickled down to maybe one or two a
23 month.

1 **MR. THOMAS BAKER:** Okay. Thank you.

2 Tom Baker. I just have one other follow-up question
3 on another item you mentioned. You walked through the
4 process to sign manifests electronically. Once they
5 get to the point where they've logged into e-Manifest,
6 put in their username and password, then they click on
7 Sign Manifest and do that process again, they answer a
8 challenge question -- once they've gotten to that
9 point, if they've got multiple manifests to sign, they
10 need to -- can they do them in succession? Or do they
11 need to go back and log in again and enter challenge
12 questions again for each manifest they sign?

13 **MR. STEVE DONNELLY:** You can sign up to
14 50 manifests at a time with the bulk signature. So
15 you can sign -- yeah -- 50 manifests per challenge
16 question, basically.

17 **MR. THOMAS BAKER:** Okay. Provided the
18 manifests are all properly in their queue --

19 **MR. STEVE DONNELLY:** Yeah.

20 **MR. THOMAS BAKER:** -- and staged as
21 pending, right?

22 **MR. STEVE DONNELLY:** Mm-hmm.

23 **MR. THOMAS BAKER:** Okay.

24 **MR. STEVE DONNELLY:** Yes, correct.

1 **MR. THOMAS BAKER:** Thank you, Steve.

2 **MS. KATHLEEN SALYER:** Great. Thank
3 you, Tom, for your question. I don't see any other
4 questions. So we are definitely ahead of schedule
5 now. But with no further questions, we'll go ahead
6 and proceed with the next presentation. Amanda?

7
8 **OPTIONS FOR EXECUTING ELECTRONIC SIGNATURES FOR**
9 **GENERATORS AND TRANSPORTERS**
10

11 **MS. AMANDA KOHLER:** Yes. Thank you.
12 So we have reached the fun part, I would say. So
13 Steve just discussed kind of the baseline process.
14 And now we're going to move into some of the options
15 that could be available in the future.

16 So we are here to talk about how to
17 increase use of electronic manifests, particularly by
18 generators and transporters. And so we see two ways
19 to do that, two ways to reduce the burden: reducing
20 the burden for user registration and then also
21 reducing the burden for actually electronically
22 signing manifests. So we have three options. We
23 presented those option in the background white paper

1 for this meeting. And we'll discuss further in just a
2 little bit.

3 Steve mentioned this earlier, but it's
4 worth repeating. Any or all of these options could be
5 made available. So it's not an either/or. It's a
6 and/or here. We see it could happen where maybe one
7 site wants to use Method 1 and another site wants to
8 use Method 2 just based on how their waste management
9 is occurring and the needs of their workforce. And
10 perhaps even a site could use both methods just
11 depending on what type of teams they have kind of
12 operating at a site.

13 So we'll go through here. The policy
14 underpinnings for these options does depend on the
15 Agency interpreting CROMERR to only apply to the
16 receiving facility signature when submitting that
17 final signed manifest to EPA. So under CROMERR,
18 persons who submit reports or other documents to EPA
19 must follow CROMERR. And so because the receiving
20 facility is responsible for submitting that final
21 signed manifest to EPA, that's where CROMERR would
22 touch e-Manifest.

23 We also are working within the existing
24 RCRA manifest regulations. So worth pointing out at

1 40 CFR 262.25, our RCRA regulations state that
2 electronic signature methods shall meet two
3 requirements: (a) Be a legally valid and enforceable
4 signature under applicable EPA and other federal
5 requirements and, then (b), be a method designed and
6 implemented in a manner that EPA considers to be as
7 cost-effective and practical for the users. And so
8 these are kind of the framework.

9 We'll talk a little bit later on today
10 about implementation for the methods. But kind of
11 spoiler alert, right now we're not envisioning needing
12 any new rule making in order to to roll these options
13 out. So that's the framework we're in right now.

14 One of the things that we looked at is
15 a 2013 guidance which was developed by the Federal
16 Chief Information Officer Council in General Services
17 Administration. This is a very helpful document. We
18 linked to it -- hyperlinked to it from our background
19 white paper. It is definitely worth a read and, to
20 the best of our understanding, reflects the latest
21 known information about electronic signatures. It was
22 developed at the request of the Office of Management
23 and Budget. It was developed in collaboration with
24 Department of Defense, Department of Justice, and the

1 National Institute of Standards and Technology. It
2 reflects the e-transaction laws, existing case law,
3 and kind of any of the other guidance that has been
4 put out in the last two decades. So it is very
5 helpful.

6 One of the sections I'll point to -- I
7 had it open here -- is there's a section that's
8 literally titled "Requirements for Legally Binding
9 Electronic Signatures." So kind of to highlight those
10 requirements, we put it on the slide here, one through
11 five. And it's worth kind of spending time here
12 because, not only are we trying to look to this
13 guidance to determine what is a legal electronic
14 signature, but I also saw in some of the public
15 comments a request for consideration by the Agency of
16 an electronic signature that would be available in an
17 industry system that could then be sent to us at the
18 end. And so whatever electronic signature we're
19 considering, either if it's when our e-Manifest system
20 or perhaps by an agency -- or by a third-party kind of
21 industry system, I think we would definitely want to
22 consider each of these criteria in turn.

23 So the first one here is the person,
24 i.e., the signer, must use an acceptable electronic

1 form of signature. So that's -- CIO GSA guidance
2 talks about -- it's actually quite flexible. Any
3 symbol adopted as one's signature when affixed with
4 their knowledge and consent -- so it talks about any
5 electronic sound, symbol, or process can be an
6 electronic signature. Some of the examples that the
7 guidance talks about is everything from digitized
8 signature to a typed name to a sound recording to
9 clicking a button that says "I Agree." So it's quite
10 broad what types of electronic signatures we could
11 consider.

12 Criterion number two, the electronic
13 form of signature must be executed or adopted by a
14 person with the intent to sign. So the guidance talks
15 about merely applying a sound, symbol, or process does
16 not make for an electronic signature. You have to
17 actually have an intent to sign.

18 So what does that look like? That may
19 look like a person's intent to sign is often inferred
20 from agreeing to the reason for signing. So including
21 language such as "By signing below, I acknowledge
22 receipt," "By signing below, I certify to" is a very
23 important part of that electronic signature. It kind
24 of differentiates, if you might imagine, the user has

1 to know that they're clicking to sign versus clicking
2 to move to the next screen so to speak.

3 Okay. So criteria number three, the
4 electronic form of signature must be attached to or
5 associated with the electronic record. So in our
6 paper environment, most of our signatures are right
7 there on the paper with that record. In the
8 electronic environment, we need to make sure that
9 we're being functionally equivalent to that. The
10 electronic signature has to be part of the record or
11 logically associated with that record being signed.

12 It also means that the signer has to
13 have the opportunity to review the record before
14 signing it. So that's an important piece there. In
15 any kind of electronic signature piece that we might
16 want to consider is that whether the system kind of
17 generates some specific data element to indicate that
18 that signing has occurred.

19 Okay. Number four, there must be a
20 means to identify and authenticate a person as the
21 signer. So to make a signature enforceable, we have
22 to establish a link between an identified person and a
23 signature, so attribution. The signature has to be
24 associated with a person.

1 Now, the CIO GSA guidance tells us that
2 authentication is important. It doesn't actually have
3 to be done with just that electronic signature. We
4 can use other parts of the process, other parts of the
5 procedures to kind of allow us to do that attribution.
6 So that is very helpful. And it also talks about the
7 level of confidence associated with this identify and
8 authenticate can be tailored depending on the needs of
9 the transactions, so also very kind of helpful
10 consideration.

11 And then finally, number five, there
12 must be a means to preserve the integrity of the
13 signed record. So this means that we will have to
14 ensure the data integrity, both for the electronic
15 signature as well as that electronic record, both for
16 accuracy and completeness and then also guarding
17 against any unauthorized modification to that record.
18 So these have been very helpful to us in kind of
19 guiding the thought behind the options that we're
20 presenting today. And I think that's all I had as
21 kind of the primer to our options. Before we get into
22 -- before Steve talks about Method 1, were there any
23 kind of questions on this part?

1 **MS. KATHLEEN SALYER:** Yeah. I see Josh
2 Burman has a question. Go ahead, Josh.

3 **MR. JOSHUA BURMAN:** Thank you. This is
4 Joshua Burman. I apologize, Amanda. I ask you to
5 jump back a slide to slide 39. Just a clarification
6 from you, and I am going to preface this by saying
7 this may be an impolitic question. But I think it
8 needs to be asked. You mentioned, and it seems,
9 reviewing the white paper, that the basis of a lot of
10 these potential or proposed options from EPA are that
11 EPA would interpret that CROMERR would only apply to
12 signatures from the receiving facility and that all
13 other the signatures would be a lesser standard or a
14 lesser signature.

15 Is that a decision that either has been
16 made or can be made within the RCRA program itself or
17 e-Manifest? Or is that something that the RCRA
18 program would have to ask for from a higher level at
19 EPA headquarters because that could be interpreted as
20 changing how CROMERR is applied? And I ask that
21 because, at our last e-Manifest Advisory Board
22 meeting, the -- I don't believe it was explicitly
23 stated, but it seemed -- the understanding from the
24 statements of some of the EPA's CROMERR staff was that

1 the headquarters would interpret CROMERR to apply all
2 the time. And this would be a major change to that.
3 So just asking for that clarification. Thank you.

4 **MS. AMANDA KOHLER:** Yes. Fair
5 question. So answer is is we have done a lot of work
6 across our EPA offices to look at the feedback that we
7 heard from the Advisory Board. And certainly your
8 recommendations from September were very helpful. And
9 so, yes. This does represent an Agency decision. And
10 kind of the smaller --

11 **MS. KATHLEEN SAYLER:** Great. Thank
12 you, Amanda.

13 **MS. AMANDA KOHLER:** Yeah. Sorry.
14 Smaller piece of the -- so that's one thing. And then
15 the other kind of clarification I just wanted to
16 mention is that so, yes, we would interpret CROMERR
17 only applying to the receiving facility signature when
18 submitting to EPA. The kind of one nuance in -- I
19 think this is in the white paper but not the slide --
20 is that we would also interpret CROMERR applying to
21 any entity submitting a correction to a manifest post-
22 receipt. So I just wanted to clarify that.

23 **MS. KATHLEEN SAYLER:** Great. Thank
24 you, Amanda. Josh, Joshua, did you have a follow-on

1 question, or is that satisfactory for answering your
2 question?

3 **MR. JOSHUA BURMAN:** No. That's --
4 thank you for the clarification.

5 **MS. KATHLEEN SALYER:** Great. Okay. So
6 Jill has a question. Go ahead, Jill.

7 **MS. JILL MACIOCH:** Yes. Jill Macioch.
8 I have a question for Amanda. You had mentioned --
9 either you or Steve mentioned -- that this is a mixed
10 and matched approach using these potential options.
11 My question is could a user continue to sign using the
12 current method where they are answering the challenge
13 questions? Or would that method be discontinued?

14 **MS. AMANDA KOHLER:** Yeah. Steve, I
15 think we were envisioning that that method could still
16 exist.

17 **MR. STEVE DONNELLY:** So yeah. That's
18 one of those interesting strings we've started pulling
19 as we discuss this. So how it would be implemented in
20 the system would be these new signature methods would
21 be given new roles. And we don't have the roles named
22 yet. But sort of like -- we'll just call them, you
23 know, new signer.

1 The new signature role would not have
2 the sort of the CROMERR widget pop up when it's time
3 to sign. It would just be either click a button or
4 respond to a text. However, if that person's role is
5 still a certifier or a site manager, it could be they
6 would still go through the traditional method of
7 certifying a manifest even if they are -- let's say,
8 it's a generator/transporter. I don't imagine that.
9 But this will be something to sort of flesh out in the
10 official EPA response to the Advisory Board
11 recommendations.

12 **MS. JILL MACIOCH:** That answers my
13 question. Thank you. Jill Macioch.

14 **MS. KATHLEEN SALYER:** Great. Thank
15 you, Jill and Steve. So I don't see any other
16 questions at the moment. So we'll go ahead and move
17 on to the next presentation. I think that's -- Steve,
18 are you taking over? Oh, go ahead.

19 **DR. FRED JENKINS:** Kathleen. I'm
20 sorry, Kathleen. This is Fred Jenkins again. I'm
21 sorry to jump in. But I just noticed that there's
22 several -- well, at least a couple of members in the
23 public audience that are raising their hands. I just
24 want to remind the public audience that tomorrow

1 morning starting at 10:00 a.m. at the start of the
2 meeting, we're scheduled to have our public comment
3 period. That's the public's opportunity to provide
4 their public comment in addressing the Board. So
5 that's the standard protocol. We can't open the line
6 up for public questions or comments because this is
7 outside of the public comment period.

8 But as a reminder, if you want to
9 provide oral public comment tomorrow during the oral
10 public comment period, please email me by 2:00 p.m.
11 Eastern Time today. Please give me your name and your
12 affiliation. And then I'll follow up and give you
13 instructions on providing your public comments on
14 tomorrow morning. Thanks so much. Sorry. Thank you,
15 you all. You all can continue.

16 **MS. KATHLEEN SALYER:** Okay. Great. So
17 we'll go ahead and proceed with the next presentation.
18 I think that's you, Steve, talking about Method 1?

19
20 **METHOD 1: ONE PERSON REGISTERED**

21
22 **MR. STEVE DONNELLY:** Correct, yes.
23 This is Steve Donnelly, and we're going to discuss
24 Method 1 for executing electronic signatures. This is

1 the one person registered option. So just to as we
2 dive in here, there's a few assumptions that we went
3 through developing these methods that, sort of overall
4 to participate in Method 1 or Method 2, each site must
5 have a site manager with a valid electronic signature
6 agreement.

7 And those site managers will have the
8 ability to edit or update the generator/transporter
9 contact information or confirm if they just look at
10 the manifest and that's the person it's going to. And
11 these signatures can be performed by the user
12 interface or through services or text or via some of
13 the additional methods. The generator and transporter
14 that uses or signs this manifest may be registered but
15 do not need to be. And essentially, the CROMERR e-
16 signature widget is required for the final TSDF
17 signature upload to the EPA and any follow-on
18 corrections by any entity.

19 All right. So yes. So Method 1 is the
20 one person registered. And this would address one of
21 the user community's main challenges with the current
22 signature process, avoiding the need for every person
23 signing a manifest to register, log in, and engage the
24 multi-step signature process. This is essentially

1 Method 1 -- if you can think about it this way before
2 we dive into it, this is the manifest coming to the
3 user. So this is going to be much like someone
4 handing a paper manifest to a generator on a dock for
5 their signature. This is going to be the e-Manifest
6 system electronically handing them the manifest on the
7 dock for them to sign electronically.

8 The method does require just one
9 individual registered as a site manager to participate
10 in this workflow. However, we would like to encourage
11 sites to have at least two site managers for
12 redundancy and for continued operations if someone is
13 sick or if someone finds a new job. You certainly
14 don't want to get locked out of your site with all
15 these hung-up requests because a certain individual
16 left the company and there has not been a backup site
17 manager. So we do recommend, as a best practice,
18 please have at least two site managers for your site.
19 And this method would allow individuals to
20 electronically sign the manifest by email, text-
21 enabled phone, or potentially landline.

22 All right. So let's sort of begin at
23 the beginning where the electronic manifest is created
24 in the system, either through the user interface or

1 through the services. So an individual could pick a
2 generator site, picks the transporter, assigns the
3 TSDF, adds the waste line information and then add the
4 -- it adds the names of the persons who they
5 anticipate signing the manifest on the loading dock or
6 leaves that space blank and sort of sets the manifest
7 status to pending, which means that, okay, all the
8 people on the manifest, all the site persons on the
9 manifest can see it.

10 And that site manager for the generator
11 or transporter site can go in and say, okay, "They
12 listed Steve Donnelly as the person on the dock. And
13 this is his cell phone that I know. Since this is my
14 site, I know that Steve's not going to be working that
15 day. It's going to be Amanda Kohler. So I'm going to
16 just change that name to Amanda Kohler and put her
17 phone number in so that manifest can continue
18 uninterrupted." Or they can look at the manifest and
19 say, "Oh, Steve Donnelly is working there today. He
20 is the person who should be on the manifest."

21 However, prior to that we are proposing
22 as sort of one-step, one-time-only validation per
23 contact information listed that the system will send
24 to that user saying "You agree to sign manifests for

1 this site." So I've been newly hired by a company to
2 sign manifests. And my site manager adds me to their
3 list of individuals on the loading dock and clicks
4 "Send."

5 And I will get a notification on my
6 email or on my phone saying something to the effect of
7 "You're name has been selected to sign manifests for
8 this site ID. If you agree, reply with yes." And
9 that means I am good to sign manifests. However, I
10 don't need to register. And this can also be done by
11 email if email is more appropriate.

12 In all these workflows and -- then
13 nothing is set in stone on the look and feel of all
14 this. This is to get the sort of broad brushstrokes
15 of how this would feel sort of intellectually rather
16 than focusing on I think this email should say that or
17 should say this or would the text message this. So
18 this is more about I may -- we have one person
19 registered. The site manager lists an individual to
20 sign manifests for their site because they know
21 they're going to be on the loading dock. And the
22 first step is to say have the system tell that person,
23 "Hey, you've been listed as someone who can sign the

1 manifest. Do you agree?" And that person agrees. So
2 we'll just say it goes to me. And I agree.

3 Okay. So the manifest is sort of
4 created in the system, and it's ready to go live. And
5 the manifest is ready to be shipped. And one of the
6 things we talked about earlier was sort of set the
7 manifest to schedule. So working with the receiving
8 facilities and transporters, they know a particular
9 manifest should be picked up, let's say, 12:18 p.m.
10 Eastern Standard Time at this site. So the system at
11 12:18 p.m. will send a notification to me, the
12 individual on the dock, saying, "Hey, your name's been
13 listed on the manifest for this site. And it's ready
14 for shipment." And then there'll be a link or
15 presentation of the manifest for them to view and then
16 a link or another method of response to electronically
17 sign the manifest.

18 So it's sort of the three sort of steps
19 right here would be number one, be like, hey, this
20 manifest, the system is -- it understands the schedule
21 time. So it says this manifest is ready to go. Then
22 the next step would be a link or presentation of that
23 manifest. And then step three would be the link or

1 other method of response to electronically sign that
2 manifest.

3 And then following my signature on the
4 dock, the system will notify the subsequent handlers
5 listed on the manifest. So I'm the generator, and
6 then we'll use Scott Christian as transporter. So I
7 have signed that manifest as the generator. The
8 system will then go to the subsequent handler listed
9 on that manifest.

10 So it will go to transporter one. And
11 it will say similar items to what it said to me. So
12 this will be sort of a locked-in workflow. So it
13 can't go from the generator/transporter three back to
14 generator/transporter one. So this -- like the
15 workflow of the paper manifest follows a signature
16 process. This will follow the same signature
17 workflow. So there will be no skipping in line.

18 And then throughout the workflow the
19 manifest status itself will be updated, as well as the
20 site managers will be receiving the notification that
21 that manifest has been signed, it's in transport, all
22 that good stuff.

23 And then this method would be available
24 for fully electronic and hybrid manifests. So for

1 sites that -- for generator sites that don't have
2 anybody registered yet, however, the transporter is
3 available and they're ready to work on this, you can
4 use the electronic manifest. You can use this
5 workflow to meet that. So we're not just saying all
6 handlers need to have electronic signatures. We are
7 using the -- we're using the hybrid flexibility to
8 encourage electronic adoption.

9 And then, as we said earlier, 80
10 percent of our manifests are coming through data
11 submission services. We will work with its users to
12 ensure that this method builds on existing services
13 and schemas. So we're not going to be -- we're not
14 going to -- we're not going to just make you guys
15 change all your systems and all your business
16 processes just to accommodate this. We're going to
17 build on what we have and what's working for 80
18 percent of our submissions. And I can see in the chat
19 box that Tom has a question.

20 **MR. THOMAS BAKER:** Yes. Tom Baker.
21 Just to -- if you could elaborate or clarify the
22 hybrid. You mentioned it's Method 1 can be used for a
23 hybrid manifest, which, as I understand, is where the
24 transporter signs on behalf of the generator. Does

1 that -- what authorization or what method has to be in
2 place to allow that transaction to happen? What does
3 the generator need to do in advance of the shipment to
4 allow the hybrid manifest to be utilized?

5 **MR. STEVE DONNELLY:** It would follow
6 the same -- this is Steve -- this is Steve Donnelly.
7 Oh, Amanda, you want to take this?

8 **MS. AMANDA KOHLER:** Well, I wanted to
9 clarify what a hybrid manifest is. So this is not
10 where the transporter signs on behalf of the
11 generator. A hybrid manifest is where the generator
12 signs on paper, and the initial transporter and all
13 subsequent handlers sign electronically. So
14 everyone's signing in their own kind of box, so to
15 speak. But the generator is on paper, and the rest is
16 electronic.

17 **MR. THOMAS BAKER:** This is Tom Baker.
18 So in that case the generator signs the paper. So
19 someone needs to create the paper. They sign paper.
20 And the generator hands the paper to the transporter.
21 And then from that point forward, it's electronic.
22 And the transporter would keep the paper and deliver
23 it to the next transporter or the ultimate TSDF. Is
24 that correct?

1 **MS. AMANDA KOHLER:** Yes. Yeah.

2 Specifically, the hybrid manifest is an electronic
3 manifest. It is created in our e-Manifest system.
4 And so what would happen is the transporter/generator
5 would just print it out from our system. Generator
6 signs on paper. Transporter signs that generator copy
7 on paper. Generator has to keep that signed paper
8 copy because it's not in the system. And then the
9 transporter would then go back and electronically sign
10 the manifest. And any subsequent transporters would
11 sign electronically as well as the receiving facility.

12 **MR. THOMAS BAKER:** Okay. Thanks,

13 Amanda. So maybe I'll rephrase my question, then. Is
14 there the ability to use this, do you believe, in the
15 situation where the transporter signs on behalf of the
16 generator, not in a hybrid way, but when the generator
17 has given the transporter authorization to sign on
18 their behalf?

19 **MS. AMANDA KOHLER:** Yes. I don't see
20 why not. Steve, sorry, I didn't mean to jump in.

21 **MR. STEVE DONNELLY:** No. It's a good
22 answer.

23 **MR. THOMAS BAKER:** Okay, thank you.

1 **MR. STEVE DONNELLY:** Alrighty then.

2 Okay. So one of the considerations we have for this
3 method is -- and this goes for the Method 2 as well --
4 is whether this method also applies to the initial
5 signature at the receiving facility loading dock when
6 the waste is received. So right now, the person on
7 the loading dock would be accepting the waste. And
8 they could sign that manifest using the no-registered
9 option.

10 And then once that manifest is fully
11 complete with the management method codes and all that
12 -- because we understand that sometimes at the loading
13 dock they'll be waiting for groups of items to come in
14 from multiple shipments before they can group them for
15 incineration or storage or anything like that -- so
16 whether this would be useful for receiving facilities
17 to have the individual at the loading dock participate
18 in this signature workflow. And then once that
19 manifest is complete and all the boxes are filled out
20 with the sort of this VR information and all the
21 different areas at the bottom of the manifest -- they
22 escape me right now -- management method codes and
23 sort of discrepancy information -- when it's finally -
24 - when it's ready to be fully submitted to the EPA the

1 manifest, to quote Rich LaShier, has been perfected,
2 that would be done electronically through a CROMERR
3 signature. But this -- it could be marked as received
4 at the receiving facility.

5 Another consideration is whether links
6 should expire after a certain amount of time. And say
7 a manifest -- that manifest that I had coming at 12:18
8 p.m., I got pulled away and I was gone for the day.
9 So that waste never got picked up. So should those
10 links have an expiry to them?

11 And then for cases where a driver is
12 unable to bring the device to the generator site,
13 whether it's acceptable for transporters to
14 electronically sign upon coming back into possession
15 of their phone or their computer so once they sort of
16 hit the highway. We understand that certain sites,
17 like the Department of Energy sites, you can't really
18 just bring their phone in there. So you have to check
19 it. And then once you hit the road, you can have your
20 phone again -- and then whether Method 1 can
21 accommodate offline functionality so SMS or MMS to a
22 cell phone or calling a landline with a touchtone
23 response -- and then whether it would be useful and
24 cost effective to send an actual PDF of the manifest

1 along with that text email to the person on the site -
2 - so instead of clicking a link to have the manifest
3 sort of rendered and presented, a PDF of that manifest
4 would just be sent along with a text message or an
5 email attachment.

6 Do we have any more questions on Method
7 1 or Option 1? We're not formal with these things.
8 So please say -- so this is the Method 1. To
9 summarize, the manifest comes to the user at the
10 loading dock or in the car. And we need a site
11 manager registered. And that user who is not
12 registered does need to accept that they're going to
13 be signing the manifest for that site. So there's
14 sort of a -- so there's a two-step process. And that
15 process can happen directly before the manifest comes.
16 Or we want to keep this flexible for businesses'
17 processes.

18 **MS. KATHLEEN SALYER:** Great. Thanks,
19 Steve. It looks like we have a question from Jill
20 Macioch. Go ahead, Jill.

21 **MS. JILL MACIOCH:** Yes. Thank you.
22 Jill Macioch. Question for Steve, say the dock person
23 that would -- that one of the considerations is having
24 it available for the dock person to sign. Would that

1 need to be the same person as the one who's doing the
2 final submittal? Or could that be two different
3 individuals?

4 **MR. STEVE DONNELLY:** So I imagine it
5 would go -- this is Steve Donnelly. So we're talking
6 about the receipt of the waste at the designated
7 facility. So right now on paper, the paper signature
8 of the person on the loading dock is different than
9 the person who's signing and then submitting the
10 manifest into the system. So we don't imagine it
11 would be -- we don't imagine that we would be changing
12 all of that. Yeah. So right now, you can pull up a
13 PDF of any of those manifests, and that's usually not
14 the person who is uploading the manifest into the EPA
15 system. It's just the individuals -- sort of the
16 counterpart to the individual at the loading dock at
17 the generator site. The individual at the loading
18 dock at the receiving facility is not the one who's
19 uploading the manifest into the system.

20 **MS. JILL MACIOCH:** This is Jill
21 Macioch. Yes. That's what I thought then. Just
22 wanted to clarify. Thank you.

1 **MS. KATHLEEN SALYER:** Great. Thank you
2 for your question, Jill. So the next question is from
3 Tom Baker. Go ahead, Tom.

4 **DR. FRED JENKINS:** I'm sorry, Kathleen,
5 to interrupted you because this is for the transcriber
6 again. There's -- a couple of you all's voices sound
7 similar to her. And not to name names but I'm just
8 going to remind everybody to please state your name,
9 Kathleen included, and others that are chiming in
10 because as you all come in and out it's hard for her
11 to keep up. So thanks again and sorry to interrupt.
12 And I'll let you all proceed.

13 **MS. KATHLEEN SALYER:** Okay. So this is
14 Kathleen Salyer. Tom, go ahead with your question.

15 **MR. THOMAS BAKER:** Okay. I'm sorry.
16 Yes. So Tom Baker. Steve, I just want to understand
17 the functionality of the system as it relates to the
18 transporter signing here. So with some very large
19 national transporters that may have several hundred
20 drivers, for example, operating under one single U.S.
21 EPA ID number, is there a way in the current system --
22 so if we utilize Method 1 and the site manager or site
23 managers, plural, want to push these texts or emails
24 to drivers for shipments that are awaiting pick up in

1 e-Manifest, is there any current way to separate or
2 divide out these activities by state or by region? Or
3 do all site managers under a single transporter's EPA
4 ID number, are they all equal? In other words, they
5 all see -- everyone will see everybody's shipments
6 across the country? Just trying to understand if
7 there's any complexities with large transporters and
8 using this method that may need to understand.

9 **MR. SCOTT CHRISTIAN:** So this is not --

10 **MR. STEVE DONNELLY:** So the way we're
11 envisioning it -- oh. Go ahead, Scott.

12 **MR. SCOTT CHRISTIAN:** Yeah. So one of
13 the things we've been discussing internally as
14 prepping for this meeting is that question and the
15 idea of grouping. And grouping is something we will
16 want to discuss more with the users -- but the way of
17 allowing sites like yours to group manifests by either
18 the route that they plan or by the individuals who are
19 going to sign it. And that's where our thinking is.
20 But we obviously welcome the, we'll call it, the
21 Board's comments on this. We do want to take comment
22 on that. But in the current system, there's not a way
23 to do it. It would be a one large list. But for this

1 enhancement, it's something where we want to -- we
2 foresee that issue, if that makes sense.

3 **MR. THOMAS BAKER:** Okay. Thanks,
4 Scott.

5 **MS. KATHLEEN SALYER:** Okay. Thank you,
6 Tom, for that question and Scott for the answer. So
7 this is Kathleen Salyer again. And next question
8 comes from Joshua Burman. Go ahead, Joshua.

9 **MR. JOSHUA BURMAN:** This is Joshua
10 Burman. A few related questions, Steve, first, has
11 EPA considered internally whether this would just be
12 limited to a specific identified person? And I'm
13 assuming that person is identified by the site manager
14 when they input the contact information, such as phone
15 number, into the e-Manifest system. Or has EPA
16 considered whether a position instead of a specific
17 name -- and the scenario I'm looking at here is one we
18 see at a fair number of very large facilities that may
19 have 24/7 coverage in certain areas of their facility.

20 And they have a cell phone for that
21 position that is shifted from person to person,
22 whoever's on duty. It's the dock manager on duty,
23 that's their cell phone number. And it's -- when the
24 next dock manager comes on duty, they hand the cell

1 phone over. That person is then there. And whether
2 EPA has looked at under -- since this is not CROMERR
3 or would be interpreted as not CROMERR -- whether that
4 would be an acceptable scenario?

5 **MR. STEVE DONNELLY:** As we are -- yeah.
6 We are aware of -- oh, sound coming in a little echo-
7 ey. But we are aware of a lot of the times there'll
8 be sort of a -- there'll be a group email for a
9 loading dock or for a group cellphone. And that's one
10 of the issues that we would like to hear the Advisory
11 Board present their concerns. And as we develop our
12 overall Agency response, we would move forward
13 developing the solution.

14 **MR. JOSHUA BURMAN:** Okay. Thank you.
15 And related to that, has the EPA also done any
16 internal thinking so far on whether that could or
17 would have to be limited to a single notification and
18 a -- it's going to be a single response we hope but
19 only to a single individual? And again, the situation
20 would be, well, it's going to be one of these three
21 people. But they're all in and out of the dock. They
22 call can sign under the current paper system.

23 Management has already authorized these
24 three people to sign it. It really doesn't matter to

1 the company nor to EPA or to any state which one of
2 them does. This one is working on something in the
3 other room today. So the other one's going to sign.
4 Whether the system could support -- and I think we'll
5 have time to talk about this more in the discussion.

6 But I just wanted to feel for whether
7 EPA has actually done any background or digging yet
8 before this meeting on whether, for instance, the
9 system could handle sending out three notifications to
10 three different numbers and, whichever one responds,
11 great. The other two links essentially die or simply
12 become unused. And essentially, I'll take your
13 response offline. Thanks.

14 **MR. STEVE DONNELLY:** All right. So
15 yeah. One of the sort of rules we're sort of
16 operating in, there is sort of a -- on the box, on the
17 manifest form itself it lists someone's first name and
18 last name and their contact information. So as far as
19 going out of -- making it sort of like -- okay. It
20 could be manifest will have one of three individuals
21 listed as potential signatures of the manifest. We
22 don't have that built into our workflow yet. And
23 that's where we would be using the -- that's where we
24 would be using sort of the site managers sort of

1 visibility into this manifest to be able to update and
2 confirm that information as it changes.

3 However, if the advisory board has some
4 additional recommendations and ideas of how that could
5 be worked within sort of the structure -- like Amanda
6 was saying, we're sort of -- we are operating inside
7 our existing regulations right now with this method.
8 So if there are some additional approaches that the
9 Board would recommend, we would be very interested in
10 hearing them.

11 **MS. KATHLEEN SALYER:** Great. This is
12 Kathleen again. So looks like we have one more
13 question from Jill Macioch. Go ahead, Jill.

14 **MS. JILL MACIOCH:** Hi. Jill Macioch
15 again. And just kind of off of Josh's comment, I
16 understand this is more just about the feel and not
17 the details. But would you anticipate that, when a
18 site manager puts in the name, that that notification
19 could be made through multiple means? So for example,
20 you could put in a cellphone and an email address
21 since you don't exactly know where that person may be
22 at any given time. Or would it only be one method for
23 notification? Or have you not thought that far out

1 since, again, this is more specifically about the
2 feel?

3 **MR. STEVE DONNELLY:** No. That is
4 something we have thought about. And we have
5 considered that as an option where it would just --
6 yeah. Someone has listed you as a contact information
7 on the manifest. Yeah. You get an email. Your phone
8 rings. A blimp goes by with the message on the side.
9 So all those things will be on the table for getting
10 that -- sort of as this workflow progresses, something
11 for us to consider.

12 **MS. KATHLEEN SALYER:** Great. Thanks,
13 Jill and Steve. Okay. One more question from Cindy
14 Walczak. I'm sorry. I'm saying your last name wrong.
15 Go head, Cindy.

16 **MS. CYNTHIA WALCZAK:** No. Actually you
17 got it right. It's Walczak. But most Americans can't
18 really get their head around that. So you're doing
19 well with Walczak. Have you considered, and if you
20 haven't, if you would please think about whether EPA
21 could allow certifiers to identify the -- allow
22 certifiers to do what now even business site managers
23 will do, which is to identify the person who's going

1 to be actually signing the manifest and provide their
2 contact information?

3 **MR. STEVE DONNELLY:** Yeah. That's
4 something we will take under advisement. That's
5 something to put in there.

6 **MS. KATHLEEN SALYER:** Okay. Thank you
7 --

8 **MS. AMANDA KOHLER:** Can I ask I follow-
9 up -- sorry. Can I ask a follow-up question to
10 Cindy's question? Cindy, what benefit --

11 **MS. KATHLEEN SALYER:** Sure.

12 **MS. AMANDA KOHLER:** Yeah. What benefit
13 would you see from us using the certifier position
14 rather than the site manager?

15 **MS. CYNTHIA WALCZAK:** One of the
16 customers of --

17 **DR. FRED JENKINS:** And that was Amanda,
18 Amanda Kohler.

19 **MS. CYNTHIA WALCZAK:** Okay. Yeah.
20 This is --

21 **DR. FRED JENKINS:** Sorry. I'm doing
22 that for the transcriber. That was Amanda Kohler that
23 just spoke. Just to remind everybody, please state
24 your full name.

1 **MS. KATHLEEN SALYER:** Sorry, Fred.

2 **MS. CYNTHIA WALCZAK:** And this is Cindy
3 Walczak replying. One of the customers I work for
4 envisions a site manager that actually has many, many
5 responsibilities because in Michigan DEQ, now EGLE,
6 they're still requiring that site managers be
7 authorized individuals to submit biennial reports. So
8 those people are kind of busy. And I don't think they
9 really want to go in there and -- very often, frankly.
10 So certifiers, on the other hand, are closer to the
11 action if you will. And does that make sense?

12 **MS. AMANDA KOHLER:** Yes. Thank you.

13 **MS. KATHLEEN SALYER:** Great. Okay.
14 This is Kathleen Salyer. I don't see any more
15 questions from the Board. So we have about 20 minutes
16 before lunch, Steve. Is that enough time for you get
17 through your next presentation on Method 2?

18 **MR. STEVE DONNELLY:** Yes. I think we
19 can get through Method 2 --

20 **MS. KATHLEEN SALYER:** Okay.

21 **MR. STEVE DONNELLY:** -- in 20 minutes.

22 **MS. KATHLEEN SALYER:** Great. Thank
23 you.
24

METHOD 2: ALL PERSONS REGISTERED

MR. STEVE DONNELLY: All right. So Method 2, all persons registered. So Method 1 was the person -- there was one person registered to the site who would be sort of grooming the manifest for -- to send out that notification to the person on the loading dock. This method says -- everyone needs to have a RCRAInfo account, needs to be assigned to a site in the e-Manifest system.

So Method 1 was the manifest would come to you on the loading dock. However, Method 2 would be you could go -- you would still need to go into the system. There could be notifications to directly take you right to the manifest. However, you would need to log in and electronically sign the manifest.

So this would not interrupt Method 1. So Method 1 could have an individual on the loading dock sign via text. However, Method 2, the user could log into the system and be able to manage multiple manifests using the more robust functionality of the application's user interface. So some speed may be sacrificed. But that could be for -- that could be good for transporters or generators or individuals on

1 the loading dock who are managing multiple manifests
2 at once.

3 All right. So similar to the first
4 method, the generator and the transporter must have at
5 least one registered site manager for their site. Or
6 if they're doing a hybrid, the transporter must have
7 one registered site manager for their site. Okay. So
8 they would register much like we talked about earlier
9 in the presentation. They would do their account
10 things. They would confirm their email address.

11 However, there would be no identity
12 proofing. That LexisNexis, the electronic signature
13 agreement, this would not exist. And as I said
14 earlier, the notifications with the direct links to
15 the signature pages would be provided to users to take
16 them directly to the manifest needing signature. This
17 is sort of contingent on the right name beginning in
18 the right block for the manifest. But yes, it would
19 take that individual right to their manifest they need
20 to sign.

21 So a user would receive notification
22 that they had a manifest ready to sign. They would
23 confirm their name and make changes. And instead of -
24 - they would still click that "Sign" button inside of

1 the application. However, they would not need to re-
2 authenticate. They wouldn't need to enter their
3 username and their password. And they wouldn't need
4 to answer one of those five questions before they
5 could sign. They would just click a big button that
6 says "Sign." And they would be done with it.

7 So this is an example of -- I'm a
8 generator/transporter. And I would get sent to a -- I
9 would get sent to my manifest page. And these would
10 be all the manifests I'm named on. And if I have them
11 all and I'm ready to sign them, there's a button right
12 up top. I can click "Select All." And I would click
13 the "Sign" button, and those manifests would be
14 signed. And they would be moving along with the
15 workflow.

16 And, as I said earlier, this would be
17 available for fully electronic and hybrid. And
18 similar to the first method, we would like to hear the
19 Board's opinion of whether this could also apply to
20 the initial signature at the receiving facility. And
21 then that final upload to the EPA would be the
22 CROMERR-compliant electronic signature. And then
23 also, another consideration would be where the driver
24 -- similar to situation one -- where the driver is

1 unable to bring their device into the generator site
2 whether it's acceptable for the transporters to sign
3 upon coming back into possession of the device.

4 And then some additional functionality
5 considerations, whether this has the ability to
6 accommodate offline and then also whether a user can
7 use this method to sign over services, meaning that
8 this manifest is going to a user that has an API ID.
9 And then they would be submitting this information
10 from their industry system. And then the API would
11 come back and forth.

12 So right now to have an API ID in the
13 system, you need to be a site manager and go through
14 the LexisNexis authentication. However, there would
15 be sort of a new -- there would be new registered user
16 role where they could have that API ID so they could
17 sign from their -- they could sign the manifest
18 electronically in their system. So one of the
19 considerations is, if this method is acceptable,
20 whether the API ID keys could be provided to users
21 with a lower level of access than site managers and
22 whether this method could be used to integrate -- to
23 make a call from a rail system -- the rail EDI system
24 to e-Manifest to transmit the signature to EPA.

1 This one is a very technologically IT-
2 nuanced submission method. There's a lot of --
3 especially because we have more users registered in
4 the system there's more opportunity for streamlining
5 and enhancements of that API submission methodology to
6 increase electronic use of manifests. However, it
7 will take some input and some consideration from
8 industry, from states, as well as the Advisory Board
9 on how it could be integrated into the system. And
10 before I move on to Method 3, do you have any
11 questions?

12 **MS. KATHLEEN SALYER:** Yes. This is
13 Kathleen Salyer. Again, it looks like we have
14 questions from Tom and Joshua. So, Tom Baker, go
15 ahead first, please.

16 **MR. THOMAS BAKER:** Yes. Tom Baker.
17 Steve, could you just maybe restate this option as
18 simply as you can insofar as the relief it provides?
19 Is it simply just to allow the signers of the manifest
20 not to have to go through the LexisNexis process?

21 **MR. STEVE DONNELLY:** Yeah. This is --
22 we're stuck in a -- if I was in an elevator with you,
23 yes. I would say they could just click to sign.
24 That's the benefit of this. It allows users just to

1 sign the manifest and continue along the workflow.

2 That's the major benefit.

3 **MR. THOMAS BAKER:** Okay. And then you
4 said it may have some other IT enhancements for rail
5 signatures and transporter signatures that maybe need
6 to be further developed as well. Correct?

7 **MR. STEVE DONNELLY:** Yes. So if
8 Scott's on the line, he could talk a little more about
9 sort of how we're thinking about the API integration
10 with the signature method. Scott, are you there?

11 **MR. SCOTT CHRISTIAN:** Yeah. I'm there.
12 I just didn't want to interrupt. Thanks. This is
13 Scott Christian. So, Tom, a couple things, also in
14 addition to the LexisNexis relief, it's also the
15 relief from the challenge question. So the user would
16 have just a username and password and then click to
17 sign like Steve said, so just to clarify that.

18 For the services approach, the user
19 would have to provide their API ID and key to the
20 system. But then the system could do the
21 authentication steps, and within, let's say, your
22 industry system where your user signs, that
23 information can be captured and then submitted and

1 uploaded. It just is another -- that's the way we're
2 thinking about that.

3 Also with rail, this would be -- rail
4 has a very, as you know, very much of a system-to-
5 system approach, so taking that information from the
6 EDI system and translating that so that we can get
7 that information out. So that's where we see this
8 benefit with this kind of relief we've gotten. But
9 obviously we want a lot of your all's input on that.

10 **MR. THOMAS BAKER:** Okay. Thanks. As a
11 follow-up question -- Tom Baker -- just so, again, the
12 differences between this and Method 1 is one of the
13 key differences that in Method 1 where you have to
14 actually identify who the individual -- who's going to
15 sign the manifest in advance and push your information
16 to them electronically, in Method 2, it's relying upon
17 e-Manifest system to allow the transporter or
18 generator signer to login and see all the manifests
19 that are pending and pick the one that they want to
20 sign. Does that require someone to push it to them,
21 as far as assigning a driver or an individual to a
22 particular manifest in advance? Correct?

23 **MR. SCOTT CHRISTIAN:** Either an
24 individual or a system. One of the areas we've been

1 discussing, like I said earlier, when we were talking
2 about grouping is doing that over services so that
3 your internal grouping could be used to manage who
4 sees what manifest when. But also if you are signing
5 a user ID to a manifest, that user is going to know
6 what manifest they're going to be seeing because that
7 user ID is assigned to that manifest.

8 **MS. AMANDA KOHLER:** But, Tom, overall -
9 - this is Amanda Kohler --

10 **MR. THOMAS BAKER:** This is Tom Baker.
11 I'm not sure I understand what you're saying.

12 **MS. AMANDA KOHLER:** Yeah. Amanda
13 Kohler.

14 **MR. THOMAS BAKER:** Yeah. I'm not sure
15 I understand what you're saying.

16 **MS. AMANDA KOHLER:** Tom, you're
17 correct. Method 1 is the manifest is sent to the
18 individual via email or text. In Method 2, the
19 individual has to log in to the system to sign.

20 **MR. THOMAS BAKER:** Okay. And there may
21 be other enhancements like groupings that could help
22 funnel down where a driver or an individual wants to
23 sign. But that's a separate discussion. Okay. Thank

1 you. I think I understand. Appreciate your comments.

2 That's all. Thank you.

3 **MS. KATHLEEN SALYER:** Great. Thanks,
4 everyone. This is Kathleen Salyer. So the next
5 question comes from Joshua Burman. Go ahead, Josh.

6 **MR. JOSHUA BURMAN:** This is Joshua
7 Burman. I am actually going to preface my question
8 with jumping back to a question just raised by your
9 response to Mr. Baker. If the gist of Method 2 is
10 that, instead of the system pushing out a notification
11 to a identified user via a device or other method,
12 that users are going into the system similar to how
13 they would today except without the identity proofing
14 and challenge questions, essentially -- what I'm
15 understanding, and please correct me if I'm wrong, is
16 that the gist of Method 2 is very similar to the e-
17 Manifest system as it's built and fielded today,
18 except removing the CROMERR-compliant requirements
19 from the signature process. Is that correct?

20 **MR. SCOTT CHRISTIAN:** This is Scott
21 Christian. Almost. So yes, the users have to login
22 and go in to see. But we can work on notifications to
23 those individuals just like in -- the notification
24 piece is key in Method 1. It does not mean that's

1 mutually exclusive for Method 2. Method 2, the user
2 has the option of going into the system. Method 1,
3 the user does not because they're not registered. But
4 the idea of adding notifications for those users is a
5 realistic one to make sure we consider. Does that
6 answer your question?

7 **MR. JOSHUA BURMAN:** Thank you for the -
8 - unfortunately, I'm going to have to ask a follow-up
9 question then and some more clarification. This is
10 Joshua Burman again.

11 **MR. SCOTT CHRISTIAN:** Oh, please.

12 **MR. JOSHUA BURMAN:** If System 1 is
13 essentially pushing -- or excuse me -- Option 1 is
14 pushing notification or a alert to ask for a response
15 out, then how is EPA envisioning this Method 2, which
16 depends on actions by the user to be integrated with a
17 remote device or notifications, SMS, MMS, because it
18 sounds like the user would need to go into the system
19 to initiate that? So are you envisioning that they
20 would sign into the system using a fully functional
21 device, a laptop, a desktop computer to then initiate
22 a notification out to a non-fully functional device,
23 to a SMS message or something like that that they

1 would initiate that back out? I'm just wondering what
2 advantage that step would give.

3 **MR. SCOTT CHRISTIAN:** So what it is --

4 **MR. STEVE DONNELLY:** This is Steve. Go
5 ahead, Scott. I'm sorry.

6 **MR. SCOTT CHRISTIAN:** Go. Go ahead.
7 Go for it, Steve.

8 **MR. STEVE DONNELLY:** Yeah. So I mean
9 this is one of the considerations. So this Method 2
10 would be the person would be in the e-Manifest system
11 doing their work, signing and all that. And the
12 SMS/MMS or those would be similar to how they would be
13 notified that there is a manifest ready for them to go
14 into the system. What sort of the larger -- the
15 larger sort of conversation we want to have is that
16 we've -- EPA has reached a policy decision where sort
17 of the non -- as long as it's not a correction or the
18 final submission of the manifest to the EPA, there is
19 no need for that CROMERR signature ceremony.

20 What we're looking at and what we're
21 discussing and what I'm really enjoying is that
22 there's a lot of questions and instances that you are
23 bringing up and really appreciate that. And so yeah.
24 Method 2, sort of the larger arc of Method 2 is that

1 this is a non-CROMERR signature because this is not a
2 correction or a final submission to the EPA. We
3 envision someone using the app in a certain way. And
4 it could be through the APIs or it could be logging
5 in. But we also understand that sort of, given the
6 kinetic nature of the set to transmission, there's
7 going to need to be multiple avenues for them to sort
8 of be aware that, hey, there's a manifest that needs
9 your attention. I hope that clarified it.

10 **MR. JOSHUA BURMAN:** This is Joshua
11 Burman again. I think I'm going to withhold follow up
12 until other Manifest Advisory Board members' questions
13 have been answered because I think your response to
14 theirs might very well clarify my remaining confusion.
15 Thank you.

16 **MS. KATHLEEN SALYER:** Okay. This is
17 Kathleen Salyer again. Thank you, Joshua, and we can
18 come back to you at the end to confirm. The next
19 question from the Advisory Board is from Jill Macioch.
20 Jill, go ahead.

21 **MR. JOSHUA BURMAN:** Thank you. Jill
22 Macioch. Say, I just want to make sure I understand,
23 Steve. Would Option 2 be a better fit for using when
24 you're doing bulk signatures of manifests? Or can you

1 do essentially the same type of functionality with
2 Option 1 for signing both manifests -- or signing a
3 bulk of manifests? Thank you.

4 **MR. STEVE DONNELLY:** Well, we certainly
5 feel that Option 2 would be easier for an individual
6 to sign multiple manifests at the same time. And
7 Option 1 right now, as we sort of presented, it's very
8 much based on a single manifest, a single manifest, a
9 single manifest, a single manifest. However, making
10 Option 1 more like Option 2 could be a possibility.

11 It's going to take some additional
12 consideration. However, sort of the overall logic of
13 the workflow is similar to this. Sort of just the how
14 of getting sort of multiple manifests for a user to
15 view via SMS or MMS is a little more difficult.

16 Sending somebody an email, you can put
17 a lot into an email. But those -- sort of like that
18 multiple like text message that you get from -- my
19 state government sent me a tar data warning. It was
20 asking me to reply yes. So something like that
21 getting multiple, multiple pieces of information into
22 -- I think it's 150 characters for SMS -- getting all
23 that information transmitted in a way that sort of
24 meets the requirements of the regulation and will

1 allow some usability on bulk sign, that's something
2 that we're aware of and something that we'll certainly
3 consider.

4 **MS. JILL MACIOCH:** Sure. Jill Macioch
5 again. So going back to Tom Baker's question, then,
6 would you say that another benefit of Option 2, then,
7 would be the addition of being able to sign a bulk of
8 manifests?

9 **MR. STEVE DONNELLY:** Well, certainly.
10 However, Option 1 and Option 2 aren't done yet. So we
11 don't -- I mean that's what's -- we'll in our response
12 and then over the next couple days we'll meet and
13 discuss this. But I think sort of, as we're
14 presenting right now, yes, Option 2 -- I guess both
15 options don't exist right now in reality. So yeah.
16 Option 2 would certainly present easier management of
17 multiple manifests than Option 1.

18 **MS. JILL MACIOCH:** Jill Macioch. Thank
19 you, Steve.

20 **MS. KATHLEEN SALYER:** Great. Kathleen
21 Salyer again. So the next question is from Michael
22 Hurley. Go ahead, Michael.

23 **MR. MICHAEL HURLEY:** Hi. This is Mike
24 Hurley. Can you guys hear me?

1 **MS. KATHLEEN SALYER:** Yep. You're
2 coming through loud and clear.

3 **MR. STEVE DONNELLY:** Sounding loud and
4 clear.

5 **MR. MICHAEL HURLEY:** Okay. Making sure
6 I wasn't still muted. Okay. I sort of -- maybe an
7 observation then and question to follow is sort of my
8 feeling on this as we're going through this is we're
9 sort of discussing e-Manifest process or the manifest
10 process as sort of an electronic reporting problem
11 that needs to be solved. And I'm sort of curious
12 about that in some ways because I don't know if I
13 would share Mr. LaShier's point of view that this is a
14 perfected document. But one of the things that's out
15 there is where is DOT in this? There's still the DOT
16 requirements for that paper manifest or the paper
17 shipping document to be in the cab, right?

18 So all these electronic signing
19 ceremonies and all that other stuff and single
20 authorization from the corporate headquarters and all
21 this, DOT still wants that paper document signed.
22 Right? So has there been any progress in getting DOT
23 to work with you guys is my question on that? And
24 also, it seems to me that there were -- there's a lot

1 of complication that's being added onto that while
2 we're kind of looking for some simplicity. We're
3 trading a pretty simple process for a more complicated
4 electronic process. And I guess, back to DOT, we need
5 to have them as part of this discussion. And has
6 there been any progress? Thanks.

7 **MR. STEVE DONNELLY:** Hi. Yeah. So
8 this Steve. And I'll kick it over to Amanda for some
9 more context. But we have been engaging with -- we
10 have been engaging with DOT. And, yes, as far as the
11 regs go, that piece of paper in the car is not going
12 anywhere, at least in the near future.

13 Sort of the driving benefits of why
14 we're doing this -- so why we're trying to get more
15 electronic manifests -- is to sort of meet the other
16 goals of the statute, have better data quality for
17 industry and states as well as the general public.
18 Right now, sort of the -- one of the ways we're
19 attacking this is that bringing more generators and
20 transporters into the fold will vastly improve just
21 those couple boxes on the manifest form and allow some
22 better implementation of the program and better sort
23 of understanding of the waste streams associated with
24 those sites and allow industry better view into what's

1 going on in their view of the world. So that's sort
2 of the primary drivers for this. And, Amanda, if you
3 want to take it over talking about DOT engagement? I
4 know Bryan is on the line as well.

5 **MS. AMANDA KOHLER:** Yeah. This is
6 Amanda Kohler. Thank you, Steve. I fully support
7 your answer. Yes. The DOT paper shipping copy that
8 they require at this point isn't going away any time
9 soon. In our response to the Advisory Board
10 recommendations, we talk -- all kind of talk about
11 this problem. We do talk about perhaps planning a
12 future Advisory Board meeting focused on transporters,
13 inviting DOT at some point. But for right now, we're
14 not seeing that as reason for us not to move forward
15 with streamlining electronic signatures for manifests.

16 **MR. MICHAEL HURLEY:** Okay. Thank you.

17 **MS. KATHLEEN SALYER:** Great. Okay.
18 Great. This is Kathleen Salyer. So I think I don't
19 see any more questions from the board. I just wanted
20 to circle back to Joshua and see if you had any
21 follow-on questions?

22 **MR. JOSHUA BURMAN:** I'm good for now.
23 Thank you. This is Joshua Burman.

1 **MS. KATHLEEN SALYER:** Okay. Great. So
2 thanks, everyone. We are at our lunch break. So
3 Fred, we want to go ahead and proceed with that and
4 return at --

5 **DR. FRED JENKINS:** Yeah.

6 **MS. KATHLEEN SALYER:** -- give people an
7 hour and return at 2:00 or 2:05?

8 **DR. FRED JENKINS:** Yep, 2:05 is great.
9 I just want to remind the Board members for those of
10 you all that hang up on the call, please give yourself
11 about 10, 15 minutes to get dialed in. So call in a
12 little bit -- about 10, 15 minutes early to make sure
13 that the operator can get you in on -- back in on time
14 for the 2:05 start time. And so I just tell the
15 operator, Jerome, we're breaking for lunch. We're
16 going to resume at 2:05. But some people may be
17 dialing in a little early.

18 I think I'm going to try to stay on the
19 line as much as I can for lunch. But thanks so much,
20 you all, for a productive meeting and see you all for
21 lunch at 2:05. See you after lunch at 2:05. Have a
22 great lunch.

23 **MS. KATHLEEN SALYER:** Okay. Thanks,
24 Fred. Thanks, everyone.

1 DR. FRED JENKINS: Thank you.

2
3 [LUNCH BREAK]

4
5 MR. STEVE DONNELLY: Hey, this is
6 Steve. I'm back.

7 MR. BRYAN GROCE: Hey, Steve. This is
8 Bryan.

9 MR. STEVE DONNELLY: Hey, Bryan.

10 DR. FRED JENKINS: Hey, Steve and
11 Bryan, welcome back.

12 MR. BRYAN GROCE: Thank you.

13 DR. FRED JENKINS: This is Fred.

14 MR. BRYAN GROCE: I actually was bumped
15 off the call. I had to redial, call back in.

16 DR. FRED JENKINS: Were you bumped of
17 during lunch time?

18 MR. BRYAN GROCE: I think what happened
19 was I guess because my phone -- I don't know if this
20 is a feature of the phone or not. It didn't sense any
21 conversation either way. So it just automatically
22 disconnected.

23 DR. FRED JENKINS: Oh, okay.

24 MR. BRYAN GROCE: So that may have --

1 **MS. AMANDA KOHLER:** This is Amanda.

2 **MR. BRYAN GROCE:** Hey, Amanda. So that
3 may happen to others. And it may take some time for
4 them to reconnect.

5 **DR. FRED JENKINS:** Okay.

6 **MS. CYNTHIA WALCZAK:** Hey, Fred, this
7 is Cindy. It looks like I can share my desktop. So I
8 think she brought me in maybe as host or something?
9 Or is that supposed to be that way?

10 **DR. FRED JENKINS:** Well, you're a
11 presenter. We brought you in as a presenter. And I
12 did that so that, say for example, we all deliberate
13 on the charge questions, you'll be able to share what
14 you want to share. It gives you a little bit of
15 flexibility on presenting.

16 **MS. CYNTHIA WALCZAK:** It's fine. I
17 didn't remember it being that way this morning. But
18 that's fine. Thank you.

19 **DR. FRED JENKINS:** Yeah. You're
20 welcome.

21 **MS. KATHLEEN SALYER:** So good
22 afternoon, everyone. This is Kathleen Salyer.
23 Welcome back to the afternoon portion of Day 1 of the
24 e-Manifest Advisory Board meeting. Fred, I heard that

1 some people were having trouble calling back in. Do
2 we want to at least do a roll call of the Board
3 members? Or should we just go ahead?

4 **DR. FRED JENKINS:** Sure. That'd be
5 good, yes, just to do a quick roll call calling the
6 Board members. Thanks.

7 **MS. KATHLEEN SALYER:** Great. Could you
8 help me with that, Fred? I don't have the roster in
9 front of me.

10 **DR. FRED JENKINS:** I sure will. Okay.
11 I see. Terry Baer, are you on the line?

12 **MR. TERRY BAER:** Yes, sir. I'm here.

13 **DR. FRED JENKINS:** Okay. Great. Tom
14 Baker? Tom? Okay, Joshua Burman?

15 **MR. JOSHUA BURMAN:** Joshua Burman is
16 here.

17 **DR. FRED JENKINS:** Okay. Syed Hafeez?
18 Syed, can you hear me? Are you on mute? I know
19 you're on the line because we communicated this
20 morning, and I see you here on Adobe Connect. But we
21 could talk offline because I think there's maybe a
22 issue with your audio, you being able to speak to us.
23 Michael Hurley?

1 **MR. MICHAEL HURLEY:** Hello, Fred. I'm
2 here.

3 **DR. FRED JENKINS:** Great. Tefvik
4 Kosar?

5 **DR. TEVFIK KOSAR:** Yes. I am here,
6 Fred.

7 **DR. FRED JENKINS:** Okay. Great,
8 Tefvik. Jill Macioch?

9 **MS. JILL MACIOCH:** Yes. I'm on.

10 **DR. FRED JENKINS:** And Cynthia --

11 **MS. CYNTHIA WALCZAK:** Yeah. I'm still
12 here.

13 **DR. FRED JENKINS:** -- Walczak? Okay.
14 All right. So okay. So we're -- got everybody on.
15 So, Kathleen, we can proceed.

16 **MS KATHLEEN SALYER:** Okay. Great.
17 Thank you, Fred. So we'll pick off where -- pick up
18 where we left off on -- I think we're on Method 3.
19 And I'll turn it over to Steve Donnelly.

20

21 **METHOD 3: DIGITIZED SIGNATURE PAD**

22

23 **MR. STEVE DONNELLY:** Yes. Thank you
24 very much, Kathleen. This is Steve Donnelly. Welcome

1 back from lunch, or I guess if you're on the West
2 Coast, you had a good mid-morning snack. And yeah.
3 So we're going to discuss Method 3, which is digitized
4 signature pads.

5 All right. So digitized signature pads
6 have been long discussed with the e-Manifest program.
7 We've mentioned them in the preambles to, I believe,
8 our first two rules. And it was also the discussion
9 point of our last 2019 Advisory Board meeting. And
10 stakeholders did express an interest in third-party
11 signature -- third-party digitized signature
12 applications.

13 So essentially, this would be a device
14 or an application that would sort of be used by a
15 driver and handed off to people where they would sign
16 it. And that would follow the manifest and the waste
17 to its ultimate destination where it'll be signed.
18 And then the manifest submission would be submitted to
19 the EPA.

20 So this would be sort of a bilateral
21 implementation. So industry would need to integrate
22 their third-party systems -- their third-party
23 applications in their system. And then the EPA would
24 also need to integrate the third-party signatures into

1 the e-Manifest application. And then once it's all
2 done, this would be uploaded to the EPA.

3 So this would solve many of the issues
4 that plague the transaction, such as sites that don't
5 any connectivity, user registration, and all of the
6 rigamarole of using the system as it is right now.
7 And the digitized signature could also be used to
8 uniquely identify the signer and would be CROMERR
9 compliant. So the digitized signature pad would be
10 different than what -- in the Method 1 and Method 2
11 are where we're saying that the CROMERR-compliant
12 signature is the TSDF upload to the EPA or any
13 corrections made post-receipt of that TSDF-signed
14 CROMERR signature. This would be CROMERR compliant
15 through the way.

16 So essentially, how it would work is
17 that the transporter would sort of download the
18 manifest data onto this digitized signature pad. And
19 at the time, the device, the transporter would bring
20 that to the generator on the loading dock. And that
21 generator would sign on the digitized pad and would
22 not need to have a -- wouldn't need to be a registered
23 user. And the manifest would have all that
24 information from the generator, have their printed

1 name. And signing it would be like signing a piece of
2 paper.

3 And then the manifest would be signed
4 by the transporter and subsequent transporters would
5 carry this throughout the shipment. And the manifest
6 would be uploaded once it's received at a designated
7 facility for a final submission to the EPA. And this
8 would be available for fully electronic, meaning
9 generator and all the transporters, or hybrid, meaning
10 all of the transporters plus the designated facility.

11 However, there's some considerations.
12 There are multiple unknowns with implementing this
13 solution for both the EPA and the industry workflows.
14 Handlers would need to integrate approved devices into
15 their systems and assure interoperability on loads
16 shared with other companies using the digitized
17 signature devices. And handlers would need to
18 purchase and maintain special equipment: hardware,
19 software, firmware, all the fun stuff that we --
20 constantly downloading updates and updating these
21 devices. We'd need to identify redundancy processes
22 to ensure that manifests aren't lost, especially if
23 they're downloaded from offline signature when

1 specialized -- these signing devices are lost,
2 damaged, misplaced, et cetera, et cetera.

3 So what -- I'm sorry -- risk. So sort
4 of to round this off and, as we discussed in the white
5 paper, we have heard -- yeah. Digitized signature
6 pads have been something this program has been
7 discussing for a very long time. And there are
8 considerable unknowns from the industry costs to the
9 EPA cost to the maintenance cost and the integration
10 costs. If this is a direction that the Board is going
11 to advise us on, the EPA is asking for a clear signal
12 that this is something we should pursue.

13 Methods 1 and 2 are something within
14 our control. This is our web application. This is --
15 there's some standardized processes. These are
16 updates to our submission schema. There's -- not to
17 say this is not going to be work. However, there are
18 -- sort of we have a list of the known knowns and the
19 known unknowns. And we have a good sense of what any
20 of the unknown unknowns would be.

21 However, the digitized signature pad
22 integration is something that would and could
23 dramatically increase the industry costs for
24 participating in the system, increase EPA time and

1 effort to develop solutions and maintain them and
2 become a sort of -- a one stop --

3 **MS. KATHLEEN SALYER:** Steve, you seem
4 to have broken up a bit. I wasn't sure if you were
5 done or you were --

6 **MR. STEVE DONNELLY:** I'm taking a drink
7 of water.

8 **MS. KATHLEEN SALYER:** Okay. Very good.

9 **MR. STEVE DONNELLY:** Excuse me.

10 **DR. FRED JENKINS:** Steve, you okay?

11 **MR. STEVE DONNELLY:** Amanda, could you
12 finish up, please? Yeah. Just wrong pipe

13 **MS. AMANDA KOHLER:** Sure. Sure. So
14 this is Amanda Kohler. So yes. Steve was actually
15 almost -- kind of completed this slide. So a lot of
16 unknowns here. And we see the need to kind of explore
17 interoperability with companies using different
18 devices. Certainly, the scenario where we have kind
19 of independent transporters that may kind of make last
20 minute changes to pick up shipments, will that work
21 with the device that a certain company is using and if
22 it's different than another one?

23 Certainly, the need to purchase those
24 devices and equipment, and then what happens when

1 those devices are damaged or lost? How do we kind of
2 get that data at some point? So a lot of unknowns
3 here in terms of how and what level of effort it would
4 take to implement a digitized signature pad. And I
5 think that might actually be the last slide for this
6 Method 3. So I think we'll open it up to questions at
7 this point.

8 **MS. KATHLEEN SALYER:** Great. Thanks,
9 Amanda and Steve. This is Kathleen Salyer. Looks
10 like Tom Baker has a question. Tom, do you want to go
11 ahead? Tom Baker, you can go ahead with your
12 question. Tom, you're on mute if you're trying to
13 talk, I think. Tom, you might want to check your
14 mute. We can't hear you if you are asking a question.
15 But you can go ahead and ask your question now.

16 Fred, can you reply back to Tom Baker
17 in the chat and just let him know that we can't hear
18 him? I'm not sure if he can hear me. But is there
19 any other questions from anyone on the Board? We can
20 give folks a moment. Okay. Tom's question -- he just
21 wrote it out -- is regarding ability to work in an
22 offline mode. What's EPA's position on this?

23 **MR. STEVE DONNELLY:** This is Steve
24 Donnelly. I think -- this is Steve. I think -- Yeah.

1 I'm back. I shouldn't have had that 12th cup of
2 coffee. I had some water, so I'm feeling much better
3 and sounding much better. Apologies for that earlier.
4 So hopefully that won't be in the transcript.

5 So the -- yeah. How it would work in
6 the offline mode is that, essentially, the manifest
7 would be downloaded and stored on a third-party
8 signature device. Or the third-party device would be
9 storing the CROMERR-compliant signatures and add it to
10 the manifest prior to shipment. So essentially, think
11 of the device as basically like a strong box or a
12 black box you're putting e-Manifest and CROMERR into.
13 And that's following the shipment along the routes.

14 And then once -- it doesn't require --
15 since it's capturing sort of forensic signature
16 information along the way, it doesn't need to contact
17 the system at any point to sort of confirm anybody's
18 identity or sort of make sure that you're a registered
19 user. It just says -- it'll say -- on the box 5,
20 it'll just say Steve Donnelly. And it'll have my
21 signature along with the forensic information that is
22 retained in my signature. So that would be sort of
23 that would be there. And that information would be
24 uploaded to e-Manifest.

1 And then if it -- I mean the EPA's
2 position is that, if the CROMERR digitized pad sort of
3 meets the requirements of CROMERR and can be
4 implemented in the EPA system as well as the industry
5 system and it's tested and it works in a CROMERR-
6 compliant manner, then the EPA is for it.

7 **MS. KATHLEEN SALYER:** Okay. Thank you,
8 Steve. It looks like Tom is still having trouble with
9 his mic. So we can come back to him if he has a
10 follow-on question. I think he may try to call back
11 in. So next question -- again, this is Kathleen
12 Salyer. Next question is from Mike Hurley. Mike, go
13 ahead.

14 **MR. MICHAEL HURLEY:** Of all the three -
15 - this is Michael Hurley. Of the three methods
16 described, the digitized signature pad seems to most
17 sort of accurately cover the current process where you
18 get somebody sort of physically checking in at each
19 chain of custody turnover point. And I know we talked
20 about this in quite a lot of detail at the last
21 advisory committee meeting. I'm just curious if any
22 of the industry side people or even the IT side people
23 could comment on this.

1 I can see where the Options 1 and 2 are
2 more of the -- and sort of enterprise level, I mean,
3 sort of a more of a top down sort of solution to this.
4 But it seems Option 3 does capture the chain of
5 custody transfer sort of in real time more or less at
6 the site of turnover. So if anybody else could
7 comment, that would be awesome. Thank you.

8 **MR. SCOTT CHRISTIAN:** Steve, do you
9 want me to go to -- this is Scott Christian. Okay.
10 Go on, Steve.

11 **MR. STEVE DONNELLY:** So I can -- no.
12 This is Steve. All right. So waiting for the Board
13 with the-- I'll just give sort of the EPA's e-Manifest
14 experience has been with these digitized signature
15 pads is that, as far as discussing it and the actual -
16 - as a sort of solution that could solve all of our
17 problems. I think everyone agrees digitized signature
18 pads have been around for a while. And they have been
19 discussed.

20 What actually hasn't happened and
21 hasn't moved anything and maybe even moved backwards
22 since our last meeting is sort of willingness for
23 industry to begin serious consideration on
24 implementing these based on the CROMERR checklist and

1 the EPA's -- the e-Manifest process. So we have not
2 received much, if any, interest from industry on
3 implementing this option. Scott, does that cotton to
4 what your experience has been?

5 **MR. SCOTT CHRISTIAN:** That and in a
6 closed system I think what -- this is Scott Christian,
7 sorry -- with what Mike is saying. But if there needs
8 to be transfers and handoffs and differences in
9 signature pads, I think there seems to be a
10 disconnect. So the person picks up at one site and
11 then that has to be transferred to another -- that
12 signed manifest has to be transferred. So there's a
13 lot of, like Steve said it, unknown unknowns still.

14 **MR. STEVE DONNELLY:** Yeah. This is
15 Steve Donnelly again. Sort of that metaphor of the
16 FedEx or the USPS model doesn't work or hasn't worked
17 with the 800 different receiving facilities, the
18 10,000 plus transporter sites, and the over 200,000, I
19 think, generator sites in the EPA ID. So it's sort of
20 a different -- multiple companies, multiple drivers,
21 multiple shipments -- it's not as -- it's sort of the
22 actual sort of implementation of something like this
23 could be a little more difficult than what everyone
24 initially envisioned.

1 **MS. KATHLEEN SALYER:** Okay. Great.
2 Thanks, Steve and Scott. Fred, did you -- so to
3 Mike's -- Mike was asking for comment from others.
4 But someone brought up this is just a time for
5 clarifying questions. Can you give guidance on that?

6 **DR. FRED JENKINS:** Yes. So the Board
7 can continue to ask clarifying questions on anything
8 they've heard so far. Like I mentioned earlier, this
9 is their opportunity to hear from the Agency as much
10 information as possible today.

11 **MS. KATHLEEN SALYER:** Right. And this
12 was just Mike Hurley and his clarifying question, I
13 guess, but also just asking for the other industry
14 members to comment, too, in response to his question.
15 But it sounds like this is not the time for that?

16 **DR. FRED JENKINS:** Oh, well, yah. I'm
17 sorry. I was misunderstanding. This is not the time.
18 The time for that is during the charge question
19 responses when the Board provides their
20 recommendations, opinions, et cetera, in response to
21 the Agency's charge. Yeah.

22 **MS. KATHLEEN SALYER:** Okay, great.
23 Thank you, Fred. So, again, this is Kathleen Salyer.

1 I'm going to take the next question in order from the
2 Board. So, Terry Baer, please go ahead?

3 **MR. TERRY BAER:** Yeah. Thank you,
4 Kathleen. This is Terry Baer. So just to -- I
5 thought that we kind of went around with this special
6 equipment and device discussion last year. And I
7 thought that we had mentioned something about pursuing
8 or recommending the EPA about pursuing an app-type
9 device because there's already apps out there now for
10 manifest programs. And so, obviously, that then takes
11 away the device need and the equipment need and more
12 of just providing the software that can be uploaded to
13 a mobile device. Is that something that you guys had
14 not seen the response from industry or just was
15 wondering what happened with that conversation?

16 **MR. STEVE DONNELLY:** This is Steve
17 Donnelly. Yes, we have heard about -- we have heard
18 the sort of the -- yeah, making an e-Manifest or sort
19 of signature app. And we've begun -- we've talked
20 about it. However, given the -- sort of the most
21 important piece of this program right now moving
22 forward is this discussion of generator and
23 transporter electronic signatures. But we have heard
24 that that is something that industry has wanted.

1 So it is -- we do have it on the list
2 of things that we've heard that people would use to
3 sort of implement electronic signatures. And if you
4 would maybe during the charge questions or whatever --
5 I don't know if I can lead the Board on it. I'm not
6 going to say anything. But yes. If you have further
7 opinions on that, I think that would be very good for
8 the EPA to consider. Did I get in front of the
9 question?

10 **MR. TERRY BAER:** Okay. Thank you.

11 **MS. KATHLEEN SALYER:** Great. Thank
12 you. So next question is from Joshua Burman. Go
13 ahead, Josh.

14 **MR. JOSHUA BURMAN:** Thank you. This is
15 Joshua Burman. Particularly given Mr. Hurley's
16 question earlier and the entire issue of digital
17 devices and the e-Manifest system versus the U.S. DOT
18 has a materials shipping paper continuing requirement,
19 in preparation for this meeting or in doing
20 background, has EPA specifically contacted or received
21 any information from either DOT or United Parcel
22 Service regarding their experience so far with the
23 special permit allowance that they received last
24 September -- that is UPS received last September from

1 DOT to, as a pilot program, use digital pads in place
2 of hard copy hazardous materials shipping papers?

3 Though it's a technically separate
4 requirement, that is another hurdle that we have -- we
5 as a regulated community have to look at and surmount.
6 Just for this specific question, it would seem that
7 any experience they have so far could be very
8 instructive. And I didn't see a mention of that in
9 the white paper. But I was just wondering if EPA has,
10 particularly considering that when we're talking
11 digital devices. The experience base out there is
12 very heavy in a very small number of current courier
13 handlers who've been using them for years.

14 I'm not trying to endorse or recognize
15 any particular company, but just having received
16 shipments myself from the U.S. Postal Service, United
17 Parcel Service, and Federal Express to name probably
18 the biggest three I've had interaction with, it would
19 seem their experience base is large. So I was just
20 wondering if EPA has had contact with them, has made
21 contact with them, or has received any experience to
22 date from that special permit allowance? Thanks.

23 **MR. STEVE DONNELLY:** This is Steve
24 Donnelly. We have engaged with USPS early in the

1 earlier days of the program prior to -- I believe it
2 was our -- sort of the one-year rule, around that time
3 about sort of their digitized signature pads. And we
4 haven't engaged with them recently. And that could be
5 something the program does.

6 However, the sort of the needle we're
7 trying to thread here is that USPS has drivers that
8 are sharing -- they're sort of going from one place to
9 another. And they sort of have a tie to the place
10 they're picking up the packages to, to the truck
11 they're driving, to the signature. So this is --
12 implementing this across multiple handlers and
13 multiple businesses through multiple shipments, that
14 has been the -- that has sort of been the sort of the
15 bridge we can't quite get across or can't get across.
16 And, Amanda, do you have anything to add to that?

17 **MS. AMANDA KOHLER:** No. Thanks.

18 **MR. JOSHUA BURMAN:** I apologize. This
19 is Joshua Burman again. I may have muddied the waters
20 by bringing up other handlers clear of the Postal
21 Service. But my question was originally engendered
22 based on the new pilot program that UPS, United Parcel
23 Service, received permission from U.S. DOT to use

1 digital pads in place of hard copy shipping papers.

2 And that was just granted last September. Thanks.

3 **MR. STEVE DONNELLY:** Well, I was -- I
4 apologize for acronym soup over here. This is Steve
5 Donnelly. Yes. So I don't have any first-hand
6 knowledge of that -- I guess, second-hand now. But
7 no, I don't have any.

8 **MS. KATHLEEN SALYER:** Okay. Thanks,
9 Steve, and Joshua for your question. Next question is
10 from Cindy Walczak. Go ahead, Cindy.

11 **MS. CYNTHIA WALCZAK:** Hi. This is
12 Cindy, Cindy Walczak. This signature pad, does it
13 need to just capture like a picture of the signature?
14 Or does it need to be a CROMERR-approved device that
15 captures the speed and the pressure and all the things
16 you referred to -- the lawyer, EPA's lawyer referred
17 to at our last meeting?

18 **MR. STEVE DONNELLY:** Yes. This is
19 Steve Donnelly. Yes. For this signature pad
20 implementation, we would be -- these devices would be
21 following the CROMERR approval checklist. I think
22 it's epa.gov/cromerr. It would, yes, all signatures
23 would CROMERR approved so that the speed, the
24 pressure, the XY coordinates, all of that -- all that

1 information that's available on the very comprehensive
2 CROMERR website.

3 **MS. CYNTHIA WALCZAK:** And was there any
4 consideration given to just -- I'm sorry. It's Cindy
5 again. Was there any consideration given to allowing
6 just a picture of the signature? Has that been ruled
7 out?

8 **MR. STEVE DONNELLY:** Well, for this
9 method we're discussing, this would be a fully
10 CROMERR-compliant signature. So a fully CROMERR-
11 compliant signature needs to meet the CROMERR regs.
12 So I don't have -- I mean the option we're discussing
13 right here is for fully CROMERR. The implementing
14 sort of something that is a -- sort of for the
15 generator -- sort of how we're implementing the Method
16 1 and Method 2 where the generator/transporter,
17 potentially their loading dock is not a CROMERR
18 signature. But the final signature is CROMERR.
19 That's something we're not presenting today but we do
20 --

21 **MS. CYNTHIA WALCZAK:** So that comes --
22 you can finish. I'm sorry.

23 **MR. STEVE DONNELLY:** Oh, go ahead.
24 Yeah. I think I was done. That's all I got.

1 **MS. CYNTHIA WALCZAK:** Okay. So what
2 you did not consider -- but you're not necessarily
3 opposed to considering if the Board were to present it
4 -- you haven't yet shut the door on perhaps just
5 having -- you would have a signature device. But the
6 CROMERR signature would be the TSDF at the end of the
7 day, rather than every signature being CROMERR
8 certified. It's just not one of the options. Right?

9 **MR. STEVE DONNELLY:** Correct.

10 **MS. CYNTHIA WALCZAK:** Okay. And then I
11 have one more question if I could. I sometimes ship
12 medical waste. And for years, Stericycle has been --
13 and most states require medical waste manifests. It's
14 a DOT hazmat. So for decades, I think, Stericycle's
15 been using a hand-held device for shipping medical
16 waste. Have you -- has anybody at EPA looked into how
17 it is that that's able to work? I mean, if there's
18 all these unknowns, maybe some of these unknowns are
19 knowable by reaching out to somebody who's doing it
20 and has been doing it a long time, you know.

21 **MR. STEVE DONNELLY:** No. This is Steve
22 again. No. So no, we have not reached out to the
23 medical waste community.

1 **MS. CYNTHIA WALCZAK:** Okay. All right.
2 That's all I had. Thank you.

3 **MS. KATHLEEN SALYER:** All right. Thank
4 you, Cindy and Steve. So I don't see any other
5 questions at this time, actually. Okay. Tom Baker,
6 go ahead with your question.

7 **MR. THOMAS BAKER:** This is Tom Baker.
8 I'm just making sure you can hear me.

9 **MS. KATHLEEN SALYER:** Yes. Loud and
10 clear.

11 **MR. THOMAS BAKER:** All right. That's
12 my question. Thank you.

13 **MR. STEVE DONNELLY:** Yes.

14 **MS. AMANDA KOHLER:** That's great.

15 **MR. STEVE DONNELLY:** An easy one.

16 **MR. THOMAS BAKER:** Yeah. I'm not sure
17 why we got cut off earlier. Maybe just an issue that
18 somebody else had going on. So thank you.

19 **MS. KATHLEEN SALYER:** Syed, maybe.

20 **MR. THOMAS BAKER:** Syed, yeah. Sorry.

21 **MS. KATHLEEN SALYER:** Okay. Great. So
22 this is Kathleen Salyer again. So I don't see any
23 more questions. So we're going to move on to the next
24 presentation. I think you were doing this, Amanda --

1 MS. AMANDA KOHLER: Yes. Thank you.

2 MS. KATHLEEN SALYER: -- on the
3 implementation?
4

5 IMPLEMENTATION OF ELECTRONIC SIGNATURE OPTIONS
6

7 MS. AMANDA KOHLER: Great. Okay.
8 Okay. So yes. So this next section talks about
9 timing and level of effort for each of the methods
10 that we just discussed. So this slide is a table
11 straight from our background white paper, estimates a
12 timeline for implementing Methods 1 and 2. We kind of
13 grouped Methods 1 and 2 because we see them as very
14 similar in terms of scale.

15 As far as kind of costs are concerned,
16 we do see implementing Methods 1 and 2 -- so that'd be
17 development testing and rolling it out to fit within
18 our existing IT development budget, so our
19 development, maintenance, and enhancement budget. And
20 then we see kind of an estimated timeframe here. I
21 think the bottom-line message is we think we can roll
22 this out within a six-month period. One kind of
23 nuance is that we -- to kind of do a fall launch, we
24 would go right from this meeting to beginning to

1 develop Methods 1 and 2. So that is to say we
2 wouldn't necessarily have to wait for the 90 days
3 Advisory Board recommendations. But if that is
4 something that the Board feels strongly about,
5 certainly let us know in your kind of deliberations.
6 And we can adjust accordingly.

7 So if we kind of roll this out over the
8 next -- over the summer and fall timeframe, certainly
9 as soon as we would launch the Methods 1 and 2 --
10 Methods 1 or 2, we would start communicating and
11 providing outreach and training, so certainly looking
12 at the need to update a lot of our content, for
13 example, in the FAQ sheets and FAQs and websites and
14 then really kind of launching something that we've
15 been wanting to do for a while, which is really
16 engaging the generator and transporter community.
17 That is something that we had wanted to do a year ago
18 and realized that that would probably be better
19 sequenced once we addressed some of the barriers to
20 generator and transporter use of electronic manifests.
21 So once we kind of get the solutions that really work
22 for that community in place, then go out and start
23 working with that community to get them registered as

1 users and getting them used to using the manifest. So
2 that is something that we are looking at doing.

3 Going on to Method 3, as Steve
4 described, a lot of unknowns here. So we're really
5 not sure about the timing and level of effort. We see
6 a lot of hurdles in terms of what is needed, in terms
7 of how industry can adapt, how we can adapt, how
8 different systems can adapt. And so very cautious
9 about kind of investing our finite program resources
10 into developing a solution that we're not sure has
11 sufficient level of support.

12 So that's kind of -- our ask to the
13 Board during the deliberations is if this something we
14 really want and we're okay spending the resources and
15 the time even if that impacts other parts of the
16 program or perhaps impacts user fees. We'd kind of
17 need to know that level of commitment before investing
18 those resources. And I think that might be all we
19 wanted to say about implementation. Any questions on
20 that?

21 **MS. KATHLEEN SALYER:** Okay. This is
22 Kathleen Salyer. Looks like Tom Baker is our first
23 question. Go ahead, Tom.

1 **MR. THOMAS BAKER:** Yeah. Tom Baker.
2 Amanda, just in light of that schedule that you put
3 out, I know it's a rough implementation schedule. But
4 I presume these five may have been worked on prior to
5 the COVID-19 situation. Is that taken into account --
6 limitations with the department the last couple weeks,
7 months?

8 **MS. AMANDA KOHLER:** Yeah. That's a
9 very good point. Yes. We finalized this background
10 white paper probably early March and so before the
11 full COVID-19 hit us. We haven't really considered
12 how this would change specific to e-Manifest.
13 Certainly, we're all still working. But you're right.
14 This may have an impact, just not sure what impact
15 yet.

16 **MR. THOMAS BAKER:** Okay. Thank you.
17 But I guess the reality is you guys are still working
18 and facilitating the database, troubleshooting, and
19 running the monthly calls, the average calls.
20 Correct?

21 **MS. AMANDA KOHLER:** That's correct.
22 That's correct.

23 **MR. THOMAS BAKER:** Okay. Thanks.

1 **MR. STEVE DONNELLY:** And this is Steve
2 Donnelly here just to sort of -- we've -- I've been
3 monitoring the sort of systems, the mission metrics
4 since, we'll just say -- well, I do it every day --
5 but really closely since about mid-March, which seems
6 like a lifetime ago, how -- are submissions coming in?
7 And things have remained fairly normal compared to the
8 previous months of this fiscal year as well as looking
9 at April the year before.

10 So we haven't seen any drastic change
11 in manifests, sort of creating manifests or submitting
12 a manifest or paying for a manifest in the last month.
13 But, just like anything else, we're in a new world
14 right now. So we don't really know what, if any,
15 impacts there will be to the program.

16 **MS. KATHLEEN SALYER:** Okay. Great.
17 Thank you, Amanda, Steve, and Tom for your questions.
18 This is Kathleen Salyer. So just waiting on if
19 there's any additional questions. Great. Tevfik
20 Kosar, go ahead with your question.

21 **DR. TEVFIK KOSAR:** Yes. I have a
22 question for Steve. Considering we don't have Method
23 3, if a client suggests the Methods 1 and 2, would be
24 alternative first. Using these two methods on Method

1 1 and 2, is there really any offline transporter
2 that's without any email or without any cellular
3 access -- would it be possible for any such
4 transporter still to sign any -- that they should sign
5 an e-Manifest? Or would they need any, basically, a
6 third method in any case if they are offline?

7 **MR. STEVE DONNELLY:** Yeah. This is
8 Steve Donnelly. Yes. So one of the -- so one of the
9 questions and one of the ideas we're looking for is
10 sort of that third offline. We have sort of briefly
11 researched the possibility of using a landline
12 telephone to sign a manifest. There are additional
13 offline ways we're looking at.

14 However, we understand that a lot of
15 drivers have personal phones that they don't want to
16 be using. Or they're using shared phones that they're
17 not allowed to sign manifests on. Or there's a lot of
18 -- so there's some sites that don't allow you to bring
19 anything in there. So there's a lot of -- there's a
20 lot of what ifs and sort of exigent circumstances that
21 we need to account for.

22 So particularly with Method 1, talking
23 about sort of the offline signature, what are some
24 other options that are being used sort of to sign

1 something electronically that will meet, as Amanda
2 presented earlier, sort of the definition of
3 electronic signature but allow for offline use but
4 also meet the sort of kinetic business needs of the
5 manifest system which we -- we feel that there's some
6 promise in using a telephone. However, we have --
7 that's why we threw it to the Board to see what other
8 options are out there, particularly when it comes to
9 these sort of -- this sort of three-step process that
10 we could be considering for these options.

11 **DR. TEVFIK KOSAR:** Okay. Thank you,
12 Steve, for clarification.

13 **MS. KATHLEEN SALYER:** This is Kathleen
14 Salyer. So I don't see any questions right now. Give
15 folks another few moments if any Board members have
16 any additional clarifying questions.

17 **MS. MIMI GUERNICA:** Hi, Kathleen. This
18 is Mimi Guernica. I'd like to make a comment.

19 **MS. KATHLEEN SALYER:** Okay. Go ahead,
20 Mimi.

21 **MS. MIMI GUERNICA:** Okay. This is with
22 respect to Cindy's question about the signature
23 device. And the way that that worked is that the
24 signature device itself is approved. And so once that

1 signature device is approved, it is deemed that all of
2 the signatures on the device are CROMERR compliant.
3 That device captures forensic information that is what
4 our Office of Enforcement needs in order to proceed.
5 So I just wanted to make that clarifying statement
6 about the digital signature pad. Thank you.

7 **MS. CYNTHIA WALCZAK:** Yeah. Thank you.
8 This is Cindy Walczak. Thank you, Mimi. That's
9 consistent with the last meeting. I was just -- and
10 so thank you for letting me know that EPA is still of
11 the same mind and hasn't really considered -- the
12 logic associated with the first method where -- and
13 second -- where just the TSDF or I guess it's only the
14 first -- where only the TSDF needs to have other
15 CROMERR-certified signature. That same rationale
16 didn't follow into Option 3 or Method 3, which is
17 fine. I was just wanting to clarify that. So thank
18 you.

19 **MS. MIMI GUERNICA:** You're welcome.

20 **MS. KATHLEEN SALYER:** This is Kathleen
21 Salyer. I don't see any other questions. Again, I'll
22 give people a few more moments, the Board members.
23 Okay. So that is the end of EPA presentations for Day

1 1. I think, Fred, I'll turn it over to you for
2 wrapping this up. We're well ahead of schedule.

3 **DR. FRED JENKINS:** Great. Thank you so
4 much. Thank you so much, everybody. Great job to my
5 EPA colleagues in your presentation. Thank you for
6 your great leadership today, Kathleen, in chairing the
7 meeting. And to the Board, thank you.

8 And so I want to say a couple of
9 important things for the public. Thank you for those
10 who've signed up to provide more public comment. I
11 will be following up with you this afternoon to
12 provide you specific instructions on providing oral
13 public comment. And you'll have to dial in a little
14 bit early, and it's very important that you dial in on
15 time. The meeting will start on time at 10:00 a.m.
16 with the oral public comment period. And if anybody
17 has any questions, please feel free to email me. So
18 with that said -- at jenkins.fred@epa.gov -- and with
19 that said, the meeting is adjourned for the day.
20 Thanks so much, everybody. And we'll see you in the
21 morning.

22 **MS. KATHLEEN SALYER:** Great. Thanks,
23 everyone. See you tomorrow. Bye-bye.

24 **GROUP:** Thank you.

1 **JEROME:** This concludes today's
2 conference. Thank you all for joining. This meeting
3 is scheduled for three days and will begin at 10:00
4 a.m. Eastern Time each morning. Today will entail EPA
5 presentation to the board. Tomorrow, Wednesday, Day 2
6 will open with the oral public comment period.

7 If you have not already signed up to
8 provide oral public comments and you're interested in
9 providing oral public comments during the oral public
10 comment period, Fred Jenkins, the Designated Federal
11 Officer of the e-Manifest Advisory Board will be
12 providing you instructions. Thank you. You may now
13 disconnect.

14

15 **[MEETING ADJOURNED FOR THE DAY]**

16

OPENING OF MEETING - DAY 2

OPERATOR: Good morning, everyone. My name is Jerome, and I am the EPA teleconference operator for this virtual public meeting of the e-Manifest Advisory Board. This meeting is scheduled for three days and will begin at 10:00 a.m. Eastern Time each morning. Today will entail EPA presentations to the board.

Tomorrow, Thursday, Day 3, we'll open with an oral public comment period. If you have not already signed up to provide oral public comments and you are interested in providing oral public comments during the oral public comment period, Fred Jenkins, the designated federal officer of the e-Manifest Advisory Board, will be providing you instructions shortly. After the oral public comment period closes, the e-Manifest Advisory Board will openly deliberate on their responses to EPA's charge questions for the remainder of the meeting.

I will now ask Fred Jenkins, the designated federal officer of the e-Manifest Advisory Board, to proceed with opening this meeting at its start time of 10:00 a.m. Eastern Time. Thank you.

1 **DR. FRED JENKINS:** Thank you so much,
2 Jerome, and hello everyone out there. Welcome for Day
3 2 of this e-Manifest Advisory Board meeting. I want
4 to say first thank you to everyone for a very
5 productive Day 1 of the meeting. Thank you to the
6 Agency, my EPA colleagues for your great presentations
7 yesterday and thank you for the board for your active
8 engaged participation in this meeting queuing us up
9 for Day 2 of the meeting.

10 So a couple things I want to note, I
11 know that there is an issue with people being able to
12 get onto Adobe Connect to see the visual portion of
13 our webcasting, and we are working on that right now.
14 Right now it's still in standby mode, and we're trying
15 to get the Adobe Connect room to open up for the
16 entire audience. I see a whole bunch of people are
17 trying over and over again. Keep trying. We're
18 working on it.

19 And it's good to see so many people,
20 240 attempts to get in. So that's a lot. That's a
21 big audience. We had a pretty big audience yesterday.
22 And I want to say thank you so much to the public for
23 joining us. This is a very important opportunity for
24 the public to become engaged in the e-Manifest program

1 and participate. E-Manifest Advisory Board meetings
2 are a key way in which we engage our public
3 stakeholders and invest in the program.

4 So we are -- before we have our public
5 comment period, we're also going to open up an
6 opportunity for the board to ask clarification
7 questions that they may have -- one last opportunity
8 for the board to ask any clarification questions that
9 they may have for the Agency. The Agency presented
10 yesterday, so yesterday was the board's opportunity to
11 ask any clarifying questions of all the information
12 that the board provided. So we're going to give one
13 last opportunity to the board so it's fully informed,
14 from the Agency's perspective, before they answer the
15 charge questions.

16 But before we give that opportunity for
17 clarifying questions for the board, I'm going to pass
18 the microphone on to our chair of the e-Manifest
19 Advisory Board, Ms. Kathleen Salyer. She's going to
20 introduce herself and ask the board members to do a
21 quick roll call of themselves. And the order of their
22 names are on the roster. Kathleen, you can take it
23 away.
24

INTRODUCTION AND IDENTIFICATION OF PANEL MEMBERS

MS. KATHLEEN SALYER: Great. Thank you, Fred. Good morning, everyone. Again, my name is Kathleen Salyer. I'm the acting director of the Office of Resource Conservation and Recovery at EPA. I'm also currently the acting delegated chair of the e-Manifest Advisory Board. And I'd like to welcome you all to Day 2 of the e-Manifest Advisory Board public meeting. I again want to thank all the board members for their service to the board and to the general public that's participating today for their interest in the e-Manifest program.

So as Fred mentioned, I'd like each of the members of the e-Manifest Advisory Board to introduce yourself. And since we have new attendees from the public today, if you can go ahead and provide background on your experience as you did yesterday, that would be appreciated. So we'll go ahead and go in order of the board member roster. So please go ahead. So we're starting with Tom Baker.

MR. THOMAS BAKER: Good morning. Hi, this is Tom Baker. Can you hear me?

DR. FRED JENKINS: Yes, we can hear

1 you, Tom.

2 **MR. THOMAS BAKER:** Okay. Great. Yeah.
3 Good morning. This is Tom Baker. I am the Vice
4 President of Environmental Health and Safety for
5 Veolia North America. I'm representing the industry
6 group on the Advisory Board. And our company is a
7 full-service environmental service provider, and we're
8 a transporter, generator of hazardous waste, and
9 operator of a number of hazardous waste treatment,
10 storage, and disposal facilities. My background has
11 been working in the hazardous waste services industry
12 for over 30 years and have been working supporting the
13 e-Manifest initiative for many years from its start
14 over 15 years ago. So glad to be here and contribute
15 to the process.

16 **MS. KATHLEEN SALYER:** Great. Thank
17 you, Tom. This is Kathleen Salyer again. I just
18 realized I called out of order. It was -- Terry Baer,
19 if you could go ahead and introduce yourself, too.
20 Okay. Perhaps he hasn't joined. We can come back to
21 Terry. Go ahead, Joshua Burman.

22 **MR. JOSHUA BURMAN:** Morning. This is
23 Joshua Burman from the Minnesota Pollution Control
24 Agency. I'm here as a state representative.

1 Minnesota sort of has been collecting and processing
2 information from hazardous waste manifests for several
3 decades and hopes to bring that experience base and
4 lessons learned to the EPA through the Advisory Board.
5 I'm here, therefore, as a state representative.

6 **MS. KATHLEEN SALYER:** Great. Thank
7 you, Joshua. Syed Hafeez?

8 **MR. SYED HAFEEZ:** Good morning. Yes,
9 my name is Syed Hafeez. I am the Director of
10 Information Resources at the Department of Labor Mine
11 Safety and Health Administration. For the past 20
12 years, I have managed all system development
13 lifecycles implementation and maintenance for the
14 various highly technologic scale system at MSHA. So
15 thank you for providing this opportunity.

16 **MS. KATHLEEN SALYER:** Great. Thank
17 you. Michael Hurley, please.

18 **MR. MICHAEL HURLEY:** Sure. Hello.
19 Michael Hurley. Massachusetts Department of
20 Environmental Protection. I'm the chief of the data
21 systems branch there. For the last 20 years, I've
22 been involved -- my branch has been involved with
23 online application development, data collection, and
24 e-permitting with a particular focus in this case on

1 hazardous waste and manifested data. Thank you very
2 much.

3 **MS. KATHLEEN SALYER:** Great. Thank
4 you, Michael. Tevfik Kosar?

5 **DR. TEVFIK KOSAR:** Good morning. This
6 is Tevfik Kosar. I am contributing to the board as an
7 IT expert member. Currently, I'm a professor of
8 computer science and engineering at the University of
9 Buffalo in New York, and I'm happy to contribute to
10 the board today.

11 **MS. KATHLEEN SALYER:** Great. Tevfik,
12 thank you. And your audio quality is not great, so
13 maybe you can try to address that before we come back
14 to you during the discussion.

15 **DR. TEVFIK KOSAR:** Yes, I'm working on
16 it.

17 **MS. KATHLEEN SALYER:** Okay. Great.
18 Thank you. Next is Jill Macioch. Go ahead, Jill.

19 **MS. JILL MACIOCH:** Good morning. Thank
20 you. This is Jill Macioch, and I'm Environmental
21 Supervisor with Xcel Energy out of Minneapolis,
22 Minnesota. We are a utility providing gas and
23 electric. We also operate a TSDF, a Part B hazardous
24 waste storage facility that I manage the operations.

1 We manage both hazardous waste and PCB waste. We have
2 a fleet of drivers, so I'm an industry representative
3 and involved with the e-Manifest with familiarity as a
4 generator, transporter, and the receiving facility.
5 Thank you.

6 **MS. KATHLEEN SALYER:** Great. Thank
7 you, Jill. Cindy Walczak, please. Go ahead, Cindy.

8 **MS. CYNTHIA WALCZAK:** Sure. Thanks.
9 This is Cindy Walczak. I'm a project manager for MPS
10 Group. My experience is on the generator side. And
11 on the board, I'm an industry representative.

12 **MS. KATHLEEN SALYER:** Great. Thank
13 you, Cindy. And then going back to Terry Baer. Have
14 you joined us? Okay, Fred. It sounds like he's not
15 on, so we'll need to check to see if he's having --

16 **DR. FRED JENKINS:** Yeah. I'll follow
17 up.

18 **MS. KATHLEEN SALYER:** -- issues
19 connecting. Okay.

20 **DR. FRED JENKINS:** Yeah. I'll do it.

21 **MS. KATHLEEN SALYER:** Okay. Great. So
22 with that, that concludes our introduction of the
23 board members. And I'm going to turn it back to you,
24 Fred, on the additional clarifying questions from the

1 board members. And then we'll move to the public
2 comment period.

3
4 **ADDITIONAL CLARIFYING QUESTIONS**

5
6 **DR. FRED JENKINS:** Okay. Thank you,
7 Kathleen. So now is the board's last opportunity to
8 ask any clarifying questions that they may have for
9 the Agency based on what you heard yesterday. I know
10 that Syed had a question or two. Syed, can you go
11 ahead and ask your question? Thank you.

12 **MR. SYED HAFEEZ:** Sure. Thanks, Fred.
13 Yes. My question is, is EPA eliminating CROMERR
14 requirements for generators and transporters or
15 keeping this requirement for them?

16 **MS. AMANDA KOHLER:** So this is Amanda
17 Kohler from EPA, and I can respond to that. So yeah.
18 The options we presented yesterday are based on EPA
19 interpreting CROMERR requirements to only apply to
20 receiving facilities when submitting that final signed
21 manifest to EPA. So generator and transporter
22 signatures would no longer have to adhere to CROMERR
23 compliance requirements.

24 **MR. SYED HAFEEZ:** Thanks.

1 **DR. FRED JENKINS:** Okay. Thank you,
2 Amanda. Any other questions from the board?

3 **MS. CYNTHIA WALCZAK:** This is Cindy
4 Walczak, if I could ask one, please.

5 **DR. FRED JENKINS:** Sure.

6 **MS. CYNTHIA WALCZAK:** So it's very
7 similar to the previous question. If we're now at the
8 place where the CROMERR signature only needs to be
9 provided by the TSDF, did the board consider extending
10 the hybrid option to transporters? And if you did,
11 could you explain why it wasn't presented as one of
12 the options?

13 **MS. AMANDA KOHLER:** Cindy, this is
14 Amanda again. I guess I'm -- I don't think I'm quite
15 understanding your question. So the hybrid is
16 available now to initial transporters, and our options
17 yesterday would be available for hybrid manifests.

18 **MS. CYNTHIA WALCZAK:** Let me clarify.
19 Under the hybrid option, the transporter still needs
20 to electronically sign. I'm wondering if EPA
21 considered -- but the generator doesn't. The
22 generator can sign in ink. So I'm wondering if the
23 board considered allowing generators to -- I'm sorry,
24 transporters to sign in ink. So you have generator in

1 ink on the piece of paper. You have transporter's ink
2 on the piece of paper. And then when it gets to the
3 receiving facility, they do the electronic and CROMERR
4 signature associated with that. Does that help
5 clarify what I meant?

6 **MS. AMANDA KOHLER:** Yes, certainly. So
7 they hybrid manifest option is something that we
8 considered through the rulemaking process that we
9 conducted prior to system launch. And at this time,
10 we're not considering any new rule changes related to
11 how the hybrid manifest works currently.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Amanda. Did that answer your question, Jill?

14 **MS. CYNTHIA WALCZAK:** This is Cindy.
15 And it answered it, but I must say I think this
16 philosophically maybe -- or there's somewhat of an
17 inconsistency between Method 1 being okay but it's not
18 okay to have transporters sign in ink. But I guess as
19 a clarifying question it sounds like that's because
20 you think that would require rule change, whereas your
21 current Method 1 you don't. Is that accurate?

22 **MS. AMANDA KOHLER:** I guess our options
23 that we presented yesterday are focused on how to
24 streamline electronic signatures as a way of moving

1 towards electronic manifests. And we weren't trying
2 to consider changes to how the hybrid workers. We're
3 just trying to make an electronic signing easier if
4 that helps.

5 **MS. CYNTHIA WALCZAK:** Yes. Thank you.

6 **DR. FRED JENKINS:** Okay. Any other
7 clarifying questions from the board to the Agency
8 before we open the public comment period? Going once.
9 Going twice.

10 **MR. THOMAS BAKER:** Fred, this is Tom
11 Baker. I have a clarifying question if I could.

12 **DR. FRED JENKINS:** Okay. Great.

13 **MR. THOMAS BAKER:** We mentioned in
14 yesterday's meeting the ability to work in an offline
15 mode, and EPA seemed to be understanding that was
16 something that could be done. I guess my question to
17 clarify with EPA is have they issued any FAQs or
18 policy guides with respect to what does working
19 offline look like? For example, if the signatures are
20 occurring in an offline mode, at what point would the
21 data need to be uploaded into the e-Manifest system?
22 Would it need to be uploaded, for example, at the
23 first opportunity when there's Wi-Fi connectivity? Or
24 is there a timeframe the EPA would recommend, 24, 48,

1 72 hours? Or is it wide open at this point as far as
2 EPA's policy or understanding of how an offline mode
3 would work?

4 **MS. AMANDA KOHLER:** Steve, do you want
5 to handle that one?

6 **MR. STEVE DONNELLY:** Yeah. This is
7 Steve. Yeah. This is Steven Donnelly speaking. So
8 we understand that offline is a big -- it's a big need
9 for our user base, but it also brings up a lot of sort
10 of policy and technology deliberations and
11 determinations. We'd have to look at sort of what are
12 government standard best practices for offline. For
13 example, in this thinking we had to run through the
14 ramifications. And part of sort of what we're asking
15 for on the time, there's a question to ask about what
16 are would the acceptable time box say.

17 Say, for example, a text message
18 signature sent to -- an MMS text message is sent to a
19 phone on the dock, and that text message puts that
20 individual phone over the data limit for a month. And
21 they can't respond. They want to respond yes, but
22 they can't sort of send the data back to the system
23 because they're over the data plan. And they're five
24 more days until that data plan's reset.

1 So there's a lot of sort of
2 technological considerations that we have to go
3 through that would impact offline signature. That's
4 one of the reasons we're looking at -- we're keeping
5 all options on the table. We don't want to get sort
6 of married to one because we do know sort of solving
7 offline would really -- especially when it comes to an
8 electronic signature, would really -- in my opinion
9 would really help boost the electronic signature
10 process. So we have not found that silver bullet yet,
11 and we're still looking at it in determining
12 solutions.

13 **MR. THOMAS BAKER:** Okay. Thank you,
14 Steve.

15 **DR. FRED JENKINS:** Any other questions?
16 I'm reading a note. So you know, Terry Baer is on the
17 line. He's having some technical difficulties. So we
18 should be able to get him. Terry, are you able to
19 speak?

20 **MR. TERRY BAER:** Yes, sir. Yeah. I
21 can speak. I just can't get into the video. It won't
22 connect.

23 **DR. FRED JENKINS:** Oh, yeah.
24 Everybody's having that problem. As a matter of fact,

1 I see the operator working in the background on that
2 issue. But we're moving along anyway until they get
3 that fixed. But thank you so much for joining us.

4 **MS. KATHLEEN SALYER:** And Fred, let's
5 give Terry -- you missed when we were doing
6 introductions of the board members. Do you mind
7 introducing yourself to the audience? Thank you.

8 **MR. TERRY BAER:** Yeah. I apologize.
9 When the call started, it was 6:30 here in Arizona, so
10 I had some technical difficulties. Yeah. Terry Baer.
11 I'm the Solid Waste and Hazardous Waste Section
12 Manager for ADEQ. I manage all interactions between
13 our landfills and our hazardous waste processes. I've
14 been with the state for three years, and I came from
15 private industry before that for 15 years doing TSDF
16 operations and brigadier response.

17 **MS. KATHLEEN SALYER:** Great. Thank
18 you, Terry. Back to you, Fred.

19 **DR. FRED JENKINS:** Okay. Thank you.
20 Thank you, Terry. So does the board have any other
21 questions to ask the Agency?

22 **MS. JILL MACIOCH:** Hi, Fred. Jill
23 Macioch.

24 **DR. FRED JENKINS:** Yes.

1 **MS. JILL MACIOCH:** I have one
2 clarifying question. Jill Macioch again. I apologize
3 if this was answered yesterday or asked and answered
4 yesterday. But for Option 1, I know we kind of
5 alluded to this yesterday. But can you enter more
6 than one person if you don't know who will be
7 available to sign the manifest? So me as the site
8 manager, I know we talked about one person -- or one
9 telephone number or one cellphone. But could you --
10 if you know it's going to be one of those three
11 people, could you enter all three names, email
12 addresses, and cellphone numbers? And that message
13 goes out to all three and one of those replies or
14 responds? And that question is for either Amanda or
15 Steve.

16 **MR. STEVE DONNELLY:** This is Steve.
17 Right now, no. It needs to go to one person. One of
18 the ideas and options we've had is to sort of give
19 more functionality to the site manager perhaps by text
20 message notification saying -- you know, give them
21 sort of pre-shipment, like five minutes before the
22 manifest goes live they can respond to a text saying,
23 "Send this person -- sent the manifest to person A, B,
24 C, D," allow them to sort of pre-groom that manifest

1 out of a smaller sub-list, give them more visibility
2 to manage that manifest and the time shipment. But
3 right now, when that manifest goes to live, we need
4 the generator signature or a transporter signature.
5 It needs to be going to a -- that Method 1 will be
6 going to a single individual. But looking into sort
7 of more robust sort of pre-manifest shipment
8 management is something that we have talked about, and
9 we would like to hear if that would be a valuable road
10 to travel down.

11 **MS. JILL MACIOCH:** Okay. Thank you.

12 **MR. STEVE DONNELLY:** We all love
13 getting text messages, so perhaps that's a good
14 response.

15 **DR. FRED JENKINS:** Okay. Thank you,
16 Steve. Thank you for your question, Jill. Any other
17 questions from the board?

18 **MS. JILL MACIOCH:** Jill Macioch again,
19 just a quick follow up question. Again, I know you
20 need to work out all the details, but this just kind
21 of helps me better understand for the charge
22 questions. If the person -- let's just say the site
23 manager is going to be the person signing the manifest
24 and perhaps even transporting the manifest. Does that

1 interfere with the process of getting those
2 notifications sent to the signer? Again, Jill
3 Macioch.

4 **MR. STEVE DONNELLY:** Hi, this is Steve
5 Donnelly again. That's one of the considerations we
6 would have to have is -- yes, if the site manager's
7 also the person signing the manifest, what would their
8 sort of notification scheme look like? And it's part
9 of a larger -- we call them IT, it's Epic. So it's
10 sort of a larger collection of issues and user
11 stories. What would good notifications look like for
12 a site manager in the situation where they are also
13 the person signing that manifest?

14 So we've heard this a lot on a lot of
15 different notification requests from industry users,
16 being able to go into the e-Manifest app and groom the
17 type of notifications they get when they get them. So
18 right now, we sort of have a weekly manifest digest
19 that goes to people. We've heard and we have in our
20 backlog the ability for users to go in there and say,
21 "I don't want weekly notifications. I get a lot of
22 stuff, so I need biweekly notifications for X number
23 of sites."

24 So I imagine that for this situation we

1 would be discussing allowing the individual site
2 manager to -- who is going to be signing the manifest,
3 giving them sort of a -- giving them a way to manage
4 how all those notifications come in. So they're
5 getting notified that they're -- we don't want them
6 getting notified that they're being notified that they
7 got notified to sign a manifest. That could get
8 expensive on their end for their SMS. It could be a -
9 - it'd be costing us sort of system capability. It
10 would be a clunky way of doing things. So we
11 understand that is -- that would be an interesting
12 requirement to work through.

13 **MS. JILL MACIOCH:** Okay. Thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Jill. So before we move on, I just want to ask the
16 audience to try one more time to get into the Adobe
17 Connect room. It looks like they might have that
18 issue resolved. Just kind of like re-enter it, and
19 then hopefully you should be able to come back in.
20 The operator's still working on that in the
21 background. And I'm communicating with the operator
22 while that's going on. But in the meantime, we're
23 going to move forward. I'm going to ask the board one
24 last time if there are any more clarifying questions

1 from the board?

2 **MR. JOSHUA BURMAN:** Fred, this is
3 Joshua Burman.

4 **DR. FRED JENKINS:** Yes, Joshua.

5 **MR. JOSHUA BURMAN:** Unfortunately not a
6 clarifying question but just an update that I'm still
7 unable to -- and I did just as you said that attempt
8 to re-renter the Adobe Connect room. Still unable to.

9 **MS. AMANDA KOHLER:** Fred, this is
10 Amanda. I think I'm one of the few people that were
11 able to access the Adobe Connect. It looks like Clyde
12 has posted a new URL.

13 **DR. FRED JENKINS:** Yeah. He does have
14 a new URL, but we're trying to still use the old one
15 because people don't have access to the new one.

16 **MS. AMANDA KOHLER:** Oh, okay. So we'll
17 wait for your direction, and we can post to the list
18 serv as needed.

19

20 **PUBLIC COMMENTS**

21

22 **DR. FRED JENKINS:** Okay. Will do.

23 Okay. Thanks. So in the meantime, we're going to
24 keep it moving. Any other questions from the board?

1 Okay. So that closes the EPA presentations and
2 clarification questions from the board to the Agency.

3 So now we're going to open up our oral
4 public comment period. We have two oral public
5 commenters that have signed up to provide oral public
6 comments. The first oral public commenter today will
7 be Mr. James Williams with the Environmental
8 Technology Council, ETC. Jerome, can you please open
9 James' line so he can provide his oral public comment.

10 **OPERATOR:** Mr. James Williams, you may
11 now provide your public comment.

12 **MR. JAMES WILLIAMS:** Thank you. Can
13 everyone hear me clearly?

14 **DR. FRED JENKINS:** Yes. We can hear
15 you, James.

16 **MR. JAMES WILLIAMS:** Okay. Great.

17 **DR. FRED JENKINS:** Good morning.

18 **MR. JAMES WILLIAMS:** Thanks, Fred. As
19 indicated, my name's James Williams. I serve as Vice
20 President of --

21 **DR. FRED WILLIAMS:** I'm sorry, James,
22 to interrupt you. James, can you hear me?

23 **MR. JAMES WILLIAMS:** Yes.

24 **DR. FRED JENKINS:** Your phone is all of

1 a sudden kind of going out a bit. It's fading. Any
2 way you can adjust your sound?

3 **MR. JAMES WILLIAMS:** Okay. One second.
4 Is that better?

5 **DR. FRED JENKINS:** It's a little
6 better.

7 **MR. JAMES WILLIAMS:** How about that,
8 Fred?

9 **DR. FRED JENKINS:** That is a little
10 better.

11 **MR. JAMES WILLIAMS:** Okay.

12 **DR. FRED JENKINS:** Yeah. That's
13 better.

14 **MR. JAMES WILLIAMS:** Great. As
15 indicated, my name is James Williams. I serve as Vice
16 President of Government Affairs for the Environmental
17 Technology Council. I would first like to thank the
18 board and EPA for the opportunity to testify and also
19 acknowledge the hard work by the EPA staff in
20 continuing to develop the electronic manifest system.

21 The ETC is the leading trade
22 association of commercial firms that provide
23 technologies or services to customers for the
24 recycling, treatment, and secure disposal of

1 industrial and hazardous waste. ETC member companies
2 own and operate a wide variety of commercial
3 operations, including solvent distillation plants or
4 recovery facilities, wastewater treatment plants,
5 secure landfills, and of course high temperature
6 incinerators. ETC member companies have worked
7 closely with EPA during the development of the e-
8 Manifest system, and it is in that spirit that we have
9 carefully reviewed EPA's background white paper and
10 offer the following.

11 In October 2019, EPA substantially
12 increased the user fees for the e-Manifest system to
13 encourage industry to adopt fully electronic
14 manifesting as soon as possible. EPA more than
15 doubled the fees for the most widely used data plus
16 image manifest submission type without consultation
17 with the Advisory Board as required by the e-Manifest
18 Act. Nevertheless, (audio skip) fully electronic.

19 Almost 80 percent -- and after
20 yesterday's presentations by EPA, that number is now
21 83 percent. Almost 83 percent of manifests today are
22 data plus image because those manifests are managed in
23 ETC facility's waste management and tracking system
24 rather than EPA's CDX system. This format supports

1 well-established management and workflow practices at
2 each facility.

3 We believe that industry will continue
4 to use data plus image manifests because fully
5 electronic manifests are infeasible for the following
6 reasons. One, the current CROMERR registration and
7 verification requirements make adaptation of fully
8 electronic manifests more difficult because every user
9 must complete a cumbersome registration process. Two,
10 the adaptation of fully electronic manifests presents
11 a significant logistical challenge of needing to know
12 prior to shipment that all personnel expected to
13 administer an electronic signature are registered in
14 CROMERR. Three, the current e-Manifest system makes
15 it impossible for generators and transporters to sign
16 electronic manifests without internet access. And
17 four, stakeholders such as transporters have an ever-
18 changing population of users who must undergo CROMERR
19 compliant registration in the current system.

20 Now, to EPA's credit, they have
21 identified three methods it is considering for
22 simplifying generator and transporter signatures for
23 fully electronic manifests but not for data plus image
24 manifests. ETC urges the board to focus on fine

1 tuning Method 1 as this method allows site managers to
2 register in RCRA info while managing electronic
3 signatures for other employees. As for Methods 2 and
4 3, we're not certain we fully understand the rationale
5 underlining them, and thus, we seek further
6 explanation from EPA.

7 I will speak more on Method 1 shortly,
8 but for now, ETC recommends the Agency consider the
9 following key system improvements that would allow
10 widescale adaptation of the electronic manifest
11 through the use of data plus image manifests. One,
12 allowing generators and transporters to electronically
13 sign data plus image manifests maintained on
14 individual TSD facilities waste management and
15 tracking systems so that an image upload of complete
16 paper manifests is no longer needed. Two, configuring
17 the manifest system so that when a receiving facility
18 electronically signs the manifest, the RCRA info
19 system automatically sends a notification to the
20 generator's email address. If there is no generator's
21 email address on file, then the RCRA system sends that
22 notification to the TSDF, who in turn can then send
23 that to the generator.

24 EPA should make clear that the

1 receiving facility does not need to mail a physical
2 paper copy of the manifest to the generator. Three,
3 allow generators that are not registered in RCRA info
4 to view their completed manifests in the database
5 after upload by the receiving facility. This would be
6 a view rights only interface and therefore, the
7 generator would not need to be registered in RCRA.

8 (Audio skip) recommends that EPA
9 establish a sandbox test environment that would enable
10 testing of any proposed system enhancements by a
11 limited number of companies. This will allow for any
12 improvements identified as a result of testing to be
13 thoroughly documented and implemented before the
14 system is rolled out to the regulator community. In
15 essence, ETC is encouraging EPA to re-engineer
16 signatures for data plus image manifests to allow
17 electronic signatures unencumbered by CROMERR
18 restrictions. Generators, transporters, and receiving
19 facilities should be able to provide electronic
20 signatures on data plus image manifests or other
21 methods to be captured by industry systems and
22 submitted as part of the data upload. This would
23 again eliminate the need for originating paper
24 manifests with ink signatures and the need to upload a

1 PDF image of the completed paper manifest.

2 Before concluding, I would like to
3 point out that all of the issues and problems we have
4 with the current e-Manifest systems stem from CROMERR,
5 which ETC has long argued should not be applied to
6 electronic manifests. As EPA now acknowledges, the
7 manifest is not like a routine environmental report,
8 filed annually or monthly with EPA, that represents a
9 predictable and consistent workflow. In contrast,
10 manifest track a business workflow that is constantly
11 in flux and can change rapidly, resulting in many
12 transactions requiring multiple signatures from
13 different entities. It is not workable to apply
14 CROMERR to generator and transporter registrations and
15 signatures on manifests because such an approach
16 introduces complexity and resource burdens that hamper
17 the efficiency of the waste management workflow. This
18 is the main reason why the current rate of the
19 electronic manifest is far below EPA's expectations as
20 indicated by EPA during yesterday's presentation.

21 Let me quickly circle back to the three
22 signature methods offered by EPA. While EPA
23 encouraged -- I'm sorry. While ETC encourages the
24 Agency to accept our recommended improvements to the

1 data plus image manifest, we do see potential in
2 Method 1. I would go so far as to say that we support
3 the concept of requiring the generator and transporter
4 to have one site manager responsible for executing the
5 multistep process of registration rather than
6 requiring every person who signs the electronic
7 manifest to register. With that, it is critically
8 important for Method 1 to accommodate offline
9 functionality since generators and transporters at
10 report locations often do not have internet access
11 when shipments are initiated or addressing those
12 situations where a transporter is not allowed to bring
13 his or her computer or device onto the generator site
14 and therefore will have to sign the manifest once
15 repossessing their device.

16 As for Method 2, we recommend that the
17 board advise EPA not to spend resources developing
18 this method as it seems to provide little relief to
19 encourage electronic manifests. Method 2 does not
20 adequately address the shortcomings associated with
21 CROMERR compliant signatures other than making it
22 somewhat easier to add a large number of people to the
23 system. As for Method 3, this presents a digitized
24 signature device option which has already been

1 discussed on many occasions at various board meetings.

2 Many TSD facilities currently use
3 digitized signature devices for chain of custody
4 tracking in their own e-business systems. And they
5 strongly want to use those devices for electronic
6 manifests. Method 3 would require too much CROMERR
7 verification, thus making the e-Manifest system more
8 complicated. And this is something we cannot support.
9 If EPA can change its policy on applying CROMERR to
10 electronic signatures, EPA should also rethink
11 requiring CROMERR compliance for digitized signature
12 devices.

13 Before opening up for questions, I
14 would just like to make one request of the board. It
15 would be very useful and enhance understanding if EPA
16 would develop a flow chart of the workflow process for
17 both Methods 1 and 2 so that we can better understand
18 how each method will work in practice. The board
19 should make this request to EPA in order to facilitate
20 more informed comments from the regulated community.
21 With that, again, I would like to thank the board and
22 EPA for the opportunity to provide comments. And I
23 will do my best to answer any questions that are
24 presented.

1 **DR. FRED JENKINS:** Thank you very much,
2 James. So this is the board's opportunity to ask
3 James any clarifying questions they may have. Board
4 members, any clarifying questions?

5 **MR. JOSHUA BURMAN:** This is Joshua
6 Burman, Fred.

7 **DR. FRED JENKINS:** Yes. Go ahead,
8 Joshua.

9 **MR. JOSHUA BURMAN:** First a procedural
10 for you and other board members. I was able to sign
11 into the second -- the revised URL that was pushed out
12 through the first URL. Question for you Fred, were
13 you going to be -- or would you be able to enable the
14 chat function? That was very useful yesterday for
15 kind of letting --

16 **DR. FRED JENKINS:** Yes, I'm sorry,
17 Joshua. Yeah. I'm going to address that with
18 everyone in a moment.

19 **MR. JOSHUA BURMAN:** Okay. Thank you.
20 That was just really helpful yesterday.

21 **DR. FRED JENKINS:** Yeah. We'll work on
22 that in the background. But I wanted to get through
23 James' public comment first, but we'll address the
24 technical difficulty happening with Adobe Connect

1 right now. But any questions from the board for
2 James?

3 **MR. JOSHUA BURMAN:** Yes. I do have
4 one.

5 **DR. FRED JENKINS:** Okay.

6 **MR. JOSHUA BURMAN:** So thank you for
7 your comments. Question on your first bullet point on
8 page 4 of the written comment that you referred
9 verbally to today. Could you clarify what the
10 advantage or change that you're suggesting or
11 supporting here -- again, I'm just going to refresh to
12 refer to it because we don't have it in front of us,
13 not everyone at least. "Allowing generators and
14 transporters to electronic sign data plus image
15 manifests maintained on an individual TSD facility
16 systems so that an image upload of completed paper
17 manifest is unnecessary. In effect, each of these
18 data image manifests become an electronic manifest."

19 It would appear that the only
20 advantaged gained is simply not having to attach a PDF
21 since currently -- and an EPA member can correct me if
22 I'm wrong -- but my understanding of the system is
23 that the data from a data plus image upload is flowed
24 directly into the e-manifest system. So as far as the

1 system is concerned and the operability of the system
2 is concerned, there really isn't a difference from a
3 data point of view between a fully electronic manifest
4 and a data plus image manifest. The image is there
5 solely as a backstop in case there is data issues that
6 may have arisen from the transcription or uploading of
7 that data at the TSD, at least that's my
8 understanding. And therefore, it would seem that this
9 suggestion doesn't gain anything except a very small
10 reduction of not having to attach a PDF. And I'm
11 asking if you can clarify if I'm incorrect or maybe
12 develop that out a little bit, please.

13 **MR. JAMES WILLIAMS:** Sure. Thanks,
14 Joshua, for the question. I think the benefits there
15 are actually twofold. First of all, what we've
16 learned in working with the e-Manifest system is that
17 the market will determine what's working and what's
18 not working. And what is currently working, as the
19 market has shown, is the data plus image manifest on
20 the TSD facilities' system.

21 Even EPA acknowledges this when they
22 constantly show the pie chart, one that they showed
23 yesterday and the one that they shared every e-
24 Manifest monthly call. That pie chart clearly

1 demonstrates that the number one type of manifest that
2 are being submitted to the system are data plus image
3 manifests. And therefore, what we're suggesting here
4 in Number 1, in that first bullet point, the first
5 benefit is to allow that process to continue and to
6 improve aspects of the data plus image manifest
7 because clearly that's the process that's working.

8 And if you want to look at percentages,
9 it's pretty safe to think that we're 83 percent to our
10 goal of achieving a fully electronic manifest through
11 the data plus image manifest. And the second benefit
12 that we see there is that -- you're correct. If we
13 are able to eliminate the image upload at the backend
14 by the receiving facility, we think that that just
15 further streamlines the process in terms of getting us
16 to a fully electronic manifest.

17 **DR. FRED JENKINS:** Okay. Thank you.
18 Any other questions from the board? Thank you, James.
19 Any other questions from the board for James.

20 **MR. TERRY BAER:** Yes. This is Terry.

21 **DR. FRED JENKINS:** All right. Thank
22 you, Terry. Go ahead with your question.

23 **MR. TERRY BAER:** Yes. Terry Baer.
24 James, thank you for what you provided. I just wanted

1 to ask one question.

2 **MR. JAMES WILLIAMS:** Sure.

3 **MR. TERRY BAER:** What's been your
4 experience with your customer base with other
5 electronic signatures? Is there other parts of their
6 business outside of the e-manifest that they use
7 electronic signatures where things have worked or
8 something of that nature?

9 **MR. JAMES WILLIAMS:** I'll have to be
10 honest. I'm not quite familiar with that aspect of
11 some of our member companies' operations. But I will
12 indicate that, as pointed out, many of the ETC members
13 currently use devices in their business operations
14 with their customers for the purpose of electronic
15 signatures. We do that through our current e-business
16 systems.

17 And therefore, we are supportive of
18 using those devices as long as they do not have all of
19 the CROMERR requirements, particularly those listed in
20 Method 3. So I feel safe in saying that there are
21 some interactions with our customer bases that require
22 electronic signatures that we are currently engaging
23 with them on. But those engagements do not have the
24 CROMERR requirements or restrictions as the current

1 EPA system does.

2 MR. TERRY BAER: And that was my basis
3 of my question was trying to understand obviously the
4 industry has moved severely more electronic. And I
5 wanted to understand, you know, how --

6 MR. JAMES WILLIAMS: That's correct.

7 MR. TERRY BAER: -- much of the CROMERR
8 has been a barrier to this implementation.

9 MR. JAMES WILLIAMS: Well, CROMERR,
10 from the perspective of the e-Manifest system, has
11 been a very tremendous barrier. And EPA even
12 acknowledges that with Method 1 by eliminating the
13 CROMERR requirements and only having the requirement
14 of one site manager to register in the system. And
15 what we're saying here is, if EPA can reverse its
16 position for electronic signatures in terms of the
17 site managers registering, then they should also be
18 able to rethink their policy decision in terms of
19 CROMERR requirements for electronic devices because we
20 see that as a huge barrier from preventing us to
21 getting to a point of having a fully electronic
22 manifest system.

23 MR. TERRY BAER: Yeah. But as you
24 mentioned in your statement, even if they pursued

1 Option 1, you still don't see the industry moving more
2 towards fully electronic just because, as you
3 mentioned the pie chart, industry has been so well
4 accepting of the hybrid approach.

5 **MR. JAMES WILLIAMS:** Yeah. I think
6 that, out of the three methods, Method 1 is the one we
7 see with the most potential. But we also feel that
8 where industry is now, in terms of submitting the
9 majority of their manifests through the data plus
10 image process, that should be a good indication to EPA
11 of the direction that may be best to get us to fully
12 electronic manifesting. In my comments, I offered up
13 four recommendations that we feel that if those
14 improvements were made to the data plus image
15 manifesting that we would be pretty close, maybe 95 to
16 97 percent close, to a fully electronic manifest.
17 Now, of course there would have to be some additional
18 work and consultation with EPA to get us to that
19 point, but we feel that we're closer there through
20 that method as we are through any of the methods
21 presented by EPA.

22 **MR. TERRY BAER:** Okay. Thank you,
23 James.

24 **DR. FRED JENKINS:** Thank you, Terry and

1 James. Any other questions for James?

2 **MR. MICHAEL HURLEY:** Fred, this is Mike
3 Hurley from Massachusetts. I have a question for
4 James.

5 **DR. FRED JENKINS:** Great. Thank you.

6 **MR. JAMES WILLIAMS:** Hi, Mike. How are
7 you doing?

8 **MR. MICHAEL HURLEY:** I'm doing okay,
9 James. How are you doing? So my questions, James,
10 based on your experience with your industry group, do
11 you see that the barrier to -- I mean in the larger
12 sense -- to the fully electronic manifest being just
13 CROMERR or do you see just as a larger sort of
14 technological issue, by which I mean the whole
15 business of logging in, logging out, accessing
16 accounts at the time of the transfer of the shipment?
17 Do you see it more as that kind of an issue? Whereas
18 to your argument of the hybrid being very successful,
19 that works in that situation. I mean, there's no need
20 for a PC to be on the dock or people to use their
21 phones or connect or things like that. Could you
22 elaborate on that a little bit?

23 **MR. JAMES WILLIAMS:** Sure. I think
24 there are -- and I think EPA staff could attest to

1 this. Throughout the process of developing the e-
2 Manifest system there've been a lot of hurdles to why
3 we have not reach that fully electronic manifest. One
4 case earlier on in the process it was funding. We had
5 to continue to lobby Congress to get funding for the
6 program. There were some years in there where no
7 funding was available and therefore slowed down the
8 development. So that was one hurdle.

9 I think on the larger scale, however,
10 CROMERR in our opinion has been the largest of the
11 hurdles to overcome. And to EPA's credit, I think
12 they're starting to realize that and therefore
13 offering up some suggests as how we can eliminate that
14 hurdle to get us to a point where we can get to a
15 fully electronic manifest. It would be great if these
16 methods would, in our opinion, get us there.

17 But again, we feel Method 2 and Method
18 3 clearly won't get us there. Method 1 has potential
19 to achieve that goal. But if you're looking to
20 achieve that goal quickly, the data plus image upload,
21 that's what's working. The market has shown that's
22 what's working.

23 So why not pursue that until we have
24 some time to look at these other options, particularly

1 Option 1? But if the goal is to get us to a fully
2 electronic manifest as quickly as we can, what is
3 working right now is data plus image manifesting. And
4 if EPA could accept some of the recommendations that
5 we've made to improving that form of submitting
6 manifests, we think we would get there pretty quickly.

7 **MR. MICHAEL HURLEY:** Okay. All right.
8 Thank you, James. Thank you very much. That's
9 helpful. Thank you.

10 **DR. FRED JENKINS:** Thank you, Terry.
11 Any other questions from the board for James?

12 **MR. TERRY BAER:** Yeah. Fred, that was
13 Mike Hurley. I was before Mike, just for the record.

14 **DR. FRED JENKINS:** Oh, okay. Sorry.
15 Sorry about that. All right. Any other questions
16 from the board? Okay. No other questions for James?
17 Calling once. Calling twice. Okay. James, thank you
18 so much for your oral public comment. And James, ETC
19 also submitted some written comments that are in the
20 public docket as well. So James, thanks so much. And
21 if you could go ahead and call back in on the public
22 line if you aren't already. Thanks so much.

23 **MR. JAMES WILLIAMS:** Thank you.

24 **DR. FRED JENKINS:** Thank you. I'm now

1 going to know as for Jerome to open the line for our
2 next oral public commenter. His name is Larry Fura.
3 He's with WTC. And also, just to give you an update
4 on our Adobe Connect issues, we have a new Adobe
5 Connect room that I'm going to be sharing with you all
6 as fast as I can shortly. I see some of you all have
7 already found it. But I'm going to send that out.

8 Right now, I'm going to upload Larry
9 Fura's -- he has a PowerPoint presentation that he's
10 going to walk through as a part of his oral public
11 comments. I'm going to share his presentation on the
12 screen. In the meantime, while he's presenting, I'll
13 be in the background. I'll send the link to our e-
14 Manifest list serv. And I'll also have our web design
15 team in ORCR to update our web page with the correct
16 link on it. Sorry, so sorry for the technical
17 difficulty and inconvenience. But we'll get
18 everything straight as we move along. So Larry, are
19 you on the line?

20 **MR. THOMAS BAKER:** Excuse me, Fred.
21 This is Tom Baker. Could you please also email us
22 that URL to the board members?

23 **DR. FRED JENKINS:** Yes, will do.

24 **MS. CYNTHIA WALCZAK:** Fred, this is

1 Cindy Walczak. Are you saying that Larry has a
2 PowerPoint but nobody can see it?

3 **DR. FRED JENKINS:** Yeah. He has a
4 PowerPoint, but I'm working on getting everybody to
5 see it.

6 **MS. CYNTHIA WALCZAK:** Are we going to
7 wait for -- are we going to postpone until that's all
8 set, or is Larry going to go ahead? I'm sorry. I'm
9 confused.

10 **DR. FRED JENKINS:** Okay. In that case,
11 Cindy, thanks for bringing this up. To avoid any
12 confusion, let's take a 15-minute morning break so we
13 can get everybody squared away. So everybody come
14 back on the normal phoneline and then -- but I'm going
15 to send the new URL via the list serv and the board so
16 everybody can join in. So Larry, if you could still
17 standby. Can we hear you -- right now, Larry, are you
18 on the line?

19 **OPERATOR:** Larry Fura, your line's now
20 open. You may now provide -- you may now answer Dr.
21 Fred.

22 **MR. LARRY FURA:** Yeah. I'm here, Fred,
23 and I got all that. So we'll just wait for the end of
24 the break.

1 **DR. FRED JENKINS:** Okay. So we will
2 resume the meeting at 11:15. We are on our break
3 right now. Standby. See you all at 11:15.

4 **MS. CYNTHIA WALCZAK:** Thanks, Fred.

5 **DR. FRED JENKINS:** Thank you.

6
7 **(BREAK)**

8
9 **DR. FRED JENKINS:** And we're back.
10 This is Fred Jenkins. Can everyone hear me? Do we
11 have board members back on the line?

12 **UNIDENTIFIED MALE:** Yes, Fred.

13 **DR. FRED JENKINS:** Okay.

14 **MS. JILL MACIOCH:** Fred, this is Jill.
15 I am back on.

16 **DR. FRED JENKINS:** Wonderful. And it
17 looks like we got people joined onto the Adobe
18 Connect. I also sent the notice to our web design
19 communications team to update our website with the new
20 link to it, the new URL. So with that said, I'm going
21 to ask if --

22 **MS. KATHLEEN SALYER:** Fred, just a
23 moment.

24 **DR. FRED JENKINS:** Yes?

1 **MS. KATHLEEN SALYER:** Fred, this is
2 Kathleen Salyer. Are we able to enable the chat box
3 function where you can see who's on and communicate
4 that way, at least among the board members? Because I
5 don't see that yet.

6 **DR. FRED JENKINS:** Yeah. That's -- I'm
7 going to ask -- Clyde, can you please give us a
8 presenters chat box only and take away the everyone
9 chat box? Give us a presenters chat box only.

10 **CLYDE:** Okay. So you want an
11 everybody's chat box?

12 **DR. FRED JENKINS:** Yeah. We don't want
13 an everybody chat box. We want a chat box only for
14 those who are presenters.

15 **MS. KATHLEEN SALYER:** Yeah. And at
16 least on my screen, Fred, I don't see a chat box
17 period or kind of the list of who's on. Maybe it's
18 something with my view --

19 **CLYDE:** Yeah. I have to elevate you.
20 That's fine. Fred, do me a favor. Just write in the
21 presenter chat the names of the people you want me to
22 elevate, and I'll elevate them.

23 **DR. FRED JENKINS:** Oh, boy. It's like
24 19 names. How about -- I'm going to send you the

1 list. It's the list of presenters that I -- that
2 email that I sent to Jerome.

3 **CLYDE:** Okay.

4 **DR. FRED JENKINS:** Yeah. Just refer to
5 that list of presenters, and that's everybody.

6 **CLYDE:** Okay.

7 **DR. FRED JENKINS:** Okay. Kathleen, I
8 was going to proceed with having Larry Fura -- while
9 he's working on that, I was going to continue --

10 **MS. KATHLEEN SALYER:** That sounds
11 great, Fred.

12 **DR. FRED JENKINS:** -- yeah -- have Larry
13 Fura go with his oral public comment. Larry, are you
14 on the line?

15 **MR. LARRY FURA:** I sure am, Fred.

16 **DR. FRED JENKINS:** Okay. So
17 introducing Larry Fura, director of technology and
18 waste technology services. He is our second and last
19 public oral commenter for the day. Larry, you can
20 take it away.

21 **MR. LARRY FURA:** Thanks, Fred. I just
22 want to start out by not only thanking Fred but
23 thanking the EPA and the Advisory Board for the
24 opportunity to make these public comments at this

1 meeting. As Fred said, my name is Larry Fura, and I'm
2 the Director of Technology for Waste Technology
3 Services, or WTS. We're an environmental consulting
4 company headquartered in Lewiston, New York.

5 We believe we are one of the largest
6 third party biproduct management providers in the
7 country, but for the sake of this discussion, we fall
8 under the classification of a broker when it come to
9 the e-Manifest system. In that capacity, we currently
10 generate approximately 10,000 plus manifests annually
11 for our client base. I have been very involved with
12 the e-Manifest system development from the earliest
13 public meetings held in Chicago and Denver to discuss
14 the initial development of the system.

15 From those very first comments and
16 suggestions I provided after those meetings until the
17 present, I have always made the point that the CROMERR
18 signature requirements present a huge burden to the
19 users of the system and was going to impede adoption
20 of the system when it went live. And I have always
21 felt that while the e-manifest team would acknowledge
22 my comments as valid, they always seemed to indicate
23 that their hands were tied in regard to those CROMERR
24 requirements. So I'm extremely excited to learn that

1 it looks like those restrictions may now be able to be
2 relaxed in some cases.

3 I applaud the EPA for finding a way to
4 make this happen. And I personally feel that the
5 overall solution of just requiring the submitting
6 disposal facility to adhere to the CROMERR compliance
7 requirement will go a long way towards helping the
8 adoption of both the hybrid and fully electronic e-
9 Manifest options. I would, however, caution that
10 while signatures may be a very large barrier that we
11 have hopefully broken down due to some of these new
12 signature options that EPA is looking to develop and
13 that are being discussed at this meeting, EPA should
14 still realize that another barrier of having disposal
15 facilities actually being willing to accept electronic
16 manifests created by generators, transporters, and
17 brokers still exists and will need to be the next
18 obstacle that EPA should have on their radar.

19 And they should be planning now to
20 start working very closely with the disposal
21 facilities, transporters, and broker community to
22 overcome this barrier now that transporter and broker
23 functionality is finally being rolled out. Because it
24 does not use -- sorry. One second here. Yeah. When

1 it comes to the electronic signatures and broker
2 functionality, the disposal facility community is
3 basically unwilling at this point at least to spend
4 the money and effort needed to make the necessary
5 application changes on their proprietary systems to
6 actually accept and import electronic and hybrid
7 manifests not created by their company into their
8 proprietary data systems. Please know that WTS, as a
9 large broker in the industry, stands ready to work
10 with EPA and our transporter and disposal facility
11 partners to develop and test various industry data
12 standards so that critical required business
13 information that must be transmitted with a manifest
14 can be processed and interpreted properly by the
15 disposal facilities so that the dream of fully
16 electronic manifests can become a reality. As the
17 fees continue to rise for non-fully electronic
18 options, are customers are asking to go fully
19 electronic, and we want to be able to provide those
20 services but need the disposal facilities to be
21 willing to accept and process the manifests we create
22 on behalf of our generator customers.

23 Now, with that being said though, I'd
24 like to now turn our attention to the different

1 signature methods that were presented yesterday and
2 provide some feedback regarding them, specifically
3 addressing some of the positives and negatives, as
4 well as some possible changes we would suggest to help
5 make them a better fit with common industry practices.
6 I'd actually like to start with the last option first,
7 Option 3, which involves the electronic signature
8 pads. And Fred, if you could just advance my slide.
9 Thank you. EPA stated yesterday in regard to the
10 questions posed by Cindy Walczak that there are only
11 currently -- that they are only currently entertaining
12 electronic signature pads in the context of those
13 signature pads being CROMERR compliant.

14 By maintaining the need for the
15 signature pad to meet CROMERR compliancy, EPA is
16 greatly magnifying the challenges around implementing
17 electronic signature pads, specifically the need to
18 test and certify multiple makes and models of
19 signature pads. EPA is correct that industry has been
20 hesitant to state that they are willing to use the
21 hardware because it is not what they are currently
22 using. And they would face costs to purchase,
23 integrate, and deploy this CROMERR compliant hardware.
24 And without having any working prototype and available

1 example code, it makes the solution a nonstarter.

2 But I would suggest that EPA turn the
3 prism a bit and look at signature pads from a
4 different angle. James Williams, the prior presenter
5 from ETC, also mentioned the same point I'm about to
6 make and that is, if EPA is now willing to accept non-
7 CROMERR compliant signature options for generators,
8 transporters, and possibly even disposal facility
9 receiving personnel, why would they not be willing to
10 accept non-CROMERR compliant signature options such as
11 signatures obtained via software on a cellphone or
12 industry handheld?

13 And Fred, if you could advance the
14 slide for me. And I'd like to thank Tom Baker's
15 company Veolia for the picture in the bottom there. I
16 was trying to find a picture of waste being loaded,
17 and they came up as a good option. But if we would
18 entertain -- if they would entertain this idea of non-
19 CROMERR complaint signature pads, industry would be
20 able to use a similar process as they are proposing in
21 Method 1 where only one registered site manager
22 exists.

23 The registered site manager for a
24 particular generator, transporter, or disposal

1 facility could simply enter in a list of users who are
2 allowed to sign manifests for them. That list could
3 then be exposed on both the e-manifest website and via
4 the industry API so that basically -- Fred, if you
5 would advance the slide one more time for me. Yup --
6 so that when a particular generator, transporter, or
7 disposal facility is selected the list of available
8 signers could be downloaded ahead of time. And the
9 end user, using a mobile handheld or cellphone, can
10 select the appropriate person that is going to sign.

11 And they could simply use that industry
12 device that they're already using or current signature
13 pad solution that they're currently using by
14 presenting the user with a disclaimer regarding what
15 they are signing for. And then the user can sign, and
16 a simple JPEG image of the signature could be
17 captured, along with the name of the person that
18 signed. And that information could be easily uploaded
19 to the e-Manifest system without the need to create a
20 major integration that supports specific signature
21 pads or hardware.

22 And I think Tom Baker from the board
23 there had asked the question -- or actually, it was
24 Terry Baer, actually, that asked the question about

1 are any of the disposal facilities using electronic
2 signature options now. You'd have to verify this for
3 sure, but I believe actually Clean Harbors with their
4 safety clean division is currently utilizing handhelds
5 and accepting signatures that are more for billing
6 purposes. So if a service company like that wishes to
7 use a signature pad that would meet CROMERR
8 requirements for storing the location, pressure, and
9 speed values, they could simply capture that data for
10 their own use to only have more backup data available.
11 But the data would not need to be transmitted to EPA
12 but rather stored in the service company's database,
13 along with the JPEG image. That would be the ultimate
14 submitted information to the e-Manifest system.

15 This would be the ideal solution for an
16 offline scenario, especially for transporters or large
17 disposal facilities that have a transportation arm and
18 are already utilizing mobile computing technology.
19 They could easily download all the possible signers
20 for a given facility to their industry device so when
21 they arrive onsite they have the full list of all the
22 quasi-registered signers entered by the registered
23 site manager for that location. And it would just be
24 a matter of the driver asking the person for their

1 name, selecting that username, entering the manifest
2 number, and having the user sign. If their device is
3 online, they could upload the signature immediately.
4 And if not, they could store it and transmit it at a
5 later time when they have internet connectivity, just
6 like a UPS or FedEx does now when they're in areas
7 where they do not have cellular reception.

8 By going this route, those larger
9 disposal facilities, such as the Clean Harbors or
10 Veolia, could currently offer transportation services
11 and already have investments in place in regard to
12 that handheld tablet and other technologies and are
13 already in many cases, as I said earlier, capturing
14 those electronic signatures for billing purposes. And
15 they could simply reutilize that exact same hardware
16 to capture signatures for e-Manifest. It would also
17 open up the potential for large industrial terminal
18 manufacturers, such as your Zebras, Honeywell, and
19 EML, among others, as well as industrious cellphone
20 app producers to possibly be willing to invest in
21 building a small signature capture application that
22 would be compliant with e-Manifest, as it would most
23 likely be a trivial undertaking at that point.

24 But it boils down to a simple question.

1 If EPA is willing to remove the CROMERR requirements
2 around the other signature options, why not remove
3 them around signature pads as well when it is a
4 generator, transporter, or disposal facility receiving
5 personnel doing the signing? Fred, if you could
6 actually advance the slide. Okay. So now I'd like to
7 move our attention to the first new signature method
8 that was presented yesterday. And in the white paper
9 we're basically texting a simple "yes" or clicking a
10 link in an email can be used to electronically sign a
11 manifest.

12 I'm actually very excited about this
13 possibility as it's a solution that should be able to
14 be implemented with minimal effort and is something
15 that could be easily understood and used by the end
16 users. If it does truly meet the new signature
17 requirements EPA is willing to accept, I am all for
18 it, and I think the users will be also. However, I do
19 think the process and workflow needs to be rethought
20 somewhat. I'm not totally onboard with the first part
21 of the process where a generator or transporters'
22 registered site manager can go in and add individuals
23 who will be allowed to sign, along with their
24 accompanying cellphone or email address, and having

1 users receive a confirmation text or email where they
2 can confirm that they understand they're being added
3 as a signer for that particular generator or
4 transporter.

5 Where I start to identify issues is
6 with the next phase, when it is time to sign for an
7 actual manifest. When Scott presented yesterday
8 regarding the solution, he stated that, at some point
9 prior to the scheduled pick up time, a text message
10 could go out to the selected individual asking if they
11 want to sign for a particular manifest. And when they
12 are ready, they can simply reply "yes." As nice as
13 this idea sounds on paper, the real world functions
14 very differently from how this solution would work in
15 practice.

16 Some immediate issues I see with this
17 solution are that the transporter could arrive earlier
18 than expected due to a prior canceled stop. A
19 transporter could arrive much later due to traffic and
20 other delays. A transporter may be coming to pick up
21 multiple hazardous electronic manifests from the same
22 generator.

23 So how would the e-Manifest system
24 handle having three pickups at the same time for the

1 same generator? Would three text messages go out at
2 the same time for each of the shipments being picked
3 up? How would the system know which manifest the
4 user's responding yes to if they all come in at the
5 same time? If the tech answer is to only send the
6 signer one manifest at a time, what happens if the
7 generator needs to load the truck in a particular
8 order based on where the containers are being
9 delivered?

10 This solution also has another
11 fundamental flaw, and that is that the PDF attached in
12 text or email may not be what actually ships. In our
13 experience as a broker, the only time you know for
14 sure what is shipping on the manifest is once it is
15 physically loaded on the truck and the manifest is
16 completed. If EPA looks at the paper and image
17 manifests they are currently receiving, they will find
18 crossed out and adjusted quantities, entire manifest
19 lines crossed out, new handwritten lines added in, et
20 cetera.

21 The bulk majority of those changes that
22 you see on the manifest occur not days prior to the
23 shipment but rather as the containers are being
24 physically loaded onto the truck. In many cases the

1 reasons for this is because the shipment was planned a
2 week or two in advance and the paperwork generated at
3 that time. Then, after that point, more drums of a
4 particular material are generated, or new drums come
5 out of production to the storage area. And if space
6 is available on the truck, the generator will want
7 those drums to go with that shipment. Or the truck
8 could be out of space in some situations, so some of
9 the containers that they planned to have go must be
10 removed from the manifest.

11 All of these scenarios plus many more
12 happen every day in the real world and need to be able
13 to be handled in some fashion. The moral of the story
14 is that the PDF that would be sent as part of the
15 email or text is going to be out of date even before
16 the driver arrives at the pickup site. As a result of
17 these issues, I would like to propose a semi-major
18 change to this workflow for EPA and the board to
19 consider, but I believe it will ultimately help
20 address all of the issues that I have outlined.

21 A key aspect of my solution is that the
22 DOT does still require a single page paper copy of the
23 manifest, which the e-Manifest system can currently
24 produce and is required to accompany the shipment.

1 Fred, if you could advance the slide for me. I would
2 propose that the first part of the solution still be
3 intact as outlined by EPA where the site manager for
4 the generator and transporter can add multiple
5 individuals, along with accompanying cellphone numbers
6 and email addresses into the e-Manifest system, and
7 the system would still require those individuals to
8 confirm this action. However, now at the time of
9 shipment the e-Manifest system would no longer send
10 out more texts or emails. Fred, if you could advance
11 the slide again.

12 Instead, when the generator and
13 transporter finish loading the truck, one of those
14 individuals, most likely the generator, can use an
15 available computer or tablet to enter the final counts
16 of what is actually being shipped and then print the
17 required DOT manifest copy that will accompany the
18 shipment. Okay. Advance the slide again, Fred. And
19 when it comes to the DOT manifest copy -- oh, go back.
20 Back a slide, Fred. There you go. Thank you.

21 When it comes to the DOT manifest copy,
22 I would suggest that in addition to the electronic
23 manifest number being printed on the manifest, a
24 document revision number or PIN code should also be

1 added as you can see in the diagram in the top right.
2 Then both the generator and transporters can use their
3 cellphones and simply create a new text message or
4 email to the EPA signature service, with the only
5 information entered into the body of the text message
6 or subject line of the email having just the
7 electronic manifest number, with or without the ELC at
8 the end. And then a space and then the four digit
9 revision number to confirm which exact version of the
10 manifest the individual is actually looking at, at the
11 time they're submitting their signature. The e-
12 Manifest system, upon receiving this text or email,
13 can look up the corresponding sender's cellphone
14 number or email address and that particular manifest
15 number and revision number to verify that the person
16 sending the signature email or text has a valid
17 manifest number and revision number, as well as
18 confirming this individual is in fact list as a
19 potential signer for this manifest. If all of the
20 criteria are met, a response message can be sent
21 confirming that the signature was accepted. Fred, if
22 you could advance the slide.

23 So once both the generator and
24 transporter have completed this action, which could be

1 done simultaneously if they wish, the e-Manifest
2 system can send both signers a final confirmation
3 message stating that the manifest has been executed
4 and that the custody has been transferred to the
5 transporter and that the shipment can now be released.
6 By utilizing this solution, that final printed
7 manifest that is required by DOT anyways would be the
8 record that both signers would look at to confirm all
9 the information is correct versus having the e-
10 Manifest system trying to send out PDF via text. And
11 that's something that's going to be near impossible to
12 try and read on a small display.

13 I would also allow the signature to
14 take place at the time in choosing -- sorry. This
15 solution would also allow the signature to take place
16 at the time and choosing of the generator and
17 transporter once the shipment is actually ready to go,
18 not just at the day and time it was originally
19 scheduled for. And by requiring the user to submit
20 the electronic manifest number and revision PIN code,
21 it requires both signers to be more active in the
22 process and ensure they have actually reviewed the
23 required documents and have them in front of them at
24 the time of the signing versus just replying "yes" and

1 possibly signing an incorrect manifest.

2 This solution could also be expanded to
3 address the concerns that were raised yesterday by
4 Joshua Burman of the board because if the same
5 cellphone number -- I think he mentioned that the same
6 cellphone number or email address is sometimes listed
7 for multiple people. If that was the case because
8 it's a shared cellphone, the e-Manifest system could
9 recognize that the person signing the message to -- is
10 not the only person listed as a possible signer with
11 that same number. So my solution for that would be
12 that, when that individual wants to sign, they would
13 enter the e-Manifest number, a space, the revision
14 number, a space, and then the last name so the system
15 can narrow down the signer to a single person.

16 So in that case, the message would look
17 something like what we're kind of seeing here on the
18 screen, but it would be 123456789 for the manifest
19 number, a space, 6343 for that PIN number, and then
20 the signer's last name. So if it was me, I would put
21 Fura. And for that user that's using that shared
22 phone, they'd quickly learn this upfront and be able
23 to provide their last name automatically the very
24 first time they're submitting instead of having the e-

1 Manifest system reject it and tell them they need to
2 provide a last name.

3 The other beautiful thing about this
4 solution and the fact that transmitting a PDF -- is
5 the fact that you no longer have to transmit a PDF of
6 the manifest. That addresses one of the biggest
7 issues that I've mentioned during past meetings, and
8 that is that it's not uncommon for transporters to not
9 have smartphones and instead rely on basic flip
10 phones. With this solution, a driver should be able
11 to start a new text message, select the e-Manifest
12 signature service contact from their address book, and
13 simply type in the nine-digit e-Manifest electronic
14 number, a space, followed by a four-digit revision
15 number. And with that, the e-Manifest system could
16 respond with a simple text confirmation, and the
17 driver would not have to worry about trying to view
18 PDFs on their flip phone, which is impossible to do
19 anyways.

20 While I can't speak directly for
21 transporters or the drivers, I would think that --
22 even though drivers may complain about having to use
23 their personal phones for work, I would think the
24 transportation companies could easily rectify that by

1 offering each of the drivers a small amount of money
2 per month, such as \$10 or \$20, to cover the cost of
3 sending some text messages each day, which would be
4 dramatically cheaper for transportation companies
5 versus providing company issued smartphones and
6 accompanying data plans. To be clear, no matter how
7 good a solution you come up with, transporters are
8 still probably going to be slow to adopt e-Manifest.
9 But as more and more customers start demanding it and
10 as disposal facilities and brokers like WTS push to
11 implement e-Manifest based on those demands from our
12 customers to avoid the continuing price increases for
13 submitting non-electronic manifests, the transporters,
14 I am sure, will figure out a way to resolve these
15 small technical difficulties and get their drivers
16 onboard.

17 Finally, I will touch briefly on the
18 Method 2 signature option. I really do not have a ton
19 of input to provide regarding that particular method
20 except to say that I think the industry would like the
21 option to allow users to be able to create their own
22 API keys, which is part of that solution, so that
23 signatures could be submitted from a third party
24 system via services. I personally could see

1 integrating this functionality into our own customer
2 facing data system that our customers are currently
3 using every day to manage their shipments. If I could
4 provide them instructions on how to obtain an API key
5 and upload it into our system and then use that key to
6 electronically sign their e-Manifest via services
7 directly from our internal system where a user's
8 already authenticated and logged in, I think that
9 would be a winning solution for all involved.

10 To summarize my comments, I think EPA
11 should consider dropping the CROMERR requirement on
12 signature pads and allow industry to utilize the
13 equipment they are currently utilizing in the field if
14 they already have something. And at the same time, it
15 might open up the option for app developers to
16 possibly create a simple on-screen signature solution
17 that could be offered in an app store for a low amount
18 of money, such as maybe \$5 or \$10. And generators,
19 transporters, and possibly even those disposal
20 facilities would probably be happy to buy and adopt
21 it. And if you wanted to make it more friendly for
22 app developers and users, you could even add a QR code
23 to the printed manifest that comes out of e-Manifest
24 so that the app could simply scan that QR code on that

1 DOT required copy, and the user would not have to
2 enter anything manually.

3 For the first proposed signature
4 method, allowing signatures to take place via text or
5 email is a great idea. But again, I think that flow
6 and process needs to be altered to accommodate these
7 real-world scenarios that I mentioned if you want the
8 system to actually be used. And finally, Option 2,
9 there -- I think that having the API key be able to be
10 used by a third-party system's a great idea as well.
11 Thank you. And I'd like to take any questions that
12 anybody may have.

13 **DR. FRED JENKINS:** Thank you, Larry.

14 Any questions from the board?

15 **MR. JOSHUA BURMAN:** This is Josh, Fred.

16 **DR. FRED JENKINS:** Yes. Go ahead,
17 Josh.

18 **MR. JOSHUA BURMAN:** First a procedural
19 question to you, Fred. Since I -- and maybe I missed
20 it. I didn't see a prior written comment submittal
21 from Larry, but a brought -- and showed and presented
22 a file that is a PowerPoint. Is that PowerPoint then
23 considered or able to be considered as a written
24 comment that the board can review and put as part of

1 its package? Or do we just have to go off of Larry's
2 verbal statement?

3 **DR. FRED JENKINS:** Yeah. Just to
4 confirm, that was his comment, that oral public
5 comment involving his presentation. Correct, Larry?

6 **MR. LARRY FURA:** Yes. I didn't submit
7 anything prior. But, Joshua, in past years, Fred
8 usually included the PowerPoint along with -- I
9 usually send him the written script that I was reading
10 from, so I'll do the same thing this time so they can
11 be put into the official notes of the meeting.

12 **MR. JOSHUA BURMAN:** Okay. That'd be
13 great. Thank you. Thank you to both of you. I
14 apologize. I get rusty on the mechanics of the
15 advisory board legal process. So then following up
16 with a question or comment to Larry, first, I want to
17 say that I -- and I say this positively. I wish I'd
18 had a chance to see your presentation yesterday
19 because it would have saved me about three pages of
20 hastily written notes because many of the items you
21 suggested or processes you suggested are already in my
22 notes here that I was going to bring up during the
23 board discussions. So thank you very much for that.
24 It's easier to see visually when somebody else puts it

1 together than to try to explain it to people off my
2 own rough notes.

3 Just to verify, in your experience as a
4 broker, it sounded like you believe that a prevalence
5 of flip phones is still very common and likely to
6 remain common for at least a foreseeable time?

7 **MR. LARRY FURA:** Yeah. We actually
8 went out and canvassed the transportation companies
9 that we use. One of my coworkers actually did that
10 and reached out to a lot of the transporters that we
11 use on a daily basis. And that was one of the main
12 comments that we heard coming back was a lot of the
13 drivers don't have company provided phones. So most
14 of the drivers, a lot of them are still on the stand
15 alone -- you know, smaller flip phone type phones.
16 They're not into the smartphone arena. So yeah.

17 It is one of those situations that we
18 still do see it as prevalent. And I think we're going
19 to still continue to see it for a while, especially --
20 you've got a lot of drivers that have been driving for
21 a very long time and that have been using their flip
22 phones for years. They just don't see a need to have
23 that smartphone capabilities or pay for that
24 smartphone capabilities. So I think we will see it

1 going forward for a while as well.

2 **MR. JOSHUA BURMAN:** Thank you. In that
3 white -- and I think your suggestion that you raised
4 verbally and in the presentation, again, tallied with
5 what I had written down yesterday and was planning to
6 raise either this afternoon or tomorrow morning with
7 the board. The change in the paradigm of instead of
8 having a system initiate a push out to a selected
9 either cellphone or other device or list of cellphones
10 to obtain -- to notify a person that, "Hey, a manifest
11 is ready, and do you want to sign it?" But turning
12 that on its head and having the user essentially call
13 into the system or put a call to the system by sending
14 a text most likely saying, "This is the manifest I
15 want to sign, and you recognize my cellphone number so
16 you now know who I am" -- have you or did you have
17 time to consider -- and what would your or your
18 entity's response be to the issue of transcription
19 errors or simple typos in typing that in, especially
20 with something like a flip phone?

21 The option to send a quick PDF image
22 out or a quick summary of the data or some of the data
23 in that manifest -- all of the data in the manifest
24 wouldn't be necessary but maybe the generator name,

1 the date, and the number back in a text message. To a
2 flip phone that's possible, just a simple data
3 summary, but larger would be more difficult. Have you
4 considered how it could be possible for the system to
5 identify or raise an alert that, "Hey, you meant to
6 type in 123456678, but what I got was 123456788? And
7 is that really the manifest you want to sign?" Thank
8 you.

9 **MR. LARRY FURA:** Yeah. So Josh, I
10 guess that's where I was going with the idea that they
11 would send in the manifest number. They would also --
12 I really like the idea of the revision number/PIN code
13 number so that they're going to have that printed
14 manifest in front of them, if EPA were to implement
15 that type of scenario. So they would need to have two
16 data elements. They would need to have the manifest
17 number and the revision number that's printed on the
18 physical copy that's going to go with the shipment.

19 And that would be something that would
20 get uniquely generated each time that manifest was
21 printed. So if they print one to begin with, they do
22 their shipment, they realize that they had to make
23 some changes, they would go back into the e-Manifest
24 system, make the changes as far as quantities go,

1 regenerate that final shipping paperwork -- that
2 single page DOT manifest copy. It would have a new
3 revision number on it. So at that point, once the
4 generator and the transporter are standing there
5 together reviewing it -- everything matches. He's
6 checked his counts on the truck. Everything's good.
7 That's when they would text in the manifest number and
8 that revision number.

9 And then, on the EPA side of things,
10 when they receive that text message they would see
11 what number it's coming from, what phone number. So
12 they would be able to see is that number listed for
13 the transporter or generator on this manifest that
14 they're trying to sign. They'd be able to confirm
15 that that matches, and then the signature could take
16 place.

17 So this way, if Josh, let's say you
18 were processing a shipment and you accidentally miss-
19 keyed a manifest number, the EPA's e-Manifest system's
20 going to be able to look and see, "Hey, you know what?
21 That manifest number exists, but you're not listed on
22 this. You're not listed having anything to do with
23 any of the companies listed on the manifest." So it
24 would be able to reject it and just tell you you've

1 entered some invalid information and that a signature
2 didn't take place.

3 **MR. JOSHUA BURMAN:** This is Joshua
4 Burman again. Sorry I haven't been saying my name.
5 Thank you, Larry, for that. One -- and I don't want
6 to beat this too hard. But one scenario that at least
7 we've seen in Minnesota fairly often is a single
8 transporter coming out to pick up a shipment that is
9 from a generator that is -- because it's going to be
10 ultimately sent to two or multiple TSDFs, is split
11 between two manifests on the same truck by the same
12 transporter. And at least in the current paper
13 system, those manifests are typically and very
14 commonly only one digit off because the transporter
15 has got a stack of manifests, and they pull the top
16 two off, print them off.

17 So much of the information on those
18 manifests would be similar or identical. And they're
19 very common situations where there's only one digit
20 separating two different manifests but from the same
21 generator, same data, and even sometimes some of the
22 same waste descriptions but just differing slightly.
23 And I just want to raise that with you to see if you
24 have any reflection of that. I'm not asking you to

1 solve that problem right now. But see if you have any
2 reflection and sort of kick ideas or questions
3 possibly from other board members. Thank you.

4 **MR. LARRY FURA:** Yeah. No. And Josh,
5 I was trying to -- I guess maybe I wasn't clear in my
6 prior -- answer to your prior question. But Fred, can
7 you back up my slide just two slides? There we go.
8 So Joshua, this is where I was going with that
9 revision number. So think of that revision number,
10 that four-digit number appearing in the manifest
11 tracking number box. That would be basically like an
12 extra validation key for -- like a check digit
13 basically almost.

14 So the manifest number and that
15 revision number would have to both be entered
16 correctly. So even if they did make a mistake, in
17 this case instead of the manifest number ending in
18 789, they keyed it in as 788. When they put that
19 revision number in of 6343, the e-Manifest system
20 would reject it.

21 **MR. JOSHUA BURMAN:** Thank you. I
22 didn't catch that little nuance earlier. So thank
23 you. That is definitely helpful.

24 **MR. LARRY FURA:** No problem.

1 **DR. FRED JENKINS:** Okay. Thank you,
2 Joshua, for your question to Larry. Any other
3 questions from the board?

4 **MR. THOMAS BAKER:** Yeah. Larry, this
5 is Tom Baker.

6 **MR. LARRY FURA:** Hi, Tom.

7 **MR. THOMAS BAKER:** Hello. Very
8 insightful presentation. I appreciate all the thought
9 that went into this and in specking out some potential
10 solutions. I guess at a high level I just want to
11 make sure I clearly understand. Your company sits in
12 a -- I won't say a unique position but an interesting
13 position as a broker working with generators,
14 arranging for transporters, but then having to ship
15 the waste to what I'll call third party disposal
16 sites, correct?

17 **MR. LARRY FURA:** Mm-hmm. Yes, that's
18 correct.

19 **MR. THOMAS BAKER:** So from your
20 perspective with WTS, what do you see as the biggest
21 barriers to integrating and being able to go fully
22 electronic? Is it more focused on getting
23 transporters and generators registered in the system?
24 Is it challenges with the WTS business systems and

1 getting them integrated in e-Manifest? Because I know
2 you guys generate the manifest today yourself for your
3 customers. Or is it reluctance for the receiving
4 facilities to accept and electronic shipment that you
5 would prepare today? Is it one of those or all of
6 those real issues for you today? Can you give us a
7 little bit of perspective on those?

8 **MR. LARRY FURA:** Sure. Absolutely. So
9 yeah. And it is really -- it's been a combination of
10 all of those. And slowly over time here, the barriers
11 are dropping. First off, one of the barriers that we
12 had with e-Manifest was that the e-Manifest system
13 would simply not allow brokers to create manifests on
14 behalf of generators. That issue is now being
15 resolved. The EPA is putting out that capability.
16 It's supposed to be released this Friday actually. So
17 I'm sure there'll be some things to work out through
18 that process.

19 But at that point, our data systems
20 will be able to be integrated with that. So when we
21 produce a manifest, we will be able to submit it on
22 behalf of our generator customers to EPA. So that
23 problem's resolved.

24 The next problem we kind of saw was the

1 signature piece of things. We didn't see it so much
2 as a problem, even with the CROMERR compliant
3 signatures. We didn't see it so much as a problem for
4 the generators themselves because most of the
5 generators do have access to computer equipment,
6 whether it's back in their office or whatever. But
7 there would be problems if it's like a dock type
8 person, you know, person working out on the dock.
9 They may not have a computer available to
10 electronically sign, so that could be a potential
11 issue.

12 But the bigger one for us that we saw
13 was the transporters, trying to find a solution that
14 would work for the transporters, because a lot of
15 generators just don't even allow the transporter --
16 the actual driver really into their facility. They're
17 allowed to stay kind of sometimes in the dock area, or
18 they might be forced even just to stay in the cab of
19 their truck until the truck's fully loaded. So we saw
20 that as an obstacle getting the signature piece.

21 And hopefully some of these solutions,
22 like this texting solution for instance, could be a
23 great option. And even the signature pad option that
24 I was talking about -- if that -- if the EPA were to

1 make that a non-CROMERR compliant signature, if they
2 were willing to just simply take a JPEG, companies
3 like Veolia -- I don't know if you have a handheld
4 that you send your drivers out with. But I know like
5 in Clean Harbors' case, they do. A facility like
6 that, if they're doing the pick up, they could easily
7 capture a signature on their device and just transmit
8 in an image of the signature along with who was doing
9 the signing. When the signature had to be CROMERR
10 complaint, that would be requiring you guys to use
11 alternative signature pads and deal with trying to get
12 it certified with EPA and all of that stuff.

13 So I think there's some good options
14 even there for the signature pieces. So I feel like
15 this -- as EPA works through this signature issue here
16 and starts to look to implement some of these
17 solutions that they're talking about, I think they
18 need to review what I've presented today as far as a
19 change in flow for Option -- Method 1 for texting-
20 based signatures. But I think that does have really
21 good potential to tear down that barrier.

22 So that just leaves the third barrier,
23 which is the willingness of disposal facilities to
24 accept electronic manifests. I've had some

1 conversations with some of the different facilities
2 that we work with. They're willing to try it as a
3 trial where they would basically go into the e-
4 Manifest website and process that paperwork. And
5 through the e-Manifest website -- if we did send them
6 one electronically that way. But they would still be
7 going and keying it into their proprietary systems
8 that they have.

9 For everybody to really recognize the
10 full electronic benefit, disposal facilities would
11 need to -- in our opinion, would need to start looking
12 at writing the necessary code to bring fully
13 electronic manifests that are created by generators or
14 transporters or brokers directly into their system.
15 That's where -- I touched on that. That is sort of
16 the last obstacle I see, last major barrier once the
17 signature barrier's removed that EPA needs to focus on
18 is working with the disposal facilities to get them to
19 be able to bring that data into their system and work
20 with it.

21 I know we had last year as part of my
22 public comment -- it sparked a developer meeting that
23 we held in Chicago. And a lot of the disposal
24 facilities were there. And one of the key things that

1 I was hoping to get out of that was let's all come up
2 with a standard. EPA could just help facilitate it,
3 but they don't have to put out actual guidance. It
4 could just be an industry standard that we all agree
5 on.

6 How do we transmit all the other
7 required business information? How do I tell you what
8 my order number is with Veolia? Where do I put that
9 in an electronic manifest so that your system can find
10 it easily and bring it in? Where do I put the actual
11 container sizes? Like if your facility cares what
12 size of a DM container I'm sending you, where can I
13 put that on the manifest?

14 Where can we, as an industry, work
15 together to come up with a standard so that when
16 people submit electronic manifests they can match that
17 standard so that your data systems can bring that data
18 in electronically and with minimal user interactions.
19 Does that answer your question, Tom? Does that make
20 sense?

21 **MR. THOMAS BAKER:** No, it does. It
22 provides some additional insight there. I just wanted
23 to understand how -- your perspective at a high level
24 to these barriers that you went through. And I think

1 it does help. Thanks very much , Larry.

2 **MR. LARRY FURA:** Yeah. You're welcome.

3 **DR. FRED JENKINS:** Okay. Thank you.

4 Any other questions for Larry from the board? And by
5 the way, board members, we do have a new presenter
6 chat up. Let me -- I sent the note to you all to
7 verify whether or not you all could see it. So if you
8 have a question, you can also send me and Kathleen a
9 note in the chat box. But any questions right now for
10 Larry before we break for lunch? Okay. There are no
11 questions. We are going to break for lunch and resume
12 in an hour. Oh, I'm sorry. Tevfik Kosar is typing.
13 Tevfik, do you have a question? Okay. Go ahead with
14 your question Tevfik.

15 **DR. TEVFIK KOSAR:** I don't have a
16 question. I was just responding to your question on
17 chat.

18 **DR. FRED JENKINS:** Oh, okay. He was
19 responding to my -- sorry about that. Okay. So let's
20 go ahead and break for lunch and resume. And also
21 just to update the audience, we did post the updated
22 new URL into our website for the meeting. We just
23 swapped out the instructions that was there before on
24 our website with the new instructions, so please join

1 us again at this new URL. And with that said,
2 Kathleen, do you have anything to add before we break
3 for lunch?

4 **MS. KATHLEEN SALYER:** No, I just want
5 to thank our public commenters, and we will, yeah,
6 look forward to starting the discussion after lunch.
7 Thank you.

8 **DR. FRED JENKINS:** Yeah. Thank you,
9 Kathleen. And thank you again to our oral public
10 commenters. There was also a set of written public
11 comments that were submitted to the public docket or
12 emailed directly to me just prior to the public
13 comment period. Those were also forwarded to the
14 board and will all go into the public docket. Thanks
15 so much and see you all after lunch at let's say 1:00
16 -- I'll give you all a little bit extra time. Let's
17 meet for lunch at 1:10 p.m.

18
19 **(LUNCH)**
20

21 **DR. FRED JENKINS:** Hello, everyone, and
22 we're back from lunch. Thank you for all those who
23 joined back in. And we want to say thank you again to
24 our oral public commenters this morning. This is Fred

1 Jenkins, DFO, Designated Federal Officer, of the e-
2 Manifest Advisory Board. Before we get started, I
3 want to do a quick roll call, after lunch roll call of
4 our board members. So starting with the e-Manifest
5 Advisory Board Chair, Kathleen Salyer. Are you on the
6 line?

7 **MS. KATHLEEN SALYER:** I am, Fred.

8 Thank you.

9 **DR. FRED JENKINS:** Okay. Wonderful.

10 Welcome back from lunch. Hope you enjoyed your lunch.

11 Terry Baer, Arizona Department of --?

12 **MR. TERRY BAER:** Yes, Fred.

13 **DR. FRED JENKINS:** Okay. Wonderful.

14 **MR. TERRY BAER:** Yes, Fred. I'm here.

15 **DR. FRED JENKINS:** Okay. Wonderful,

16 Terry. Thomas Baker, Veolia?

17 **MR. THOMAS BAKER:** I'm here.

18 **DR. FRED JENKINS:** Wonderful. Joshua

19 Burman, Minnesota Pollution Control Agency?

20 **MR. JOSHUA BURMAN:** Joshua Burman is

21 here.

22 **DR. FRED JENKINS:** Wonderful. Syed

23 Hafeez, U.S. Department of Labor?

24 **MR. SYED HAFEEZ:** Syed is here.

1 DR. FRED JENKINS: Okay. Wonderful.

2 Michael Hurley, Massachusetts Department of --

3 MR. MICHAEL HURLEY: Hi, Fred. I'm
4 here.

5 DR. FRED JENKINS: Okay. Wonderful.
6 Massachusetts Department of Environmental Protection.
7 Okay. Hey, Mike. And Tevfik Kosar?

8 DR. TEVFIK KOSAR: Yes, Fred. I am
9 here.

10 DR. FRED JENKINS: Okay. Wonderful.
11 Jill Macioch?

12 MS. JILL MACIOCH: Yes, I'm here, Fred.

13 DR. FRED JENKINS: Okay. Wonderful.
14 And Cynthia Walczak?

15 MS. CYNTHIA WALCZAK: Yes, I'm here.

16 DR. FRED JENKINS: Okay. Wonderful.
17 Again, welcome again to the board and welcome again to
18 our public. Now, it is time -- now that the public
19 comment period is officially closed, now it is time
20 for what we've all been waiting for and that is to
21 hear the board's recommendations to our charge
22 questions. Every part of the meeting is important.
23 The Agency presentations are important, and we
24 anticipate that. The public commenters are important,

1 but the anticipation builds up into this moment. And
2 that is the Advisory Board's deliberation on each of
3 the charge questions.

4 We are going to start off by having the
5 charge questions official read into the record. And
6 I'm going to ask Mimi Guernica -- she is the Associate
7 Director of the Permit Implementation Division in
8 ORCR. And she will be reading the charge questions
9 into the record. Mimi, are you on the line?

10 **MS. MIMI GUERNICA:** I am.

11 **DR. FRED JENKINS:** Okay. Thank you,
12 Mimi, and could you please read the charge question
13 into the record. I'm sorry. Just one second, Mimi.
14 And after she reads the charge question, then the
15 board will proceed with their responses to Charge
16 Question 1A.

17
18 **CHARGE QUESTION 1A**

19
20 **MS. MIMI GUERNICA:** All right. Good
21 afternoon, everyone. I'm Mimi Guernica, Associate
22 Division Director of the Program Implementation and
23 Information Division within the Office of Resource
24 Conservation and Recovery. So I will be reading the

1 charge questions this afternoon. Thank you, Fred, for
2 your introduction and thank you, Advisory Board
3 members, for working with us on improving the e-
4 Manifest system and also thank you to our public
5 commenters.

6 Charge Question number 1, targeting
7 electronic signatures for generators and transporters
8 -- so this question has several subparts. So this is
9 1A. Would streamlining the process for electronic
10 signatures for generators and transporters effectively
11 address challenges for use of electronic manifests?

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Mimi. And we have our lead discussant of Charge
14 Question 1A, Thomas Baker. Go ahead.

15 **MR. THOMAS BAKER:** Okay. This is Tom
16 Baker. So this is I think a very general question
17 that I'll provide a high-level comment on,
18 recognizing, I guess, that there's more specific
19 questions drilling down into each of one of the three
20 methods later on. So I do believe that certainly one
21 of the most challenging provisions of e-Manifest is
22 the need to satisfy the CROMERR requirements, as we've
23 been discussing, with respect to signatures for both
24 generators and the transporters.

1 Therefore, it seems logical to me that
2 if we could streamline this process and reduce those
3 administrative burdens in applying signatures that it
4 should make use of e-Manifest much more attractive to
5 both generators and transporters. However, I'd also
6 like to highlight the fact that electronic signature
7 process is not only -- is not the only significant
8 administrative burden in the eyes of many transporters
9 and generators. The registration process itself,
10 which was actually the focus of a prior Advisory Board
11 meeting, seems to continue to be viewed as an equally
12 challenging situation for users.

13 The reality to date is that only a very
14 small number in the universe of stand-alone generators
15 and transporters -- and when I say stand alone, I mean
16 those that are not associated with commercial waste
17 management companies. A very small number of those
18 have actually registered access to e-Manifest. So
19 that even if EPA was able to streamline this
20 electronic signature process, that doesn't address the
21 challenges that we're faced with in the registration
22 process.

23 We're not going to see a significant
24 increase in adaption or adoption of e-Manifest, full

1 e-Manifest by generators and transporters. In
2 addition, since the vast majority of manifests today
3 that are prepare for generators are being done so by
4 commercial waste management companies as a service to
5 those generators, it's foremost important to make sure
6 that the issues with respect to integration of
7 industry systems gets addressed promptly. Again,
8 without that piece being resolved or addressed fully,
9 I don't see a big change in adoption by generators and
10 transporters, even with going forward with one of
11 these methods.

12 Again, so in summary, in my opinion, to
13 effectively increase the use of the e-Manifest system
14 fully, EPA needs to successfully address all existing
15 barriers, not only the CROMERR signature issue but
16 also the registration process and integration with
17 industry systems. And I'll hold off further comments
18 on recommendations for how I think we can accomplish
19 that. The last charge question for tomorrow deals
20 with more open-ended recommendations, so I'll bring
21 them up there. Thank you.

22 **DR. FRED JENKINS:** Okay. Thank you so
23 much, Tom. So I'm going to call on Terry Baker. He's
24 the next associate discussant assigned for this

1 question. Terry?

2 **MR. TERRY BAER:** Thank you, Fred.

3 Terry Baer with ADEQ. Yeah. I would have to agree
4 with what Tom said. As he mentioned, this is a very
5 kind of general question for the beginning.
6 Obviously, we're going to dive into more detail of the
7 methods as we kind of progress.

8 I think really EPA's got to evaluate
9 kind of their problem statement. From basically some
10 of the public comments, it would appear that CROMERR
11 continues to be a barrier. So I think that needs to
12 be more the problem statement is how do you develop
13 the system around the complications of the CROMERR
14 requirement. And that is what I would encourage to be
15 the focus.

16 As Tom already said, some of these
17 methods are more promising than others. But
18 obviously, I don't think ultimately it's going to be
19 the resolution. So as we kind of heard last year,
20 when you looked at those that are using the electronic
21 system, it's those that have control of the system
22 from start to finish, so those that are both the
23 generator, have their own transportation, and the TSD.
24 And I think that's why the numbers are so low is

1 because, for them, it works because they have every
2 control of that leg.

3 Obviously, that's not the general
4 consensus of the industry because, obviously, between
5 generators, transporters, brokers, and TSDs, there's
6 multiple aspects that come into play there. So that
7 is the barrier's that got to be broken down is how to
8 simplify things for everyone. So yeah. Like I said,
9 just to kind of echo what Tom said, I just think that
10 we need to continue to evaluate more effective options
11 for everybody involved. Thank you, Fred.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Terry. Next associate discussant, Syed Hafeez.

14 **MR. SYED HAFEEZ:** Thanks, Fred. This
15 is Syed Hafeez. So simple answer is, yes, there is a
16 definite need to streamline the signature requirements
17 for the generators and transporters. The current
18 process is too cumbersome. Streamlining the process
19 will address one of the challenges that industry face.
20 The other big challenge is that the network and sale
21 of services is not available in various locations.

22 If the EPA is considering allowing data
23 plus image additions to the electronic manifest, that
24 was one of the questions I asked this morning. I

1 agree with the recommendations that was presented by
2 this morning from ETC, Environmental Technology
3 Council, today because 80 percent of all manifests are
4 being submitted using a data plus image process. So
5 that type of manifest would be easier and quicker to
6 adopt than electronic manifest submission.

7 **DR. FRED JENKINS:** Okay. Thank you,
8 Syed. Next associate discussant, Michael Hurley.

9 **MR. MICHAEL HURLEY:** Hi, this is Mike
10 Hurley. I'd like to agree with everyone who's gone
11 before here. I think the CROMERR issues with
12 signature are part of the problem, but they're not the
13 complete problem. That's just solving one piece of
14 it. The system is very cumbersome for generators and
15 transporters to use at the point of transfer of the
16 waste. And that's really what it all comes down to.

17 There needs to be something that's a
18 more nimble piece of technology that can be used at
19 the site of turnover that accurately reflects what
20 those waste loads are. As Larry Fura was saying this
21 morning, one of his solutions was to have the DOT
22 printed document become basically the copy of record
23 for a certain part of the shipment. And that is, to
24 my eyes, not really a solution. You've just

1 transferred the EPA responsibility to a different
2 agency to sort of track -- the burden of tracking the
3 waste shipment until it reverts back to the EPA
4 system.

5 But again, it just needs to be a
6 simpler piece of technology that could actually be
7 used at the site of transfer. And I think that -- the
8 CROMERR piece is a part of it. But again, it's not
9 the whole piece. Thank you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Michael. Next associate discussant, Cynthia Walczak.

12 **MS. CYNTHIA WALCZAK:** Yeah. Hi. Thank
13 you. I think at this time that streamlining that
14 process would not actually result in more e-Manifest
15 users. It could be an impediment later, but right
16 now, I think the big impediment is what Tom mentioned
17 at the top, which is that -- is the integration with
18 industry systems.

19 Now, again, I'm a represent -- I'm
20 familiar with the generator side of things, not the
21 industry side or TSDF side, if you will. But I'll
22 tell you, as a generator, if the TSDF doesn't want me
23 using e-Manifest, I don't get to use e-Manifest. And
24 right now, they don't. And when I talk to them, it is

1 these integration issues.

2 So I think the first hurdle is getting
3 acceptance or buy-in, or integration, with TSDF so
4 that they tell their customers this is how the
5 transaction's going to go. Once that's been resolved,
6 then, yeah, we want to streamline the process. But it
7 could be really simple on the frontend. And if the
8 guys at the backend don't want it being used, it's
9 just not going to get used. Thank you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Cynthia. At this time, we're going to open up the
12 opportunity for the rest of the board to respond to
13 Charge Question 1A. And I see that Jill Macioch has
14 her hand raised. Jill, go ahead with your response.

15 **MS. JILL MACIOCH:** Thank you. This is
16 Jill Macioch. I still believe that there are
17 challenges. And especially one of the comments I
18 wanted to add is specifically to the PCB, or
19 polychlorinated biphenyl regulatory community. So as
20 a user of the current e-Manifest system and a
21 generator of the PCB regulated waste, there are
22 challenges when you're manifesting large quantities of
23 PCB items under the current e-Manifest system. And in
24 many cases, users are faced with using a paper

1 manifest for some of these shipments.

2 But first off, I appreciate the recent
3 FAQs on PCBs that were added to the e-Manifest
4 website. Question 17 specifically addresses the
5 additional information required to be on e-Manifests,
6 such as identity or the type of PCB waste, also known
7 as the PCB classification, removed from service for
8 disposal dates and other unique identification
9 numbers. This is not new to the e-Manifest system.
10 This has always been required on paper manifests.
11 These shipments may have several pieces of electrical
12 equipment or containers of PCB waste.

13 As a user of the system, my last two
14 shipments to one of our disposal facilities consisted
15 of between 88 and 103 PCB items, all with unique
16 dates, all with unique serial numbers, and also the
17 PCB classifications. And that information can either
18 be added to the manifest, the manifest continuation
19 sheet, or a PCB continuation sheet from the generator
20 or facility they're working with. So the way I see
21 it, that's approximately 300 additional entries.

22 Many generators of waste have systems
23 for these PCB continuation sheets. And as we learned
24 yesterday, and if I understand correctly, there will

1 be some new functionality coming out, I think, Friday
2 for copying or cloning data for each line. However,
3 that's still an enormous amount of cloning and
4 updating data specific to each PCB item. So that was
5 my first comment.

6 Two of my others were brought up by
7 previous discussants, so I don't want to be redundant
8 there. Cindy did bring up about the integration with
9 industry systems. And one thing I'm not sure that was
10 comment on yet is, when it gets to correcting a
11 manifest by the generator -- so if a generator is
12 correcting its e-Manifest and makes changes in the
13 system, how that information is incorporated into the
14 receiving facility system -- because currently it's my
15 understanding if me, as the generator, makes a change
16 to the e-Manifest, that I'm the one notified of those
17 corrections. So I just see some additional
18 functionality that we need to continue to work out.
19 Thank you.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Jill. All right. Joshua Burman, I believe you raised
22 your hand.

23 **MR. JOSHUA BURMAN:** Yes, Fred. Thank
24 you. This is Joshua Burman. First, and I apologize

1 for keep on asking these, Fred, a procedural question.
2 Could you remind me and us of the FACCA procedures?
3 If a point or a comment or a line of discussion is
4 raised in a submitted public comment, does the board
5 need to separately raise it in this verbal discussion
6 in order for it to be eligible to be included in
7 board's written final minutes? Or -- go ahead.
8 Sorry.

9 **DR. FRED JENKINS:** If the board wants
10 to address a particular comment that a public
11 commenter made and you want your response to that
12 public comment to be in the record or in your
13 recommendations, the answer to your question is yes.
14 Does that answer the question?

15 **MR. JOSHUA BURMAN:** So the board does
16 have to raise it separately -- okay -- or
17 additionally, I should say.

18 **DR. FRED JENKINS:** No. You don't have
19 to -- if you want it part of the public record in your
20 official recommendations to the Agency, please raise
21 it.

22 **MR. JOSHUA BURMAN:** Okay. Thank you.
23 That helps clarify. Thank you. In response to the
24 charge question, I believe Mr. Hurley and Mr. Baker

1 addressed it very, very well. And no disrespect to
2 the other board members. I think just their comments
3 were very spot on in terms of -- the CROMERR and
4 signature piece is, I think, substantial, certainly in
5 my and my agency's experiences with generators and
6 transporters within the state of Minnesota over the
7 past few years.

8 The signature piece and confusion
9 regarding it and complexity and challenges regarding
10 it is very, very large. And I personally am extremely
11 heartened that the EPA is reconsidering its prior
12 position, which appeared to be quite solid in
13 discussions at the last advisory board meeting. I, in
14 particular, introduced quite a bit of discussion at
15 that meeting and in the final minutes to that meeting
16 to the EPA specifically requesting and recommending
17 that the EPA strongly reconsider its view of CROMERR
18 application and what the meaning of a signature is.
19 And I think that, particularly in the EPA's
20 presentation for Option 1, that that's raised.

21 But I would kind of step beyond what
22 even Mr. Baker and Mr. Hurley said, and the other
23 discussants, and say that EPA really needs to keep
24 reviewing that line and develop that line of thinking

1 further because signature is not, definitely, the only
2 challenge. But it is one of the most vexing, and it's
3 one of the first challenges that potential users of
4 the system face. And when they're faced with a steep
5 mountain that they either are unwilling or unable to
6 climb, they don't look further.

7 So if somebody's turned off initially,
8 you can have the greatest system in the world down the
9 road and fix the problems with the API integration and
10 some of the other issues that have even been raised
11 today. But if we don't get through signature, they're
12 never going to get to that. So I think that's really
13 very key, and I think we need to continue to develop
14 that through these discussions and urge EPA to even
15 take its thinking as it started to coalesce in Option
16 1 further. And again, we'll develop that further.
17 Thank you.

18 **DR. FRED JENKINS:** Okay. Thank you,
19 Joshua. Are there any other board members that want
20 to respond to Charge Question 1A? Okay. I'm going to
21 turn back to the Agency. Kathleen, did you have
22 anything?

23 **MS. KATHLEEN SALYER:** No, Fred. Thank
24 you. Just -- yeah. I think what you were proceeding

1 to do was asking if the Agency had any clarifying
2 questions, the Agency team.

3 **DR. FRED JENKINS:** Yes. Thank you,
4 Kathleen. So yes, does the Agency have any questions,
5 clarification in regard to -- in response to the
6 board's response and recommendations in Charge
7 Question 1A? I will take that as a no. Oh, Steve,
8 I'm sorry. Go ahead.

9 **MR. STEVE DONNELLY:** We don't have any
10 clarifying questions.

11 **DR. FRED JENKINS:** You don't? Okay.
12 Great. No clarifying questions. Okay. Mimi, can you
13 please read Charge Question 1B into the record?

14
15 **CHARGE QUESTION 1B**

16
17 **MS. MIMI GUERNICA:** 1B, are some of
18 EPA's options for executing electronic signatures more
19 promising than others in terms of increasing use of
20 electronic manifests?

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Mimi. Our lead discussant for 1B is again Thomas
23 Baker.

24 **MR. THOMAS BAKER:** Okay. Thanks, Fred.

1 This is Tom Baker. Certainly, yes. We've been given
2 three methods to consider as part of the charge
3 questions, and I think certainly one of those has more
4 promise than the others. Specifically the first
5 method, referred to as the one person registered
6 method, to me seems to be the one that has the most
7 promise for two reasons.

8 One, it effectively eliminates the need
9 for the individual who's signing the manifest, whether
10 it be the generator representative or the driver -- it
11 eliminates that person's need to register in e-
12 Manifest. And number two, it also allows a signature
13 to be applied that does not need to satisfy the
14 CROMERR standard. The relief provided in both
15 instances will be viewed as an improvement, I think,
16 by generators and drivers needing to sign manifests in
17 general terms.

18 However, in looking at Method 1
19 closely, it does create some new administrative
20 complexities, specifically with pre-shipment planning
21 in that companies representing the generator and the
22 transporter will need to determine which employee will
23 be signing in a manifest and then also establishing
24 means to effectively communicate with them via email,

1 text, or phone at the point of shipment. There are
2 definitely challenges in that arrangement in that
3 hazardous waste pickups, shipments, at times are --
4 schedules are changed. Additional wastes are brought
5 out to be managed and shipped offsite. There could be
6 driver changes coming out of ten-day transfer
7 facilities, for example. So the process needs to be
8 flexible to accommodate those realities of shipping
9 hazardous waste when trying to coordinate with
10 generators and transporters.

11 So while Method 1 is an improvement
12 over the existing e-Manifest generator and transporter
13 signature process, the perspective I think we need to
14 look at is when Method 1 is compared to the current
15 paper signature process, which is in place today for
16 greater than 99 percent of the manifests in shipments
17 that we see, whereby a representative of the generator
18 and the transporter can sign the manifest without any
19 prior authorization needed, it should be expected that
20 this method's still going to be viewed by many
21 generators and transporters as still overly
22 burdensome. And as a result, I don't see it likely
23 having the desired outcome of significantly increasing
24 adoption of the electronic manifest process. Thank

1 you.

2 **DR. FRED JENKINS:** Okay. Thank you,
3 Tom. Terry Baer, our next associate discussant.

4 **MR. TERRY BAER:** Thank you, Fred.
5 Terry Baer, ADEQ. So I would agree with Tom. I do
6 think that some methods are better than others. As he
7 kind of mentioned Method 1, it really goes to show how
8 far EPA has gone to think of a solution and then try
9 to fit it within the confines or context of the
10 CROMERR requirement. So I applaud them on that, and I
11 continue to urge them to think along that thought
12 process because I think that's ultimately going to
13 help go a long way, as Joshua kind of said.

14 I mean, this isn't just a first
15 milestone. But obviously, this is probably the first
16 barrier to overcome to get further adoption. As Mr.
17 Fura had mentioned during his public comment, I think
18 Option 3 has some value, once again, as long as you
19 get away from the concept of the limitation on the
20 device. And I think there's options out there within
21 the economy that could be drawn from.

22 There's a number of electronic
23 signatures that take place every day. So some are
24 using those. I personally filed my taxes

1 electronically, and I didn't have to go through any
2 sort of CROMERR certification. So that's just another
3 federal level of submission that didn't seem to be
4 hindered by that aspect. So I think it's going in the
5 right direction, but definitely some are more
6 promising than others. Thank you, Fred.

7 **DR. FRED JENKINS:** Okay. Thank you,
8 Terry. Syed Hafeez?

9 **MR. SYED HAFEEZ:** Thanks, Fred. Syed
10 Hafeez, Department of Labor. Yes, I agree with Tom
11 Baker and Terry Baer. Method 1 seems to be the best
12 option because it's very flexible and convenient for
13 the generators and transporters. I have one
14 clarifying question. Does EPA planning need digital
15 electronic signatures required? There are couple of
16 risks with using electronic signatures, like forgery
17 or fraud. But I agree with both of them as Method 1
18 is the best option.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Syed. Michael Hurley, next associate discussant.

21 **MR. MICHAEL HURLEY:** Okay. Thank you,
22 Fred. This is Mike Hurley. I agree with pretty much
23 everybody else. Method 1 seems to have the most
24 promise. But I do agree with Tom Baker in that it

1 does give rise to a lot of admin issues prior to the
2 shipment. And issues of using people's personal
3 devices, cellphones, what have you, for work purposes
4 and things like that could be a bar to adoption
5 because, again, the paper, you don't have to do any of
6 that stuff. It's easy. You just do it, and you can
7 see the full shipment record right there in your hand.
8 You can cross stuff out. It's pretty straightforward.

9 So I would wonder, if we don't have to
10 have CROMERR at the signature point for Option 1, why
11 would we need to have all the back and forth with all
12 the texts and emails and all that kind of stuff?
13 Because for people who are in my position who are on
14 the implementation end of it for state agencies, it
15 would be difficult for me to explain this to a regular
16 person who is calling me to ask me, "What do I do?"
17 And I'd say, "Well, you know, you've got your phone.
18 You've got to use your phone."

19 It makes it more complicated, and I
20 think those parts need to be worked out. So I think
21 one has the most promise when combined with parts of
22 three. I don't think either of them are the complete
23 solution, but they are a step in the right direction.
24 Okay. Thank you.

1 **DR. FRED JENKINS:** Okay. Thank you,
2 Michael. Cynthia Walczak?

3 **MS. CYNTHIA WALCZAK:** Okay. Thank you.
4 This is Cindy Walczak. I think Mike put it very well,
5 which is that if the signatures don't need to be
6 CROMERR signatures, it kind of begs the question about
7 why all this back and forth, right? So I guess --
8 also, I'm perfectly capable of using the system the
9 way it was built, but I don't really get the
10 opportunity to use it because, again, I'm working with
11 parties that aren't invested in it and don't want to
12 use it.

13 So in some ways, you can pick any one
14 of the three, and you can make it. And many
15 generators will figure it out and go along. But I
16 don't think they'll have the opportunity to if the --
17 I sound like a broken record. I'm sorry. But if the
18 TSDF does not integrate it with their system, then I'm
19 not hopeful that any of them are really going to be
20 successful. That's all I've got. Thank you.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Cynthia. Do we have any questions -- or I'm sorry,
23 responses from any other board members?

24 **MR. JOSHUA BURMAN:** This is Joshua

1 Burman. Sorry, Fred. I guess I didn't raise my hand.
2 I'm not used to that. I fully just wanted to express
3 support for the prior positions of the previous
4 discussants. And I know that sounds repetitive, but I
5 think emphasizing when the board has consensus, even
6 in verbal discussions, I think helps give more weight
7 to the board's recommendations and the board's
8 discussions. So I think it's important, and I
9 apologize if it seems repetitive to everyone
10 listening.

11 I again think that we -- as I expressed
12 last year in June, I think that we get very hung up as
13 agencies, as regulators, as individual people, on a
14 word, without necessarily examining what that word
15 means to each of us and how it may be different. The
16 word signature has very particular meaning for many
17 people but under different contexts. And I think it's
18 easy in this discussion here to talk about electronic
19 signatures and have a bias going in with, well, what
20 does that mean? What do we mean as signature?

21 The board spent quite a bit of ink, so
22 to speak, in its response to Question 4A in the prior
23 board minutes that I think is worth EPA revisiting and
24 reexamining again. I think EPA has started as an

1 agency -- and I give full credit to the members of the
2 e-Manifest team that sort of opened the Agency's eyes
3 and said, "Yeah. Let's take a second look at this
4 because maybe we're looking at this in a way that we
5 don't need to."

6 I think further introspection on that,
7 what does a signature mean -- as Mr. Hurley pointed
8 out, if our concern is that a person, an individual
9 representing an entity, representing a generator,
10 representing a transporter, is going to say, "Yes,
11 this waste is properly packaged and it's ready to go
12 and I'm going to say that this is what it is. These
13 five drums, somebody's written down somewhere that
14 there's five drums." That is the entire purpose of
15 the manifest system is to provide a cradle to grave
16 tracking system.

17 So really the key is the information.
18 The signatures or the statements of the handlers, the
19 attestations, all of this simply supports accurate
20 information. That's what we're all concerned about.
21 Do I, as a regulator -- and again, I expressed this
22 back in June. Do I, as a regulator, care whether John
23 Smith or Jane Doe signed the manifest? Nope. I don't
24 care. And it won't really, in the real world, make

1 any difference whatsoever to a potential enforcement
2 case.

3 The states who are the primary
4 regulators of hazardous waste and have primary and
5 daily enforcement do not, with extremely rare
6 exceptions, do individual prosecutions or enforcement
7 against individuals. It's the entity, the company,
8 the generator that is responsible. It's that who
9 we're looking for.

10 So what I'm concerned about is not who
11 signed it but that somebody, be it a flesh and blood
12 human being or an artificial intelligence computer
13 system -- I'm raising that because that's going to be
14 on the horizon at some point in the not too distant
15 future, and I think we need to start putting it in
16 the back of our minds -- is saying, "Yes, this is
17 what's going on the truck, this is what's going on the
18 rail car, and instead of 20 drums as we thought we
19 were going to send, we're sending 21," so that at the
20 other end the receiving facility says, "Yup. We've
21 got 21 drums." Versus, "Hey, we only got 10. Where
22 did the other 11 drums go?"

23 That's the function of the e-Manifest
24 system. That's its entire reason for being. And I

1 think we can get lost -- we can start looking at trees
2 rather than the forest here. Or to use more
3 metaphors, the tail can sometimes wag the dog. What
4 we want to do is make sure that as easily, as
5 efficiently, and as accurately as possible we track
6 the waste.

7 I do believe that at least at this
8 point we do need to have a human being make a final
9 statement that, "Yup. Somebody else drafted a draft
10 manifest a couple days ago. We thought we were going
11 to ship that. Then somebody today made some
12 corrections. But no, I'm saying this is what's going
13 out." I think we still need to have that. And if we
14 want to call that a signature, if we want to call that
15 a finalization of the manifest, I urge that we don't
16 get stuck on signature, with that word, with all the
17 baggage it carries.

18 So that seems kind of rambling, but
19 when we're talking about the charge question being
20 "are some methods of signature more effective than
21 others," let's go beyond that and say what do we
22 really need? And maybe just not the word signature
23 because that kind of binds us up. That being said, if
24 we are looking at just the options here -- which again

1 I don't urge we do. I urge that the board in its
2 deliberations today and tomorrow use the charge
3 questions as a jumping off point rather than as a
4 final.

5 Mr. Donnelly suggested that yesterday
6 in his statements to the board that -- and I'm
7 paraphrasing you, Mr. Donnelly. I apologize, and EPA
8 certainly has an opportunity to clarify or ask
9 clarifying questions of the board. I believe that the
10 EPA's intent was to say, "Here's some things we've
11 considered. How could we develop those, or what do
12 you think about them? But don't limit yourself to
13 those. What might else that suggest to you?" And I
14 say in that vein that some of the methods presented
15 have great promise. I think that if some of the
16 methods are merged or mixed with some of the other
17 methods they may be even better, as was suggested by
18 Mr. Fura and Mr. Hurley today. So thank you.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Joshua. Are there any more board responses to Charge
21 Question 1B? Okay. Yes, Syed Hafeez. Yes, go
22 ahead, Syed.

23 **MR. SYED HAFEEZ:** Thanks, Fred. I just
24 have a clarifying question. If the requirement is

1 tracking all the waste, all chain of custody is also
2 as important. If it's just the tracking of how many
3 drums you deliver, it's supposed to be 15 you deliver
4 -- but chain is very important. Who is the one who's
5 delivering it if something is missing? How are you
6 going to track that without some kind of notification
7 or tracking? Who is the person that delivered and why
8 those five drums were missing? So I don't know the
9 full requirement. I apologize for that, but I think
10 those two go hand to hand. You have to track, and
11 then you have to maintain the chain of custody.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Syed. Joshua?

14 **MR. JOSHUA BURMAN:** Thank you. This is
15 Joshua Burman. I thank you for raising that, Syed.
16 Chain of custody is critical, and it is the function
17 of the manifest. But as I stated and I believe -- and
18 he can correct me -- Mr. Hurley reiterated or affirmed
19 in June last year, from the state's point of view, the
20 primary regulator's point of view, the chain of
21 custody relates to the entity, not to the individual.
22 Again, I as a regulator don't care whether John Smith
23 or Jane Doe signed it. What I need to know is that
24 the company made a statement through its

1 representative.

2 Now, because we are -- it's way too
3 amorphous to say, "Well, ABC Manufacturing shipped
4 this today." It's very easy for the company to say, "I
5 don't know who --" Okay. We do want an individual to
6 go to, to say, "Look, you said this was accurate, was
7 that a guess?" But that's not necessarily to the
8 level of what has previously been discussed as a
9 signature.

10 Again, that's why I don't like to get
11 hung up on that word. As Mr. Hurley pointed out a few
12 minutes ago, that may be over involved. What we need
13 is somebody to check the truck and say, "Yup. This is
14 accurate." And we need to know that somebody did
15 that. And that is the functionality we're looking
16 for. And I think EPA has already started to look at
17 that and go down that road.

18 That's why I say, when we look at
19 things like Option 1, that's really -- I think it
20 needs refining. I think there's potential ups and
21 downs. But the concept of saying, "We don't
22 necessarily need somebody's fingerprint. What we need
23 is, yup, we have fair assurance, reasonable assurance
24 that somebody from this generator looked at this truck

1 and said it was accurate." And that's what we're
2 really looking for. Or that's what I -- I shouldn't
3 say we. I don't speak for everybody. That's what I
4 in representing the state as I do would be looking
5 for.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Joshua. I see Michael Hurley has his hand raised.
8 Michael?

9 **MR. MICHAEL HURLEY:** I do have my hand
10 raised, Fred. This is Mike Hurley. And just to build
11 on what Josh was saying is -- so we're almost
12 redefining somewhat signature. We're not saying we
13 need someone's personal identifier written into this
14 box. We just need a corporate authorization for this
15 shipment, right, in whatever form that might take?
16 That might be -- whether it's a database entry from
17 that one person that the company's saying "This pickup
18 will be scheduled. It will happen on this date, and
19 this will be the transporter."

20 Maybe that's enough for what we're
21 trying to do here. But I think that's an interesting
22 sort of philosophical point is are we redefining what
23 the signature would be? So it's not something that
24 identifies a person who's working for the company.

1 We're saying we just need corporate authorization for
2 the shipment. And I think that's kind of interesting.
3 I just wanted to make that point. Thanks.

4 **MS. KATHLEEN SALYER:** Fred, it's
5 Kathleen Salyer. I don't see any additional
6 questions, but I think the Adobe Connect is updating.
7 If there are any other questions, please let us know.
8 We can't see the chat right now. Okay. So with
9 that, we can move on to the next question. Mimi, can
10 you go ahead and read the next question, please.

11 **MR. THOMAS BAKER:** Excuse me, this is
12 Tom Baker. Is there no EPA clarifying questions for
13 the board?

14 **MS. KATHLEEN SALYER:** Oh, I'm sorry.
15 Yes. Yes, let me ask that. Just asking the EPA team,
16 do you have any clarifying questions?

17 **MR. STEVE DONNELLY:** This is Steve
18 Donnelly. Not at this time, no.

19 **MS. KATHLEEN SALYER:** Great. Thank
20 you, Steve. Okay. With that, we'll go on and move to
21 Charge Question 2. Mimi, do you want to read that
22 into the --

23 **DR. FRED JENKINS:** I'm sorry. I'm
24 sorry. Can you hear me? I was talking to myself. I

1 forgot I was on mute. But I just want to interject
2 really fast. So we're right around the 2:00 time, so
3 I'm noticing some technical adjustments being made to
4 the Adobe Connect. So let's take a break and resume
5 at 2:15 so the operator can fix whatever they're
6 trying to fix, and I can communicate with them. So is
7 that okay with you, Kathleen?

8 **MS. KATHLEEN SALYER:** That sounds
9 great, Fred. That sounds like a good idea.

10 **DR. FRED JENKINS:** Okay. So let's
11 resume everyone at 2:15 with Charge Question 2. See
12 you all at 2:15.

13
14 **(BREAK)**

15
16 **DR. FRED JENKINS:** And we're back from
17 our break. This is Fred Jenkins again, Designated
18 Federal Officer of e-Manifest Advisory Board. I'm
19 going to do just a really quick after the break roll
20 call to make sure all the board members are back.
21 Kathleen, are you back, Kathleen Salyer, chair of the
22 e-Manifest Advisory Board? Are you back?

23 **MS. KATHLEEN SALYER:** I am. Thank you,
24 Fred.

1 DR. FRED JENKINS: Okay. Great. Terry
2 Baer?

3 MR. TERRY BAER: Yes, sir. I'm back.

4 DR. FRED JENKINS: Okay. Thomas Baker?

5 MR. THOMAS BAKER: I'm here.

6 DR. FRED JENKINS: Okay. Joshua
7 Burman?

8 MR. JOSHUA BURMAN: Joshua Burman here.

9 DR. FRED JENKINS: Okay. Syed Hafeez?
10 Syed, are you there? Okay. He'll join us shortly,
11 I'm sure. Okay. Michael Hurley?

12 MR. MICHAEL HURLEY: Hi, Fred. I'm
13 right here.

14 DR. FRED JENKINS: Okay. Great.
15 Tevfik Kosar? Okay. We'll give him a little bit of
16 time. Jill Macioch?

17 MS. JILL MACIOCH: Yes. I'm here,
18 Fred.

19 DR. FRED JENKINS: Thank you, Jill.
20 Cynthia Walczak?

21 MS. CYNTHIA WALCZAK: Yes. I'm here.

22 DR. FRED JENKINS: Okay. Great. Okay.
23 I'm going to check with EPA. Are you all ready to
24 read Charge Question 2 in the record?

1 **MS. MIMI GUERNICA:** Yes, Fred. I am.

2 This is Mimi Guernica.

3 **DR. FRED JENKINS:** Okay. Great. Okay,
4 Mimi. Okay. There we go. Mimi, can you please
5 proceed with reading Charge Question 2 in the record?

6

7 **CHARGE QUESTION 2A**

8

9 **MS. MIMI GUERNICA:** Charge Question 2,
10 Method 1, one registered user, subdivision A, to what
11 extent does the Advisory Board support this method to
12 increase the use of electronic manifests by generators
13 and transporters?

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Mimi. Up first, our lead discussant is Jill Macioch.

16 **MS. JILL MACIOCH:** All right. Thank
17 you, Fred. This is Jill Macioch. And again, this is
18 the one registered user. I think if you can remove
19 that registration in the challenge question for most
20 of the users, that's definitely going to be a step in
21 the right direction.

22 And I guess what I'd like to say is
23 where I feel that I bring the value to the Advisory
24 Board is when I provide some of the practical

1 examples. And I feel this is a good mix with the rest
2 of our Advisory Board expertise. So just wanted to
3 give you a little bit of a background.

4 I had mentioned previously our company
5 transports our own internal hazardous waste shipments
6 to our part B hazardous waste storage facility. And
7 we also transport other hazardous waste and PCBs to
8 receiving facilities across the United States. So we
9 have what I would call a relatively small group of
10 drivers or fleet, just under approximately 20 drivers.
11 They're mainly transporting larger equipment, non-
12 regulated material, and also the occasional manifested
13 shipments of waste.

14 So the registrations -- so I just
15 wanted to back up and say that, when we went full
16 force with June of a couple of years ago, of 2018 I
17 guess, of the e-Manifest, Xcel Energy jumped onboard
18 since we did a lot of internal manifested shipments
19 and had our own internal transportation. We wanted to
20 take advantage of the electronic manifest system. So
21 we did try to get all of our drivers registered and
22 setting them up. And that definitely took quite a bit
23 of time.

24 But I also wanted to point out that

1 there's also the process of maintaining that list of
2 users, modifying that list and the permissions for the
3 selected list for the sites for those users, changing
4 these permission levels as needed, especially when
5 some of these individuals do leave the company. It's
6 been, I think, expressed, either in written comment or
7 elsewhere that there is a challenge there when you're
8 trying to maintain qualified drivers. And we
9 experience that as well.

10 Also, what we've experienced -- that
11 each time a driver is assigned a manifest load, our
12 office person needs to work with these drivers to make
13 sure that they remember their usernames and passwords.
14 I think that's been brought up before, no surprise
15 there. When it comes to signing the manifest, the
16 driver often cannot remember their challenge questions
17 presented, and many times they need to reset their
18 signature challenge question. The process has become
19 time consuming and challenging.

20 So with that said, if Option 1 meets
21 the necessary electronic signature methods and the
22 other considerations that have been voiced throughout
23 these last couple of days, I feel this method would be
24 supported by many of the generators and transporters

1 since only one site manager or a couple of site
2 managers would be needed. And the rest of the users,
3 such as the dock personnel and the drivers, would not
4 need to go through the full registration and identity
5 proofing process. However, this will take some time
6 to develop, as we talked about, and we would need the
7 right workflow as a solution. So thank you.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Jill. Our next discussant is Joshua Burman.

10 **MR. JOSHUA BURMAN:** Thank you, Fred. I
11 think Jill raises some excellent points there. I
12 think that this -- the discussion surrounding this
13 method and EPA's presentation regarding Option 1 goes
14 further than any other in -- down the road that I
15 think EPA needs to keep going. In the discussion to
16 this option, EPA clearly said, "You know what? Maybe
17 the other interactions of users with the e-Manifest
18 system are not signatures as we normally or have
19 previously understood them. And what they are is just
20 affirmations of data accuracy or notifications of
21 actions."

22 The waste shipped today, okay, that's a
23 very good data point to have. The waste described on
24 the manifest, the data -- the information in this

1 manifest, this statement of a shipment is accurate,
2 that's another really good data point to have. In
3 fact, that's critical data point to have. But that's
4 -- I think EPA has gone very far down that road.

5 I will be revisiting it probably too
6 much for my fellow board members, and I apologize in
7 advance. But -- and in the written minutes -- but I
8 think the presentation of Larry Fura developed this
9 quite well. And in fact, as I mentioned in direct
10 response to Mr. Fura, I was surprised and -- in common
11 terms, I'd say he stole my thunder because I have
12 literally pages of notes that I wrote yesterday, and
13 he was reading verbally things that were written in
14 front of me already.

15 So just to reiterate some of those to
16 make sure they make it into the verbal public record,
17 the dropping down of saying the actual signature, the
18 verification when we have to say somebody is making a
19 legal affirmation -- this is a legally binding record,
20 that everything is complete, accurate, done, the
21 shipment is completed, is the TSDF. And I would
22 definitely support maintaining a CROMERR level
23 signature, however it's done. And I'm absolutely not
24 saying that the way the e-Manifest system is built and

1 operating today is necessarily the best way.

2 I'm not knocking the e-Manifest team
3 that put it together under extremely difficult
4 circumstances with limited budgets and short time and
5 constant changes in needs and direction in technology.
6 I think they did an amazing job, and I applaud them.
7 And they've also stood up to some harsh questions from
8 the public and even this board over the last few
9 meetings. So I applaud them for that as well.

10 But the prior interactions of users
11 with the system, I would like to move away from the
12 term "signature" because I think it's confusing. And
13 I think it just brings with it all sorts of baggage.
14 What we need is an individual notifying system or
15 interacting with the system to establish data points
16 or to verify the accuracy of data that either they or
17 somebody else put in.

18 To that end, I think using available
19 technology -- and at this point, we really heard
20 comments that have diverged. And we really have, I
21 think, a spectrum of users. And one of the
22 difficulties that EPA has faced in the past several
23 years is that the e-Manifest system is one system that
24 has to serve a very widely ranging set of users with a

1 lot of different expectations and a lot of different
2 sophistication.

3 A very large, extremely sophisticated
4 user who has built their own internal database system
5 that handles information on a mass level and would
6 seek to do direct dumps and direct interaction with
7 the EPA system and can do so through the API set up is
8 using the same system that a mom and pop autobody shop
9 owner who ships waste once every two or three years --
10 they have to interact with the same system. And the
11 poor transport companies are kind of stuck in the
12 middle of those very wide range and so is EPA. To
13 that end, I think when we look at the interactions of
14 users of that system we're going to have to embrace a
15 range of options. There's not going to be the one
16 silver bullet that meets all.

17 Interacting with cellphones or other
18 remote devices that are going to change over the next
19 few years may serve one set of users very well. I
20 think looking at Option 1 in my and the state of
21 Minnesota's experience, the very small generator user
22 could potentially be very well-served by this option.
23 Yeah. It's their personal cellphone, but people are
24 becoming more used to interacting with semi-official

1 uses of that cellphone.

2 I, today, am talking on a personal
3 cellphone because we're under a rather unusual
4 situation nationwide. But while I normally would say
5 work and business phones do not mix, this is an
6 unusual circumstance, but it's happening across the
7 nation. And as a consequence, people are becoming a
8 little more comfortable with that, as long as it's
9 carefully done and under set circumstances.

10 I signed into a computer system today
11 using an interactive app on the phone that generated a
12 security code, a one-time use single security code to
13 securely tie into my state's computer system so that I
14 could log into the e-Manifest meeting this morning.
15 That is an app that resides on a personal device, but
16 it interacts with that device only in a very limited
17 fashion. It doesn't give out or divulge any personal
18 information.

19 And I think some of the discussions
20 with Option 1 where the really only personal
21 information that's being used on a potentially and
22 likely private telephone or other device is the number
23 or address of that device. Where a text is sent or
24 received from that device, that may need to be the

1 only personally identifying information. We're all
2 familiar with so-called two factor authentications,
3 and we had some discussion with our IT experts, who
4 are way beyond us, way beyond me in these terms. But
5 that -- we're becoming very comfortable with receiving
6 a text saying, "Here's your single use five-digit
7 code. Enter it to show that it's you."

8 I do believe that Mr. Fura raised a
9 very important point, though, that I was actually
10 going to raise, which is, rather than looking at the
11 e-Manifest system to push out notifications or
12 requests to users -- and then we start having to worry
13 about timeouts or, gee, if three people get the same
14 text and two of them say, "Oh, yeah. I can do that,"
15 or one of them responds to it or none of them respond
16 to it, how does the system handle that? How do we
17 handle when two push -- two notices are sent out to
18 two different devices and neither is responded to?
19 How can a third person interact?

20 I think it might be much more useful to
21 have the capacity for the system to have a list of
22 preapproved potential signatories entered by a site
23 manager. And I think at this point we may still need
24 that position. The user initiates interaction with

1 the system by sending a text to the system. The
2 system should be able to recognize the incoming phone
3 number. Can that be spoofed? Yes. Do we believe
4 there's a really high likelihood of that? Based on my
5 state's experience, no, because you can spoof the
6 paper-based system a lot easier.

7 And people aren't doing it. They
8 haven't been doing it. We just don't see fraud at any
9 scale whatsoever in the manifest system. We see fraud
10 in waste handling, which is then documented in the
11 manifest system. But that's a separate matter and
12 that's -- we're not going to do anything in the
13 manifest system that will prevent that.

14 So again, touching back on Mr. Fura's
15 presentation, if a -- looking at Option 1 and
16 developing it, if a user -- excuse me, a site manager
17 preloads a list and says, "Okay. At our company,
18 we've got maybe 20 people that we've trained on what a
19 manifest is, or we've got one. Okay. Here's our
20 list. It's residing in the e-Manifest system. We can
21 change that at our leisure. We can take people off.
22 We can add people on."

23 The day of the shipment somebody takes
24 their cellphone, types in the manifest number. I

1 think Mr. Fura actually developed it further than I
2 had gone in that direction with basically a version
3 code or a version number or check digit code such that
4 the system says, "Okay. Not only is that you, but
5 we're fairly certain that that's you accurately and
6 correctly typing in the manifest number. We're
7 matching it up with this version. And the very fact
8 that you're sending it in, we'll then bounce it back
9 and say are you sure?"

10 We're all familiar with the "click here
11 to approve," and then you get an immediate bounce back
12 saying, "Do you approve, or was this done in error?
13 Click yes, respond, type Y-E-S," whatever the method
14 we choose. I think those details are important but
15 doable. The system then recognizes that and moves on.

16 I think that for the small operators
17 that's very, very doable. Many of these operators
18 currently today don't prepare their own manifests.
19 They call up their contracted vendor and say, "Hey,
20 I've got a couple drums ready to go." The vendor then
21 asks them a series of questions. They pull up a waste
22 profile and pre-print the manifest. They bring it.

23 The generator's sole responsibility --
24 excuse me. I correct that word. The generator's sole

1 task -- their responsibility is complete. As a
2 regulator, I have to state that. But their actual
3 action, they skim it over. They make sure it looks
4 accurate. Any changes are typically made by the
5 transporter, not the generator. And they then sign
6 it. I think we can do that electronically.

7 Option 1 definitely gives that,
8 particularly if we reverse it around and have the user
9 push to the system using a remote device rather than
10 the system sending it out. So I probably am going to
11 be spurred with more with the responses of other
12 discussants, but I don't want to monopolize the
13 conversation or bore people. So I want to essentially
14 pause at this point and maybe raise my hand later
15 after everybody else has talked.

16 **DR. FRED JENKINS:** Okay. Thank you,
17 Joshua. I believe we have a question from Terry Baer.

18 **MR. TERRY BAER:** Thank you, Fred.
19 Terry Baer, ADEQ. So to echo what Jill and Josh have
20 both kind of said, I do think this is the most
21 supported. But I think that my fellow board members
22 have hit the nail on the head of I think that we've
23 got to move away from the distinction of signatory
24 versus certification. And the reason that I want to

1 kind of emphasis on that is look at the manifest
2 system as it operates today with the paper manifests.
3 The generators offers their shipment.
4 During that shipment, a transporter may have to
5 overpack a drum, repack a drum. And they can make all
6 those changes on the manifest. And then it ultimately
7 will get to the end disposition, and the TSD is either
8 going to accept it or they may do a partial rejection.
9 They may do a full rejection. In any aspect, the
10 current system still allows for a modification of that
11 shipping record. It's not until that bottom page is
12 signed, even for a partial rejection, that the
13 certification has taken place.

14 So I do what to kind of go back to the
15 generators offer certification. So it states that "I
16 certify that the contents of this consignment conform
17 to the terms of the attached EPA acknowledgement of
18 consent." So that's what's being certified by the
19 generator. And then it says, "I certify that waste
20 minimization statement identified in 40CFR basically
21 is true." So that's the validation of the
22 certification that's being done at the generator's
23 level. There's nothing that takes place in the
24 current system of a paper manifest for a transporter.

1 And ultimately, like I said, those can change during
2 the course of the system.

3 The reason I want to bring those up is
4 ADEQ has gone to electronic submissions. We allow
5 submitters to submit documents all the time.
6 Ultimately, though, we do have to have somebody,
7 particularly what we call the RCO, the registered
8 corporate officer, certify the record. And that does
9 adhere to the CROMERR policy. So I think there's ways
10 of modifying this approach. And as I said before, I
11 think it's in the right direction because it allows
12 for transactions to take place, but you're not
13 necessarily I want to say certifying the record. And
14 I think that's a key aspect that we've got to keep in
15 context and less about the signatory aspect, as Josh,
16 Mr. Burman, kind has already emphasized.

17 The other thing that I wanted to kind
18 of mention is Stericycle, in their written submission,
19 they mentioned the complexities associated with
20 retail. During my time in the private sector, I did a
21 lot of retail operations, and training was a huge
22 hurdle. And even at the state level now, doing
23 inspections of these retail locations we're finding
24 that training continues to be a huge hurdle.

1 And it's mostly as what they've
2 identified. It's turnover. So when you think about a
3 generator in that context, if you've got someone kind
4 of coming in, whether it be seasonal or it's just
5 their kind of college job for a time, you're going to
6 have a lot of users coming into the system that have
7 to be able to use it and have it functional and then
8 be able to change that user as quickly as possible.
9 So I just wanted to mention that because I think it's
10 a very valid point.

11 The other issue that we have found here
12 in Arizona with our certification system is that
13 sometimes we get records that come in, and we send
14 comments back out. We've actually found that
15 sometimes if somebody left the company that comment
16 sits in limbo. So if that happens, then the record
17 sits in this limbo state, and we can't do anything
18 because it's basically waiting on the certifier or
19 somebody to either modify and kick it back.

20 So I just wanted to mention that for
21 EPA to consider that because, if you do look at this
22 code system of sending a code or a text, you may want
23 to make sure that you consider some kind of timeout
24 aspect. That's what we've done is we're actually

1 working on a mod right now that, if there's no
2 response within a certain amount of time, the system
3 automatically denies the request and kicks it back.
4 So I think Joshua mentioned a great point of, if
5 you're sending it out to multiple people, you want to
6 have some kind of timeout function so that way you
7 don't have this shipment sitting in this limbo is this
8 is the method that you pursue to move forward with.
9 Thank you, Fred.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Terry. Next, Michael Hurley asks for an opportunity
12 to respond.

13 **MR. MICHAEL HURLEY:** Sure. Thanks,
14 Fred. This is Mike Hurley. I agree with my brother
15 state implementors there. Two are data points; three
16 is a trend. I agree with them. I think that this
17 really kind of begins the exploration of what is a
18 signature and what needs to be done to demonstrate the
19 chain of custody and the turnover to the next actor in
20 this event. And maybe at the corporate level, there
21 just needs to be -- signature becomes more of a
22 concept of corporate acknowledgement of the
23 responsibility for the shipment, less of a corporate -
24 - you know what I mean? Less of a corporate

1 individual being responsible for it. I think this
2 could all be expanded on, and it's a great place to
3 start. And I just wanted to get my comment in. Thank
4 you very much.

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Michael. I believe Cindy wants to chime in. Cindy
7 Walczak, please.

8 **MS. CYNTHIA WALCZAK:** Yeah. Thanks,
9 Fred. This is Cindy Walczak. If EPA chooses to go
10 forward with this first option, I'd like to suggest
11 they consider allowing certified users to do the work
12 that they have in here identified as work belonging to
13 the site manager. I mentioned this in comments
14 yesterday, but in Michigan, still, the state
15 regulatory agency's requiring that the site manager is
16 the authorized representative. And those are
17 generally pretty high-level people and pretty busy,
18 and they don't really do shipments. They certainly --
19 so I would just ask EPA to consider allowing
20 certifiers to do the work that they've herein
21 identified as work on the site manager.

22 **DR. FRED JENKINS:** Okay. Thank you,
23 Cindy. Tom Baker. Go ahead, Tom.

24 **MR. THOMAS BAKER:** Yeah. Thanks, Fred.

1 The only thing that I wanted to add was just to put it
2 in perspective with the resources I think EPA should
3 use in pursuing the Method 1 solution really needs to
4 be proportional to the expected gains that we think
5 we'll see with getting greater adoption of a fully
6 electronic manifest. So again, we mentioned earlier
7 today that there's many other burdens that need to be
8 addressed through registration and integration of
9 industry systems, just the concern that we put too
10 much effort and resources to this one particular issue
11 or make it the priority, for example, in the short-
12 term. I think that would be inappropriate given the
13 other issues that we have to address. Thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Tom. Do we have any -- Mike, I still see your hand
16 raised. Do you have something else to say?

17 **MR. MICHAEL HURLEY:** Yeah. Mike Hurley
18 again. Sorry to have another thought here on this.
19 One of the things, too, is if EPA is to go forward on
20 this or to consider it, one of the things I would
21 think is the administrative burden of having the whole
22 business of the texting and the sending information
23 back and forth on cellphones and all that. I think if
24 you sort of redefine what signature means you don't

1 need all that.

2 And that would save a burden on both
3 ends because, as Jill said, people at the facilities
4 are always forgetting their passwords. Man, this week
5 since we've been working from home, I'm no better.
6 But people forget their passwords. They forget their
7 questions and everything else. If you don't need to
8 do it, just don't do it. Again, if we redefine what
9 signature means, we can probably get rid of a lot of
10 that administrative overhead. Okay. Thanks.

11 **DR. FRED JENKINS:** Okay. Thank you. I
12 think we're back to Tom. Tom, did you have your hand
13 raised?

14 **MR. THOMAS BAKER:** I guess I didn't
15 lower my hand. I'm sorry. I'm still working on the
16 technology issue here.

17 **DR. FRED JENKINS:** We all are.

18 **MR. THOMAS BAKER:** No pun intended.

19 **DR. FRED JENKINS:** Okay. Any other
20 board members want to respond to Charge Question 2A?
21 Okay. We'll turn to the Agency. Do you have any
22 clarifying questions for the board?

23 **MR. JOSHUA BURMAN:** Fred?

24 **DR. FRED JENKINS:** Yes?

1 **MR. JOSHUA BURMAN:** I apologize for
2 interrupting. This is Joshua Burman. It appears that
3 Adobe Connect is refreshing or stuck in cycle. I was
4 trying to raise hand and send chats, and neither one
5 seemed to be working. So I apologize for having to
6 verbally interrupt.

7 **DR. FRED JENKINS:** Okay. No problem.

8 **MR. JOSHUA BURMAN:** I did want to
9 circle back a little bit and talk about a few other
10 elements that were raised. The idea of a bounce back
11 from the system to a query or a call from a remote
12 device, whether it be a cellphone, pad, or something
13 else, I think could be and should be looked at by the
14 Agency as a potentially very useful tool not just
15 limited to this one scenario. The scenario that we've
16 talked about and I would develop a little bit would
17 be, A, the transporter, a broker, a TSDF acting as a
18 consultant, whoever it is has entered information into
19 the e-Manifest system for an intended shipment,
20 everything from the generator's name and address to
21 the expected wastes, volumes, and all the rest. The
22 truck goes to a site. Yes, the waste is loaded, and
23 it's now time to say, "Yup, we want to send the truck
24 on its way."

1 Again, I would suggest that rather than
2 the system pushing out and saying, "Hey, this shipment
3 was scheduled for today. Are you ready to send it?
4 Here's your -- response to this text," it would be
5 more efficient and effective because it might have
6 been planned for this day but maybe the truck was a
7 day early or, gee, there was a snowstorm and it was
8 several days late. Or it's during the coronavirus
9 pandemic response and the truck driver had a sick kid
10 or school closed so they're not going to come out
11 there for a week. That raises timing issues. I
12 think, again, having the user send a push or a call
13 into the system makes more sense from that end. And I
14 believe it at least conceptually would work.

15 If however the user does that, we're
16 right now having an expectation that the system's
17 ready, that all the data's prepopulated, that
18 everything's ready to go. I think hopefully not that
19 often but certainly in easily foreseeable situations
20 that won't be the case. Somebody left a datapoint
21 empty, or somebody else is currently logged into the
22 system saying that they're changing data. They're
23 changing the container count. They're changing the
24 volume. They're changing the waste description

1 because, oh, we thought we were going to pick up
2 silver, and we're picking up lead today. Okay.

3 The system could and should be able to
4 send a very summarized simple response back. And I
5 think we're already talking about that as the manifest
6 is ready. Do you want to sign? Respond back. And
7 I'll respond to Mr. Hurley's point in just a minute.
8 But I think for the point I'm making here it's not
9 critical.

10 We could certainly -- it would be
11 feasible. I'm not a software person, but
12 conceptually, it would make a lot of sense and would
13 seem feasible at least for the system to bounce back a
14 status message and say, "Yes, your waste is ready to
15 ship," or "This manifest is still locked. Log into
16 the system for problems," or "This manifest appears to
17 have been shipped yesterday. Please call your
18 regulator or log into the system to fix it." And that
19 could be a very nice error check that would help the
20 end users interact with the system successfully as
21 well as kind of know what's going on. And I think it
22 could be used even further by allowing somebody to
23 send in a number -- manifest number at any time.

24 One of the challenges that we have

1 already seen as regulators is, again, I'm going to
2 talk about multiple types or different types of
3 generators and users of the system. But from the
4 regulatory point of view, I'm going to focus on
5 generators as being the parties ultimately and
6 completely and wholly responsible for the management
7 of their waste. So though everybody that touches a
8 manifest bears a responsibility, it's in most states
9 statutorily the generator that is ultimately, totally,
10 completely responsible.

11 So they really have a very critical
12 information need. They need to know that their waste
13 got there. They need to be able to access their
14 manifests. Theoretically, they should be -- they
15 should have created accounts in the system. And I
16 personally believe that it's not too onerous for them
17 to do so, though I think we could make that process
18 easier. But what we have been seeing as regulators in
19 the state is a whole lot of generators don't or
20 haven't, particularly those that are sending waste off
21 on paper manifests and then not ever getting anything
22 back in paper, which really is kind of what we are
23 going towards.

24 One of the whole points of the e-

1 Manifest system is to eliminate the flow of paper and
2 the mail and the big envelopes with stacks of
3 duplicate forms being mailed around the country. But
4 for -- again, I'm going to use an example of a small
5 mom and pop autobody shop. They send waste off, or
6 the sign a manifest in ink. They send their waste
7 off. And as far as they're concerned, that's it.
8 They should have created an account in the system.
9 They may not have. They often haven't. Or if they
10 have, it was made by the previous manager who's now
11 left and working across the street, or it was made by
12 somebody who's going to be on medical leave for two
13 months. They just don't have access to their
14 manifests, and that's a concern from a state
15 regulatory point of view.

16 A possible use of the system would be
17 for a user to ping it at any time, not just when a
18 waste shipment is ready to leave the site, which is
19 the context we're primarily focusing on today. But
20 I'd encourage EPA to consider that concept and say,
21 "Hmm. If we're going to set up a system whereby a
22 user can ping the system, looking for the status of a
23 shipment that's documented as a set of data we'll call
24 a manifest when it's ready to ship, why couldn't we,

1 and what would be the limitation, to doing that at any
2 time?"

3 So it would certainly seem to be
4 conceptually feasible and an enlargement of this
5 discussion around Method 1 that we're having to say
6 six months from now shouldn't a user be able to ping
7 the system with a manifest number and a version code
8 or a date that it was sent and have the system simply
9 send back a very summarized set of data, easily less
10 than 160 characters? "Manifest shipment received by
11 TSDF. Signed on such and such a date" -- and have --
12 the generator at least has the confirmation, easily
13 accessible, that their waste got there. And I think
14 that's -- and for other interactions with the system
15 or other statuses.

16 But it's something I wanted to raise
17 here. We can develop it further, but I wanted to
18 bring it to EPA's attention that, if you're building a
19 software and building a capacity, why not use it as
20 much as we can? Because I think it could solve some
21 problems that we, as state regulators, are seeing in
22 the field today, particularly with the hybrid system.
23 Which, though we'd like to see it go away and have
24 everything be electronic, in the real world that's

1 probably not happening tomorrow or in the next few
2 weeks, no matter how successful this meeting and the
3 developments of EPA. Jury's out on what the results
4 of it are.

5 And the other thing that I wanted to
6 bring to the EPA's attention is a point raised by Mr.
7 Fura again that for those using straight flip phones
8 or limited text, limited capacity, limited devices,
9 whatever they are, a simple text SMS -- I hope I'm
10 using the correct acronym there -- SMS based system
11 should be built, could be built -- certainly,
12 conceptually it seems feasible. But for those using
13 apps on smartphones or other more sophisticated or
14 capable devices, adding a scannable link to a printed
15 copy, as long as that printed copy exists -- right
16 now, it still has to exist in most circumstances to
17 meet U.S. DOT requirements -- would be a really useful
18 tool and would eliminate some of the concerns that
19 were raised yesterday and today a little bit about
20 data entry, accuracy, typographical errors, things
21 like that. So he mentioned a QR code, whether it's a
22 barcode, QR code, something scannable that, again,
23 brings it back.

24 And I'm, again, going to relate that

1 back to something very recent that's crossing the
2 bridge between personal and private use of technology.
3 Again, myself, like almost everybody on this call and
4 in this meeting, is working remotely. In one of the
5 initial setup actions to set up the access that I used
6 today using a soft token one time generated code, I
7 was emailed a QR code, which I scanned with the
8 device, my personal cellphone, which then immediately
9 interacted with the system and gave me the
10 authorization to use the soft tokens or the software
11 codes that I now use on a daily basis.

12 It was very seamless. It worked
13 extremely well, and it eliminated a problem that we
14 had -- my state had had in the previous system whereby
15 users had to type in a long alphanumeric code that was
16 uniquely generated that everybody, including myself,
17 constantly typed in wrong. That created lots of
18 problems. So I think that's an experience that I'm
19 guessing some staff at EPA and some other members of
20 the board likely have had in setting up their home
21 offices to work in the current environment.

22 However, regarding the paper manifest,
23 I think Option 1 bears a lot of looking into because
24 we heretofore have had an assumption that the paper

1 manifest is going to continue for a long time. And
2 it's with reluctance that we've had that -- or come to
3 that conclusion. DOT has been looking at formally
4 electronic hazardous materials shipping papers since
5 the early 2000s. There were public meetings and
6 federal register notices in the early 2000s. And it
7 really hasn't gone very far except for two -- and
8 there may be more. I'm just aware of two -- very
9 recent actions, one of which I think is very much
10 along the lines that may eliminate some of the
11 concerns and make something along the lines of Option
12 1 really doable and something that EPA may really look
13 at as one of the very effective measures it could
14 take.

15 And that is, as I referenced yesterday,
16 a DOT special permit that was issued to the United
17 Parcel Service for wholly electronic hazardous
18 material shipping papers. For those shipments that
19 UPS is making under this special permit -- and it was
20 granted by DOT in September of 2019. And it extends
21 for four years until 2023 -- they do not have to have
22 any hard copy hazardous material shipping paper. It
23 can be totally on an electronic device, as long as
24 certain conditions are met.

1 And if there's not a hard copy shipping
2 paper, then the attractiveness of an easy to use for
3 unsophisticated users option like Option 1 I think
4 becomes far more viable. And I think it also behooves
5 EPA to specifically enter into or pursue -- because I
6 apologize. You've already entered into discussions --
7 but really pursue DOT on the provisions of this
8 special permit, what it's looking for, how open it is
9 to expanding that to other carriers who may have
10 nearly as sophisticated or just as sophisticated
11 electronic systems as UPS, the one it was issued to.
12 So I think that's an additional tag on with Option 1
13 that I think EPA should bear looking into. Thank you.

14 **DR. FRED JENKINS:** Okay. Thanks,
15 Joshua. Anyone else on Charge Question 2A? So
16 there's no one else? I'm going to turn it over to the
17 Agency and ask them if they have any clarification
18 questions to ask the board?

19 **MR. STEVE DONNELLY:** Hi, Fred. This is
20 Steve Donnelly. No, we do not have any clarifying
21 questions.

22 **DR. FRED JENKINS:** Okay. Great. Thank
23 you, Steve. So with that, I'm going to ask Mimi
24 Guernica to please -- with EPA to please read the next

1 charge question into the record, Charge Question 2B.

2
3 **CHARGE QUESTION 2B**

4
5 **MS. MIMI GUERNICA:** Okay. Are there
6 any -- excuse me, are there unique industry
7 circumstances for EPA to consider when developing and
8 implementing this method?

9 **DR. FRED JENKINS:** Okay. Thank you,
10 Mimi. So our next lead discussant again is Jill
11 Macioch.

12 **MS. JILL MACIOCH:** Hi, thank you, Fred.
13 Jill Macioch. It should be pretty brief. Some
14 industries or businesses may be in remote locations,
15 or they may not allow cellphones or other portable
16 devices in the work environment. We've talked about
17 this before. Therefore, offline functionality should
18 be considered. I know it was in the white paper. We
19 talked about it over the last two days, probably the
20 last few years.

21 True story, I was debating about
22 sharing this or not. But recently, I came into work
23 to do a manifested shipment. It was all set to go,
24 driver was already there. Come to find out I have no

1 internet access, and this is in the regular warehouse.
2 What had happened was a squirrel got into the
3 warehouse, was looking for something to eat, ate
4 through the cables, and took out our entire network in
5 our location. So thankfully, it must have tripped
6 something so our business system was there.

7 And right away, I was like, "How am I
8 going to sign the manifest? I don't know what to do.
9 How am I going to print the manifest?" Thankfully, I
10 realized, hey, I've got a cellphone, and I can access
11 the manifest that way. But before we had to sign it,
12 they got it back up and working. So point being
13 situations happen, things that we don't expect or
14 foresee. We're always going to have those
15 circumstances.

16 Also, as mentioned yesterday by Mr.
17 Burman -- and perhaps he will cover in greater detail
18 -- but there are those circumstances when the dock
19 personnel or other users may share a cellphone or a
20 cellphone number. And it is not known which person
21 may be present to sign the manifest. So that presents
22 an issue. This is another consideration for Option 1
23 system development, too.

24 Also, many smaller businesses may not

1 have individual emails but one share account or a
2 business email address. I'm not sure that's an issue,
3 but just something to consider. Also, however it's
4 been pointed out in the white paper, it would be
5 important to have multiple means of communicating with
6 a potential signer, not just one method, so if you
7 could push it out through cellphone and email or, like
8 you said, potentially landline or other means.

9 How this option will work when there's
10 also multiple transporters assigned to a shipment
11 should be considered. Often, it's more than one
12 transporter going to different ten-day transfer
13 facilities. It could be several. It's just it's hard
14 for me to wrap my head around the actual workflow and
15 the responsibilities that each site manager will need
16 to coordinate this whole assigned process.

17 And I wish I would have thought of it,
18 and I didn't, but as Mr. Larry Fura with Waste
19 Technology Services noted -- and I know Mr. Burman and
20 I talked about it as well -- instead of pushing out
21 the notifications from the EPA system, user texts,
22 calls information into the EPA system to initiate a
23 response might be something else to consider. In
24 terms of developing and implementation of this method,

1 Mr. James Williams had mentioned, through
2 Environmental Technology Council, the ability for EPA
3 to use a sandbox test environment to get all the
4 necessary parties involved. I think that's a huge
5 point to consider. So with that, I'll turn it over to
6 the next person. Thank you.

7 **DR. FRED JENKINS:** Okay. Thank you,
8 Jill. Joshua Burman.

9 **MR. JOSHUA BURMAN:** Thank you. This is
10 Joshua Burman. And humorously, I was trying to raise
11 my hand to sort of develop what Jill was saying that I
12 realized I was the next discussant anyway, so again,
13 getting used to the technology and how we're working
14 here. I appreciate that we have, yesterday and today,
15 talked about some of the challenges raised by multiple
16 staff filling a position and potentially sharing
17 technology.

18 Though I think every IT person I've
19 ever talked to tells us not to, we know that it's
20 fairly common in industry for certain industry
21 applications or software applications to have a common
22 shared password. Not a great idea but it definitely
23 happens and the same with an item of technology or
24 piece of equipment like a cellphone or pad or other

1 device. However, I want us to be careful. I would
2 suggest that we be careful not to, again, go down a
3 road of "Oh, we have to have a signature from that
4 particular person."

5 Again, as a state regulator -- and I
6 talked about this at great length in June of 2019, and
7 I urge us to go back and look at the minutes from that
8 meeting where we discussed it, or we presented it in
9 writing. The predominate concern of the primary
10 regulators of hazardous waste, which is -- I'll speak
11 for my state and I believe for many states as well --
12 is that the entity shipping the waste, the generator
13 who's ultimately responsible for the waste, the
14 corporate entity is taking an action. The identity of
15 the individual representing that entity is
16 significantly less important unless, for instance,
17 it's a sole ownership, in which case they're the same
18 thing.

19 And I believe EPA itself has also
20 opened its mind on this. And I would draw EPA's
21 attention and the board's attention to the relatively
22 recent generator improvement rule changes, whereby for
23 large quantity generators, for instance, instead of
24 specific emergency coordinator names, the EPA formally

1 is now allowing a 24/7 staffed position, like a
2 security desk or emergency response onsite staff to be
3 identified by position and identified in contingency
4 plans and listed in contingency plans by position
5 rather than listing out the five people that might
6 share that job and having five different phone
7 numbers. EPA has looked at the modern world and said,
8 "Yeah. There are facilities that have three people
9 that share a position. But what's really important is
10 the position."

11 And if they all share a cellphone
12 because they pass the emergency call cellphone from
13 responder to responder when they change shifts, what's
14 important is that number, not the individual cellphone
15 number of whatever staff is holding the company phone
16 and the individual staff name. What's important is
17 that position. So I would suggest -- I can't say that
18 all states would agree with this, and Mr. Hurley and
19 Mr. Baer may themselves disagree with it.

20 But I would suggest that it is
21 certainly reasonable for regulators to look at a
22 position performing an interaction with the e-Manifest
23 system -- you notice I'm deliberately avoiding the
24 word "signature" -- but interacting with the system

1 rather than the individual. So in the situation that
2 was raised yesterday and that Ms. Macioch just raised
3 where you may have three dock staff that rotate or a
4 set of managers that rotate but they share a means of
5 communication, such as a cellphone, other device,
6 email inbox or email box, that we consider them to be
7 one and the same. I don't, as a regulator, need to
8 know which of the three dock managers signed it.

9 The fact that the company said only
10 three people are going to carry this cellphone or
11 three people have log in credentials to this email
12 inbox, that's sufficient for me because that tells me
13 that they were representing the entity, that one of
14 them performed the action. Which one, that's up to
15 the company. If they want to figure out who goofed up
16 the manifest, great. What's important to me is that
17 the manifest was incorrect. A company representative
18 who I can reasonable say was representing the company
19 because it wasn't just some oddball that came off the
20 street and signed -- it was somebody who was holding a
21 company cellphone and was authorized to use it. And
22 that's sufficient.

23 So I think that potential hiccup is not
24 necessarily a hiccup and that we don't necessarily

1 need to start trying to develop lots of complex ways
2 to get around something that may not actually be a
3 problem. So I just wanted to address that concern.
4 And again, Mr. Baer and Mr. Hurley representing other
5 states may agree or disagree. Thank you.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Joshua. Do any other board members have a response to
8 Charge Question 2B? Terry Baer.

9 **MR. TERRY BAER:** Yeah. Thank you,
10 Fred. Yeah. Mr. Burman, I'm -- can you hear me?

11 **DR. FRED JENKINS:** Yeah. There's an
12 echo going on.

13 **MR. TERRY BAER:** Yeah. I'm getting a
14 lot of feedback.

15 **DR. FRED JENKINS:** Yeah. Someone may
16 have their phone on speakerphone. That could help --
17 it would help if you can take your phone off of
18 speakerphone so we don't hear an echo.

19 **MR. TERRY BAER:** Thank you, Fred. No
20 more echo. So yeah. I would concur with Mr. Burman.
21 You do focus on organization and not necessarily the
22 individual. So I just want to concur with his
23 statement on that.

24 But I also wanted to echo something

1 that either I think Jill or Cynthia had mentioned --
2 Cindy, I'm sorry. The other problem you're still
3 going to have to address with this solution here is
4 the TSD integration because, as I said before, I think
5 it's a step in the right direction in getting more
6 generators involved. However, there is still a large
7 consensus from the TSD sector of the industry that
8 they're just not on board with it. They're not seeing
9 the value. A lot of them have their own systems. So
10 it would take a huge investment on their part to try
11 to integrate what EPA is.

12 So I think that's still a barrier that
13 has to be address down the road, in concert with the
14 solution here. And the reason I wanted to mention
15 that is, you know, obviously being in Arizona, we're
16 right next door to California. So we do receive a
17 large amount of California haz waste. So all of our
18 landfills are registered here in Arizona because
19 they're receiving Cal haz waste. And yeah.

20 It's just -- anyone who's been to a
21 landfill knows that it's usually out in the middle of
22 nowhere for the most part. So usually internet and
23 stuff may not be something always available to them.
24 So those that I know that are participating in the e-

1 Manifest system are sending it to a corporate office
2 for the upload. But the others are just kind of
3 mailing them in. So TSD integration still has to be
4 at the forefront of the thought with regards to this
5 approach.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Terry. Michael Hurley?

8 **MR. MICHAEL HURLEY:** Sure. Thank you,
9 Fred. This is Mike Hurley. I just want to agree with
10 both Joshua and Terry. Really, it's not really a
11 question of there are unique industry circumstances.
12 It's how do you collect all of the various
13 circumstances, throw them all into some sort of table
14 and say we've got to build something to take into
15 consideration everybody from the -- as someone was
16 saying, like a small autobody shop all the way to a
17 massive manufacturing plant.

18 The trick for you guys, EPA, is to
19 build something that everybody can use and is simple
20 enough that it's -- that becomes the hook. Why do you
21 want to use this? Because it's easy. Other than
22 that, I think everybody else has pretty much covered
23 everything, so thanks.

24 **DR. FRED JENKINS:** Okay. Thank you,

1 Michael. Any other board members? Tom Baker.

2 **MR. THOMAS BAKER:** Thank you, Fred.

3 Tom Baker. I just wanted to point out again I
4 mentioned yesterday, for transporters particularly,
5 some have very large organizations that provide
6 national coverage, that employ hundreds of drivers and
7 they're operating under a single U.S. EPA ID number.
8 So this is not an uncommon situation, and it creates
9 certain complexities for pre-job planning in
10 determining which drivers will be signing which
11 manifests and then communicating with those drivers at
12 the point of signing. That's really a significant
13 challenge that needs to be looked at closely in this
14 solution.

15 In addition, I mentioned yesterday as
16 well, and I think Steve commented on it, but we need a
17 way to segment those driver and transporter groups
18 within organizations so they can better manage large
19 driver pools and activities. Secondly, Larry with WTS
20 had highlighted as well that flexibility needed with
21 driver changing of schedules, waste pick up times in
22 flux and not always consistent really is a challenge
23 that transporters face that needs to be accommodated.
24 And lastly, in the comments submitted by the Hawaii

1 Department of Health, they further highlighted this
2 multiple transporter concern where roughly half the
3 manifests have more than two transporters or two or
4 more transporters, excuse me. And approximately 20
5 percent of all the manifests have three or more
6 transporters, which creates some new complexities with
7 the need to have handoffs from one transporter to
8 another, which could occur in a ten-day transfer yard
9 or could, quite frankly, occur at a very remote
10 transportation terminal. Thanks, Fred.

11 **DR. FRED JENKINS:** Thank you, Tom. Any
12 other board members? Any other board members? Okay.
13 I'll turn to the Agency. EPA, do you have any --

14 **MR. JOSHUA BURMAN:** Fred?

15 **DR. FRED JENKINS:** Yes?

16 **MR. JOSHUA BURMAN:** I apologize. This
17 is Josh again. Technology is just not working again,
18 apparently. So I apologize for having to -- I was
19 waiting and hoping that the Adobe Connect would carry
20 through so I wouldn't have to do this. So I
21 apologize. It's kind of disruptive to you and your
22 flow.

23 I wanted to ask a question of Tom.
24 Would you see -- I believe you have a very, very valid

1 concern, and I think it's important to look at more
2 closely the number of drivers employed by particularly
3 large transporters. And even in a region, there could
4 easily be dozens of drivers serving -- that might
5 serve a particular route or that might be driving a
6 particular -- picking up a shipment on any particular
7 day. Would you see as a potential addressing of that
8 having the -- or what we've discussed so far, having
9 the driver or other user interacting with the system
10 calling into the system or sending a call into the
11 system rather than the system pushing out and
12 essentially having a large transporter have a very
13 large potential driver list associated with all of its
14 manifests? But then only the driver that calls in or
15 sends a call in using their device, or a device, to
16 the system is then linked to that?

17 And do you think that might potentially
18 be a resolution to the problem of how do we match a
19 large number of drivers with a manifest when we're not
20 really sure who's going to do it until that very day?
21 Or do you see that that is insufficient? I just kind
22 of want to get your handle on that since we just
23 raised it. Thank you.

24 **MR. THOMAS BAKER:** Sure. Yeah. This

1 is Tom Baker. I can speak just on behalf of Veolia.
2 So we have roughly 450 drivers across the country
3 operating out of, say, 11 or 12 different branch
4 locations, regional branch locations, which each one
5 of those then has sublocations or satellite
6 territories. So it's a level of different management
7 structures in place. So it is a real issue and even
8 thinking about this within my own organization of how
9 we would carry through with this coordination with
10 drivers to sign manifests to me is a bit daunting. It
11 would be even more challenging when I get into
12 discussions with using third party transporters, which
13 we do quite frequently, that have a national presence
14 where they're -- now we're one step removed from the
15 process as a waste management company relying upon
16 them as the transporter to be able to be syncing up
17 with our customer who's the generator.

18 So it's a real challenge. I think
19 you're comment about being able to call into the
20 system as the driver versus being push data to them
21 seems to me on initial thought as being a better
22 approach. But again, even with that I just find this
23 method a daunting task for managing drivers and the
24 complexities of shipping hazardous waste in real time.

1 Hopefully that helps.

2 **DR. FRED JENKINS:** Okay. Thank you.

3 Sorry. Go ahead, Joshua.

4 **MR. JOSHUA BURMAN:** It does. Thank
5 you. This is Joshua Burman, again. I'm responding to
6 Mr. Baker. It does. Thank you for your response and
7 bringing your experience to the table. And I also
8 wanted to make a final affirmation of a statement of
9 Mr. Hurley. I think it's critical for us to take a
10 larger view, sort of higher-level view. And instead
11 of reading the question as "are the unique industry
12 circumstances for EPA to consider," I would say
13 there's a range. And our task is to create or
14 recommend a range of solutions that will cover some
15 portion of that.

16 There is not going to be any single
17 silver bullet. But there's also not going to be a
18 definitive limited list of unique industry
19 circumstances. Every day, there's going to be
20 something we didn't think of out there in the field.
21 And I think that's why it's very important for us to
22 consider a range of options that can all interact or
23 be, to some extent, interchangeable or interact at
24 least equally successfully with the system so that any

1 particular circumstance that arises that we didn't
2 predict, because they're going to happen, is at least
3 handleable that day in the field by whoever's facing
4 it.

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Joshua. Are there any other responses from the board
7 on Charge Question 2B? Okay. Let's turn it to the
8 Agency. Any clarifying questions from the Agency?

9 **MR. SCOTT CHRISTIAN:** Hi, this is
10 Scott. May I make a clarifying statement?

11 **DR. FRED JENKINS:** Go ahead, Scott.

12 **MR. SCOTT CHRISTIAN:** So I guess it's
13 more for the next users call, but the idea of the
14 sandbox, we do have a test --

15 **DR. FRED JENKINS:** Your sound went out.
16 Hello?

17 **MR. STEVE DONNELLY:** Hi, yeah. This is
18 Steve Donnelly. I can pick up where Scott's going.
19 Yeah. So I guess our clarifying question and
20 statement would be we do have a test environment right
21 now in the preproduction. And we're just wondering
22 what would the difference be between that and a
23 sandbox, as opposed to what we're doing currently to
24 test functionality with our users? Thanks.

1 **MS. JILL MACIOCH:** Hi. This is Jill
2 Macioch. I think, to me, they were considered one and
3 the same. I do understand that there is a test
4 environment available to use that. I think the
5 comment was more, from my point anyway, is on just
6 making sure you're getting the necessary users pulled
7 together in order to test the solution or solutions,
8 where before the system was relatively new, perhaps.
9 And you might have had a lot of different users.

10 Maybe now, knowing more on some of the
11 different users, you can pull random people together
12 as well as select people together in order to test the
13 process, a lot of what we've been talking about,
14 multiple transporters, remote locations, people where
15 you have three dock individuals and one telephone
16 number. To me, it was one and the same. I apologize
17 if I used a term out of context.

18 **MR. STEVE DONNELLY:** Understood. Thank
19 you. EPA has no further clarifying questions.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Steve. So I'm going to ask Mimi to read Charge
22 Question 2C into the record.

23

CHARGE QUESTION 2C

MS. MIMI GUERNICA: Okay. 2c, are there impacts to state programs that EPA should consider when developing and implementing this method?

DR. FRED JENKINS: Okay. Our lead discussant for this question is Joshua Burman.

MR. JOSHUA BURMAN: Thank you, Fred and Mimi. As far as impacts to state programs, any actions, efforts, or steps that EPA can take to increase the access of regulated parties, particularly generators but also transporters, to the manifests, the data in the manifests, and to ease that interaction is going to be beneficial to the states. One of the biggest challenges we face on the manifesting area as a state, at least in Minnesota, is, as I mentioned earlier, a lack of familiarity, lack of comfort, lack of ability of generators particularly to interact with the system as it's built today.

So for many of these generators, the paper-based system is going away. Yes, they still sign almost always a paper manifest with ink. But from their point of view, the paper then disappears,

1 and it becomes fully electronic, which from the states
2 perspective we like because we now have access to data
3 on a national level that we only had at a state level
4 before and, quite frankly, at a lot of time, expense
5 and work at a state level. EPA has now taken that on.

6 From the generator level, we've seen
7 that a lot of generators have had their effective
8 access to information decreased. And until the
9 interaction of those generators with the e-Manifest
10 system is either made easier or more simpler or less
11 difficult to explain to them, that's going to either
12 continue or get worse. And that's the exact opposite
13 of what we'd like.

14 So particularly for this option, my
15 state's point of view would be, if it eases the
16 interaction of a user, be it a generator or
17 transporter, with the system and therefore leads to
18 increased access of communication with the system or
19 interaction with the system -- which why I brought up
20 the idea of queries other than just to notify that a
21 shipment is ready or to authorize that shipment.
22 Again, I'm very carefully avoiding the word
23 "signature" -- that would be an advantage. And if
24 that capability's being built, could we extend it into

1 other uses with limited software development if the
2 basic tool's already built? Because that would be a
3 big impact. And that's actually where I see one of
4 the best results of Method 1 is its potential utility
5 in other aspects of the e-Manifest user interaction.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Joshua. Jill Macioch, next associate discussant.

8 **MS. JILL MACIOCH:** Thank you, Fred.
9 This is Jill Macioch and not too much to add here with
10 regard to state programs. And the comment that I do
11 have I'm sure my Agency board members will set me
12 straight on this. So my comment specifically has to
13 do with whether any specific language in the state
14 program regulations, specific to -- and I know it says
15 signature requirements -- would need to be adjusted or
16 modified. I know we've been referring to it as a
17 notification.

18 So where I'm going with this is -- and
19 perhaps this is old language and it's nullified based
20 on EPA e-Manifest regulation. But for example,
21 California Code of Regulations for Use of Manifests
22 specifically says obtain the handwritten signature of
23 an initial transporter. Even in Minnesota we have
24 some language about sign the manifest certification by

1 hand, obtain the handwritten signature of the initial
2 transporter and the date of acceptance on the
3 manifest. So how does that change based on the
4 methods or options we are talking about in terms of
5 notification? And I'll turn that back over to the
6 others.

7 **DR. FRED JENKINS:** Okay. We have
8 several hands raised amongst board members who want to
9 chime in. I believe, Michael Hurley, do you want to
10 add to this?

11 **MR. MICHAEL HURLEY:** Hi, Fred, it's
12 Mike Hurley here. And I would say anything that EPA
13 does will affect the states. But yes, if this could
14 be made simpler to use for industry, that definitely
15 helps us in every respect, as Josh pointed out. And
16 certainly one thing to consider, too, is we end up at
17 the states being the implementers of these electronic
18 things. So it has to be easy for us to explain to
19 people. And I can't even really get into how
20 important that is because our phones ring off the hook
21 every time something is rolled out. So something that
22 is easy to use and easy to explain is key for us.
23 Okay. Thank you. Those are my comments.

24 **DR. FRED JENKINS:** Okay. Thank you,

1 Michael. I believe, Tom Baker, you had your hand up
2 next.

3 **MR. THOMAS BAKER:** Sorry, Fred. That's
4 from before. I've got nothing to add. Thank you.

5 **DR. FRED JENKINS:** Okay. Terry Baer,
6 do you have anything to add?

7 **MR. TERRY BAER:** Yeah. Thank you,
8 Fred. Terry Baer, ADEQ. Yeah. So I would agree with
9 what Mr. Hurley just said. Obviously, from Arizona's
10 standpoint, we've enjoyed the diversity of what the e-
11 Manifest has added for the state in getting more real
12 live time data to look at.

13 With that said, I think as my fellow
14 board members have already mentioned, there is a gap
15 of industry not knowing. So there's a lot of times
16 that we go to do an inspection and they were still
17 waiting on what they originally shipped as a paper
18 manifest. So it's at that time level that we're kind
19 of working with them, showing them that they've got to
20 log in, get the electronic copy. So some kind of
21 notification that that record is complete and then
22 sent back would be very beneficial, at least from a
23 generator aspects.

24 The other thing that we have found is

1 that -- and this might be more of an issue because of
2 the backlog the EPA has experienced and not
3 necessarily maybe a function of the system. But those
4 that are more on top of checking the system for their
5 signed copy, they log in, and it had been 45 days.
6 And they don't see it complete.

7 So in conversations that I've had with
8 some of the e-Manifest folks a lot of the times it was
9 because it was still sitting in the queue, so it
10 hadn't been certified because it was a data plus image
11 upload. So I think that was really the issue there.
12 But obviously, there are some generators that are
13 checking their stuff more frequently. So as quickly
14 as those can be processed I think would help as well.

15 **DR. FRED JENKINS:** Okay. Thank you,
16 Terry. Joshua, do you have anything else to add. I
17 see your hand raised.

18 **MR. JOSHUA BURMAN:** Yes, sir. This is
19 Joshua Burman. I wanted to respond to Ms. Macioch's
20 question. I'm not a lawyer, and I don't play one on
21 TV because I'm not good looking enough. But it is my
22 state's understanding and our effective implementation
23 that the Hazardous Materials Transportation Act
24 afforded the U.S. DOT and in partnership with the U.S.

1 EPA effectively preempts any differing state
2 regulations or more restrictive or more stringent
3 state regulations regarding manifests, hazardous waste
4 manifests, including signature requirements.

5 So though, yes, Minnesota, as an
6 example, still has on its books a rule of requirement
7 that all manifests must be, quote, signed by hand,
8 that rule is for all effects and purposes completely
9 preempted by federal regulations. And if EPA, as it
10 has done, promulgates an allowance that electronic
11 manifests may be signed using some sort of electronic
12 method or not signed at all because that signature is
13 originally an EPA requirement in the first place
14 anyway, as we discussed at length in June, that EPA
15 can do so and that a state cannot enforce anything
16 more stringent. So at least in Minnesota, that is
17 absolutely our understanding, and I believe that's
18 based on sound legal reasoning under federal law.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Joshua. Any other board members have anything else to
21 add to Question 2C? Okay. Let's turn it to the
22 Agency. Are there any clarifying questions to the
23 board based upon what you heard?

24 **MR. STEVE DONNELLY:** This is Steve

1 Donnelly. No, we do not have any clarifying
2 questions.

3 **DR. FRED JENKINS:** Okay. Moving on.
4 Let's move on to Charge Question 2D, Mimi.

5
6 **CHARGE QUESTION 2D**

7
8 **MS. MIMI GUERNICA:** D, for this method,
9 how best can the Agency engage generator and
10 transporter users to register site managers for their
11 sites?

12 **DR. FRED JENKINS:** Thank you, Mimi.

13 **MS. JILL MACIOCH:** Fred, this is Jill
14 Macioch. Do you want me to go ahead?

15 **DR. FRED JENKINS:** Oh, I'm sorry.
16 Sorry. I was on mute. I put myself on mute by
17 mistake and then was talking to the mute button. But
18 yes, Jill, go ahead. Take it away, Jill Macioch, lead
19 discussant.

20 **MS. JILL MACIOCH:** Thank you. It's
21 Jill Macioch. I think there's going to be several
22 means of trying to best reach out to the potential
23 registrants, various outreach opportunities through
24 trade groups or trade associations, such as ATA or the

1 American Trucking Association, to engage with
2 transporters or others based on their specific
3 industry, so industry group trades; continuing,
4 obviously, the existing education, training, and
5 webinars that have been occurring through EPA to
6 promote the simplified registration process -- and I
7 believe, I can't remember if it was Michael or Terry
8 or Joshua that eluded to utilizing the state and local
9 agencies for reaching out to these generators and
10 communicating these new methods for signing manifests.
11 Sounds like that's outreach and communications and
12 training is a big part from what I'm hearing within
13 the Agencies.

14 And then I know -- I think this came up
15 yesterday as well is simplified maybe FAQs sheets
16 specific to the registration process. I know there's
17 a site manager FAQ sheet. There's some others based
18 on the stakeholders, maybe potentially one specific to
19 the simplified process and maybe even just enticing
20 the generators with just the benefit of being able to
21 see these e-Manifests in real time instead of this
22 data plus image that takes a while or even this mailed
23 copy that takes even longer.

24 We just talked about 45 days could have

1 passed and the copy's still not uploaded or available
2 in RCRA info. So I guess from my point of view it's -
3 - the e-Manifest system is also this central
4 repository -- excuse me, central repository for the
5 copies of these manifests, making record keeping
6 easier for them. So I guess you just have to continue
7 to sell the benefits. So that's all I have. Thank
8 you, Fred.

9 **DR. FRED JENKINS:** Thank you, Jill.
10 Joshua Burman, you're on for next associate.

11 **MR. JOSHUA BURMAN:** Thank you, Fred.
12 This is Joshua Burman. I think this is not new
13 territory for us. We discussed this at length in
14 June, and I think we discussed it at length in 2017
15 even. However, I think this charge question is a
16 little bit of a misnomer with the preface of saying
17 "for this method." It doesn't matter what method.
18 The answer's going to be the same no matter what
19 method the EPA rolls out, what range of methods as I
20 believe should actually be developed.

21 The primary outreach in most
22 circumstances must be -- is going to be the state
23 programs. These are the primary regulators. These
24 are the agencies that the regulated parties,

1 especially the generators, have the most visibility to
2 and are used to interacting with. It's a strange day
3 in Minnesota if a regulated party in Minnesota is
4 referred to EPA for direct advice because that means
5 that we've missed something as a state. It means
6 we've failed as a state to develop or prepare guidance
7 or instructions in an area that we obviously need to.

8 So the "how best should EPA engage
9 generators and transporters?" By making it, quite
10 frankly, as easy as possible for the states to explain
11 whatever methods eventually are developed or are
12 fielded or are used because we've already had this
13 challenge with the e-Manifest system even as it's
14 built today in that the state is not the builder of
15 the system. We're not the -- we cannot go in and look
16 at the bits and pieces and parts of it when there's
17 problems.

18 We can't sort of lift the hood and see,
19 well, "Why is your site registration getting rejected?
20 Or why did your password -- you're typing in the
21 correct password it would seem. Why is it rejecting
22 it?" We can't look under the hood and fix those
23 things, but we are the ones getting the calls.

24 And that's not going to change, nor

1 honestly do we want it to change because, even though
2 we cannot provide direct real time help desk style
3 advice to a user having a problem with the e-Manifest
4 system, very likely their question about the e-
5 Manifest system was prefaced with or will immediately
6 be followed by a question about, well, what do I have
7 to put on a manifest? What wastes are regulated?
8 Where can I send this waste? What type of facility
9 can accept this waste?

10 These are inherently state level
11 questions that the state's going to have to answer.
12 So we need to be able to explain at least the basic
13 operation, how to do basic things with the system as
14 easily as possible. And because we didn't build the
15 system, we need that system to be as simple as
16 possible so that we can understand it, quite frankly,
17 because, for better or for worse, most of the people
18 at least in my state -- and I believe this is likely
19 reflected in many states that don't have the extreme
20 benefit of having people like Mr. Hurley or Mr. Baer
21 who have hands in both worlds, in both the regulatory
22 and IT world -- most of the time these calls are
23 coming at the state level to regulators, people who
24 have an in depth understanding of environmental

1 protection of laws but have difficulty getting their
2 computer to boot up in the morning.

3 And I say that meaning no disparagement
4 to regulators across the country. But we are the
5 people that are trying to help people, generators, log
6 into the system to interact with the system. When
7 we're out on an inspection, we say, "We need to see
8 this manifest." "Oh, it's in the e-Manifest system."
9 "Well, how do I get in there?" There I am in
10 somebody's office in a manufacturing plant somewhere
11 in the state trying to explain to somebody on their
12 computer how to log into the system. So the simpler
13 we can make it, the easier we can make it, the better.
14 And that extends to registering site managers.

15 We have -- this particular option is
16 built -- and I believe many of them are going to have
17 to be, at least at this point the way the e-Manifest
18 system is structured, from a point of view of having
19 some point of contact at a regulated party, at least
20 their contact information identified. I don't
21 necessarily need to know whether it's Bill Smith or
22 Jane Doe. But I do need to know that there's a valid
23 email address, there's a valid phone number, there's a
24 valid log in or some interaction with the system at

1 that or from that regulated party. I don't care about
2 the name. What I do care is that that generator can
3 interact successfully with the system.

4 And the way the system's built today
5 and I think at least for the foreseeable future,
6 that's based on a site manager position. So what it
7 all comes down to when we talk about getting users
8 into the system, we really are talking about getting
9 at least that site manager step. And again, the
10 simpler we can make it for the state's to explain,
11 which means the simpler it actually is, the better.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Joshua. I believe Terry Baer is next, had your hand
14 raised.

15 **MR. TERRY BAER:** Yeah. Thank you,
16 Fred. Terry Baer, ADEQ. So yeah. As Josh had
17 already said and obviously Jill before him, we talked
18 about this at great length back June of last year. I
19 know that the most common form of communication that
20 EPA likes to use is their list serv. But the simple
21 matter is that not everyone participates in those.
22 You're going to get your big corporations and
23 organizations that are on those list servs, but that
24 obviously -- just speaking for Arizona, our LQG

1 universe is 363. Our SQG is triple that. It's over
2 900. So those smaller organizations are not going to
3 be on these list serves.

4 So I think an outreach in concert with
5 the state agencies would be great, as Jill had said.
6 I think if you start looking at some of these
7 organizations -- actually as a result of our meeting
8 last year, I had reached out to invite EPA to attend
9 an organization here in Arizona called EPAS, which is
10 Environmental Professionals of Arizona, and actually
11 got a booth and wanted to share that booth with EPA so
12 that way folks could ask those questions in between
13 the sessions and whatnot about e-Manifest. I never
14 got any correspondence back, and I think that was a
15 missed opportunity.

16 But that's where you're going to get
17 the meat of this discussion in moving the adoption
18 forward. It's going to be in the outreach through,
19 whether it be business roundtables, professional
20 organization, and obviously anything in concert with
21 the state. So I'm glad that the Agency's looking at
22 that, but that would be my recommendation. Thank you,
23 Fred.

24 **DR. FRED JENKINS:** Okay. Thank you,

1 Terry. Mike Hurley?

2 **MR. MICHAEL HURLEY:** Hi, this is Mike
3 Hurley. Thanks, Fred. Yeah. For Massachusetts, we
4 regulate down to zero, so down to the VSQG amount and
5 for both RCRA waste as well as waste oil. So
6 everybody's got to register with us or with RCRA
7 through MyRCRAID to ship any waste. So we pretty much
8 have a site manager for every single facility with
9 just very few exceptions. But just to agree with
10 everybody else, we are the ones who will be talking to
11 everyone, whether again it's the small to the large to
12 VS2Gs up to TSDF. It's us. It's the state who will
13 be doing all the outreach and just wanted to get that
14 on record. Thanks.

15 **DR. FRED JENKINS:** Okay. Thank you,
16 Michael. Tom Baker?

17 **MR. THOMAS BAKER:** Thanks, Fred. So
18 from an industry perspective, I would share with you
19 since our last meeting and discussion of increasing
20 registration, we've taken the approach of showing
21 generators, transporters what we perceive to be the
22 benefit of the system: cost savings, time savings,
23 improved data access. And as waste management
24 companies, we've endorsed the system from the

1 standpoint of getting folks registered. We've done
2 multiple outreach correspondences to our customer
3 base. We've held webinars and given instructions and
4 walked folks through the process to register.

5 It's complex in their eyes, and many
6 are afraid to go down that path. And currently, the
7 perceived benefits are low. So the result is that a
8 vast minority of our customers are currently
9 registered in e-Manifest. And I think, again, until
10 we can show real benefits, real cost savings, real
11 improved data access and simplified reporting, no
12 one's going to take the steps in a large way across
13 the industry groups, whether it be transporters or
14 facilities or generators to register.

15 I personally think that the method that
16 needs to be pursued by EPA is through regulatory
17 change, mandate that anyone utilizing a hazardous
18 waste manifest be required to register to use the
19 system. I'm not sure why EPA has been reluctant to do
20 that. It was raised as a recommendation previously.
21 I think that other federal programs do take that
22 approach of mandating registration for filing reports.
23 I think this is a similar situation, and EPA should
24 reconsider and take a stronger approach from a

1 regulation perspective.

2 In so doing, there would be great
3 benefits for TSDFs. We're currently still in the
4 process of mailing paper copies of manifests back to
5 generators. The system is not able to send those
6 confirmations of receipt back to every generator that
7 ships waste to us because generators have not
8 registered. So if that could become a reality, there
9 would be tremendous administrative time and cost
10 savings and benefits at the TSDF level. Thanks, Fred.

11 **DR. FRED JENKINS:** Okay. Thank you,
12 Tom. So any other board members want to respond to
13 Question 2D? Okay. I'm going to ask the Agency if
14 you have any clarification questions to the board on
15 what you just heard for 2D.

16 **MR. STEVE DONNELLY:** This is Steve
17 Donnelly. We have no clarifying questions. Thank
18 you.

19 **MS. MIMI GUERNICA:** Actually, Steve,
20 this is Mimi Guernica. I had a question.

21 **DR. FRED JENKINS:** Okay. Go ahead,
22 Mimi.

23 **MS. MIMI GUERNICA:** Okay. So this is
24 to Tom. Tom, as you know, regulations take a long

1 time and they require a vast amount of EPA resources.
2 We have an interest in promoting use of the system as
3 quickly as possible. I was wondering if you could
4 elaborate on that tradeoff between the time needed to
5 issue a regulation versus having an efficient
6 responsive system sooner rather than later.

7 **MR. THOMAS BAKER:** This is Tom Baker.
8 Quite honestly, if we had taken action when it was
9 recommended last year, I think we'd be well on the way
10 to making this a reality already. So with all due
11 respect, I think time goes by when we don't take
12 action. What we can do in the short term, again, I
13 think is really just to continue to show outreach,
14 show benefits of the system.

15 Again, without a lot of material
16 benefit for most generators today, I think the only
17 other way, in my opinion, to really see a significant
18 increase in the number that register is to have an
19 alternative registration process that is designed just
20 to allow generators to receive communications and data
21 from the system, maybe a stepwise registration
22 essentially where they would register in a very
23 simplistic way to allow them to receive email
24 notifications and get access to the data without

1 having to go through a more elaborate registration
2 process. So that would be my suggestion.

3 **DR. FRED JENKINS:** Okay. Thank you,
4 Tom. Mimi, does that answer your question?

5 **MS. MIMI GUERNICA:** Yes. Thank you.

6 **DR. FRED JENKINS:** Okay. Any other
7 questions from the Agency for clarification? Joshua
8 Burman raised his hand. Joshua?

9 **MR. JOSHUA BURMAN:** Thank you, Fred. I
10 can wait until -- if there's additional questions from
11 the Agency.

12 **DR. FRED JENKINS:** Okay. Any other
13 questions from the Agency?

14 **MS. MIMI GUERNICA:** No.

15 **DR. FRED JENKINS:** Okay. Go ahead,
16 Joshua.

17 **MR. JOSHUA BURMAN:** Thank you, Fred.
18 This is Joshua Burman. I wanted to tag off of what
19 Mr. Baker just said. This was raised by public
20 comments earlier today, but I honestly wasn't sure
21 that the best place in the board's discussions to
22 raise it. Since he sort of brought it up, I'll
23 develop it a little bit here, and other board members
24 may want to raise it or talk about it further later,

1 either today or tomorrow.

2 But the availability of the information
3 from the system -- we discussed -- this board
4 discussed last June a recommendation that when a TSDF
5 uploads a manifest into e-Manifest system, whether
6 it's by electronically signing a fully electronic
7 manifest or by submitting a set of data with or
8 without an image to the system, that it would be
9 extremely helpful and would not appear, at least on
10 its face, to be extremely difficult from a software
11 point of view to autogenerate a notification back to
12 the generator that their manifest has been uploaded to
13 the e-Manifest system and is available there or even a
14 set of that data and/or if there's an image attached
15 to have that. And my understanding after that was
16 that that was something EPA was either in the process
17 of developing or had already started that process and
18 it would be fielding soon.

19 If that hasn't been fielded and isn't
20 something that has been fully developed yet, I would
21 tag off of Mr. Baker's comments and say that would be
22 a big push in response to this question towards
23 engaging at least generators to use the system because
24 they would see a benefit to the system. They're not

1 seeing a benefit to the system right now. And without
2 seeing a benefit, the idea of creating yet another
3 password and yet another username and yet another
4 account that has to be kept track of and updated and
5 constantly you forget the password, or it expires, and
6 you have to reset it is just one more. And it's one
7 too many.

8 And seeing a benefit by saying, oh,
9 wow, I got an email in, or I got a text alert that the
10 shipment of hazardous waste that I sent off last week
11 hit the receiving facility. And the manifest has been
12 uploaded. "Oh, you mean I can see the manifest in the
13 system? Oh, wow. Okay. And there's even a link for
14 me to click here and either get an image, a data set,
15 or at the very least an invitation to log into the
16 system to view that data." I really believe as a
17 state regulator that would go a long way towards
18 helping us as states encourage generators to interact
19 with the system by allowing us to point to a direct
20 instant, immediate benefit to the generators.

21 And that was a comment raised by -- in
22 the ETC -- I apologize. I didn't write down the name
23 of the verbal commenter representing ETC. But in the
24 ETC comments, it's indeed two of the bullet points of

1 the four recommendations that ETC made in their
2 written comment. Two of the bullet points are exactly
3 this issue of saying it should not be difficult for
4 the system to autogenerate or send a push out to
5 parties that have participated in the system.

6 Yes, that would mean gathering a data
7 element, or more than one data element, either an
8 email address or a cellphone number to send the alert
9 out to. And we could certainly, again, use that as a
10 selling point to say, "Hey, if you register with e-
11 Manifest and create an account as a site manager, you
12 can input your text -- or your cell number and get
13 texts. And oh, my god, no you don't want spam. But
14 you do want a text when your hazardous waste hits the
15 TSDF or is accepted by the TSDF because guess what?
16 You're legally responsible for it, and wouldn't you
17 like to know that?"

18 And you can't get that today with the
19 paper manifest. But as you're moving to the
20 electronic system, yes, you can. "Isn't that a nice
21 benefit? Yes. You could put your email address in."
22 That can actually be used as a selling point if that
23 feature was there. And it's certainly one that I
24 would love to be able to market as a state to our

1 generators to induce particularly the smaller, less
2 sophisticated generators that are not currently
3 registered or don't have a site manager in the e-
4 Manifest system. I need something I can point to, and
5 that's a really great selling point that we could use,
6 that would provide real benefit and hopefully would
7 not be too difficult technologically. Thank you.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Joshua. Anyone else want to chime in before we move
10 onto Question 2E? Okay.

11 **MS. JILL MACIOCH:** Fred, this is Jill.

12 **DR. FRED JENKINS:** Yes. Go ahead,
13 Jill.

14 **MS. JILL MACIOCH:** I just had a quick
15 comment. Maybe I missed seeing a little bit of Mr.
16 Burman's comments. So I know that e-Manifest or RCRA
17 info does push out a weekly e-Manifest activity email.
18 Again, it's probably to registered users. But matter
19 of fact, I have been getting these weekly, and I
20 probably rarely look at them until I just got one the
21 other day.

22 And oh, sure enough, here's a manifest
23 I've been waiting for, for almost 30 days. And the
24 email told me it had been uploaded. It gave me the

1 manifest tracking number. So I was able to go into
2 the system and print them off. So it doesn't help
3 those that are not registered, but if you are
4 registered, there is that weekly e-Manifest activity
5 notification. And I just wanted to point that out.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Jill. Okay. The Agency is clear. The board has
8 thoroughly responded to Question 2D. We'll move onto
9 Question 2E. And I want to propose this and bounce
10 this off of Kathleen.

11 We are ahead of schedule. Today was
12 supposed to end on Question 2E. Kathleen and board,
13 so what I propose is, since we're ahead of schedule,
14 let's finish off Question 2E and resume again in the
15 morning. So we come back with fresh energy to tackle
16 day 3. Kathleen, are you okay with that?

17 **MS. KATHLEEN SALYER:** Yeah. I'm fine
18 with that, Fred. Thank you. I would like the input
19 of the board, though, and if they favor that option or
20 if anyone does not favor that option. Maybe that's an
21 easier way to ask the question.

22 **DR. FRED JENKINS:** I see Jill Macioch's
23 hand raised.

24 **MS. JILL MACIOCH:** No, this is Jill. I

1 was just lowering as we speak.

2 **DR. FRED JENKINS:** Okay. And I see
3 Joshua Burman and Tom Baker. Joshua, your hand is
4 still raised. Okay. He took it down. So is the
5 board okay with just finishing off with 2E and
6 starting fresh in the morning for today?

7 **MR. JOSHUA BURMAN:** Sure.

8 **MS. JILL MACIOCH:** Sounds good.

9 **MS. KATHLEEN SALYER:** And maybe just
10 note if you disagree. Okay. Great.

11 **DR. FRED JENKINS:** I'm sorry?

12 **MS. KATHLEEN SALYER:** Oh, I was just
13 going to say they can note they disagree as one of the
14 indicators in Adobe Connect. But it sounds like
15 everyone's fine with that.

16 **DR. FRED JENKINS:** Okay. So we'll move
17 on to Question 2E. Mimi, can you please read Question
18 2E into the record?

19
20 **CHARGE QUESTION 2E**

21
22 **MS. MIMI GUERNICA:** Sure. 2E, would
23 receiving facilities users be interested in using this
24 method for initial intake/receipt of the manifest?

1 **DR. FRED JENKINS:** Okay. Our lead
2 discussant for 2E is Jill Macioch.

3 **MS. JILL MACIOCH:** Hi. Jill Macioch
4 again. That's a good question. Would they be
5 interested in using the method for intake/receipt? I
6 suspect this may be the case, but more information --
7 I think I would need to be made available outlining
8 the benefits of why you would need this or want it.

9 Currently, once the paper copy of the
10 manifest reaches the receiving facility right now,
11 they are signing -- usually it's being signed by a
12 dock personnel or dock person upon receipt. And then,
13 eventually, it is being uploaded and signed by someone
14 else within the facility either on the receipt date or
15 on a later date. Since the receiving facility would
16 still need to fully sign the manifest under the
17 current process, EPA -- I would say EPA and receiving
18 facilities would need to explore these advantages.

19 We did have an instance ourselves where
20 this would have been helpful to have the dock person
21 sign the e-Manifest right away or get some -- sorry.
22 I won't use the word sign anymore -- receive the
23 notification or they could push a notification. What
24 happened was it was a full electronic manifest, and

1 typically the dock person would go back to their desk
2 and sign off on it as the receiving facility. And
3 after the transporter had left our facility, the
4 person realized that the driver had never signed the
5 e-Manifest. So perhaps maybe if that was an option
6 for the receiving facility, potentially maybe that
7 would not have occurred. Thank you.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Jill. Joshua Burman.

10 **MR. JOSHUA BURMAN:** Thank you, Fred.
11 This is Joshua Burman. I think when we talk receiving
12 facility, at least in my mind, it's very quick or easy
13 to incorrectly assume that we're predominately or
14 always talking about relatively sophisticated,
15 permitted treatment, storage, or disposal facilities.
16 Certainly, indeed, they do receive the vast majority
17 of manifested hazardous waste.

18 However, there can be other facilities
19 that receive hazardous waste on a manifest and have to
20 complete the manifest process, such as recycling
21 facilities and PCB commercial storage facilities,
22 which generally, in my state's observation, tend to be
23 smaller, less regulatorily sophisticated. They
24 typically don't have dedicated regulatory compliance

1 staff. And I do believe based on Minnesota's
2 experience that likely at least some of those
3 facilities would, for the initial receiving staff,
4 avail themselves of a simple interaction method with
5 the e-Manifest system, such as is proposed by Option
6 1, more than larger more sophisticated facilities
7 might.

8 So I definitely think we should rule
9 out at least some receiving facilities seeing a
10 benefit to this and using it, the general idea of
11 Option 1 with tweaks as we've discussed already. So
12 yes, I would see a benefit to at least some receiving
13 facilities. I think there are certainly other much
14 more sophisticated facilities might not want to use
15 it, particularly if they already have a very well
16 entrenched, well established internal electronic
17 tracking system as we certainly have seen some of the
18 large, sophisticated TSDFs in Minnesota have. They're
19 probably not going to change their existing system.
20 But yes, some certainly would.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Joshua. Tom Baker?

23 **MR. THOMAS BAKER:** Thank you, Fred. So
24 I think possibly it has some benefits or some merits

1 to pursue further, but I guess my initial impression,
2 thinking about at least my organization, is that the
3 method for initial receipt of manifest would be really
4 of minimal interest to most of our receiving facility
5 since each facility already has established
6 individuals that function as registered site managers
7 and e-Manifest users for the purposes today of
8 uploading e-Manifest data to the central database.
9 Down the road if we're accepting fully electronic
10 shipments, I would envision those same registered
11 users or employees would be able to function and
12 electronically sign to receive waste shipments and
13 wouldn't need to go through a preliminary receipt or
14 intake step. But again, I think it needs some more
15 consideration once we get to a point, if we do, where
16 there's a larger number of fully electronic manifests
17 being received at a TSDF. Then there may be some
18 situations where it benefits the process. Thank you.

19 **MS. KATHLEEN SALYER:** Fred, you're on
20 mute, I think. We can't hear you.

21 **DR. FRED JENKINS:** Oops. You were
22 right. It's getting late in the day. Sorry about
23 that. Thank you, Tom. Are there any more board
24 responses to Question 2E? Okay. Let's turn to EPA.

1 EPA, are you clear on everything you heard in the
2 board's response to Question 2E?

3 **MR. STEVE DONNELLY:** This is Steve
4 Donnelly. We do not have any clarifying questions at
5 this time. Thank you very much for the considered
6 response.

7 **DR. FRED JENKINS:** Okay. Wonderful.
8 So before I close this out and adjourn us for the day,
9 I just wanted to make sure you all take note that we
10 do have a new URL for our Adobe Connect meeting space,
11 virtual meeting space for this meeting where you see
12 the presentations. And that new URL is on our
13 website. It's on the same set of instructions that we
14 previously put on our website for our meeting. Just
15 go to the e-Manifest website, and you can link all the
16 way into the e-Manifest Advisory Board. And you can
17 link into this particular meeting website. And you
18 will see the instructions with the new URL for
19 tomorrow.

20 Another important note that I want to
21 make is, because when this meeting ends -- between the
22 time when the meetings ends and between the time when
23 it begins at 10:00 again tomorrow morning, the web
24 room is on standby. So it only allows ten people at a

1 time to get in on standby. We go in there, in terms
2 of EPA, and do our testing ourselves. It only allows
3 us ten at a time. And I'm working with the operator
4 to get that adjusted so more people -- a lot of you
5 all are joining in early, so it's kicking out a lot of
6 people, including our people and some of our
7 contractors that need to get in the system. So bear
8 with us in the morning.

9 The new URL should work to allow
10 everybody to come in at 10:00, just like yesterday.
11 So if you get kicked out, keep trying again. But I'm
12 going to work on that to prevent that from happening.
13 I'm going to work with the operators to prevent that
14 from happening tomorrow morning but be patient. We'll
15 get you in tomorrow.

16 And with that said, we'll be beginning
17 tomorrow morning, starting with the next Charge
18 Question 2F. I want to thank you again to the board
19 for an extremely productive day today. And thank you
20 so much for our very engaged public audience that's
21 been tuned in all this time. See you all in the
22 morning. Be safe and see you all in the morning.
23 This is Fred Jenkins, U.S. EPA, with the e-Manifest
24 team signing out. This meeting's official adjourned

1 for today. See you tomorrow.

2

3

[MEETING ADJOURNED FOR DAY]

4

OPENING OF MEETING - DAY 3

JEROME: Good morning, everyone. My name is Jerome and I am the EPA teleconference operator for this virtual public meeting of the e-Manifest Advisory Board. This is the third day of the meeting and we'll begin at 10:00 a.m. Eastern Time. Today will entail EPA presentations to the Board. I will now ask Fred Jenkins, the Designated Federal Officer of the e-Manifest Advisory Board, to proceed with opening this meeting at a start time of 10:00 Eastern Time. Please go ahead, Fred.

DR. FRED JENKINS: Thank you so much, Jerome. And good morning everyone out there who's joined us on our Day 3, final day of this e-Manifest Advisory Board public meeting. My name is Fred Jenkins, and I am the Designated Federal Officer for the EPA e-Manifest Advisory Board.

I want to first begin this third day by thanking, again, to my Agency colleagues and very -- thank you very much to the Board and a

1 very productive meeting thus far. And we really
2 appreciate your engagement and your hard work and
3 productivity thus far in the meeting. I want to
4 give a special thanks to those who provided public
5 comments. It was two oral public commenters
6 yesterday. Thank you for your oral public
7 commenters.

8 And there were also a bunch of
9 written public comments submitted that are -- most
10 of them are in the public docket. There were a
11 few that were emailed to me that I emailed to the
12 Board that I will be submitting the public docket
13 for the record for this meeting. And we are on,
14 again, Day 3, and we are in the -- right on
15 schedule actually in answering the -- having the
16 Board answer each of the charge questions.

17 With that said, I am going to pass
18 the microphone over to Ms. Kathleen Salyer. She
19 is the acting chair of the e-Manifest Advisory
20 Board. And Kathleen, I'm going to pass it over to
21 you. Please introduce yourself, and we're going
22 to ask all the Board member to do -- introduce

1 themselves and do a quick roll call. Then we'll
2 proceed with the next charge question. Kathleen,
3 you can take it over.
4

5 **INTRODUCTION AND IDENTIFICATION OF BOARD MEMBERS**
6

7 **MS. KATHLEEN SALYER:** Great. Thank
8 you, Fred. Good morning everyone and, again, my
9 name is Kathleen Salyer. I am the Acting Director
10 of the Office of Resource Conservation and
11 Recovery at EPA. I'm also the Acting Delegated
12 Chair of the e-Manifest Advisory Board. So I'm --
13 again, I want to welcome you all to the Day 3 of
14 the e-Manifest Advisory Board public meeting. I
15 also want to thank the Board members for their
16 engagement in this Board meeting and just welcome
17 the public and our appreciation of your interest
18 in the e-Manifest Program.

19 So I would like each of the Board --
20 e-Manifest Advisory Board members to introduce
21 themselves. We'll introduce yourselves in the
22 order that you appear on the roster, but, for

1 simplicity's sake, I'll just go ahead and call out
2 each of your names. So first, Terry Baer, please
3 go ahead and introduce yourself.

4 **MR. TERRY BAER:** Thank you,
5 Kathleen. Terry Baer, I'm the section manager
6 here at ADEQ. I manage the solid and hazardous
7 waste program for the state of Arizona, been with
8 the state for the last three years, and then
9 worked in the private sector for 15 years before
10 that doing various operations such as TSDs,
11 operations and emergency response. Thank you.

12 **MS. KATHLEEN SALYER:** Great. Thank
13 you, Terry. Next, Tom Baker.

14 **MR. THOMAS BAKER:** Good morning.
15 This is Tom Baker. I'm the vice president of EH&S
16 for Veolia North America, and I'm serving on the
17 Board as a representative of industry. Our
18 company functions as hazardous waste receiving
19 facilities, what we call TSDFs, as well as
20 transportation and waste generation activities.
21 Thank you.

1 **MS. KATHLEEN SALYER:** Great. Thank
2 you, Tom. Next is Joshua Burman.

3 **MR. JOSHUA BURMAN:** Good morning.
4 Joshua Burman from the Minnesota Pollution Control
5 Agency. State of Minnesota's been collecting and
6 processing the data from hazardous waste manifests
7 for several decades prior to the inception of the
8 e-Manifest Program and bringing the state's
9 experience and lesson learned to the Board and,
10 through that, to EPA. So here as a state
11 representative.

12 **MS. KATHLEEN SALYER:** Great. Thank
13 you, Joshua. Next is Syed Hafeez.

14 **MR. SYED HAFEEZ:** Good morning.
15 Syed Hafeez, I'm the Director of Information
16 Resources at the Department of Labor Mine Safety
17 and Health Administration.

18 **MS. KATHLEEN SALYER:** Great. Thank
19 you, Syed. Next is Mike Hurley.

20 **MR. MICHAEL HURLEY:** Hello. Mike
21 Hurley, Massachusetts Department of Environmental
22 Protection. I'm the chief of the data systems

1 branch there. My branch and I focus on online
2 application development, data collection, e-
3 permitting. And we've been collecting manifest
4 data for over 20 years through an online process,
5 and I'm hoping to bring some of that experience to
6 this body. Thanks.

7 **MS. KATHLEEN SALYER:** Great. Thank
8 you, Mike. Next is Tevfik Kosar.

9 **DR. TEVFIK KOSAR:** Good morning.
10 This is Tevfik Kosar. I'm a professor of computer
11 science and engineering at the State University of
12 New York at Buffalo. I am here as an expert
13 member of the Board, and I'm happy to help today.
14 Thank you.

15 **MS. KATHLEEN SALYER:** Great. Thank
16 you. Thank you, Tevfik. Next is Jill Macioch.

17 **MS. JILL MACIOCH:** Good morning,
18 everyone. This is Jill Macioch and I am the
19 Environmental Supervisor at Xcel Energy's
20 hazardous waste storage facility headquartered in
21 Minneapolis, Minnesota. Xcel Energy is an
22 electric and gas utility, and we service across

1 eight states. And I am -- at our facility we
2 manage hazardous specially regulated waste, as
3 well as TCD TSCA waste. And I am representing
4 industry. Thank you.

5 **MS. KATHLEEN SALYER:** Great. Thank
6 you, Jill. The final Board member is Cindy
7 Walczak.

8 **MS. CYNTHIA WALCZAK:** Hi. This is
9 Cindy Walczak. I'm a project manager with MPS
10 group. MPS provides waste management
11 professionals and other services to generator
12 companies. And I'm one of the industry
13 representatives on the Board.

14 **MS. KATHLEEN SALYER:** Great. Thank
15 you, Cindy. So that completes the Board member
16 introductions. I'll turn back to you, Fred.

17 **DR. FRED JENKINS:** Okay. Thank you,
18 Kathleen and thank you Board members for
19 introducing yourselves. So we finished off
20 yesterday at Charge Question 2E, correct,
21 everyone? And so we are going to begin this
22 morning fresh on Charge Question 2F. And I'm

1 going to ask Mimi Guernica one of the senior
2 managers in charge of the e-Manifest Advisory --
3 sorry, the e-Manifest Program to read into the
4 record for the public record Charge Question 2F.
5 And then the Board will proceed with their
6 responses to Charge Question 2F. Mimi.

7
8 **CHARGE QUESTION 2 (2F)**

9
10 **MS. MIMI GUERNICA:** Good morning,
11 everyone. Thank you for joining us for Day 3 of
12 this e-Manifest Advisory Board discussion. Charge
13 Question 2F is are there unique technical
14 considerations or hurdles that EPA should take
15 into account when developing and implementing this
16 method? And by this method, that's referring to
17 Method 1, one registered user. Thank you.

18 **DR. FRED JENKINS:** Thank you, Mimi.
19 Our lead discussant for Charge Question 2F is Jill
20 Macioch.

21 **MS. JILL MACIOCH:** Thank you, Fred.
22 With regard to Option 1, as EPA presented some of
23 the technical considerations on our first day

1 back, I believe on Tuesday -- seems like so many
2 days ago -- some of those considerations are
3 having those offline capabilities would be useful.
4 How long the notifications or those links would
5 remain active is a consideration. Would they
6 expire after a certain amount of time? I know we
7 had kind of talked about this a little bit.

8 Often the generator and the
9 transporter or driver isn't determined until
10 usually the day -- sometimes the day before or
11 even the day of the shipment, causing excessive
12 strain on the site managers trying to set up the
13 contact person into the system. And I also
14 understand that's why it's important to have more
15 than one site manager. But additionally, the
16 onsite dock personnel or handler, as well as the
17 driver, may change even that day unexpectedly due
18 to a variety of unforeseen circumstances. EPA
19 needs to consider the ease of changing an
20 individual at the last minute due to these
21 illnesses or unforeseen circumstances or whatever
22 it may be.

1 Also, if a site manager adds a new
2 person, so the kind of role is going to change on
3 who is going to be doing the pickup or who the
4 dock person is, does that make a link or this
5 notification that the person gets through their
6 cellphone or email -- does that make that original
7 notifier, their information null and void? Or is
8 it still active where, if things change, they
9 would be able to sign or certify or complete that
10 notification process?

11 We also heard public comments
12 yesterday, an oral comment from -- an oral
13 commenter from Mr. Fura of WTC suggesting the
14 reverse notification process where the user texts
15 or calls or emails select information to the
16 system instead of the push -- the system pushing
17 out this notification. So perhaps the
18 technicalities with this workflow should be
19 considered.

20 And then also, it would be prudent
21 to obtain additional insight from the
22 transportation community when developing and

1 implementing Option 1 if that becomes one of the
2 options. Is there a limit on the number of
3 transporters that may sign or certify or agree to
4 the conditions on the e-Manifest in the system, or
5 do you make that unlimited? As we've talked about
6 -- and know that having multiple transporters
7 moving a load from a generating facility to the
8 end facility or receiving facility occurs quite
9 often.

10 Currently, a paper manifest would
11 have a paper -- a manifest continuation sheet
12 attached to the paper manifest for transportation
13 information and signatures when you get to
14 transporter three and four and so on. So if you
15 run out of room on a paper copy, you just attach
16 another additional manifest continuation sheet.
17 So these are a few of the considerations that I
18 wanted to bring to EPA to be addressed for Option
19 1. Thank you.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Jill. Our next discussant, our associate
22 discussant is Joshua Burman. Joshua.

1 **MR. JOSHUA BURMAN:** Thank you, Fred.

2 This is Joshua Burman. I want to concur and
3 reiterate all the points that Ms. Macioch raised.
4 I think she went through a very good list. I, as
5 I discussed yesterday, believe that having users,
6 or potential users, send a call into the system is
7 likely far more practical and implementable in
8 most real-world situations than having a push out
9 from the system. So definitely agree with that
10 and -- as I said, I brought it up yesterday,
11 wanted to reiterate it today.

12 I think rather than delving down
13 into specific pluses and -- or technical
14 considerations, which I think are going to have to
15 be sussed out and discovered as this method or
16 other methods were put into a sandbox and trialed
17 out in the field -- I think those are going to be
18 likely found there. But I think the important
19 consideration, rather than looking at specific
20 unique technical considerations for each method,
21 is again to encourage EPA to roll out a range of
22 options. The e-Manifest system, as it was built

1 and is operating today, certainly has methods that
2 can be used. There's a lot of challenges with
3 those in many situations.

4 We believe -- and the reason this
5 meeting was called is -- one of the biggest
6 challenges is the initial interactions with the
7 generators and transporters that we have
8 heretofore referred to as signatures, but I'm very
9 carefully avoiding that term today. And that's
10 why this meeting was called to try to figure out
11 how we can best surmount that. As Mr. Baker
12 pointed out yesterday, there are other challenges
13 after we meet this one, and we should not view
14 this as a silver bullet that well, okay, we fixed
15 this and now everybody's going to be on e-
16 Manifest.

17 I think we -- if we can make this
18 currently very steep hill lower or smoother,
19 easier to get over, I think that'll get us to the
20 next hill where we can address that. But to make
21 this hill most easily climbed to kind of use an
22 analogy too much, I believe EPA should consider

1 and roll out as many options for initial users as
2 it can, as many as its software developing
3 capabilities can support. So that would be my
4 response to the technical considerations is don't
5 just focus on one method. Include as many as we
6 can, as many variations as we can because that is
7 most likely how we'll address unique situations in
8 the field that we're going to come across or that
9 even are discovered during the testing and sandbox
10 process. Thank you.

11 **DR. FRED JENKINS:** Okay. Thank you,
12 Joshua. Do any other Board members have anything
13 they would like to add to Charge Question 2F?
14 Okay. So let me turn it to the Agency. EPA do
15 you have any questions? Are you clear on what you
16 heard in the Board's response to Charge Question
17 2F?

18 **MR. STEVE DONNELLY:** Hi. This is
19 Steve Donnelly. I do not believe we have any
20 clarifying questions. Thank you.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Steve. Moving on then to Charge Question 3,

1 Charge Question 3A. Mimi can you please read
2 Charge Question 3A into the record?

3
4 **CHARGE QUESTION 3 (3A)**

5
6 **MS. MIMI GUERNICA:** Okay. So now
7 we're moving to Method 2 which deals with all
8 registered users. And the first question under
9 Charge Question 3, 3A, is to what extent does the
10 Advisory Board support this method to increase the
11 use of electronic manifests by generators and
12 transporters?

13 **DR. FRED JENKINS:** The lead
14 discussant for Charge Question 3 is, again, Joshua
15 Burman. Go ahead, Joshua.

16 **MR. JOSHUA BURMAN:** Thank you, Fred.
17 This is Joshua Burman. I, at this point -- and I
18 may circle back later after other Board members
19 provide input -- at this point I don't have
20 specific responses to this method except to again
21 stress that this method would likely be supportive
22 but cannot and would not address problems on its

1 own. It would have to be combined in a range of
2 all being rolled out to be available to users.

3 **DR. FRED JENKINS:** Okay. Thank you,
4 Joshua. Michael Hurley.

5 **MR. MICHAEL HURLEY:** Hi. This is
6 Mike Hurley. I think on this one, I don't -- I'm
7 not a big fan of this one. I think this one is
8 more complicated than is really necessary. It'll
9 be sort of more difficult for states to implement,
10 and it would probably be more difficult for the
11 users on the ground.

12 I really think that the best method
13 would be a mix of Methods of 1 and 3. And I do
14 agree with the presenter yesterday, James, for the
15 -- I believe it was the Environmental Technology
16 Council. I think that might be right -- Where he
17 also felt this one would not really help with
18 expanding the acceptance of the whole electronic
19 manifesting. And I might have more comments after
20 other people talk, but that's what I have for now.
21 Thanks.

1 **DR. FRED JENKINS:** Okay. Thank
2 you, Michael. Jill Macioch.

3 **MS. JILL MACIOCH:** Thank you, Fred.
4 Jill Macioch. I think Method 2 is similar to the
5 current method that's in place with the exception
6 that there's no ID proofing. Therefore, the user
7 would still need to log into the system to access
8 it. However, they wouldn't need to go through the
9 process of answering the challenge questions when
10 they're going into the notification process.

11 In the beginning, you know, they
12 wouldn't have to also do the ID proofing, the
13 signature agreement. At first, I was pretty
14 excited about this. We, our drivers -- and again,
15 we have about 20 of them. We went through the
16 entire process, getting all of the agreements in
17 place and the challenge questions.

18 One of the issues that we run into
19 was not the registrations, but it is the challenge
20 questions and remembering those questions. And
21 there's five different ones, and it seems that you
22 never get the same question. And if you do mess

1 up on a question, it doesn't roll to the next
2 challenge question. If you don't answer the one
3 it gives you correctly, at least my experience is
4 you need to go and either contact for help or
5 reset your questions if you understand the process
6 through the profile -- through the individual user
7 profile.

8 So, you know, I guess having users
9 continue to register will still be a deterrent
10 from increasing adoptability to this system. I
11 believe during the EPA presentation it was pointed
12 out that Option 2 may be enhanced to benefit, for
13 example, like, the rail system. It was further
14 mentioned that enhancements could be made to allow
15 for, you know, grouping of manifests by different
16 means, which would definitely assist transporters,
17 you know, locating their daily e-Manifested loads.

18 And then also it was mentioned that
19 Option 2 would complement Option 1 since Option 1
20 would not work for everyone. Kind of works -- it
21 seems to be better for those with just kind of the
22 sole -- one transporter, one shipment type of e-

1 Manifested waste shipments. So having another
2 system to increase participation I think would be
3 useful. What solution that would be still remains
4 to be seen, hence the reason we're here today.

5 All the functionality -- it sounds
6 like all the functionality would remain such as
7 for bulk signing manifests, and that's something
8 that is greatly needed for continuing to have as
9 an option. And although I'm not quite clear,
10 because I'm definitely not a technical expert, but
11 it talks about, you know, through the API and ID
12 and key system that it would allow kind of those
13 system to system connections and that this method
14 would supplement the first method but would be
15 sufficient to -- but my question is would it be
16 sufficient enough to increase participation into
17 the e-Manifest system? And that remains to be
18 seen. Thank you.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Jill. Would any of the other Board members like
21 to weigh in on Charge Question 3A? I see Tom
22 Baker. Go ahead Tom.

1 **MR. THOMAS BAKER:** Thanks, Fred.

2 Tom Baker. So certainly agree with the comments
3 made so far and what Jill has shared with us. I
4 would just add, again, it's a very IT heavy
5 solution, so it has a lot of technical challenges,
6 as does the current system -- or the current
7 options for signatures of e-Manifests.

8 And I would just add that, if for
9 some reason this is the only method that EPA
10 decides to pursue of the three, it would be slight
11 improvement over the existing signature options
12 but, again, would point out that it still falls
13 way short of providing really any substantial user
14 benefits that would spur a significant increase in
15 adoption of full e-Manifest use. Thank you.

16 **DR. FRED JENKINS:** Okay. Thank you,

17 Tom. Joshua Burman.

18 **MR. JOSHUA BURMAN:** Thank you, Fred.

19 And I appreciate the other Board members kind of
20 helping my brain get going this morning and think
21 of things that I probably thought of yesterday and
22 forgot to write down. So circling back, I

1 actually would suggest modifying what I initially
2 said just a few minutes ago.

3 And I think it might be more helpful
4 to look at the concept of Option 2 rather than as
5 a stand-alone option for how do we field something
6 new that will help to increase user participation
7 in the full e-Manifest. I think it may be more
8 helpful to look at this as how can we slightly --
9 because it's really not that big a change as
10 others have pointed out -- slightly modify the
11 existing process to make that existing process a
12 little bit better to which we'll add new
13 supplementary options. I think the concepts that
14 EPA has referred to as Option 1 and Option 3 are
15 new -- adding significant new value.

16 However, I think we did a lot of
17 talking yesterday about a change in EPA looking at
18 the application of the CROMERR requirement. And I
19 suggest that Option 2 we really could look at
20 again as a modification of the entire system
21 saying, do we need the entire CROMERR process
22 including identity proofing, which though

1 seemingly fairly -- mostly, or should be mostly a
2 one-time thing and not too hard, as Jill has
3 pointed out, can cause problems down the road.
4 And any increase in the height of the hurdle to
5 getting initial registrations or initial
6 interactions with the system by users, both
7 generators and transporters, is something that
8 should be addressed.

9 Can we look at removing that for
10 anybody except the final TSDF that will sign off
11 as receiving a manifest and that EPA, as appears
12 to be acknowledging, is the only party that we
13 really need to have this whole CROMERR
14 requirement? In that case, it would seem that
15 generators and transporters should be able to
16 fully register with the system and have that
17 entire identity piece completely removed. It --
18 they are -- they would have accounts in the
19 system, they would have the full abilities they do
20 now. The only action that I would suggest a non-
21 identity proof, non-CROMERR user should be
22 restricted from would be signing off as a TSDF for

1 finalization of a manifest, what we would today
2 refer to as the third signature.

3 And that, while not a giant change -
4 - I fully acknowledge what everybody else said
5 that this really isn't that major of a change -- I
6 think conceptually it could be a large change and,
7 again, may not lower the hill that much. But any
8 lowering is definitely to our advantage. And I
9 think we should ask ourselves why make people jump
10 through hoops we don't really need?

11 If we've already acknowledged -- or
12 EPA is starting to acknowledge in presenting
13 Option 1 that, "Hmm, maybe we don't need to have
14 every user interacting with the system need full
15 level CROMERR identity proofed. We think we know
16 who they are," then why have anybody at that site
17 do that? There doesn't seem to be a need. As
18 long as a person or user interacting with the
19 system at a site says, "Hey, I have authority to
20 add new users, new names, new contacts" -- might
21 be maybe helpful to refer them to as that -- "I
22 can add in cell phone numbers and names to make

1 Option 1 or something along that conceptual line
2 work," then how is knowing who I am any different?

3 Because the identity proofing as it
4 exists today, though established to meet CROMERR
5 requirements, does nothing as far as the actual
6 authorization. I may know who John Smith is, but
7 whether he's working for AMCE Corporation and
8 whether ACME Corporation has actually granted him
9 authority to add -- to designate manifest users --
10 and again, I'm trying to avoid using the word
11 signature -- I have no idea. The current identity
12 proofing system has no idea.

13 This is the reason why the state of
14 Minnesota declined to do any review of site
15 managers applying to the state because we have no
16 way of knowing, short of going and interviewing a
17 company president or demanding signed letters
18 saying "Yes, I, as CEO of ACME Corporation, give
19 John Smith these rights," which would be an
20 incredible use of state resources to no apparent
21 end. Minnesota refused to do that. We are aware
22 that other states are requiring submittal of

1 documentation from generators before the state
2 will approve site managers.

3 As I mentioned last June, Minnesota
4 reviewed that and decided that the state and,
5 indeed, the federal government gained no value
6 whatsoever from that work. And therefore,
7 currently, people are just automatically by
8 default approved by the state because it's a
9 necessary hoop the state has to jump through to
10 make those people be able to work with e-Manifest.
11 But I suggest that we look at removing that from
12 anybody, from any user, except those that would
13 perform the final step that would finalize the
14 manifest in the e-Manifest system.

15 And I think that is potentially the
16 value of what EPA referred to as Option 2 but
17 really, I think isn't an option. It's a needed,
18 recommended, and advised change to the overall
19 system as it exists and built today. Thank you.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Joshua. Do any other Board members have anything
22 else to add to Charge Question 3A? Okay. If

1 there are no more responses from the Board to
2 Charge Question 3A, I'll turn to the Agency. Do
3 you all have any questions asking for
4 clarification on what you just heard from the
5 Board for Charge Question 3A?

6 **MR. STEVE DONNELLY:** Yes, Fred.
7 This is Steve Donnelly. I do have a clarifying
8 question. At what point during a shipment do
9 sites know who is going to be signing a manifest,
10 particularly on the generator, the transporter or
11 the initial signature, the designated facility?
12 When does a corporate system know that?

13 **MR. JOSHUA BURMAN:** This is Joshua
14 Burman. I'm happy to respond to that, although
15 other members may want to as well.

16 **DR. FRED JENKINS:** Go ahead, Josh.
17 And then Tom Baker has a response to that as well.

18 **MR. JOSHUA BURMAN:** Thank you. I
19 apologize Tom if I preempted or talked over you.
20 Not my intention. I can speak only from the state
21 of Minnesota's experience. And I can say, for
22 many generators, at what time does the entity

1 initiating a shipment -- that is what we would
2 refer to as the generator -- know what actual
3 staff will be supervising the loading and
4 affirming what is actually on the truck? And I
5 can say in many situations, two minutes before the
6 truck leaves because, while a company, be it a
7 five-person company or a 100-person company or
8 even a 10,000-person company, may have specific
9 designated individuals, life happens.

10 And this person is sick or that
11 person's child calls and they had to leave. Or
12 the person that normally does this is called away
13 to another section of the company to do important
14 work, and somebody else has to. While the
15 majority of the time at the majority of
16 generators, it's typically a small number of
17 people and is -- if, for instance -- and EPA can
18 certainly do this with the information it has --
19 if you look through a stack of manifests -- and I
20 apologize. I used stack as that's what we're used
21 to do with paper.

1 But if you review a file of
2 manifests in the e-Manifest system or go to pull
3 out an actual stack of paper manifests and start
4 flipping through, most sites -- most generating
5 sites, you will see the same names over and over
6 and again. But they're not constant, meaning not
7 every time, and there may not be a predictable
8 pattern. It may not be January, February, March
9 it's one person and then April, May, June it's
10 another. It may be one, one, one, one, one, oh,
11 there's a different name; one, one, a third name;
12 one, one, one, one, one, oh, back to that second
13 name. And that's because of unpredictable life
14 circumstances.

15 So I do -- I want to respond to that
16 clarifying question by cautioning EPA that, while
17 simplistically we could say, well, the company
18 designates three people and we know it's going to
19 be one of those three people because that's who
20 the company's designated, real life doesn't work
21 like that. And 95, 90 percent of the time it may

1 be one of those three people. But the other 5 or
2 10 percent it's somebody else.

3 And I can say that a great concern
4 among the generating community and one of the
5 concerns expressed to the state of Minnesota by
6 those generators when e-Manifest is brought up --
7 as we're doing inspections, we're kind of
8 spreading the word, saying "Hey, there's this
9 thing called e-Manifest out there. If you haven't
10 heard about it here's what it is" -- is "Well,
11 what happens if the normal person isn't there, and
12 how do I handle that? And I absolutely,
13 positively have to be able to ship the waste that
14 day. If I -- if it's due to a problem in my part,
15 meaning I don't have a person that can sign or --
16 that's what they're referring to -- sign the
17 manifest, I absolutely cannot send that
18 transporter away empty handed and have them come
19 back another day, either because it's going to
20 cost -- they're going to charge me a trip fee.
21 And that trip fee is sometimes quite substantial -
22 - or I'm going to have my waste here over time.

1 And now I'm going to fail regulatory limits
2 because John was sick today and therefore couldn't
3 do the manifest. And the system wouldn't allow me
4 to do something else."

5 The paper manifest obviously, you
6 just have somebody else put their wet ink on it,
7 so the -- I would caution EPA that they system has
8 to be built to accept or be able to handle short
9 notice changes at the time of shipment, literally
10 minutes before shipment goes out because that is -
11 - while a minor case scenario, it's incredibly
12 important to the generating community because
13 they've got to get that waste out the door. And
14 if the truck's there, they've got to somehow be
15 able to get the waste on the truck and initiate
16 that shipment. Thank you.

17 **DR. FRED JENKINS:** Okay. Tom Baker.

18 **MR. THOMAS BAKER:** Yeah. I think
19 Josh is accurate with respect to generators. It's
20 going to vary somewhat substantially. I think
21 your large quantity generators that have more
22 staffing and assigned responsibilities, we do see

1 consistency in who signs the manifests when we
2 pick up waste from a large quantity generator.
3 But, you know, based on vacation schedules and
4 meeting schedules, there's usually backup folks
5 that would sign manifests in addition to a
6 primary.

7 So we, as a services company --
8 again, speaking on behalf of Veolia -- don't know
9 in advance who's going to sign the manifest from a
10 systems, you know, data perspective. The field
11 services crew has the contacts onsite, and,
12 working with them, they identify who is the
13 manifest approver and signer at the point of
14 shipment. Certainly, for small quantity
15 generators that are using manifests for very small
16 companies it's going to be who's available that
17 day in many cases when we're picking up the
18 containers of waste.

19 From an industry systems
20 perspective, you know, our typical activities
21 with, you know, functioning as a transporter, as a
22 waste services company, sending our crews out into

1 the field to provide waste services could be a --
2 typically is more than one individual for a larger
3 project. At the point of them going out to do the
4 job for the day, we are not designating in advance
5 which one of those is going to sign as the
6 manifest transporter one. It could be anyone on
7 that -- in that vehicle.

8 So again, from an industry data
9 tracking perspective, we're not capturing the name
10 of the individual in advance in anticipation of
11 who's going to be signing manifests for the day's
12 transactions. It would certainly be a change of
13 work process for us to now have to make those
14 determinations in advance and make those -- reach
15 out to those folks electronically to authorize
16 individuals to sign. That process is not in place
17 today. And I'd be curious, you know, if Jill or
18 Cynthia have comments that are different than that
19 based on their activities of having manifests
20 signed. Thank you.

21 DR. FRED JENKINS: Okay. Next was
22 Terry Baer.

1 **MR. TERRY BAER:** Thank you, Fred.

2 Terry Baer, ADEQ. So yeah. I mean, along with
3 what Josh and Tom have kind of already said, you
4 know, during my time when I was in the private
5 sector the most impact I'd see was -- what this
6 clarifying question is -- is brokers. So
7 obviously brokers are managing a vast number of
8 generators, and they're functioning mostly on the
9 customers' either 90-day window or their 180-day
10 window. And it was not uncommon for someone to
11 need a last-minute pickup. And while your normal
12 driver would pick this up on a routine thing, they
13 just, they were already on a route, couldn't get
14 to that location, and so then that may be
15 subcontracted to another third-party transporter.

16 So that's I think why the Board has
17 stressed the need for flexibility, especially with
18 aspects to the transporter, because it has so much
19 variability that goes into it. In addition, when
20 I was doing retail it wasn't uncommon that, you
21 know, a regulator would show up and then next
22 thing you know they need a pickup that day and so,

1 you know, having to call somebody that was on
2 contract to be able to respond to that location
3 and then put that third-party broker or company on
4 the next route to pick up from their location. So
5 yeah. That's I think it -- while you plan for the
6 best, you have to -- I'm sorry, hope for the best,
7 you have to decide for the worst, and
8 unfortunately those do tend to come up and happen.
9 Thank you, Fred.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Terry. Jill Macioch.

12 **MS. JILL MACIOCH:** Thank you, Fred.
13 This is Jill Macioch. Yeah. I have a couple of
14 answers to that clarifying question. Short answer
15 is, you know, it depends on the circumstances, of
16 course. I echo with -- what all the Board members
17 have said. With regard to Tom Baker mentioning
18 about, for example, Veolia may be going to a
19 generating facility and they have contacts but
20 don't necessarily know who'd going to be signing.
21 It could be multiple people.

1 I see that all the time. We ship
2 out a lot of hazardous waste. And the disposal
3 facility that we work with, they have a contact,
4 but they have no idea who's going to be signing
5 the manifest. But what I wanted to say more than
6 -- in addition to what everybody else has brought
7 up, a lot of times that circumstance changes based
8 on the truck or the trailer. For example, a lot
9 of fleets have different sized trucks, tractors,
10 trailer, things like that. And so that might
11 dictate who the driver ends up being.

12 We have circumstances where a driver
13 may have been planned for one shipment but needs
14 to get pulled off because they have the only truck
15 and trailer to do a certain type of work. Maybe
16 it requires a low-boy or something like that --
17 trailer, and so that changes the driver. Or, for
18 example, it maybe that somebody was going to do,
19 like, a milk run shipment, and the transporters
20 were going to go around to a variety.

21 Maybe one shipment had sixty drums
22 and the other five, and the one with the 60

1 canceled last minute. Well, they don't want to
2 send out the semi-trailer now. They're going to
3 send out a smaller, you know, short-bed -- short
4 truck. And so perhaps now that driver's going to
5 change.

6 So it kind of depends also not
7 necessarily on the driver but on the
8 tractor/trailer type of truck that's going to be
9 sent out, and that may dictate who's going to be
10 signing a manifest. So in short, the
11 circumstances vary greatly. We typically know
12 ahead of time who's going to be signing manifests,
13 but the circumstances ever so change. Thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Jill. Josh, I still see your hand raised. Do you
16 have anything else to add?

17 **MR. JOSHUA BURMAN:** Yes, Fred.
18 Thank you. I'm getting -- I have to remember the
19 lower the hand -- back to elementary class. I
20 wanted to express my appreciation to EPA for
21 asking this clarifying question. I think it's
22 been very difficult -- I think we've seen as Board

1 members and as -- I'll speak as state agency
2 representatives -- it's been very difficult for
3 the EPA's staff over the years who are attempting
4 to build and improve and make work a very new,
5 novel e-Manifest system and applying it to
6 situations where they don't have daily experience.
7 And I'm saying this to the EPA staff's credit, not
8 to their denigration.

9 These situations are seen by state
10 regulators or by industry representatives like Mr.
11 Baker and Ms. Macioch. But they're maybe
12 sometimes difficult to imagine or hypothesize if
13 you haven't been to 100 sites and say "Oh, yeah,
14 here we go again. We've seen this again." So I
15 really appreciate the EPA staff asking this
16 question attempting to bring that field experience
17 in.

18 I also want to qualify my previous
19 response to say, while I believe it's very
20 important that among the range of options -- among
21 the choices that potential users of the system
22 should have to interact with the system and

1 initiate shipments and progress shipments along
2 the way and make sure those initiations, those
3 actions, those transfers from one handler to
4 another, such as from one transporter to another,
5 are documented in the system, I think it's --
6 well, I think it's important that there's a wide
7 range of choices for them. I will respond with a
8 little more information and say, in the state of
9 Minnesota's experience at least, at the majority
10 of sites it is often or common to be able to
11 identify a relatively small number of likely --
12 and, yes, I know there's a whole lot of wiggle
13 words thrown in here -- but a small range of
14 likely users of the system or actors that will
15 perform actions related to a hazardous waste
16 shipment and a manifest.

17 So at a very large company, they may
18 have thousands of employees, but most of the
19 shipments are going to be initiated or handled by
20 a handful, maybe a couple dozen employees. And I
21 think, reflecting back to our discussion yesterday
22 when we talked about what EPA's referred to as

1 Option 1, having somebody at that site -- we've
2 currently called them the site manager -- pre-
3 populate a list of potential users of the system
4 with contact information and names or positions, I
5 think for many sites that's feasible. And we do
6 need to have a system able to handle an outlier
7 where they've got a dozen people on the list, but,
8 you know what, not one of them is available right
9 now, today, for this shipment and that's -- we've
10 got to figure out how to make it happen anyway.
11 But for the majority of circumstances, for the
12 majority of generators, they're going to be able
13 to identify a relatively small list.

14 And if the system is built with an
15 option to handle pre-population of that
16 information -- I think I wanted to make sure to
17 say this to avoid scaring EPA staff off from our
18 discussion yesterday about Option 1 saying, "Oh,
19 wait, they said on Thursday that generators may
20 not be able to predict. Well, then, how in the
21 world can we make Option 1 work?" For most of the
22 time, they're going -- it's going to be from a

1 relatively small list a, I believe, manageable
2 amount of information and data that the system
3 should be able to handle. So I just wanted to put
4 that qualifier in there to my earlier response
5 because I think it's manageable. However, the
6 system should be able to or has to be able to
7 handle the outliers as well. But those are a
8 minority of cases, thankfully, where it's somebody
9 totally unexpected. Thank you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Joshua. Does the Agency have any more clarifying
12 questions? Are clear on everything you heard in
13 regard to Charge Question 3A?

14 **MR. STEVE DONNELLY:** Yes. Thank
15 you, Fred. This is Steve Donnelly.

16 **DR. FRED JENKINS:** Okay. Great. So
17 if there's no more to be said about Charge
18 Question 3A, we'll move on to Charge Question 3B.
19 I'm going to ask Mimi. Can you please read Charge
20 Question 3B into the record?
21

CHARGE QUESTION 3 (3B)

MS. MIMI GUERNICA: Sure. This is Mimi Guernica. Charge Question 3B, are there unique industry circumstances for EPA to consider when developing and implementing this method?

DR. FRED JENKINS: Okay. Thank you, Mimi. The lead discussant is Josh Burman.

MR. JOSHUA BURMAN: Thank you, Fred. Thank you, Mimi. I don't have a lot to add to my previous response to 3A, whereby I'd say, instead of focusing on unique industry circumstance, we look at this change -- this improvement as something overall for the system and not a specific option for a specific industry or situational circumstance. It's an improvement that likely should be made across the system and would improve the user experience for most users. Thank you.

DR. FRED JENKINS: Okay. Thank you, Joshua. Jill Macioch.

1 **MS. JILL MACIOCH:** Hi. This is Jill
2 Macioch. Yeah. We covered a lot of this
3 yesterday during, I think, 2B, and it's still
4 pretty much the same. You know, the
5 considerations, I think, aren't as much by
6 industry but I was thinking more -- I believe Josh
7 pointed out yesterday, you know, by the size of
8 the industry or the complexity of the operations,
9 as opposed to that specific industry. So many
10 smaller businesses, like he mentioned about maybe
11 an oil recycler who -- they may manage some
12 hazardous waste and only do a shipment once or
13 twice a year -- they may be reluctant to register
14 as a user. If they did, you know, most likely for
15 that once or twice a year shipment they are more
16 than likely going to forget their, you know,
17 username or password and be a little frustrated
18 with the system.

19 However, with that said, it appears
20 that this option would not be geared toward those
21 smaller generators of waste or smaller
22 transporters but maybe larger industries. And

1 those with those smaller shipments, as we talked
2 about, you know, there's no one single solution
3 that this option -- Option 1 might be more
4 suitable for that audience, and this might be for
5 a little bit more complex or larger industries.

6 And again, although, you know, I --
7 I'm not a technical person. I really can't go
8 into any specifics. But I know there was some
9 talk on the whole, you know, API system and system
10 to system connections. But I just ask, you know,
11 why -- and not to be answered right now -- but why
12 are, you know, end facilities so reluctant to use
13 this? Why is it just the data plus image at the
14 backend, as opposed to the uploading of their
15 information from system to system in the
16 beginning?

17 So a good portion of the generators,
18 you know, it seems -- I'm kind of jumping around,
19 so I apologize about that. But also, I just
20 wanted to mention a good portion of these
21 generators are not preparing their own manifests
22 and rely on the disposal vendor or the broker that

1 they are working with for the manifest. So it
2 would need to work closely with those facilities
3 because it seems right now, you know, the
4 generator -- I mean, how can you improve on
5 registration when, you know, generators' hands are
6 basically tied by -- to potentially that
7 transporter or to the end facility?

8 I mean, if they come with a paper
9 copy, you kind of need to use the paper copy. So
10 it seems industry is reluctant to go with the new
11 option and a new fix when there already seems to
12 be something working with the data plus image. I
13 know we heard from some of the comments yesterday.
14 So EPA mentioned in their presentation how there
15 may be -- again, I'm sorry for jumping around, but
16 EPA also mentioned during the presentation that
17 there were some industry specific needs, I
18 believe, such as with the rail industry. So this
19 might be a good fix for them.

20 The other comments during Option 1,
21 you know, still stand that were mentioned
22 yesterday, such as the offline capabilities and

1 network issues by either the generator or the
2 transporter. So those are my comments. Sorry I
3 jumped around from point to point, but that's kind
4 of how I had it written out. Thank you.

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Jill. Michael Hurley.

7 **MR. MICHAEL HURLEY:** Sure. So if
8 we're looking on -- I just want to say Jill's
9 comments were great. Jill pretty much covered a
10 lot of things I had as well. And really, I think
11 a lot of it comes down to simplicity and what is
12 easy enough to use at the point of the transfer of
13 the waste.

14 And if it's -- the more tech heavy
15 the more, sort of, resource intensive it is for
16 the people to interrupt the process of their daily
17 jobs to go and then, you know, reset their
18 password, perhaps call CDX to have their account
19 unlocked and all kinds of issues like that, all
20 those kind of things, all those moments are
21 negative advertising for the whole e-Manifesting
22 process. You want it to be just smooth. And any

1 time where people stop and say, "The paper was so
2 much easier," is a -- it's not a win.

3 So I think that's really, you know,
4 the overall message I would like to put on this
5 particular question is that's the big issue. And
6 the more complicated something gets the more
7 difficult it will be to actually in real practice,
8 you know, to use. And I -- yeah. I just can't
9 keep getting -- I keep getting hung up on that one
10 point.

11 If you're in the situation where the
12 waste is being transferred and there's a lot of,
13 like, process and fiddling around with phones and
14 things and user accounts and everything like that,
15 the paper was real quick exchange. And it was
16 clear, and everyone understood it. And I think
17 you have to have something that's as simple as
18 that. If anybody else has any other comments on
19 that. Thank you.

20 **DR. FRED JENKINS:** Thank you,
21 Michael. Any other Board members, do you have
22 anything else to add to Charge Question 3B? Okay.

1 I see no one does. I will turn to the Agency.

2 Are you clear on all the Board said in regard to

3 Charge Question 3B?

4 **MR. STEVE DONNELLY:** This is Steve
5 Donnelly. I do not believe we have any clarifying
6 questions. Thank you.

7 **DR. FRED JENKINS:** Okay. Thank you,
8 Steve. Then we'll move on to Charge Question 3C.
9 I'll ask Mimi to read Charge Question 3C into the
10 record, please.

11
12 **CHARGE QUESTION 3 (3C)**

13
14 **MS. MIMI GUERNICA:** Okay. 3C, are
15 there impacts to state programs that EPA should
16 consider when developing and implementing this
17 method?

18 **DR. FRED JENKINS:** Okay. Josh
19 Burman go ahead please.

20 **MR. JOSHUA BURMAN:** Sorry about that
21 delay. Phone issues. Thank you, Fred. Thank
22 you, Mimi. I just want to revisit and reiterate

1 what I and other Board members said yesterday as
2 far as impacts to state programs. The simpler,
3 the easier a process is the easier it is for the
4 states who are the front line in both dealing with
5 problems and in marketing and encouraging users to
6 get into and use the e-Manifest system, the easier
7 it is for us to sell, the easier it is for us to
8 figure out for a particular user why it's not
9 working.

10 If EPA finalizes what appears to be
11 its very considered -- and I applaud the
12 thoughtful opinion so far that CROMERR
13 requirements may not need to apply to all users of
14 the e-Manifest system -- that is in and of itself
15 a dramatic improvement. And taking that
16 discussion from what was referred to as Option 1
17 yesterday and flipping it here and saying, rather
18 than just looking at this as an option, can we
19 eliminate that hurdle for all non-TSDF uploader
20 users of the system, that is, all generators, all
21 transporters and even some or many TSDF users? You
22 only need a few at TSDF that are actually going to

1 upload it, make that final -- now we'll call it a
2 signature up into the system, that's -- it's not a
3 be all end all. It's not going to fix all our
4 problems, but it's a big win for at least
5 Minnesota as a state.

6 It's a big win for the regulators in
7 Minnesota and I believe other states as well.
8 Simplicity is key. And if we can eliminate
9 complexity, which this change to the system would
10 suggest we can do, let's do it. That is
11 absolutely key.

12 And I'll again affirm what I said
13 yesterday and what I said at quite -- at long
14 length last June in the last e-Manifest Advisory
15 Board meeting. For the vast majority of
16 situations, the specific identity of a user of the
17 e-Manifest system at the generator site, and even
18 among the transporters, is not important to the
19 majority of state interactions. Our compliance
20 and enforcement and oversight is primarily with
21 the corporate entities and what particular

1 representative of the corporate entity isn't
2 relevant to us. It really isn't.

3 There are a very, very limited
4 number of cases where EPA or a state may, for
5 instance, prosecute a fraud charge against a
6 particular person who may have gained illicit --
7 or illicitly gained through a manifest
8 transaction. I can think of one in Minnesota in
9 the last 30 years, and that was an EPA case. And
10 that could have been prosecuted under -- without
11 the proof -- identity proofing that the CROMERR
12 electronic signature process.

13 That was a fraud case. It happened
14 to involve manifests and revolve around the
15 manifest as a document, but even that could have
16 gone forward. And that was an outlier in and of
17 itself. So again, coming back, the impact to the
18 state is going to be all positive if we can make
19 it simpler, eliminate complexity where we don't
20 need it. Thank you.

21 **DR. FRED JENKINS:** Okay. Joshua,
22 thank you. Jill Macioch.

1 **MS. JILL MACIOCH:** Thank you, Fred.

2 Short statement here, basically echo what Mr.
3 Burman said. And I feel he hit the nail on the
4 head. At the income -- or excuse me. As the
5 income -- blah -- the impact to state programs is
6 communicating those changes and helping the
7 stakeholders in their respective states walk
8 through any of these new processes. Basically,
9 that was just said. Simplify the process, make it
10 easier. Provide the documentation that helps the
11 state programs communicate the solutions well. I
12 believe that was also echoed by Terry Baer and
13 Michael Hurley yesterday, as well. Thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Jill. Terry Baer.

16 **MR. TERRY BAER:** Thank you, Fred.

17 Terry Baer, ADEQ. Yeah. Nothing to add. I mean,
18 it's been pretty well covered, I think.

19 **DR. FRED JENKINS:** Okay. Thank you,

20 Terry. Does -- okay, Michael Hurley. Go ahead
21 Michael.

1 **MR. MICHAEL HURLEY:** Oh. Hi, Fred.

2 Thanks. Hi. This is Mike Hurley. I just wanted
3 to point out that, you know, the impact to the
4 state programs, it's -- the resources for covering
5 registration of pretty much everyone, which is
6 what this Option 2 really is, it means we spend a
7 lot of time signing people up. So beyond the
8 usual outreach and et cetera, we also spend a lot
9 of time helping people find the website, help them
10 log in, help them do all this stuff, help them
11 reset their password. When they lock their
12 accounts, we have to refer them to CDX.

13 Usually by this time, they're pretty
14 angry because they're trying to do something, and
15 they're stopped because they're hung up on this
16 process. And they have to work through it. They
17 go to CDX. They come back to the state. They
18 say, "What do we do now?" These are pretty labor-
19 intensive operations for us. We spend tons and
20 tons of time on this in my state. And I think
21 that's something to consider as well.

1 So sort of to -- I believe Jill was
2 the one that said it. It really needs to be --
3 whatever process is decided upon, it has to be
4 simple with less of this kind of administrative
5 overhead being shifted to the states because we're
6 the ones who have to do all this stuff, right?
7 And one of the things that we haven't really
8 talked about too much in this is the user account.
9 You've got some people -- they're working for a,
10 you know, specific facility, and they move to a
11 different facility. You know, they're still
12 affiliated with the old facility. They're
13 supposed to turn that off, but they don't know how
14 to.

15 You end up with all kinds of stuff
16 in the data world. You've got people affiliated
17 to the wrong companies. It becomes kind of a
18 mess. And, you know, if you're affiliated with
19 your old company you can still act for them, which
20 is not what you want. So I think the states are
21 supposed to do some kind of administrative
22 oversight on that, but it's also very difficult.

1 So one of the things on that is just
2 sort of the administration and authorization of
3 user accounts really needs to be kind of thought
4 out on this. It would be shifted directly to the
5 states in this Option 2. And it would be a lot of
6 work for us, and we don't have a lot of people to
7 do that work. All right those are my comments.
8 Thank you.

9 **DR. FRED JENKINS:** Okay. Thank you,
10 Michael. Does any other Board members have any
11 comments to make? Okay. Joshua Burman go ahead.

12 **MR. JOSHUA BURMAN:** Thank you, Fred.
13 Mike, a clarifying question to you. I responded
14 under the premise that if we -- if EPA was willing
15 to relax and remove the identity proofing and
16 CROMERR requirements for the majority of the users
17 of the e-Manifest system, all generators and most
18 transporters, that would be an improvement. Did I
19 just hear you say that, in your view, some
20 elements of what EPA's referred to as Option 2
21 would increase workload? I just want to make sure
22 I'm hearing you correctly. Thank you.

1 **MR. MICHAEL HURLEY:** Sure. Hi.

2 This is Mike Hurley again. Hi, Josh. If we do
3 relax CROMERR for the individual actors at these
4 facilities, right? But they're still going to
5 want to or need to go in and look at some parts of
6 their activities. So we're just going to make
7 them preparers, no, in my reading of this?
8 They're still going to need to go in at some point
9 and look at their -- what am I saying here -- the
10 manifests they've signed for and everything else.
11 They're still going to need to go in and out of
12 the system, you know?

13 I don't see how they wouldn't
14 because you're shifting the entire -- you're
15 shifting more of this into an electronic platform,
16 so there isn't a piece of paper to refer back to.
17 Do you know what I mean? So if you wanted to go
18 check your work, you'd have to go in and see this
19 stuff, unless you did a complicated thing of
20 checking in at the e-Manifest web -- RCRAInfo
21 website. And you're looking at the e-Manifest
22 reports that are there, but you'd have to weed

1 through those. And they wouldn't show P-waste if
2 you'd shipped P-waste, you know? So yeah. Does
3 that make sense? Am I making sense here? Feel
4 free to tell I'm not. It's okay.

5 **MR. JOSHUA BURMAN:** Thank you. This
6 is Joshua Burman again. What I'm hearing is your
7 concern is more centered around moving more
8 manifests to the e-Manifest system electronic
9 rather than this particular change. Correct?

10 **MR. MICHAEL HURLEY:** Thanks, Josh.
11 Perhaps not -- not a concern about moving things
12 to the e-Manifest platform, but you're going to
13 need to have all these users more involved with
14 it. And that becomes a consideration. Any time
15 you're adding users to the system you add user
16 support. And I guess I'm thinking of it more of a
17 user support issue. I would also like to indicate
18 at this time it would be so much easier if I was
19 sitting across from a table with you and could
20 make eye contact.

21 **MR. JOSHUA BURMAN:** I absolutely
22 agree, Mike. I apologize. At previous meetings,

1 you and I have bounced things back and forth quite
2 excitedly, and this very stilted. And I'm
3 struggling with it. So I apologize to everyone on
4 this call that many of my answers have seemed
5 plodding and drawn out. I'm trying very hard to
6 make this work as well as in person.

7 I thank you for that clarification,
8 Mike. I think other states share that same
9 concern, but we see the benefits as -- we still
10 want this. We see that it's going to increase
11 complexity for end users, but we're on board this
12 e-Manifest train because we think the station
13 we're getting to at the very end is better, though
14 different. It's not going to be a golden world.
15 There's going to be additional work we have to do,
16 particularly as states. But we're seeing an
17 ultimate benefit in it.

18 However, I think your response does
19 bring up something that I just wanted to throw out
20 there for all of us to put in the back of our
21 minds. It's not necessarily a response
22 specifically to this charge question, but I think

1 it'll help at least me and hopefully some other
2 people in further thoughts about this -- is that
3 the e-Manifest system in its user interactions
4 essentially is a paradigm shift. And I hadn't
5 really looked at it through this perspective
6 before but it's helpful. And I'm glad you
7 triggered that in my mind, so thank you.

8 Previously, the interactions of
9 regulated parties with the manifest system was as
10 a corporate entity. Somebody at a site would take
11 out a pen or give a nod to the transporter for the
12 transporter to take out a pen to actually put pen
13 to paper and sign the manifest. But every
14 corporation, every corporate entity, every
15 generator site had a different way of doing that,
16 of selecting who -- or does have a different way
17 doing that of selecting who.

18 Sometimes it's pure happenstance,
19 it's "Hey, who's down on the dock today because
20 everybody else is gone?" Or it's, "We have to
21 find this person, and they happen to be in a
22 meeting. So the truck driver's waiting, and

1 they're getting impatient. But we got to go find
2 this person because that's who we've decided to do
3 this." But even in that situation, it was a
4 regulated entity corporate problem.

5 It was something that, oh, the
6 truck's here. Everybody can see the truck.
7 Everybody knows that there's this piece of paper
8 on a clipboard that we got to find somebody to
9 sign or somebody is going to sign it. It was very
10 obviously a corporate interaction.

11 Then, after the waste had shipped
12 and copies -- the three-signature copy was sent
13 back to the generator, while there might be a name
14 on the envelop or the courier package, it might be
15 opened by a front office staff. It might be
16 opened by the mailroom staff. It might be opened
17 by an assistant to that person, and somebody else
18 would file them. The name on that envelope is
19 typically a convenience. That person might have
20 retired by the time that a signature copy comes
21 back.

1 And ideally -- and we would
2 definitely hope that the corporate entity had a
3 process for, "Oh, we have an envelope with
4 somebody's name on it, and they're no longer
5 here." Somebody's going to open that. The e-
6 Manifest system by its very nature was a dramatic
7 change to that paradigm and shifted it to personal
8 individual interactions. There are some
9 corporations that have shared email inboxes, a
10 corporate inbox where you might have something
11 sent to customer.service@acmecorporation.com or
12 healthandsafety@XYZcorporation.com. But that's
13 the outlier. Those are the minority of cases.

14 The vast majority of time, the e-
15 Manifest system now has as its contacts individual
16 persons. And I think that's one of the things
17 that is a real challenge here is that people
18 change, and people even can rotate from day to
19 day, which is why we had the discussion yesterday.
20 That's what was underlying that discussion
21 yesterday about pre-populating potential users or
22 potential actors for a corporate entity.

1 And in particular when we talk about
2 record keeping, an email sent from a TSDF or from
3 e-Manifest system -- it really doesn't matter --
4 is going to go to either one or a number of
5 discreet addresses. And as many of us have had
6 experience with, physical addresses are rock
7 solid. We did have a big change about 15, 20
8 years ago with the roll out of the e-911 system
9 where a whole bunch of rural addresses got changed
10 from mail drops or rural routes to actual physical
11 street addresses so that firetrucks could find
12 these places and not just their mailboxes.

13 But other than that, except for the
14 occasional dedicating a street name after a
15 respected departed individual, the vast majority
16 of street addresses don't change over decades.
17 Email addresses have a lifespan in minutes it
18 seems sometimes. You just get your system
19 populated with current addresses for all your
20 regulated parties -- and I'm speaking from the
21 state of Minnesota's experience. And the next
22 time you send an email push out three months later

1 10 percent of them come back as undeliverable or
2 lost or dead addresses. And that is continuous.

3 There's a huge churn in that, and I
4 think that is something that's really important to
5 keep in the back of our minds whenever we talk
6 about user interactions with e-Manifest systems is
7 that we're not used to that. We're not used to
8 the record keeping, hazardous waste tracking
9 system having to constantly be updated with new
10 information for contacts for the regulated
11 parties. This is going to have to if we're
12 depending on things that change frequently like
13 email addresses.

14 I mean, I've been with the state of
15 Minnesota for 20 years. I've had three different
16 email addresses. And while theoretically there
17 are auto forwards for my obsolete addresses, I
18 can't depend on that, and I can't say with any
19 confidence that if somebody sent an email to the
20 address that they had in their system from 10
21 years ago if it would get to me. I don't know.

1 And many corporations have a much more rapid churn
2 than that.

3 So I think -- I'm taking your
4 comment, Mike, as a springboard to that, but I
5 hadn't really thought of that paradigm shift
6 before. But I think that really does underlie a
7 lot of our discussions here about user
8 interactions with the system. Thank you.

9 **DR. FRED JENKINS:** Okay. Thank you,
10 Joshua. Thank you, Michael, for those
11 discussions. Any of the other Board member, do
12 you have anything else to add to Charge Question
13 3C? Okay. If not, I'll turn to the Agency. Are
14 you clear on everything you've heard for Charge
15 Question 3C?

16 **MR. STEVE DONNELLY:** This is Steve
17 Donnelly. Yes, we are clear. Thank you very
18 much.

19 **DR. FRED JENKINS:** Okay. Thank you.
20 And I want to propose to the Board and Kathleen
21 that we -- I want to keep the same momentum we had
22 going throughout the week where we took a morning

1 break. And so we were going to go up to 3C and
2 then take a break for lunch, but we're a little
3 bit ahead of schedule. I propose that we take a
4 15-minute break and then come on back on at 11:30
5 and then take us to lunch time. Kathleen, are you
6 okay with that?

7 **MS. KATHLEEN SALYER:** I think that
8 sounds great, Fred. Thank you.

9 **DR. FRED JENKINS:** Okay. Is
10 everybody okay with that? I'll take that --

11 **UNIDENTIFIED FEMALE:** Definitely.

12 **UNIDENTIFIED MALE:** Sounds good,
13 Fred.

14 **DR. FRED JENKINS:** Okay, wonderful.
15 Okay, wonderful. So let's take a morning break
16 and come back at 11:30. William can you put the
17 break slide up please for -- and just say we'll
18 resume at 11:30? Thanks so much. We'll see
19 everybody at 11:30.

20
21 **[BREAK]**
22

1 **DR. FRED JENKINS:** Okay. Hello
2 everyone and good morning again. Back from our
3 15-minute break. This is Fred Jenkins, the
4 Designated Federal Officer, e-Manifest Advisory
5 Board. We will now be resuming our e-Manifest
6 Advisory Board meeting. I want to do a quick roll
7 call to make sure everyone is back on the line off
8 of break before we begin. I'm going to ask,
9 Kathleen, are you back?

10 **MS. KATHLEEN SALYER:** I'm back.
11 Thank you, Fred.

12 **DR. FRED JENKINS:** Okay. Do we have
13 Terry Baer?

14 **MR. TERRY BAER:** Yes, Fred. Terry
15 Baer on the line.

16 **DR. FRED JENKINS:** Okay. Do we have
17 Joshua Burman?

18 **MR. JOSHUA BURMAN:** Joshua Burman's
19 here.

20 **DR. FRED JENKINS:** Okay. Do we
21 have, sorry, Tom Baker?

22 **MR. THOMAS BAKER:** I'm here, Fred.

1 **DR. FRED JENKINS:** Okay. Syed
2 Hafeez? Syed, are you there? Okay. Not yet.
3 Michael Hurley?

4 **MR. MICHAEL HURLEY:** Hi, Fred. I am
5 here.

6 **DR. FRED JENKINS:** Okay. Tefvik
7 Kosar?

8 **DR. TEVFIK KOSAR:** Yes, Fred. I am
9 here.

10 **DR. FRED JENKINS:** Okay. And Jill
11 Macioch?

12 **MS. JILL MACIOCH:** Yes, I'm on,
13 Fred.

14 **DR. FRED JENKINS:** Okay. And
15 Cynthia Walczak?

16 **MS. CYNTHIA WALCZAK:** Yeah. I'm
17 here.

18 **DR. FRED JENKINS:** Okay. Great. So
19 we just finished up Charge Question 2C, and we are
20 going to move onto Charge Question -- I'm sorry,
21 Charge Question 3C. And we're going to Charge

1 Question 3D. Mimi, can you please read Charge
2 Question 3D into the record?

3
4 **CHARGE QUESTION 3 (3D)**

5
6 **MS. MIMI GUERNICA:** Charge Question
7 3D, for this method, how best can the Agency
8 engage generator and transporter users to register
9 site managers for their sites?

10 **MS. KATHLEEN SALYER:** Fred, I think
11 you might be on mute.

12 **DR. FRED JENKINS:** Sorry about that.
13 Sorry about that. Lead discussant for Charge
14 Question 3D, please. Jill Macioch.

15 **MS. JILL MACIOCH:** Thank you. Jill
16 Macioch here. So I guess the way I see it is --
17 and this may have come up before -- but it seems
18 like we have a cycle here, right? You know,
19 generators may not be registering in the system
20 because transporters are showing up with a paper
21 copy of the haz waste manifest. Seems like many
22 smaller companies may not even realize that

1 manifests are being uploaded and are available to
2 view through RCRAInfo.

3 On the other hand, you have the
4 transporters and they may not be registering
5 because the manifests provided to them are still
6 paper copies. So it seems that there could be
7 limited benefit for them to register as site
8 managers. Receiving facilities or disposal
9 vendors, who, of course, are registered and have
10 site managers, may be handcuffed from providing
11 electronic manifests because some of the
12 transporters are not on board with the whole
13 registration process for each individual driver
14 because, as we've pointed out, there seems to be
15 such a high turnover. So you may have registered
16 site managers but not necessarily all registered
17 drivers.

18 So I guess I ask the question is the
19 problem with registering site managers, or is the
20 issue with embracing or adoption the system of
21 using electronic manifest because of other
22 reasons? And if you're looking to register site

1 managers perhaps -- I don't know, you know --
2 perhaps EPA can communicate with those
3 stakeholders or work through the state programs
4 with their sites. You know, information is being
5 uploaded into the system, so I'm sure there's an
6 easy means of identifying -- which we have in the
7 white paper -- which facilities do and do not have
8 site managers. You know, are there any type of
9 contacts being made with these particular
10 facilities, generating facilities or
11 transportation facilities in terms of getting site
12 managers?

13 I guess, also according to the white
14 paper, it does talk about that 35 percent of
15 manifests have originated as a generator site with
16 a site manager and also that 77 percent have a
17 transporter with a site manager. So I guess with
18 that in mind, why is the usage less than 0.5
19 percent for e-Manifest? The e-Manifest system is
20 -- well, one of the reasons is it's complex. And
21 essentially, everything needs to fall into place
22 perfectly for it to work.

1 Once a disposal vendor or end
2 facility has their waste shipments set up in the
3 system and the transporters are available to sign
4 electronically, generators would need to register
5 a site manager in order to sign those manifests,
6 at least under Option 2 and the current option, or
7 continue to use the hybrid options, which I
8 believe is still available. So I guess my point
9 is, to increase the generator user's involvement,
10 to what extent will the full e-Manifest percentage
11 increase, or do we have a bigger issue on our
12 hands? Thank you.

13 **DR. FRED JENKINS:** Okay. Thank you,
14 Jill. Michael Hurley.

15 **MR. MICHAEL HURLEY:** Thanks, Fred.
16 Michael Hurley. Jill, that was great. That gave
17 me a lot to think about right there. And it might
18 be that she is completely correct. It may not be
19 an issue of getting generators and transporters to
20 register as site managers. It really is, you
21 know, what's their incentive and why should they?
22 Which, you know, would be, you know, how do you

1 sell the e-Manifesting process to them to make
2 them want to do that, right? Because it's
3 voluntary.

4 And I guess -- so how can you best
5 engage generator transports? Well, you know, in
6 Massachusetts we regulate, again, down to zero.
7 So all the generators who come in looking for EPA
8 ID numbers and to take out permits, we make
9 everybody, you know -- if you come in for your
10 facility, we're going to make you become a site
11 manager, so we have pretty solid coverage of that.

12 Transporters we don't because
13 that's, you know -- for them it's sort of
14 optional. I think you'd have to push down maybe
15 from EPA -- you'd have to work a bit with the TSD
16 side saying, to get the TSDs to want to do this to
17 the point where they're going to say to their
18 customers who are the transporters, "We need you
19 to do this." I think that's the direction it
20 would have to go in. Otherwise, it would be just
21 the states mostly or EPA reaching out to the

1 transporters and asking them to, but they're, you
2 know -- we can't require them to.

3 I'm interested in that. If anybody
4 from the industry side could elaborate on that a
5 little bit because I don't see that as being --
6 this being a government side push down. I think
7 it's -- it would have to be industry demand,
8 right? Thank you.

9 **DR. FRED JENKINS:** Okay. Terry Baer
10 next associate discussant.

11 **MR. TERRY BAER:** Thank you, Fred.
12 Terry Baer, ADEQ. Yeah. I think Mr. Hurley
13 brings up great questions, as well as Jill had.
14 You know, I think the intention was -- is that the
15 TSDs were going to be the springboard for pushing
16 hopefully the migration of the system.
17 Unfortunately, it just did not have that effect.
18 Instead, it just ended up them passing on costs to
19 their customer base and just continue to do things
20 as, you know, their businesses operated.

21 So, you know, that's obviously
22 something that needs to be addressed, and that's

1 something that was mentioned, I think, by Jill and
2 Cynthia, or Cindy, with regards to, you know,
3 these are all great things for trying to push the
4 adoption of the system or use of the system. But
5 ultimately, if the TSDs are still pushing back,
6 that's going to forever be a barrier. So
7 definitely a milestone that has to be addressed.

8 But with that said, one of the
9 things -- just to reiterate what we kind of said
10 yesterday, you know, adoption by the generators
11 and transporters is going to involve EPA
12 involvement at the state level and so reaching out
13 to those environmental programs and organizations
14 as we mentioned before, you know, the various
15 business round tables that take place around the
16 country. It's really got to be taken from a
17 marketing standpoint approach. Thank you, Fred.

18 **DR. FRED JENKINS:** Okay. Thank you,
19 Terry. Tom Baker.

20 **MR. THOMAS BAKER:** Yeah. Thanks,
21 Fred. A question from Jill and Terry directed
22 back to industry to why are we in this situation,

1 what's going on? Got to understand two things.
2 You know, one is there's not full adoption of e-
3 Manifests for a whole host of reasons, which I'll
4 attempt to address later today in closing
5 statements, in response to item six, Charge
6 Question 6.

7 But specific to the registration
8 process, industry groups, Veolia, other members of
9 ETC, have actively been engaging their customers,
10 the generators, in getting them to register in e-
11 Manifest. We've held webinars. We've had
12 numerous customer facing letters describing the
13 process to go into RCRAInfo, to go into e-
14 Manifest, and properly register to use the system.
15 Those results have been mixed.

16 Many generators have not registered,
17 even with our requests. And the reason is, quite
18 frankly, as we've discussed earlier in the other
19 charge question, there's not a lot of benefits for
20 someone to get into the system and register at
21 this point in time as a generator. I think that's
22 as simply as I can say it.

1 We discussed this, I think, on the
2 last go around at the e-Manifest Advisory Board
3 Meetings when the focus was registration. And
4 there have been numerous actions taken to
5 encourage and educate generators to do so. But
6 the results have been somewhat mixed and has not
7 been, you know, a significant number have actually
8 registered as a result of that. So hopefully that
9 answers the question. If you guys have further
10 questions for industry, I'd be happy to respond to
11 them from the other Board members.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Tom. Any other Board members want to respond to
14 Question 3D? Okay. I just saw a bunch of hands
15 go up. Go ahead, is that Jill or Cindy? Who was
16 that?

17 **MS. CYNTHIA WALCZAK:** This is Cindy.
18 This is Cindy Walczak.

19 **DR. FRED JENKINS:** Okay.

20 **MS. CYNTHIA WALCZAK:** As I recall
21 our last meeting -- that -- it's hard to summarize
22 why people aren't registered. We had three days

1 of meetings, what, six months ago, as to why
2 people aren't registered and how to get them to
3 register. So I think there's a whole host of
4 reasons, and I'd refer back to the meeting notes
5 from then.

6 **DR. FRED JENKINS:** Okay. Is that
7 all you had, Cindy?

8 **MS. CYNTHIA WALCZAK:** Yeah. Thank
9 you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Cindy. Let's go to Jill Macioch.

12 **MS. JILL MACIOCH:** Yes. Thanks,
13 Fred. Jill Macioch here. Kind of going back to
14 Tom -- and correct me if I'm wrong. But from
15 either our last meeting or at some point, I mean,
16 would it be true as a disposal vendor or a
17 receiving facility that it's going to be, or you
18 would want it to be, kind of an all or nothing?
19 That you don't want to have maybe for some of the
20 generators that have registered start rolling out
21 the system for them, you know, while you're still
22 waiting for the others to kind of register and

1 catch up? I mean, is that the approach that it's
2 kind of let's get everybody on board or
3 potentially start with a smaller group? If you
4 could help me understand that.

5 And then I do have one more comment
6 prior to kind of my clarifying question, I guess
7 for Tom, if I may. But following our meeting last
8 June, I worked -- I had mentioned during our
9 meeting, you know, we're a little bit different
10 situation. We are fully electronic. We do a lot
11 of our own manifests. We're not relying on the
12 end facility, so a lot of my manifests going to
13 vendors are e-Manifests.

14 It's pretty unique, I know. But I
15 did have a lot -- a very large vendor reach, you
16 know -- reach out to me or we were working with
17 each other to utilize the system or try it. I
18 think even one of the public -- or the presenters
19 -- oral presenters yesterday had said, "Yeah. We
20 reached out." I think it was Larry Fura -- about
21 being able to use -- would you allow us as a
22 generator or a broker to try and use this system?

1 And I had the vendor say, "Yes, we
2 would love to try out the system with you." When
3 we essentially got everything set up and then I
4 was told, no, we can't because, you know, the
5 transporters, their independent transporters that
6 they needed to use were not on board. So, you
7 know, put a stop to it. So it's -- like I said it
8 just seems to be this vicious cycle. So I'll let
9 it go back to Tom Baker. Thank you.

10 **DR. FRED JENKINS:** Okay. Tom Baker
11 then we'll go after Tom, Joshua Burman, Mike
12 Hurley.

13 **MR. TERRY BAER:** Yeah. Thanks,
14 Fred. Tom Baker. So just good question Jill. So
15 it's really two things, and I want to keep them
16 separate because they are two separate things.
17 One is registration and one is full adoption of
18 the e-Manifest system. With respect to the
19 registration process, we've encouraged all of our
20 customers to register. The goal, in one respect,
21 is, if they all register in the system, the system
22 can push back to them upon shipping waste to the

1 facility the confirmation of receipt of the
2 shipment.

3 We're still mailing paper copies
4 back to our customers because they are not
5 registered, and, if we could have them all
6 registered, it would eliminate that. It would be
7 huge burden reduction for us, a cost savings for
8 us. So the goal there was really ideally is an
9 all or nothing.

10 If they're all registered, we can
11 stop our current paper systems of mailing. But
12 with just a handful registered, it's very
13 difficult for a services business to have dual
14 work processes based on whether it's a registered
15 customer or a non-registered customer. So that's
16 the registration situation today. We would want
17 them all to register. Without them all
18 registering, we really can't eliminate our current
19 paper process for mailing back the manifests.

20 From a fully implementation of the
21 e-Manifest system, what it comes down to
22 essentially is the industry systems that are in

1 place today are used for many things: manifest
2 creation, waste tracking, waste profiling,
3 billing, reporting to agencies. And I'm not just
4 talking about BRS reporting but also state agency
5 reporting for transporter reports, TRI reports.
6 It goes deep into the different federal and state
7 reporting requirements. The waste industry
8 systems are integral to the permitted facility's
9 operating record.

10 So it's a very ingrained industry
11 system. It's not just a front-facing system for
12 making manifests in the field. It's much more
13 than that. It's important that you understand
14 that.

15 So to have dual systems operating
16 and servicing customers where we have a handful of
17 customers that want to do electronic manifesting
18 where the vast majority of them still are not to
19 that point, we'd have to run dual systems and have
20 our field services personnel and operations
21 personnel educated, trained, equipped with the
22 tools to be able to complete projects based on the

1 customer requests, electronic or non-electronic.
2 That creates a lot of burden, a lot of costs for
3 industry. If we do accept an e-Manifest shipment
4 today, which we've done on occasion, we can do so.

5 The reality is it results in us then
6 having to enter in -- manually enter in all that
7 waste tracking data into our industry system to
8 allow us to do what I just said: bill, report,
9 keep our operating record compliant. And it goes
10 on and on. So the full electronic approach from a
11 business perspective as a waste service provider
12 is best viewed as an all or nothing approach.

13 If you want to save money and
14 provide more efficient services, you need to have
15 a uniform approach to managing those customers'
16 waste. So it's -- to work in two systems
17 independently without full integration of the two,
18 it's just not a very feasible solution. So
19 hopefully that provides a bit more insight into,
20 you know, how at least my company, Veolia, views
21 the situation today.

1 **MS. JILL MACIOCH:** No, thank you.

2 This is Jill Macioch. Thank you. That was my
3 understanding. It was just good to have that
4 insight and have that available during this
5 meeting. Thank you.

6 **MR. TERRY BAER:** Okay. You're
7 welcome. Thanks, Jill.

8 **DR. FRED JENKINS:** Okay. Thank you.
9 And Joshua Burman.

10 **MR. JOSHUA BURMAN:** Thank you to
11 everyone. This is Joshua Burman. Mr. Baker, I
12 very much appreciate the -- and Ms. Macioch as
13 well, I very much appreciate the industry
14 perspective. I was reading over, as you were
15 talking, the public comments submitted by ETC that
16 were presented yesterday. And I think perhaps in
17 our later charge questions and the final summing
18 up either today or tomorrow, a further development
19 of the fact that registration is one piece.

20 And while I think it's the initial
21 piece and since it's a barrier to initial
22 interaction, it has to be the first piece that we

1 address. It's not the only piece and, in fact,
2 probably not even the biggest piece from industry
3 perspective. From a state regulator perspective,
4 we are for this -- purposes of this question and
5 others, or at least the issues raised about
6 industry adoption, particularly TSDF adoption, the
7 state functions as an observer.

8 The states are under a very limited
9 ability to compel any particular actor to interact
10 with the e-Manifest system if the entire manifest
11 chain can't. And since that manifest chain is in
12 the real world almost completely controlled by the
13 end receiving facility as well as, to some extent,
14 the intermediary transporters if they're
15 independent, generators are at the mercy. We can
16 -- and in a minute I'm going to touch on
17 potentially some methods to use carrot and stick
18 to help and push generators towards at least
19 establishing an initial interaction with the
20 system.

21 But if all links in the chain for
22 the e-Manifest transport and ultimate destination

1 are not ready and desiring to manage a shipment
2 using the e-Manifest, generator's completely
3 powerless. The only lever they can pull is to
4 take their business elsewhere and say, "Well, if
5 you don't want to do e-Manifest, I'm going to take
6 it to somebody else that would." And we certainly
7 don't see that as a lever that many, if any,
8 generators are willing to pull because there's a
9 whole lot of other factors, everything from cost
10 to convenience to for some wastes limited options.

11 For some industry waste, there's
12 only a few TSDFs that can accept that waste, and
13 there's a limited number of transporters that
14 reasonably may service a facility in Warroad,
15 Minnesota because not a lot of transporters want
16 to drive all the way up there. So that's not a
17 really good lever. And it's not one that's
18 realistic for us to look at. So I think it very
19 definitely bears further discussion later today or
20 tomorrow separating out the registration from the
21 whole integration piece.

1 I'm glad that EPA called this
2 meeting of the Advisory Board, that it has done
3 great work in reviewing its stance on things like
4 the word "signatures." And I think that's a great
5 first step, but it is -- and I would reiterate
6 what everybody else has said -- it's only a first
7 step. There's other steps that might even be
8 bigger steps. We just have to take this first one
9 first.

10 That all being said, I wanted to
11 respond to a few different points. The first
12 being I've heard a few times now outreach from EPA
13 to the states. The reality is that state programs
14 are, for the most part -- there may be a few
15 exceptions from incredibly lucky states -- for the
16 most part, state programs are doing as much as
17 they can now with the resources they have or
18 feasibly or foreseeably going to have in the
19 future.

20 Minnesota I will use as an example.
21 Other states may be more blessed; other states may
22 be in more dire circumstances. Minnesota's entire

1 RCRA program is seven FTEs. That covers
2 everything from onsite inspections to record
3 keeping to Minnesota does do an annual reporting
4 and data collection. And it covers that as well.
5 It also covers policy development, rule writing
6 and regulation enactment and, finally, things like
7 e-Manifest support.

8 The state doesn't have -- as much as
9 EPA can reach out and encourage and say, "Gee,
10 states, let's do this. Let's form a partnership."
11 We're already doing it. And while we want to
12 support and we want to get as much resources to
13 this as we can, we're already doing it. And I
14 think it's kind of farcical to say, "Well, we'll
15 have more outreach." That's -- we're already
16 doing outreach.

17 And states, for the most part, are
18 not going to be able to do more. What they are
19 going to be able to do is do their outreach more
20 efficiently if, as I've said before -- and I'm
21 kind of beating this one, sorry -- the simpler we
22 make it, the simpler the interactions of every

1 user or potential user with the e-Manifest system,
2 the more states can do because every minute that I
3 spend on the phone trying to explain to somebody
4 the difference between a site manager and a
5 certifier versus a viewer is one minute less that
6 I can be reaching out to somebody else saying,
7 "Hey, there's this thing called e-Manifest. We
8 really think you should be part of it."

9 And that's the reality of the
10 situation is the simpler it is, the more efficient
11 we can be, the more outreach we can do with the
12 resources we have. Because there's not going to
13 be more resources. That's just a simple fact.

14 Touching on that, one of the things
15 we've said several times is how do we show a
16 benefit to regulated parties? Now, that's a
17 carrot. I specifically touched yesterday and we
18 spent a fair amount of time last June talking
19 about what fairly theoretically minor software
20 changes can we make that might produce -- get some
21 good bang for the buck, one of which was
22 specifically auto-generated notifications or even

1 auto-links or auto-copies of manifests begin sent
2 back out to the regulated parties, both generators
3 and transporters.

4 I'd like to touch just briefly on
5 the other side, which is the stick. The states
6 are compliance enforcement entities. They are the
7 main regulatory bodies for RCRA across the nation.
8 There's only two states where EPA is the primary:
9 Iowa and Alaska. Everywhere else it is the state.
10 And one of the key state requirements -- it's in
11 the federal regulations but states are the ones
12 applying it -- for manifests is record retention.

13 Information is useless if we can't
14 review it. The likelihood that a state inspector,
15 that another regulator, that somebody with
16 oversight capacity even internally in a company --
17 a health and safety person for a company will be
18 onsite at the loading dock the day a shipment is
19 being prepared is virtually nil. It -- every once
20 in a while, we're like, "Hey, look, they're
21 loading a truck. Let's go watch and supervise.

1 Great." But we can't plan on it, doesn't happen
2 very often.

3 Most of the time we're reviewing
4 records only, which means the record retention
5 requirement is key for at least for my state and
6 likely many other states. There's been some
7 confusion with e-Manifest in this regard. The
8 FAQs as they're published today do shed some light
9 on that. However, I think they also provide us an
10 opening.

11 I'm specifically looking at the FAQ
12 that's currently up on the EPA's website for e-
13 Manifest. It's under "record retention and
14 distribution number two." The question is, if I
15 mail or upload a paper manifest to EPA, what's
16 considered the legal record of shipment once the
17 paper manifest becomes an e-Manifest? Do I need
18 to retain my paper copy, or can I rely on the
19 system?

20 And EPA gives a number of answers.
21 For purely e-Manifest, the answer's easy. You
22 never had a paper copy to start with, so there's

1 no paper for you to retain. Everything is e-
2 Manifest. The e-Manifest is the legal copy of
3 record. However, for hybrids, which is the vast
4 majority of manifests currently being created in
5 the nation today, EPA gives the answer that the
6 two-signature copy, since that's the only thing
7 the generator has access to, unless and -- well,
8 until the three -- until the final manifest --
9 I'll use that term -- the final manifest is
10 uploaded to the EPA system by the receiving
11 facility.

12 The only thing the generator has is
13 that paper, two-signature copy. So clearly
14 generator has to retain that because they need
15 some documentation of their shipment. If the
16 truck goes in the ditch, they need something to
17 say this is what was on the truck and, yes, it was
18 properly packaged and properly loaded and so on.

19 But once that final manifest is
20 uploaded, EPA is here saying -- or has here said -
21 - that because the final uploaded manifest, which
22 is now an electronic manifest, data plus image, is

1 -- does not necessarily contain all the
2 information that was initially on -- for instance
3 if the -- at some point it became an e-Manifest in
4 the hybrid model, then the generator must still
5 retain that paper copy because it's the only copy
6 that retains the actual signatures. The EPA's
7 actual term is "the generator using the hybrid
8 manifest must retain its hand signed paper copy" -
9 - I apologize. Reading the wrong line. Because
10 it's the only copy with -- that will display the
11 quote, hand signatures of all the waste handlers.
12 If we circle back to the discussion yesterday and
13 talk about what is a signature, do we need a
14 signature, and is a signature necessary for all,
15 then I would say we have a potential opening here
16 for a little bit of a stick.

17 And say, if we don't need
18 signatures, if what we need is the dates and the
19 interaction or some documentation of the
20 interaction of a regulated entity, i.e. the
21 generator in this case and the initial
22 transporter, with the manifest shipment then does

1 not the e-Manifest data contain that? And if so,
2 then the paper copy is not really relevant anymore
3 after the final manifest has been uploaded. If
4 so, then as for e-Manifest we've already clearly
5 said -- and I think we all agree -- e-Manifest is
6 the copy of record.

7 And to be able to access the copy of
8 record, a generator must have access to the
9 system, at least in some sort of viewer mode. And
10 we certainly wouldn't recommend that they wait
11 until the manifest data becomes available three
12 months later because, if something happens in the
13 interim, they're on the hook. They are liable.

14 EPA could consider -- and I suggest
15 they may want to consider -- a regulatory change
16 to indicate that e-Manifest is the copy of record
17 in all situations except for a shipment started
18 with a paper manifest until the final manifest is
19 uploaded. That two-signature copy when it starts
20 as a paper manifest, that's all they're going to
21 have. So that will remain until the final
22 manifest is uploaded.

1 States then would likely -- I can
2 speak for Minnesota almost certainly but other
3 states I can only suggest likely -- would likely
4 consider that, for generators to meet their
5 existing retention and access to information, the
6 generator would have to, simply for regulatory
7 compliance, interact with the e-Manifest system
8 and I'll use the word "register" some person at
9 their site. And it's probably not a stick that we
10 would wave at least for quite a long time. We
11 want to focus on education and encouragement, but
12 it's something that I think we should consider as
13 another tool in the toolbox.

14 And again, I'm going off of what
15 EPA's current interpretation, as published today,
16 how that could be changed through rulemaking to
17 make it very clear that, to meet regulatory
18 compliance for access to information, generators
19 would have to interact with the system. So I
20 wanted to bring that up. This may not be the best
21 charge question to address it to. But since we're
22 kind of developing the registration of site

1 managers question, which is, I think, inherent in
2 quite a few of these charge questions, I wanted to
3 bring it up here. Thank you.

4 **DR. FRED JENKINS:** Okay. Thanks,
5 Josh. Tom Baker did you have anything else to add?

6 **MR. THOMAS BAKER:** I do not, Fred.
7 Thank you.

8 **DR. FRED JENKINS:** Okay. So this
9 brings us to lunch time, so we're going to break
10 for lunch. And I just want to remind the Board
11 and say real quickly, when we come back for lunch,
12 that will be -- we will be finishing up -- trying
13 to finish up the meetings for the afternoon. To
14 the Board, just a reminder that we will have -- we
15 will have to finish on time because we're doing
16 this virtually, and, you know, everything's
17 reserved our meeting time and what not.

18 So be cognizant of time when we get
19 back, and let's just keep it moving without any
20 delays so we can finish the meeting on time and
21 get all the rest of the charge questions answered
22 when we get back from lunch. And with that said,

1 Kathleen, do you have anything you want to add
2 before we break for lunch?

3 **MR. STEVE DONNELLY:** Fred, this is
4 Steve --

5 **MS. KATHLEEN SALYER:** No, Fred.
6 That sounds great.

7 **MR. STEVE DONNELLY:** -- I have
8 something to add -- so the EPA has no clarifying
9 question for Sub-Question D so we can move on.

10 **DR. FRED JENKINS:** Oh, sorry about
11 that. Yeah. Thank you, Steve. Thank you.

12 **MR. STEVE DONNELLY:** We don't have
13 any clarifying --

14 **DR. FRED JENKINS:** Thank you.

15 **MR. STEVE DONNELLY:** Thanks.

16 **DR. FRED JENKINS:** Okay. Great.
17 Thank you. No clarifying questions. So let's
18 break for lunch. Let's come back from lunch at
19 1:10 p.m. Eastern Time. And can we get a lunch
20 break slide for 1:10? Thanks so much. See you
21 all after lunch. Have a great lunch.
22

1 [BREAK]

2
3 MR. STEVE DONNELLY: Hey, Fred, this
4 is Steve. Can you hear me?

5 DR. FRED JENKINS: Yes. Hey, Steve.
6 How are you doing? You okay?

7 MR. STEVE DONNELLY: Yeah. I'm
8 okay. Just sort of -- yeah. I got kicked off and
9 then I was putting Harry back in -- Harry down for
10 a nap.

11 DR. FRED JENKINS: Oh.

12 MR. STEVE DONNELLY: I'm back.

13 DR. FRED JENKINS: Oh. All right.
14 Harry's down for a nap?

15 MR. STEVE DONNELLY: Fingers
16 crossed.

17 MR. MICHAEL HURLEY: I'm down for a
18 nap.

19 DR. FRED JENKINS: Yeah. Amen to
20 that. Amen to that. I think all of us are.

21 MR. MICHAEL HURLEY: This is
22 actually a really tough Advisory Committee

1 meeting. Without that being able to see people
2 making, like, throat cutting motions so I'll be
3 quiet or hand waving gestures so I'll talk or
4 speak or just eye contact, it's really -- it's a
5 lot harder than I thought it would be.

6 **DR. FRED JENKINS:** Yeah. Yeah. It
7 is. Especially when -- yeah. You can't see
8 people's expressions and whatnot.

9 **MR. MICHAEL HURLEY:** I feel like
10 we're missing a lot of the back and forth that we
11 usually have.

12 **DR. FRED JENKINS:** Yeah. Yeah. I
13 agree.

14 **MS. JILL MACIOCH:** Hi, Fred. Jill
15 Macioch's back on.

16 **MR. TERRY BAER:** Hey, Fred. Terry's
17 back on as well.

18 **DR. FRED JENKINS:** Hello, everyone.
19 Okay. Hello, everyone. And reminder you all are,
20 you all are live. Everybody can hear you,
21 including our public audience.

1 **MR. TERRY BAER:** Was that Mike
2 Hurley?

3 **DR. FRED JENKINS:** Yeah. That was
4 Mike Hurley.

5 **MR. MICHAEL HURLEY:** It is Mike
6 Hurley.

7 **MR. TERRY BAER:** Yeah, Mike. I
8 would agree. I don't think we have as much debate
9 as we did last time, but I think these questions
10 are much more focused to specifics to where the --
11 last years' were very kind of generalized.

12 **MR. MICHAEL HURLEY:** Yeah. I think
13 that's true as well.

14 **DR. FRED JENKINS:** Yeah. And I'm
15 going to be bringing -- starting us up in about a
16 minute. I'm going to bring the slides up, and
17 then I'll put you all on a brief mute. Okay.
18 We're back. Welcome back, everyone. This is Fred
19 Jenkins again, DFO for e-Manifest Advisory Board.
20 Let's do a quick roll call before we get started
21 again just to make sure everybody's back online

1 and we can proceed with answering the charge
2 questions. Start with Kathleen Salyer.

3 **MS. KATHLEEN SALYER:** Yeah. I'm
4 here, Fred. I'm here, Fred. Thank you.

5 **DR. FRED JENKINS:** Okay. Okay.
6 Great. Terry Baer's here. Tom Baker, are you
7 here?

8 **MR. THOMAS BAKER:** I am.

9 **DR. FRED JENKINS:** Okay. Joshua
10 Burman?

11 **MR. JOSHUA BURMAN:** Joshua's here.

12 **DR. FRED JENKINS:** You're here.
13 Okay, great. Syed Hafeez, he had an emergency --
14 work related emergency he had to go deal with. So
15 I think he's gone by now, this afternoon. But I
16 think he's -- so I don't think he's -- yeah. He
17 should be off the line right now. But we do have
18 his charge question responses that we're going to
19 read into the public records when that comes time
20 for his charge question responses. Mike Hurley is
21 on the line. Tevfik Kosar, you back?

1 **DR. TEVFIK KOSAR:** Yes. I am here,
2 Fred.

3 **DR. FRED JENKINS:** Okay, Jill
4 Macioch.

5 **MS. JILL MACIOCH:** Yes, I'm on Fred.

6 **DR. FRED JENKINS:** Okay. Thank --
7 okay. Great. And Cynthia -- Cindy Walczak?

8 **MS. CYNTHIA WALCZAK:** Yes, I'm here.
9 Thanks.

10 **DR. FRED JENKINS:** Okay. Wonderful.
11 So I think we are all finished with Charge
12 Question 3D. Correct, everyone? Okay. I'll take
13 that as a correct. And also, before we move on,
14 Joshua -- I see his name's -- your hand's still
15 raised, can you -- I presume because it's been
16 raised for a while, can you deselect the hand
17 raise?

18 Okay. Thanks, Joshua, then we'll
19 move on. Okay. So let's move onto Charge
20 Question 2E. I'm going to turn to EPA. Mimi, can
21 you please read Charge Question 2E into the
22 record?

1 **MS. MIMI GUERNICA:** Yeah. We're
2 actually on 3E.

3 **DR. FRED JENKINS:** I'm sorry, three.
4 I'm sorry. I keep saying two because I see Method
5 2 in front of me. Yeah. Sorry. I'm sorry about
6 that.

7 **MS. MIMI GUERNICA:** I just wanted to
8 clarify it for the record.

9 **DR. FRED JENKINS:** Yeah. Thanks.
10 Yeah. Thank you. Thank you.

11 **CHARGE QUESTION 3 (3E)**

12
13 **MS. MIMI GUERNICA:** Charge Question
14 3E, would receiving facility users be interested
15 in using this method for initial intake receipt of
16 the manifest?

17 **DR. FRED JENKINS:** Okay. And the
18 lead respondent for Charge Question 3E is Jill
19 Macioch.

20 **MS. JILL MACIOCH:** Thank you, Fred.
21 This is Jill Macioch. And yeah. I think, similar
22 to yesterday, I believe there would be interest of

1 having -- if a dock person could register without
2 the identity proofing steps and without having to
3 answer the challenge questions to take receipts or
4 intake of the manifested waste. Of course, that
5 is assuming that they have access to a computer,
6 tablet, phone, or other device to complete this
7 step -- the intake step.

8 I'm not as familiar with the dock
9 personnel at the receiving facilities, just our
10 own facility. But I presume it may be multiple
11 individuals like we have as well also across
12 multiple shifts, and this person or persons may
13 change quite frequently as well. So yeah. I
14 think it would a couple less steps to complete as
15 part of the RCRAInfo set up process and that there
16 would be benefits to this particular instance.

17 Thank you.

18 **DR. FRED JENKINS:** Okay. Thank you,
19 Jill. Michael Hurley.

20 **MR. MICHAEL HURLEY:** Thank you,
21 Fred. This is Mike Hurley here. I think this --
22 so I would caveat my answer. This option over the

1 current option I think would be of more interest
2 to the receiving facility because it's a bit
3 easier. You're eliminating some of the
4 administrative load on it. But other than that, I
5 really can't speak to it over much because I'm a
6 state regulator, and it's been a long time since I
7 worked on a -- at a receiving facility. I would
8 sort of defer to the industry people. Thanks.

9 **DR. FRED JENKINS:** Thank you,
10 Michael. Terry Baer.

11 **MR. TERRY BAER:** Thank you, Fred.
12 Terry Baer. I would agree with Mr. Hurley. Yeah.
13 I think it does alleviate some of the burden
14 compared to the current method. Obviously, I'm
15 not sure that it scales with the Method 1. But
16 yeah. I would have to defer mostly to our
17 industry representatives here on the Board.

18 **DR. FRED JENKINS:** Okay. Thank you,
19 Terry. Tom Baker, go ahead.

20 **MR. THOMAS BAKER:** Yes, so Tom
21 Baker. I think what Jill describes is generally
22 applicable to other commercial waste services

1 companies that operate TSDFs. So multiple people
2 on site, you know, could register, avoid the
3 LexisNexis process, and that would provide some
4 benefit to them. Thank you.

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Tom. Do we have any other Board members that want
7 to respond to Question 3E? Okay. I'm going to
8 turn to EPA. Do you have any clarifying
9 questions? Are you clear on what you heard from
10 the Board on Question 3E?

11 **MR. STEVE DONNELLY:** This is Steve
12 Donnelly. I believe we are all clear. Thank you
13 very much.

14 **DR. FRED JENKINS:** Okay. Wonderful.
15 Let's move on to Charge Question 3F. Mimi can you
16 read it into the record, please?

17
18 **CHARGE QUESTION 3 (3F)**
19

20 **MS. MIMI GUERNICA:** 3F, are there
21 unique technical considerations or hurdles that
22 EPA should take into account when developing and
23 implementing this method?

1 **DR. FRED JENKINS:** Okay. Lead
2 discussant, Jill Macioch.

3 **MS. JILL MACIOCH:** Thank you, Fred.
4 You know, other than the considerations that were
5 brought forth the last couple of days in the white
6 paper and during the presentations for Option 2, I
7 think it may be an uphill battle as we've kind of
8 been deliberating on -- well, let me take that
9 word back. We're not deliberating -- as we've
10 been recommending throughout today, showing how
11 the options make increased adoptability in the
12 system. Although users do need to complete the --
13 although the users would not need to complete the
14 identity proofing and signature agreement, users
15 still need to be registered in this option. And
16 my understanding is that there's still are the
17 concerns with the registration process due to
18 turnover of some of the positions at companies and
19 the time to even keep some of these lists
20 maintained.
21 We talked about an employee leaving
22 and they're still on the site manager's list.

1 They might have moved onto another company. I
2 looked at our list recently, and I noticed that
3 there was somebody that moved onto another company
4 about a year ago and just got him removed from our
5 company list. So I know it's going to happen.

6 You know, there are some of the
7 technical hurdles that still need to be covered.
8 We kind of heard from Tom Baker talking about, you
9 know, just the different systems. I mean, a
10 receiving facility, their system isn't just for
11 manifests. It's used for billing purposes. It's
12 used for inventory, and also, you know, manifests
13 and other sorts. And so kind of getting the
14 necessary information into the EPA's system may be
15 a technical hurdle under this option.

16 And it seems that most people are
17 still utilizing the, you know, the data plus image
18 option, and so how do you move away from that? So
19 I guess one of the bigger hurdles is getting the
20 users on the same page. You know, if our company
21 has registered a site manager for the generator
22 and transporter and can create the e-Manifest and

1 has no problem, you know, certifying or signing
2 the manifest, what good is it if the receiving
3 facility cannot accept it?

4 And there's -- like we talked about,
5 there's many reasons why that -- a receiving
6 facility may not be able to accept it under the
7 current method. So yeah. I see that there are
8 some technical issues with Option 2. Thank you.

9 **DR. FRED JENKINS:** Okay. Thank you,
10 Jill. Michael Hurley.

11 **MR. MICHAEL HURLEY:** Thanks, Fred.
12 This is Mike Hurley. So we sort of covered this
13 particular question for the other option, and I
14 don't think there's anything particularly new
15 about this over Option 1. There's just -- as Jill
16 eluded to, there's still the issue of -- I guess
17 it's more of a social consideration rather than a
18 technical consideration, which is how do you
19 migrate receiving facilities and others off of the
20 current process and onto this one? And I think
21 that becomes really the core question.

1 The technical questions, I mean,
2 technical issues, you just work them out. They're
3 built in the software and other things like that.
4 But the real issue would be how do you get people
5 to actually migrate to this process? Thank you.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Michael. Terry Baer.

8 **MR. TERRY BAER:** Thank you, Fred.
9 Terry Baer. Yeah. I mean, as the -- my other
10 colleagues have already -- or Board members have
11 already mentioned -- yeah. I think the hurdle
12 here is more of the value added. So it's creating
13 the value added and moving into the system. So
14 obviously, I think in more of this within context
15 of question E around the facility -- receiving
16 facility.

17 You know, as Mr. Baker has already
18 spoke to about the added benefits and ease from,
19 like, his customer's standpoint and the generators
20 and transporters, I know in Arizona we've been
21 kind of pushing the system. But just folks aren't
22 seeing the value. And I think that's the

1 technical hurdles that it just -- the value hasn't
2 been realized. Thank you, Fred.

3 **DR. FRED JENKINS:** Okay. Okay.
4 Thank you, Terry. Tom Baker. And there's an echo
5 in the background. If someone has their phone on
6 speaker that might be the root of the echo. But
7 if everybody could make sure their phones on
8 speaker to prevent the echo sound issue. Tom
9 Baker, you had a response you wanted to provide?

10 **MR. THOMAS BAKER:** Yes, Fred. Thank
11 you. I just wanted to point out that we had said
12 earlier, I believe, in the comments that we did
13 not think Method 2 was a viable method to pursue,
14 that Method 1 was the preferred method over 2. So
15 I just wanted to point that out again in light of
16 the comments, you know, about how to improve and
17 implement Option 2.

18 Bottom line is Method 2, in my
19 opinion, is not worth perusing. So other folks on
20 the Board may feel differently and should speak up
21 if I'm misstating it for the Board, but, you know,
22 I want to make sure that we don't convey the wrong

1 message with giving suggestions on how to improve
2 Method 2 where I think it's not worth pursuing.

3 Thank you.

4 **DR. FRED JENKINS:** Okay. It looks
5 like Joshua Burman wants to speak up and also
6 Terry Baer. So Joshua are -- your hand was raised
7 first.

8 **MR. JOSHUA BURMAN:** Thank you, Fred.
9 Just wanted to ask a question of Mr. Baker. I
10 responded to an earlier charge question on this
11 option, Option 2 as -- my opinion was that, as an
12 option to either stand alone or even in concert
13 with others to act as an increase in use of the e-
14 Manifest system from a "how do we get manifests
15 in, how do we get them initiated, notified," --
16 again I'm trying hard not to use the word "signed"
17 -- that it was probably non-productive.

18 But from an overall point of view,
19 if EPA, as it appears to be, is reconsidering its
20 prior stance that all users must be identity
21 proofed and meet full CROMERR requirements, if
22 that's potentially no longer the case, then easing

1 I believe quite a bit -- easing quite a bit the at
2 least registration process for other users, I
3 believe, would be a benefit. And I just wanted to
4 find out if you believe that you don't see that as
5 a benefit? And I'm directing this to Mr. Baker.
6 If you don't see that as a benefit or if you think
7 that the software changes to affect that would be
8 more than the benefit received? Thank you.

9 **DR. FRED JENKINS:** Okay. I'm going
10 to let Tom respond and then we'll go to Terry.
11 Tom Baker.

12 **MR. TERRY BAER:** So yeah. This is
13 Tom Baker. So I think in that context, Joshua, I
14 don't disagree. I -- you know, it is a step in
15 the right direction. It signals EPA's flexibility
16 in avoiding the identity proofing process for
17 someone to be signing a manifest, so I do
18 acknowledge that's a benefit.

19 I guess where I draw the line though
20 is in the scope of -- the big scope of things in -
21 - to focus on substantially increasing the use of
22 electronic manifests shipments it's, in itself,

1 not a solution. But I do -- you know, I would
2 agree with your statement in the context that you
3 provided it in. Thank you.

4 **MR. JOSHUA BURMAN:** This is Joshua
5 Burman --

6 **DR. FRED JENKINS:** Okay.

7 **MR. JOSHUA BURMAN:** -- thank you for
8 that clarification.

9 **DR. FRED JENKINS:** Okay. Thank you,
10 both. Let's go to Terry Baer.

11 **MR. TERRY BAER:** Yeah. Thank you,
12 Fred. Terry Baer. Just to -- as response to Mr.
13 Baker's question. Yeah. I would agree. I mean,
14 if you're looking at, as we kind of already
15 discussed, the preferred methods, definitely think
16 that, you know, Method 1 adds more value.

17 I think it's great that EPA is
18 evaluating multiple options because obviously the
19 more that's available to industry then it
20 eliminates barriers in all aspects. So I guess
21 that was kind of my approach to the question was
22 with that context of -- to follow kind of the

1 outline. But I would agree that, if you were to
2 prioritize each method, obviously, I think Method
3 1 would be prioritized over Method 2 in the
4 advantages and use. Thank you, Fred.

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Terry. Do any other Board members have a response
7 to Charge Question 3F? Okay. Let's turn to the
8 Agency. Do you -- are you clear on everything you
9 heard on Charge Question 3F?

10 **MR. STEVE DONNELLY:** This is Steve
11 Donnelly. Yes. WE are clear. Thank you.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Steve. We'll move on to the next charge question.
14 We are now into Charge Question Number 4. I'm
15 going to turn it over to Mimi Guernica who will
16 read Charge Question Number 4 into the record.

17 **MS. MIMI GUERNICA:** All right.

18 **DR. FRED JENKINS:** Go ahead, Mimi.

19
20 **CHARGE QUESTION 4 (4A)**
21

1 **MS. MIMI GUERNICA:** Yes. Hi. We
2 have moved onto Method 3, which focuses on
3 digitized signature pads. 3A states to what
4 extent does the Advisory Board support this method
5 to increase the use of electronic manifests by
6 generators and transporters?

7 **DR. FRED JENKINS:** Okay. So the
8 lead discussant, Joshua.

9 **MR. JOSHUA BURMAN:** Thank you, Fred.
10 Thank you, Mimi. I'd like to begin my response by
11 clarifying that EPA's presented Option 3 appeared
12 to, and then was confirmed by Mr. Donnelly
13 yesterday, as assuming that all CROMERR
14 requirements would continue to apply and that EPA
15 appeared to be rejecting its own potential change
16 of reasoning regarding whether individuals acting
17 on behalf of generators and transporters would
18 have to be identity proofed and meet all CROMERR
19 signature requirements for use of a digital pad
20 type device or interaction with the system. And I
21 -- my reflection on that is there does not seem to
22 be any reason whatsoever to not apply the same

1 forward thinking and development that EPA has very
2 admirably done reconsidering its view of
3 signatures and what's necessary, what's needed,
4 what's a practical requirement and what's a, gee,
5 it would be nice to have but not really essential
6 regarding signatures and therefor notifications,
7 approvals, whatever other word we'd want to use to
8 not use that term to digital pads as well. And I
9 think that changes -- could change the entire
10 outlook.

11 The Option 3, as presented with
12 development of digital devices that would have to
13 meet all CROMERR requirements requiring either
14 completely new digital devices or complete new
15 software package for existing devices that are
16 common in the industry, bluntly, from at least the
17 state of Minnesota's experience, would be a non-
18 starter. Zero interest, no reason to pursue it
19 whatsoever. It would not work.

20 Technology, the equipment itself
21 moves so quickly as a somewhat parallel -- it's a
22 little different but I believe lessons learned or

1 parallel example. The state of Minnesota invested
2 an unfortunately large amount of time and money
3 into developing, or trying to develop, digital
4 inspection pads for inspectors to carry in the
5 field. And there were a lot of concerns about
6 security and how do we make sure that some
7 regulated party doesn't pick up the pad when the
8 inspector's not looking and change all the
9 inspection findings.

10 And how do we ensure that some
11 person doesn't hack the system and, again, replace
12 an inspection report with a different inspection
13 report? And what it resulted was, was hey, here's
14 a theoretical prototype that we found a
15 manufacturer that can build for a gigantic amount
16 of money, and oh, look. iPads and Chromebooks and
17 other tablet devices are way beyond it already.
18 Several years and a lot of money was spent, and
19 the technology of the common marketplace outpaced
20 it. And we eventually ditched the entire effort
21 and said, well, that was a waste.

1 I would not want to see EPA go down
2 the same path, whether it looked at developing the
3 equipment itself or entertained industry
4 development of a CROMERR compliant device solely
5 for manifests. With all the limitations that we
6 discussed on digital devices, tablets -- so, for
7 example, at the last meeting in June 2019, non-
8 starter. But if instead EPA takes the same
9 consideration that it gave when proposing Option 1
10 and extends it here, the game is changed and now
11 it becomes a potentially very attractive option, I
12 believe.

13 The technology is easily available.
14 There are signature pads fielded by quite a few
15 large nationwide transport services that would
16 appear to be able to accept all the data elements,
17 to provide readable screens to accept an image of
18 signatures if that is still needed or to input
19 names onsite, as long as they are connected
20 digitally, or even to accept new information not
21 connected and then later upload. That's all
22 available.

1 What is needed is relatively -- and
2 I am not a coder, I am not a software developer --
3 but looking at what these devices and software
4 they run already do, relatively minor changes to
5 that -- to the basic software model. The amount
6 of coding would seem to be substantially less than
7 inventing from scratch. And potentially a very
8 viable option, even up to and including
9 information that I would argue -- and did argue
10 last year -- is not even necessary, such as a jpeg
11 image file of a signature if EPA really wants
12 that.

13 And I'm going to remake a point I
14 made back in 2019, which is, that's what we've got
15 now. The idea that the existing hazardous waste
16 manifest system incorporates any level of
17 verifiable signatures is pure fantasy. What EPA
18 has now is jpeg images, often of very poor
19 quality, of signatures. And to expect anything
20 more is actually and effectively to add a new
21 dramatic requirement that doesn't currently exist.

1 And I don't believe that's what EPA intends nor
2 should it.

3 If we take that view, then there's
4 some very interesting possibilities, one of which
5 I alluded to, I believe on Tuesday and again
6 yesterday, which is that in parallel and
7 apparently completely independently, the U.S. DOT
8 very recently as of September of 2019 extended a
9 special permit to a nationwide transport service
10 who uses, on a daily basis, digital devices to
11 track all shipments, even, quite frankly, far more
12 extensively than hazardous waste manifest system
13 does. Many couriers -- and I'm not endorsing this
14 one or singling them out. It's just they were the
15 ones that were extended the special permit that
16 I've seen. Literally packages in route are
17 tracked by the hour from vehicle to vehicle, from
18 building to building. That's a level of detail
19 far beyond what the hazardous waste manifest
20 system currently has, nor I would argue do we
21 want.

1 But it shows that that system
2 already collects far more data than we might need
3 and therefor is a very robust system that -- whose
4 model bares close looking at because that
5 transport service has been extended already a
6 special permit from the DOT exemption from the
7 hazard materials shipping paper hard copy
8 requirement. They're using those digital devices
9 already or in some instances -- personally, I'm
10 not sure how large a field test this transport
11 service is doing. They're allowed to use it
12 fairly extensively according to the special
13 permit, but, obviously, it's up to them how far
14 they decide to go as a company.

15 The -- at least in those test
16 services, they're not carrying a hard copy at all.
17 What they have is a digital device that is
18 functioning as the hazardous material shipping
19 paper that's carrying -- those these are not
20 hazardous waste shipments; they're hazardous
21 materials shipments -- that's tracking more
22 information than the hazardous waste manifest

1 contains. And so I think that's a model that --
2 whether that company or others that may be either
3 in the process of applying for special permits
4 from U.S. DOT or that might, without my knowledge,
5 already have them, whether they would be
6 interested in sharing any information with EPA or
7 in some future development is unknown. But I
8 certainly think it bares looking at.

9 Just for EPA's reference, that's DOT
10 special permit 15747. It was issued in September
11 2019. And that I think would be interesting for
12 EPA to push DOT on in that, if DOT is already
13 willing to field test or allow a company to field
14 test an exemption from the hazardous material
15 shipping paper hard copy requirement, would DOT be
16 willing to partner with EPA to say, "Okay. We're
17 going to do or allow a field test of a digital
18 device under that -- under a parallel exemption
19 from the hazardous material hard copy and shipping
20 paper requirement. And we're also rolling in the
21 hazardous waste manifest under a modified Option 3
22 -- modification being non-CROMERR requirement or

1 the removal of the CROMERR requirement, except for
2 the final facility upload, at which time it's no
3 longer on the portable digital device anyway?"

4 My understanding -- and I am not a
5 software guy. I'm not a tech guy at all. My
6 understanding of how many of those systems work is
7 that they can work in either offline or online
8 mode. If offline they collect manually inputted
9 data and then later, when they have a network
10 connection, either automatically or upon the user
11 activation, link back up with the system and sync.

12 And while there were some concerns
13 raised last June regarding what happens when
14 you've got, quote, two copies of a manifest --
15 you've got a copy either digitally or in hard copy
16 form left with the generator. And now you've got
17 a transporter with a copy, an electronic form on
18 their vehicle. What happens if the -- and how do
19 we prevent the transporter from fudging the data
20 or changing things, either deliberately or
21 inadvertently? Or what happens if that electronic

1 device is destroyed in transit so that
2 information's lost?

3 That's definitely some experience
4 that many of the major carriers in the courier
5 industry have definitely faced. They have exactly
6 those questions and concerns, and I would suggest
7 that they have likely answers for them already
8 that we haven't heard here. In all that vein,
9 taking that huge change of removing the CROMERR
10 requirement from the devices, I think, my
11 reflection -- and I probably want to circle back
12 after other Board members have talked -- is this
13 is very attractive and potentially one of several
14 potentially successful options that may help
15 address the marriage of the industry database
16 electronic management system with the e-Manifest
17 system, which is currently a challenge.

18 And I would certainly reflect back
19 to what Mr. Baker said, what the representative
20 from ETC said, and other Board members have said,
21 which is user registration and, quote, signatures
22 or user interactions with the system is one

1 barrier. But the really -- the big barrier
2 looming beyond is how do the existing industry
3 systems which serve many functions far beyond
4 manifesting -- everything from billing to employee
5 scheduling to workload balancing -- how do we tie
6 that in with the e-Manifest system?

7 And I think, again, these are models
8 that are out there that may already perform this
9 function and with some relatively conceptually
10 minor tweaking may perform a function. And I
11 certainly would love to hear from our IT
12 representatives on whether I'm way off base on
13 that. And thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Joshua. Cindy Walczak.

16 **MS. CYNTHIA WALCZAK:** Hi. This is
17 Cindy Walczak. I agree with Joshua, actually,
18 which is to say that I like the idea of digitized
19 devices. But I don't love the idea of CROMERR
20 compliant devices simply because we've already --
21 EPA's already established that the only signature

1 that needs to be CROMERR compliant is the one that
2 submits the data to EPA.

3 And so, if we don't need CROMERR
4 compliant signatures from the transporter or from
5 the generator or even the guy at the dock, it
6 doesn't seem to me a good use of resources for EPA
7 to develop CROMERR compliant devices. I'm not
8 sure if everyone follows, but it's -- the way it's
9 described in the white paper and EPA's
10 presentation is that these would be CROMERR
11 compliant devices. And it's been established that
12 we don't need CROMERR compliant signatures.

13 So it's a little confusing to me.
14 But if we take that CROMERR aspect out of it, then
15 it seems to me that EPA doesn't really need to
16 develop devices. They just need to accept
17 devices; they need to accept jpegs, basically. So
18 I -- and that I think is quite worthwhile,
19 frankly. That's all I've got. Thank you.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Cindy and now to our -- one of our IT experts, Dr.
22 Tevfik Kosar. Go ahead, Tevfik.

1 **DR. TEVFIK KOSAR:** Hi. This is
2 Tevfik Kosar. First, I would like to re-emphasize
3 the concern raised by Joshua and Cynthia regarding
4 this CROMERR requirement, I think, since this
5 really important for the success of Method 3.
6 During the public comments and other discussions
7 yesterday, it was mentioned that strict CROMERR
8 requirements was one of the major bottlenecks in
9 the adaptation of fully electronic manifests. And
10 in the current proposal, this requirement is
11 waived for Methods 1 and 2, which is really great
12 and a very positive step forward.

13 But as we understand it, this
14 requirement is not waived for Method 3. So
15 waiving the CROMERR compliance requirement for
16 Method 3, as well, will definitely have a
17 significant impact on the success and adaptation
18 of this method. There is no question about it,
19 and I would like to reemphasize this.

20 The proposed Methods 1 and 2 alone
21 do not allow generators and transporters to sign
22 electronic manifests if they are not connected to

1 the network if we understand. And this can happen
2 quite frequently. In that respect, use of digital
3 signature pads is a definitely feasible compliment
4 for Option 3 to support of signing of e-Manifests.

5 Again, according to the public
6 comments we have heard yesterday, many TSD
7 facilities are already using digitized signature
8 devices for their chain of custody tracking in
9 their own e-business systems, and they can
10 definitely use the same devices for electronic
11 manifests. This means the transition to use these
12 existing devices for digitally signing e-Manifests
13 would not be really difficult, especially for
14 those facilities which already have those devices.

15 Additionally, digital signature
16 applications running on smart devices, such as
17 tablets and smartphones, can definitely be used as
18 an alternative method, which will make the
19 adaptation of this mechanism across wider
20 community much easier and lower the cost
21 considerably. Thank you.

1 **DR. FRED JENKINS:** Okay. Thank you,
2 Dr. Kosar. So we have Michael Hurley. Go ahead,
3 Michael.

4 **MR. MICHAEL HURLEY:** Thank you,
5 Fred. This is Michael Hurley. I just -- kind of
6 embarrassed saying this out here in front of
7 everybody in the whole world. I'm a lazy
8 consumer. And if I was in the e-Manifest or
9 manifesting market and I'm looking for something,
10 I want to do the easiest thing possible. And
11 that's kind of why I support this Option 3 sort of
12 the most.

13 If a transporter came before me and
14 said, "Here, just -- here's the thing, you can
15 look at your manifest on this device." And I look
16 at it and I go, "Yeah. That's what I did." And
17 they say, "Click this button. Sign here." And I
18 go, "Sure," and I just do it, scribble my
19 signature done. He goes, I go, we're all set. I
20 can look at this online later if I wish to.

21 That to me sounds like the perfect
22 solution. It's not a half and half where I have

1 to go log into a system. It's not something where
2 I sign a piece of paper that then becomes
3 digitized. It's all of a piece. It's perfect.

4 I think what's holding us up -- and
5 we talked about this at considerable length at the
6 last meeting -- I think Josh is referring to our
7 greatest hits package that was out there. We did
8 talk about this at length, and I still support
9 this. I think this is the best solution.

10 And I think by eliminating the
11 CROMERR parts of the signature steps, that's where
12 you end up with the winner because that makes it
13 easy to develop, easy to deploy. You don't have
14 to worry about proprietary devices. You could use
15 whatever is out there, whatever people choose to
16 use. You could use different software packages
17 from different vendors. They just have to be
18 compliant with the data model that the e-Manifest
19 team specify. It's -- I think this is just the
20 best option.

21 And again, ETC was saying that they
22 felt in their comments that the best option really

1 was a combination of 1 and 3, and I agree. You
2 take away the CROMERR pieces. It makes it easier
3 on the signature end. You make a device that
4 shows the whole manifest. It takes care of the
5 whole thing. It uploads to e-Manifest. I mean,
6 you have to make allowances for the offline
7 operation and things like that, but I think this
8 is the best of the options. Thanks.

9 **DR. FRED JENKINS:** Okay. Thank you,
10 Michael. Joshua Burman. Joshua, you --

11 **MR. JOSHUA BURMAN:** Thanks, Fred.

12 **DR. FRED JENKINS:** -- have your --

13 **MR. JOSHUA BURMAN:** I apologize,
14 Fred I have phone problems here. Again, I am not
15 a technical person, even with a cellphone. I
16 wanted to tail off of what Mr. Hurley was saying
17 and completely agree. I do believe that either
18 this Board or EPA or some combination does need to
19 ensure we don't overlook the potentially fairly
20 common situation of offline data entry, whether it
21 be at the generator site, whether it be at a
22 transporter to transporter transfer, which, as Mr.

1 Baker and others have pointed out, can literally
2 happen on the side of the highway in eastern
3 Montana where there's not a cell tower in sight,
4 so essentially offline.

5 I, frankly -- as a state
6 representative, I'm very comfortable with the data
7 side and the fact that, okay, data's residing in
8 this device. The device goes with the waste.
9 Wherever the waste goes, the device goes, unless
10 and until it's uploaded to the system, which it'll
11 do hopefully either automatically as soon as it
12 hits coverage or upon activation by the operator
13 driver at their home base, at a dock, wherever.
14 The one element that's missing -- and I'm speaking
15 from the state regulator point of view -- is,
16 particularly at the generator site, we need to
17 make sure that we include in that model some
18 method for the generator to get a current copy of
19 that data showing what the waste was, when it
20 left, who -- what transporter -- not necessarily a
21 person -- but what transporter accepted it and
22 when. And while they're traditionally the hardcopy

1 manifest that's inherent and automatic -- when you
2 use a six-copy carbon form, you tear off a copy
3 and okay, there, they've got it.

4 In the online mode it's -- we don't
5 even have to think about that. If the device is
6 operating in an online mode, then the information
7 is instantly uploaded to the system two minutes
8 after the truck leaves. If the generator wants to
9 wander back into their office, find a desktop or
10 laptop computer, and log into the system and view
11 their manifest and say, "Yep, there it is. My
12 waste went out on that truck. I can still see it
13 on the road driving down, and there it is,"
14 great.

15 But if the device is operating in
16 offline mode, the generator or initial transporter
17 if handing off to another transporter needs a copy
18 of that data. And as long as the DOT hazardous
19 materials shipping paper hard copy requirements --
20 okay, that means we have to have a printer
21 somewhere to print out a current, final shipping
22 paper. I think the possibilities of the DOT,

1 which is clearly opening itself or has opened
2 itself after many years of contemplation to
3 looking at portable device electronic hazardous
4 material shipping papers being potentially allowed
5 and tested now, okay, that solves a great -- a
6 hard problem. But it then presents us with a
7 minor associated result, which is now we're not
8 assuming that we're going to have to have a
9 printer or connected device somewhere to a printer
10 to create that shipping paper, which could also
11 function as the generator's, essentially, receipt
12 or copy of information.

13 There would appear, just on my non-
14 technical side, to be quite a number of options.
15 I don't know whether existing -- the existing
16 digital devices commonly used by transport
17 services and courier delivery services support
18 connection with non-internal network systems, i.e.
19 will they Bluetooth or use a Wi-Fi connection to
20 something other than their home base? For
21 security purposes, that may not be desired. Can
22 they Bluetooth out? Can they somehow send a copy

1 of that data out to an outside system, an outside
2 network, an outside device such that a generator
3 could say, "Oh, yeah. We're offline. Okay."

4 And then it brings up a bugaboo but
5 just as an example -- kind of an outmoded example
6 now -- but here's a thumb drive. Drop it on
7 there. Obviously, the IT experts and security
8 experts in the room are jumping up and down going,
9 "No, no. Don't ever plug an unknown thumb drive
10 into your device. Bad idea security wise."

11 But I just wanted to raise that as
12 something that we want to be careful not to
13 overlook because, from a regulator's point of
14 view, I do -- when I go to a site say you need --
15 before that truck leaves your parking lot, you've
16 got to have something, whether it's a photocopy of
17 a manifest, whether it's the carbon copy of a
18 manifest, whether it's a picture you took on your
19 cellphone of a screenshot of a device. You've got
20 to have something in documentation in your
21 possession of what just left your facility.
22 Because, otherwise, you're in deep trouble.

1 You have no idea, yet you have full
2 liability. You're not in trouble with me. I
3 mean, yes, you are, but I'm not who you need to be
4 concerned about. You need to be concerned about
5 your liability here. So I just wanted to raise
6 that as something that we definitely need to look
7 at.

8 And then I do have another comment,
9 but I would like to invite any other Board members
10 to, or EPA if they clarification questions, to
11 reflect on that before I move on to any other
12 because it's separate. It's different. Thank
13 you.

14 **DR. FRED JENKINS:** Tom Baker.

15 **MR. THOMAS BAKER:** Thank you, Fred.

16 I just wanted to add to the conversation that, you
17 know, again to reconfirm that digitized pads could
18 be a potential solution, provided they don't need
19 to be CROMERR complaint, essentially. There are
20 some service industries -- there are some waste
21 services groups today that use digitized pads in
22 their business applications. And their ability to

1 continue to use those pads and devices, you know,
2 in this manner would certainly be an option that
3 they would likely pursue. Again, it's not widely
4 used across the industry as a whole, but there are
5 companies that do have systems in place that they
6 could potentially leverage and take advantage of.
7 Thank you.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Tom. Do we have any other Board members that want
10 to address Charge Question 4A? Okay. Let's turn
11 to the Agency. Oh, I'm sorry. Joshua, go ahead.

12 **MR. JOSHUA BURMAN:** Thank you, Fred.
13 Yeah. I wanted to give everybody a chance to
14 bounce anything back to me on that before I
15 rambled on into something that's still related to
16 this charge question but different than my
17 previous comment. So apologize for any confusion
18 caused by that.

19 I just wanted to note so we can
20 develop it further if we need to in the minutes or
21 -- that the Association of American Railroads did
22 submit, as part of their public comment, a copy of

1 a different special permit issued by the DOT
2 regarding hazardous materials shipping papers.
3 And in fact, talk about new, this one appears to
4 have been issued this week Monday, so brand new.
5 But I had wished that the Association had made a
6 verbal comment because I -- their written comment
7 submittal raised a lot of questions that remain
8 unanswered.

9 This special permit does not appear
10 to completely exempt the hard copy shipping paper.
11 It simply appears to exempt certain information
12 regarding hazardous materials in a train. This is
13 a special permit specifically for a railroad
14 regarding the location of hazardous material in
15 the train, not necessarily the hazardous material
16 shipping paper itself.

17 So whether -- obviously, it can't be
18 part of the public record for this meeting. But
19 whether at some point in the future the railroads
20 may choose to clarify to EPA what they had
21 intended EPA to consider, I think for this Board
22 it unfortunately doesn't appear applicable at this

1 time. And I just wanted to clarify that. Thank
2 you.

3 **DR. FRED JENKINS:** Yeah. And just
4 in response to what Joshua just said about the
5 public comment, it was submitted to me as an
6 intended public comment. So what was submitted to
7 me, it will just go into the public record because
8 the submitter made it clear to me that they wanted
9 that to be considered as their public comment in
10 the record. So are there any other -- is any
11 other responses from the Board in regard to Charge
12 Question 4A? Okay. I'm going to turn to the
13 Agency. Are you all clear on everything you all
14 heard for Charge Question 4A?

15 **MR. STEVE DONNELLY:** Yes, Fred. The
16 EPA -- this is Steve Donnelly. The EPA has no
17 clarifying questions. Thank you.

18 **DR. FRED JENKINS:** Okay. Quickly
19 I'll just want to mention before we go on to the
20 next charge question -- so we're at 2:00 right now
21 and we have a -- we're approaching a break at
22 2:30. So we're going to keep going until that

1 break time. But I just want to remind the Board,
2 we are a bit -- a little bit ahead of schedule,
3 but I don't want the Board to get too comfortable
4 as far as time because we have a limited time to
5 answer -- you know, we probably have I think about
6 seven charge questions left to answer.

7 So I want to remind the Board,
8 please be cognizant of the time. This being a
9 virtual meeting, we have this platform reserved
10 for a set time, so we have to get to all these
11 charge questions within that set time. So let's
12 keep things at an efficient -- going at an
13 efficient clip, answer the charge questions, and
14 minimize any, you know, delay or further
15 discussion if not necessary. Get your responses
16 into the public record and we move on to keep
17 ahead of time. So with that said, I'm going to
18 ask Mimi to read the Charge Question 4B into the
19 public record.

20
21 **CHARGE QUESTION 4 (4B)**
22

1 **MS. MIMI GUERNICA:** Okay. Question
2 4B, are there unique industry circumstances for
3 EPA to consider when developing and implementing
4 this method?

5 **DR. FRED JENKINS:** Okay. Thank you,
6 Mimi. Joshua Burman, you're the lead. Go ahead.

7 **MR. JOSHUA BURMAN:** Thank you, Fred.
8 Thank you, Mimi. This is Joshua Burman. I --
9 looking at my notes I apologize to everyone. I
10 realize I think I mixed up my responses to two
11 charge questions here. And so I'm going to say
12 the same things, but they probably should have
13 been reversed.

14 Unique industry circumstances, I
15 think the most critical that at least I can see at
16 this point I just addressed in response to the
17 last charge question, which is ensuring that data
18 is shared between both the offering and receiving
19 party at any transaction where hazardous waste
20 changes possession when working in offline mode.
21 Somehow both parties need to get a copy of that
22 data, whether it's in a hard copy form, whether

1 it's in an electronic form, whether it's an image
2 of data displayed. Somehow both parties need to
3 get a copy of that for their own liability
4 protection as well as regulatory compliance so
5 that states and federal government can oversee
6 that transaction and ensure that it's following
7 what we need and want to happen.

8 But then you might view this as a
9 further or better response to the previous charge
10 question. I'm just going to take this time to say
11 the digital device would appear, as long as the
12 stipulation that CROMERR does not apply, to meet
13 one of the concerns raised by several commenters
14 about Method 1, which is Method 1 relies on
15 somebody at the site -- we'll call them the site
16 manager, but it can be anybody -- somebody at a
17 site prepopulating the e-Manifest system with a
18 list, be it one or a hundred contacts, of
19 potential users for either a particular manifest
20 or for that site, however the site and e-Manifest
21 system want to condition that data.

1 What happens when, well, a company
2 listed three people and by a bizarre set of
3 circumstances -- which happens more than we might
4 want it to -- one person's sick, one person's got a
5 sick kid, and the other person's in a meeting with
6 the president and cannot come down right now to
7 the dock? So now you need person number four.
8 Problem, person number four wasn't previously
9 identified. Their cellphone number's not anywhere
10 in the system.

11 It would -- right now it would
12 appear the only best default would be, okay, bring
13 out a hard-copy manifest. We've got to go start
14 back from the beginning. The digital devices
15 would appear to offer a quick and easy and
16 reliable method to add information if that
17 information was necessary.

18 We do this, all of us, every day in
19 our professional world and our private world.
20 When a delivery service brings us a package and
21 the sender of the package has stipulated that a
22 signature -- used in air quotes. You can't see

1 that -- but a signature is required, very commonly
2 not only do they obtain an image of a signature,
3 whether that's in jpeg or png or some other file
4 format, they also ask for a name.

5 And it would certainly seem to not
6 be much harder to ask for a name in any additional
7 data parameters that we might feel appropriate.
8 Employer, are you a direct employee of this
9 company, that is the generator or first
10 transporter company? Or are you a contractor.
11 Okay? Do I think position title's important? No.
12 But if that's a data element we all agreed or EPA
13 decided it wanted, that could be thrown in their
14 as well.

15 And I don't think -- maybe it --
16 maybe I didn't need to bring it up because it's,
17 well, duh. Yeah, of course. We all know that.
18 You don't need to bring it up. That's an obvious
19 advantage of a digital device.

20 I wanted to bring it up to say, hmm,
21 that solves a little problem that we'd already
22 identified as a problem that this could be one of

1 the solutions for when you combine the multiple
2 options. That certainly could do that. And that
3 option -- or excuse me, that advantage would
4 appear to apply whether it's in offline or online
5 mode. Because as long as that data's entered into
6 the device, I don't need that data instantly in e-
7 Manifest system.

8 As long as it's tied to the
9 information regarding that waste shipment -- the
10 collection of data we are referring to as a
11 manifest -- that's fine with me. That's all I
12 needed. And whenever that data's uploaded, the
13 additional new user information can be uploaded as
14 well. So thank you.

15 **DR. FRED JENKINS:** Okay. Cindy
16 Walczak.

17 **MS. CYNTHIA WALCZAK:** I'm sorry. I
18 just -- I don't really think I have anything to
19 add at this time. Thank you.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Cindy. Okay. Tevfik Kosar.

1 **DR. TEVFIK KOSAR:** Hi. This is
2 Tevfik Kosar. I think one of two major impacts on
3 the industry would be the cost of implementing
4 this method, especially if Method 3 continues to
5 require CROMERR compliance. This would result in
6 TSD facilities and companies having to perform
7 very expensive hardware upgrades or equipment
8 substitutions to ensure compliance with CROMERR.
9 This was also mentioned in one of the public
10 comments yesterday. And I think this will
11 significantly decrease the effectiveness of this
12 method.

13 Also, another issue we need to
14 consider when developing and implementing this
15 method is when especially the transporters are
16 using digitized signature devices for offline e-
17 Manifest signing, we need to make sure that
18 transporters can also -- or they should also have
19 the capability to modify the manifest in the
20 offline mode if necessary. So we need to consider
21 this in the implementation of this method to make
22 sure not only the capability of signing but also

1 the ability to modify and change the e-Manifest.

2 Thank you.

3 **DR. FRED JENKINS:** Okay. Thank you.

4 And are there any other respondents to Charge
5 Question 4B? We'll go to Jill Macioch. Go ahead,
6 Jill.

7 **MS. JILL MACIOCH:** Thank you, Fred.

8 Thank you. This is Jill Macioch. So I guess I'd
9 like to see the removal of the CROMERR compliant
10 electronic signature as well, at least to the
11 generator, for the situation of what if they
12 cannot sign. And here's my example that I was
13 thinking of, I think, yesterday. This is
14 certainly not an industry specific, but we are
15 definitely under unique circumstances right now
16 due to the COVID-19 outbreak.

17 During these extreme circumstances,
18 we're going through unprecedented times at home
19 and at work for essential employees. The company
20 I work for, as a utility, has several critical and
21 essential employees. At our company we were -- we
22 recently received notification, in order to reduce

1 the potential exposure to employees from the
2 COVID-19 virus, that employees were not to sign
3 any digital devices during this timeframe until
4 further notice.

5 So they are to have the delivery
6 person sign on their behalf if possible or state -
7 - you know, I don't if there's sometimes, like,
8 check boxes on these devices or maybe there's no
9 signer available or under circumstances, if they
10 have to sign, that they do so with gloves. And
11 that might not always be possible.

12 So if someone cannot or does not
13 sign at the dock, would all the parties understand
14 that the CROMERR compliant electronic signature
15 requirements -- would a driver say "Hey, you
16 cannot -- you have to sign. This is CROMERR --
17 this has to be CROMERR complaint?" Or would a
18 driver potentially say, "Hey, no problem. I'll
19 sign on your behalf?"

20 I guess -- or as Mr. Josh Burman
21 just brought up -- or maybe a transporter could
22 add the user information themselves such as

1 mentioned as a name or other identified data
2 parameters. So hopefully, you know, this is a
3 one-time situation, but will there be unique
4 circumstances in the future that would prevent a
5 user from signing a digital device? Thank you.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Jill. Go ahead, Joshua.

8 **MR. JOSHUA BURMAN:** Thank you, Fred.
9 And I want to thank Ms. Macioch for raising the
10 current situation, which I honestly have been
11 thinking around but hadn't addressed so directly.
12 While the current situation is somewhat
13 unprecedented, I actually think there is some
14 bright clouds within the dark sky here, which is
15 that this is a really good mental model to adapt
16 and say, okay, this particular situation will
17 hopefully be relatively short-lived and hopefully
18 not repeated exactly in the near future.

19 But this is a great example of what
20 we need to build all options for the overall
21 system of the e-Manifest user interactions to be
22 able to handle. Because if it can handle this, it

1 can probably handle other things as well, things
2 that we can't or don't foresee now that will be
3 coming down the pike or, indeed, a repeat of
4 something like this. Which history suggests and
5 science suggests may actually become more common
6 due to changes in our world and how we interact
7 with our world.

8 So this I think is something that we
9 should not say -- I think it would be a mistake to
10 say, well, this is a unique situation. So let's
11 just get through this, and then we'll build the
12 system to handle normal. I think quite the
13 opposite. We build the system to handle this, and
14 then it should be able to take most of what life
15 throws at it and still operate because the last
16 thing we want is, okay, we're facing an
17 unprecedented national situation, be it this or
18 something else, and, oh, by the way, that means
19 that the e-Manifest system won't work. And now we
20 have concerns about, oh, we got all this hazardous
21 waste that's being moved around the nation, and we
22 really can't track it anymore.

1 So now we have a new chemical
2 concern that is added to whatever the crisis of
3 the moment is. So I think this is a really good
4 time to say, what situations, what problems, what
5 challenges are we facing as a result of this?
6 Let's build the system to meet those, and I think
7 that's the approach we should take. Thank you.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Joshua. Do we have any other discussants that
10 want to chime in on Charge Question 4B before we
11 move onto 4C? Okay. Let's move --

12 **MR. STEVE DONNELLY:** EPA has --
13 Fred, this is Steve Donnelly. The Agency has no
14 clarifying questions.

15 **DR. FRED JENKINS:** Okay. Okay.
16 Thank you, Steve. Okay. Moving on to Charge
17 Question 4C. I'm going to ask Mimi Guernica to
18 please read that into the record.

19
20 **CHARGE QUESTION 4 (4C)**

21
22 **MS. MIMI GUERNICA:** Charge Question
23 4C, are there impacts to state programs for EPA to

1 consider when developing and implementing this
2 method?

3 **DR. FRED JENKINS:** Okay. Thank you,
4 Mimi. Our lead for that question is Joshua
5 Burman.

6 **MR. JOSHUA BURMAN:** Thank you, Fred.
7 Thank you, Mimi. This is Joshua Burman. My first
8 response to EPA and to the Board is I'm going to
9 tail off of what Mr. Hurley said a few questions
10 ago, which is with the caveat of devices and/or
11 signatures captured by them and/or software
12 running them be CROMERR compliant, from a state
13 regulatory perspective, we love this option. This
14 is as close to not only the existing system with
15 which generators are already long familiar and
16 really don't want to change because it's what
17 they're doing, what they're used to. But this is
18 also a model that virtually every person in this
19 country is familiar with, as I mentioned in
20 response to the last question, in their personal
21 and private life.

1 We are used to being presented with
2 a digital device and asked to verify information,
3 look at what's on the screen, make sure it's
4 correct, check here, click here, push a radio
5 button there, scrawl your not really signature,
6 but some sort of a wavy line down here. We're
7 used to that, and it's comfortable and familiar.
8 And from a state perspective, whatever is
9 comfortable and familiar is easy to implement.
10 It's easy to explain. It's easy to make
11 analogies.

12 It's easy to say to people, "Yeah.
13 Okay. Your manifesting is going to change.
14 Instead of you grabbing a pen and having to push
15 really hard because we tell you you've got to hit
16 six copies and make sure you do that on a firm
17 surface, you're going to get handed a device just
18 like XYZ courier service uses. You remember
19 those, right?" "Well, yeah, yeah." Okay. Good.
20 Done. Let's move on.

21 Even more than Option 1, which I
22 think is worthy of development -- is definitely a

1 potentially good option, particularly -- and I'm
2 hoping maybe our industry representatives may be
3 able to provide more light on this -- but from my
4 experience and the state's experience, for smaller
5 independent transporters which don't have an
6 already fielded system of digital devices in their
7 trucks already, they only have two trucks. And
8 their drivers use tablets at home but that's it.
9 This would be -- digital devices would be an
10 investment for them. It would be something new.
11 It would be a change of business.

12 So for them, something like Option 1
13 may be very attractive. For big established
14 players that have already fielded digital devices,
15 which maybe with some software tweaks can simply
16 collect a few more data points or add new data
17 points to the information parameters that they
18 hold, this actually may be very easy. Or -- I
19 shouldn't say very easy. I apologize -- would be
20 easier than the current system and indeed may be a
21 big benefit. Whatever makes things simpler for
22 generators and transporters is going to make life

1 simpler for the states and going to make it more
2 effective for the states.

3 As I mentioned earlier, every minute
4 that I spend trying to explain how to work a new
5 system to a regulated party is one less minute
6 than I can spend accurately tracking waste,
7 dealing with problems, following up on manifest
8 errors that we say, "Whoop. Okay. The e-Manifest
9 system flagged something, and we should figure out
10 what happened." It's one less minute I can do
11 that. And with limited resources, that's great.
12 So overall, with the caveat that the CROMERR
13 requirement is completely removed except for the
14 upload from the final receiving facility, I think
15 this is very attractive to states.

16 **DR. FRED JENKINS:** Okay. Thank you,
17 Joshua. Cindy Walczak.

18 **MS. CYNTHIA WALCZAK:** Yeah. Thank
19 you. I don't think I have anything helpful to add
20 being a -- I think the state reps probably have a
21 -- can speak better to this but thank you.

1 **DR. FRED JENKINS:** Okay. Tevfik
2 Kosar.

3 **DR. TEVFIK KOSAR:** Hi. This is
4 Tevfik Kosar. Yeah. I think Joshua has
5 summarized the impacts of this method to the state
6 programs very well. Just to add what he already
7 said, I think training is a very important
8 component of this method. Especially, it brings
9 some additional requirements of both from the EPA
10 side and also from the state side in terms of
11 training of all of the stakeholders that have to
12 use this system.

13 And I think it will have an
14 important impact on how successful this method
15 could be. In this sense, I think the state
16 programs will need to be ready to offer extensive
17 training to all of the stakeholders for this
18 method to be successful. Thank you.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Tevfik. Do we have any -- oh, okay. Michael
21 Hurley go ahead.

1 **MR. MICHAEL HURLEY:** Hi. It's Mike
2 Hurley here. Yeah. I would just like to add, for
3 my state, this is -- to agree with Josh this is
4 the easiest thing for us to implement. It's a
5 very familiar model where, you know, there's no
6 paper document anymore.

7 There's this electronic thing. You
8 review the document, you sign the little keypad
9 thing, and you're done -- the signature pad thing
10 and you're done. And it's so easy to understand
11 because it's so familiar to you from the rest of
12 your life that it -- exactly as Josh said, it
13 frees up the state people's time where we don't
14 have to explain a complicated system to anybody.
15 It's obvious and intuitive this is how it works.
16 And I just wanted to support Josh's statements
17 there. Okay. Thanks.

18 **DR. FRED JENKINS:** Okay. Thank you,
19 Michael. Jill Macioch.

20 **MS. JILL MACIOCH:** Thank you, Fred.
21 Yes. Just a comment back to Mr. Joshua Burman, I
22 do agree. We still need an additional option,

1 whatever it may be, other than just only the
2 digital signature pad, not only for the smaller
3 independent transporters but also those small
4 private carriers that transport their own
5 hazardous waste and smaller generators that may be
6 generating their own manifests and working with
7 other independent transporters or other receiving
8 facilities. So that's all I wanted to add.

9 Thank you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Jill. Any other respondents to Charge Question
12 4C? Okay. No other respondents. Let's turn to
13 the Agency. Do you have any -- are you clear on
14 everything that you heard from the Board for
15 Charge Question 4C?

16 **MR. STEVE DONNELLY:** This is Steve
17 Donnelly. The Agency doesn't have any clarifying
18 questions at this time. Thanks.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Steve. So we're right at almost 2:20, and so I
21 was -- I propose that -- before we go into the
22 next charge question, I propose that we go on

1 break, so we don't prolong the opportunity to go
2 on break. And then we go on a 15-minute break and
3 we come back and start fresh on Charge Question 4B
4 -- I'm sorry, Charge Question 4D. Is everyone
5 okay with that? Kathleen?

6 **MS. KATHLEEN SALYER:** That sounds
7 great, Fred. Thank you.

8 **DR. FRED JENKINS:** Okay. Board?

9 **MR. THOMAS BAKER:** Fred, this Tom.
10 I was -- I mean, it just seems odd to me that we
11 would break before we finish up the Charge
12 Question 4 completely. I think we're on a roll
13 now, and I think we can wrap it up relatively
14 quick timeframe here instead of coming back to the
15 same topic again.

16 **DR. FRED JENKINS:** Well --

17 **MR. THOMAS BAKER:** I have -- sorry I
18 have a --

19 **DR. FRED JENKINS:** -- thank you --

20 **MR. THOMAS BAKER:** -- differing
21 opinion, Fred.

1 **DR. FRED JENKINS:** Oh, no, no, no
2 no. I have no problem with that. It's just that
3 the DFO has to do something really fast, take a
4 break. The DFO has to take a quick break.

5 **MR. THOMAS BAKER:** That's fine. If
6 you need to break, then it's fine.

7 **DR. FRED JENKINS:** Yeah. I don't
8 need to announce it to the world.

9 **MR. THOMAS BAKER:** I just thought
10 we're, you know, in the home stretch before --

11 **DR. FRED JENKINS:** No, no, no --

12 **MR. THOMAS BAKER:** Thanks.

13 **DR. FRED JENKINS:** No, yeah. I --
14 we will, but the DFO got to step away for, you
15 know -- and take a quick break and because of that
16 --

17 **MR. THOMAS BAKER:** I got you.

18 **DR. FRED JENKINS:** -- you know, we
19 have to take a break.

20 **MR. THOMAS BAKER:** That's fine.

21 **DR. FRED JENKINS:** But with that,
22 let's take a 15-minute break, and we'll see you

1 all at 2:00 -- let's say 2:35. Thanks so much.

2 See you all in a few minutes.

3
4 **[BREAK]**

5
6 **DR. FRED JENKINS:** Okay. And we're
7 back. All right. This is Fred Jenkins, DFO. I'm
8 just going to do a quick check to make sure
9 everybody's back so we can get started back with
10 the charge questions -- back from our break.
11 Okay. Starting with Kathleen Salyer.

12 **MS. KATHLEEN SALYER:** I'm here,
13 Fred. Thank you.

14 **DR. FRED JENKINS:** Okay. Terry
15 Baer.

16 **MR. TERRY BAER:** Terry Baer is here,
17 Fred.

18 **DR. FRED JENKINS:** Okay. Wonderful.
19 Tom Baker.

20 **MR. THOMAS BAKER:** Tom's here.

21 **DR. FRED JENKINS:** Okay. Joshua
22 Burman.

1 **MR. JOSHUA BURMAN:** Joshua Burman's
2 here.

3 **DR. FRED JENKINS:** Okay. Syed
4 Hafeez is not present. He's dealing with a work
5 emergency, but we do have his information, as I
6 mentioned, that we are going to read into the
7 record. Michael Hurley.

8 **MR. MICHAEL HURLEY:** I'm right here.

9 **DR. FRED JENKINS:** Tevfik Kosar.

10 **DR. TEVFIK KOSAR:** I'm here, Fred.
11 Thank you.

12 **DR. FRED JENKINS:** Okay. Jill
13 Macioch.

14 **MS. JILL MACIOCH:** Yes, I'm here.

15 **DR. FRED JENKINS:** Okay. Cindy
16 Walczak.

17 **MS. CYNTHIA WALCZAK:** Yes, I'm here.
18 Thanks.

19 **DR. FRED JENKINS:** Okay. So we are,
20 for the record we are all done with Charge
21 Question 4C. Correct, everyone? Am I right?
22 Okay. I'll take that as right, yes, we are done.

1 So let's move on to Charge Question 4D. I'm going
2 to ask Mimi Guernica to please read Charge
3 Question 4D into the record.

4
5 **CHARGE QUESTION 4 (4D)**

6
7 **MS. MIMI GUERNICA:** Charge Question
8 4D, are there unique technical considerations or
9 hurdles that EPA should take into account when
10 developing and implementing this method?

11 **DR. FRED JENKINS:** Okay. Thank you.
12 Joshua Burman, please.

13 **MR. JOSHUA BURMAN:** Thank you, Fred.
14 Thank you, Mimi. This is Joshua Burman.
15 Regarding considerations EPA should take into
16 account when developing -- again, I seem to do
17 this a lot. I would flip this question on its
18 head a little bit and say, based on what's
19 existing today, there are quite a family of
20 portable digital devices used for tracking items,
21 whether that be inventory or packages or materials
22 in transport. That exists today already.

1 There is a suite of software for
2 most of these devices that is either proprietary
3 to the maker of the device or the user of the
4 device or is in the commercial realm. And I would
5 suggest that EPA would, or should, focus less on
6 developing the -- as a matter of fact, don't focus
7 at all on developing devices or software. That is
8 not EPA's forte -- but instead on developing and
9 being very, very clear about data elements and
10 data expectations.

11 Now the caveat with that is, if
12 EPA's and this Board's primary concern is upload
13 of data into the e-Manifest system, then as long
14 as there is assurance or reasonable care that that
15 data is accurate and protected throughout the
16 shipment of hazardous waste, then I suggest that
17 EPA may instead simply open the door to industry,
18 whether it's the transport industry or other
19 commercial vendors to say, "Hey, here are the data
20 elements we need to have. Here's how we need --
21 or here's our expectations for ensuring data
22 accuracy. There are situations we need you to

1 make sure you've addressed such as, offline,
2 making sure that all users including customers,
3 i.e. generators or previous transporters, have a
4 copy of the data or have a method of getting a
5 copy of that data if you're in offline mode and go
6 to it."

7 I would hope -- and I may be wrong -
8 - but I would hope that the transport industry
9 with the existing devices that are out on the
10 market, with their use of those devices, and with
11 other parallel industries like the courier or
12 package shipment industry could meet the
13 expectations with reasonable speed without a lot
14 of work by EPA in that development. And I would
15 suggest that's the route to take. If you open the
16 door and say, "Hey, we're -- you have existing
17 devices? Great. Use them. Here's just
18 additional expectations. If you can meet them, go
19 for it. If not gee, is there a vendor out there
20 or multiple vendors?"

21 I don't believe EPA really should
22 have a role in certifying devices. We don't care

1 about the device. We really don't. Whether it's
2 pink, blue, brown, doesn't matter. We don't care
3 whether it's a pad, a tablet, a wrist piece, a
4 phone. What we care about is the data. That is
5 the whole reason for this system. It's to collect
6 data, transfer data between parties, and protect
7 data or archive the data, I guess, store the data.

8 As long as we have expectations for
9 the data, don't get involved in software
10 development. Because if we make clear -- or EPA
11 makes clear that the ultimate receiving facility
12 is responsible for uploading the data, either in
13 the existing models or through the existing
14 avenues or through parallel but separate
15 development of those -- which I think can be a
16 separate discussion between EPA and industry --
17 that is a challenge and a hurdle as raised by kind
18 of just from ETC yesterday and Mr. Baker and Ms.
19 Macioch, and Ms. Walczak. As long as that's
20 addressed, then there would not appear to be
21 really barriers standing in the way of this. And
22 I don't think EPA should really develop or

1 implement it. I think EPA should put conditions
2 on allowing it and then allow it. Thank you.

3 **DR. FRED JENKINS:** Okay. Thank you,
4 Joshua. Cindy Walczak.

5 **MS. CYNTHIA WALCZAK:** Hi. I really
6 don't have anything to add and further this. This
7 is really beyond my area of expertise. So I'm
8 going to pass. Thank you.

9 **DR. FRED JENKINS:** Okay. Let's go
10 on to Tevfik Kosar.

11 **DR. TEVFIK KOSAR:** Hi. This is
12 Tevfik Kosar. I think the costs of purchasing,
13 maintaining, and providing user training,
14 especially if the CROMERR compliance for signature
15 devices is kept, that would be the biggest hurdle
16 in the implementation of this method. In that
17 sense, I think this method should not be the only
18 or mandatory option for electronic signatures.
19 But it should be provided as an additional
20 compliment to mix with other methods as mentioned
21 before.

1 Also, the digital signature
2 applications for smart devices, such as the
3 tablets and smartphones, should be seriously
4 considered as an additional option. The method
5 should not only lie on the specialized digital
6 signature pads, which seems to be the case in the
7 current proposal. And the digital signatures
8 using this method should not have more rigorous
9 requirements compared to the regular TDSF of
10 handwritten signatures, such as recording the
11 signature attributes like speed, pressure,
12 expiration, encryption and so on.

13 So I think this was also mentioned
14 in the last Board meeting in June, the digitized
15 signature pads can provide additional features
16 that the regular smart devices could not provide.
17 And EPA can choose potentially to use these
18 additional features for the signature
19 requirements. But I think additional requirement
20 -- basically, any additional requirements in the
21 digital signatures would make the adaptation of

1 this method less appealing and more difficult for
2 the community. Thank you.

3 **DR. FRED JENKINS:** Okay. Thank you.
4 Tom Baker.

5 **MR. THOMAS BAKER:** Thanks, Fred. So
6 I've, I guess, got some considerations for the
7 devices. It may not all be technical. It may be
8 more cost related, but I will share them anyway.
9 To broadly implement this as a solution across all
10 transporter groups and waste service providers it
11 requires a significant financial investment to
12 purchase digitized pads.

13 You know, for example, in our
14 company, to fit all of our field service
15 operations folks with devices, we would need well
16 over 500 signature devices to be purchased. So
17 that's a relatively large expense, and it's really
18 needed to take into consideration required
19 maintenance for these devices. Durability in the
20 field certainly would determine which devices
21 would need to be purchased.

1 I don't expect that to be a major
2 limitation based on the fact that many couriers
3 today use digitized pads in similar settings. So
4 it shouldn't be a limitation by any means, just
5 more of a consideration. So in summary, I think
6 just this method, because of the costs of
7 implementation, will be viewed by many as a
8 significant drawback. Even though it might be
9 adopted by some, it won't be widely adopted by
10 most. Thank you.

11 **DR. FRED JENKINS:** Okay. Thank you,
12 Tom. Michael, did you -- Michael Hurley do you
13 have anything to add? I see your hand raised.

14 **MR. MICHAEL HURLEY:** I'm sorry,
15 Fred. I didn't mean to have my hand up. No, I
16 agree with everybody else's comments. Thank you.

17 **DR. FRED JENKINS:** Okay. Thank you.
18 Anybody else want to add to Charge Question 4D?
19 Joshua.

20 **MR. JOSHUA BURMAN:** Thank you. And
21 I preface this my -- just for everyone's
22 background, there are sirens in the background. I

1 apologize if they come through too loudly. We're
2 having a tornado drill right now, so I preface
3 that.

4 But I wanted to link back to -- I
5 apologize. I can't remember who said it and
6 whether it was yesterday or today. But when
7 looking at digital devices, at least I make a
8 quick natural assumption we're talking about a
9 purpose-built tablet or pad, similar to, or indeed
10 exactly the same, as those used by courier
11 services and other transport services today, just
12 with potentially somewhat different data elements
13 or indeed just a few added data elements since
14 many of them currently capture or create many of
15 the data points that the hazardous waste manifest
16 does.

17 However, I think discussion of this,
18 or at least EPA's conception of this, should also
19 include a very predominate digital device that the
20 vast majority of us have on us 24 hours a day,
21 which is cellular telephones, particularly smart
22 cellular telephones. I am in no way suggesting --

1 some commenters touched on this earlier today. I
2 am in no way suggesting that we should require or
3 recommend that the default be use of personal or
4 company provided smartphones for all parties,
5 particularly because many of those phones don't
6 work well or the apps on them don't work well in
7 offline environment, whereas many of the
8 independent digital devices are manufactured and
9 designed to either work offline or online,
10 depending on where they are.

11 However, as an adjunct, as an added
12 side of this particular option, I suggest that EPA
13 say, again, the data elements are what we're
14 concerned about. And as long as we collect those
15 data elements, and as long as we're reasonably
16 assured that they're accurate and that all the
17 parties in the chain of custody are receiving a
18 copy when they need it of those data elements,
19 then use not only whatever purpose built device
20 but if you -- either as a stuck at home not doing
21 anything else software developer with time on your
22 hands want to build an app that will collect the

1 data elements that we want and display the data
2 elements of a manifest, to open that door.

3 I'm not suggesting that EPA divert
4 any of its very limited, incredibly hard-working
5 software development team towards an app, either
6 for a tablet or a smartphone or for any particular
7 operating system. But again, I think the software
8 development universe and vendors in that universe
9 are always looking for potential markets. And if
10 EPA would be willing to open that door with
11 provisions -- again, what we're talking about here
12 though -- and I want to clarify this -- hold on, I
13 apologize. Okay. I apologize. I had an alarm on
14 my phone as well apparently.

15 What we're talking about here is not
16 building or allowing a new portal directly into e-
17 Manifest. I am not talking about, hey, let's
18 allow an app to directly interact with e-Manifest.
19 Although, I think that is something to look at in
20 the future.

21 What we're talking about is an app
22 that would be used by transporters and receiving

1 facilities to get data into their systems where
2 they would then organize it and upload it to EPA
3 with a CROMERR compliant signature using the
4 either established methods and channels or through
5 parallel but separately developed ones. And I
6 think that may dramatically limit the security
7 concerns, the development -- size of development
8 question.

9 What we're talking about is, hey, if
10 we're talking about allowing a purpose-built
11 digital device such as exactly the one used by
12 common courier services today and just saying,
13 "Hey, you can use those. You'll have to talk
14 separately to DOT. But, hey, we want to be part
15 of those discussions about whether you can use
16 those devices, at least in a pilot test to also
17 meet DOT hazardous material shipping papers as one
18 courier service already can." But we're also
19 saying, "Hey, if you want to either yourselves or
20 hire a developer or if a developer wants to
21 independently market a software app to you that
22 could be built and then purchased on an app store

1 and downloaded to already existing cellphones, and
2 you want to use that in-house for your employees
3 to collect data in the field, as long as you can
4 assure us and we can be assured that that data's
5 accurate and that all parties are being provided
6 with a copy of that data, then there's really no
7 difference between the purpose-built device and an
8 app on a commonly available smart device, be it a
9 smartphone or a tablet."

10 And I suggest that EPA be clear that
11 that might be an option and see what industry does
12 and see what the software industry does. Because
13 I would hope and suspect that there might be
14 developer saying "Hey, it's a market, and we'll
15 write an app" -- and as long as it collects that
16 data. There are not -- now, there are security
17 concerns because that -- for industry that's going
18 to be tying into their systems, but that's not
19 something that EPA needs to be involved with.
20 It's not something EPA needs to be concerned
21 about. That's something that the private industry

1 is already -- can already talk with the
2 development industry or can do it in-house.

3 So I just -- I wanted to raise that,
4 and we can develop it further in writing. I
5 wanted to raise that as something that this opens
6 the door to that could lower the cost for smaller
7 transporters or those that don't want to buy
8 purpose-built devices or those that may -- for
9 instance, I'm thinking of single transporters
10 that, "Hey, I want to do this digital thing. But
11 I don't want to go out and buy an independent
12 purpose-built tablet. But I'm comfortable using
13 my phone because I already make all my business
14 calls on my phone because I've got one employee,
15 me." So I wanted to throw that out there.

16 And I invite any of the IT
17 representatives or any of the industry
18 representatives to shoot me down, but I wanted to
19 suggest it. Thank you.

20 **DR. FRED JENKINS:** Okay. Any other
21 Board members want to respond to Charge Question
22 4D? Okay. Going to ask the Agency, are you clear

1 on everything you heard from the Board for Charge
2 Question 4D? Okay. I will take that as a yes,
3 Agency is clear. Mimi, can you please read Charge
4 Question 5A into the record? We're in Charge
5 Question 5, implementation of options.
6

7 **CHARGE QUESTION 5 (5A)**
8

9 **MS. MIMI GUERNICA:** Okay. Charge
10 Question 5A, should the Agency take into account
11 any considerations regarding timing of
12 implementation, including integration with
13 industry user systems?

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Mimi. Our lead discussant, Tom Baker.

16 **MR. THOMAS BAKER:** Okay. So the
17 question focuses here on implementation and
18 timing, with respect to integration of industry
19 user systems. So I think, as we stated earlier in
20 these meetings, you know, the critical importance
21 of the existing industry systems today in managing
22 manifest data, providing critical services to

1 waste generators, and making waste shipments occur
2 needs to be acknowledged. And it's really
3 important that EPA focus and tackle the issue of
4 industry systems and integration needs with e-
5 Manifest prior to embarking on any of these three
6 proposed signature improvement options or methods.
7 Thanks, Fred.

8 **DR. FRED JENKINS:** Okay. Thank you,
9 Tom. Joshua Burman.

10 **MR. JOSHUA BURMAN:** Thank you, Fred.
11 Thank you, Tom. This is Joshua Burman. From the
12 state perspective, good sooner is better than
13 perfect late. We don't want to see anything
14 fielded or anything developed by EPA that
15 potentially is going to break the system or cause
16 new problems that don't exist today. They'll for
17 -- I should clarify that, sorry -- that create new
18 problems to the existing systems today. New
19 methods are going to come with new problems.
20 There will be bugs. There will be things we
21 didn't think about. There will be unintended
22 consequences.

1 But as long as they don't break
2 what's working now, they're added to -- they're
3 side -- they're options until they're fully
4 developed, I think that's not a fatal concern. In
5 which case, the education and roll out between
6 states and the regulated parties in the states is
7 at best slow. And the more things can be kept
8 moving, the better.

9 Because even if today EPA announced
10 at the end of this meeting that there is a
11 wonderful brand new product, we're unveiling it
12 this Friday, and it's going to be fantastic and
13 amazing, I'm looking at six months to a year just
14 to communicate the existence of that product to
15 the majority of the regulated community in my
16 state. And that doesn't include time for the
17 state staff to learn about it, to get a feel for
18 it, to work out the bugs so that we can then turn
19 around and educate and reach out. So there is a -
20 - there is an extended timeframe here. And the -
21 - something that's workable, something that makes
22 life a little bit better, sooner is better than a

1 theoretically perfect solution that's a decade
2 down the road. Thank you.

3 **DR. FRED JENKINS:** Okay. Thank you,
4 Joshua. Tevfik Kosar.

5 **DR. TEVFIK KOSAR:** Hi, Fred. This
6 is Tevfik Kosar. I believe especially taking
7 input from stakeholders is very important during
8 the entire implementation process. Yesterday, one
9 of the public commenters presented their proposed
10 modifications to Method 1 in order for it to work
11 properly from their perspective. And I believe
12 that made a lot of sense to many of us. This type
13 of input from the major stakeholders is really
14 important for the success of the implementation of
15 these proposed methods.

16 The white paper provided by EPA
17 mentions that EPA staff will work with
18 stakeholders via webinars and user support calls
19 on the technical requirements for the options,
20 which is really great. And it is really necessary
21 for success of the program. But the provided

1 timeline in the white paper, it does not really
2 include any concrete plans towards this effort.

3 It would be beneficial to lay out
4 concrete plans and a definite timeline of
5 additional stakeholder input with this -- for this
6 and how this input will become part of the end-to-
7 end implementation process. In our last Board
8 meeting in June 2019, the Board recommended EPA to
9 begin posting detailed agendas and minutes for the
10 e-Manifest developers group meetings, I believe,
11 including all proposed updates to the e-Manifest
12 system. This issue was not brought into
13 discussion in this meeting, and I'm not really
14 aware of the latest status on this.

15 But I think -- and I would like to
16 reiterate this recommendation from Board to the
17 EPA -- that I think it would be really helpful
18 these meetings to be transparent to the entire
19 community. And it will definitely increase the
20 community input to the entire process. Thank you.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Tevfik. Are there any other Board member that

1 want to respond? Okay, Michael Hurley. Go ahead,
2 Mike.

3 **MR. MICHAEL HURLEY:** Thanks, Fred.
4 This is Mike Hurley. I just want to indicate we
5 did speak at length about implementation and other
6 things at the last Board meeting. And I just
7 wanted to mention that so we can sort of include
8 them by reference where appropriate in our write
9 up. Thank you.

10 **DR. FRED JENKINS:** Okay. Thank you,
11 Michael. Anyone else wants to respond to Charge
12 Question 5A? Okay. Okay. So no one else is
13 asking to respond, so we're going to turn to the
14 Agency. Do you have -- are you clear on
15 everything that you heard the Board say for this
16 question?

17 **MR. STEVE DONNELLY:** This is Steve
18 Donnelly. Yes, we are clear. Thank you very
19 much.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Steve. Okay. Let's move on to the next question,

1 Charge Question 5B. Mimi, can you please read
2 this into the record?

3
4 **CHARGE QUESTION 5 (5B)**

5
6 **MS. MIMI GUERNICA:** Yes. Charge
7 question 5B, how best can EPA support
8 implementation and communication of its options
9 for executing electronic signatures with
10 generators and transporters?

11 **DR. FRED JENKINS:** Okay. Tom Baker.

12 **MR. THOMAS BAKER:** Thanks, Fred. So
13 I think really getting the generators and
14 transporters engaged, the guidance has to be clear
15 regarding any new signature methods that EPA
16 decides to implement and launch. I think ETC had
17 commented in the public session regarding a need
18 for more details on some of these once they're
19 further developed, such as process flow charts
20 that would help gain better understanding of the
21 process. Once the signature methods are being
22 rolled out, I think things like a how-to and
23 videos that could be put on YouTube are very

1 instructional, give folks a better practical sense
2 of, you know, how signature methods would be
3 executed in the field. So I think just different
4 mechanisms to use to instruct both generators and
5 transporters and getting a better understanding of
6 these new methods.

7 And that lastly, really coordinating
8 any of the outreach efforts, you know, with the
9 waste management service providers, since they're
10 linked to many waste generators and transporters
11 in how they provide their services, they would be
12 a key source of support and assistance in getting
13 the word out. Thank you.

14 **DR. FRED JENKINS:** Okay. Thank you,
15 Tom. Joshua Burman.

16 **MR. JOSHUA BURMAN:** Thank you, Fred.
17 Thank you, Mr. Baker. From the state perspective,
18 one of the most effective things the EPA can do to
19 support communication and hopefully implementation
20 of whatever options or whatever changes to the
21 system ultimately come out is to be able to point
22 to immediate clear benefits to the various users

1 for those options or for the changes. As a state
2 representative, it is much easier for me to train
3 somebody, educate somebody, encourage somebody,
4 sell somebody a change in a regulatory standard if
5 I can, at the same time, point out to them how it
6 will immediately benefit them, not somebody else,
7 not the state, not somebody down the line.

8 But I can say, if you do this then,
9 hey, you can now do this. Or if you do this, then
10 you're going to get this. That is really a key
11 underpinning of trying to change an established
12 practice in an industry is being able to show how
13 it will benefit that industry and even drilling
14 down to the individual business.

15 Why should you encourage your
16 transporter and your TSDF to use e-Manifest? Why
17 should you ask them about it? Because here's the
18 payoff. This is what you can do. And yes, we all
19 understand, and the underlying is everyone
20 ultimately, hopefully, theoretically will save a
21 significant amount of money, data retention, data
22 tracking. And our understanding and awareness of

1 where hazardous waste is and where it went will be
2 improved. But that's not a clear, tangible
3 benefit.

4 Saying, if you register you can now,
5 and will -- not just can, but will get
6 automatically notified of your manifests when they
7 hit various points, that's a selling point.
8 That's something I can point to. And I think that
9 is sometimes easily overlooked when we're making
10 changes to things or improving things. We say,
11 "Oh, there's this great change, we think it's
12 great." It takes an outside person to say, "It's
13 great. How is it great for me? Tell me that.
14 Because if you can tell me that, then maybe I'll
15 consider it."

16 And I encourage EPA to keep that in
17 the forefront of their developing mind as they
18 work through things to say how will this benefit
19 the user, and how can we show the user that it
20 benefits them? Thank you.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Joshua. Tevfik Kosar.

1 **DR. TEVFIK KOSAR:** Thank you, Fred.

2 This is Tevfik Kosar. In order to support
3 implementation and communication of these options,
4 first of all EPA should provide really clear
5 guidelines on the acceptable forms of digital e-
6 Manifest signatures to all of its stakeholders.
7 Second, it should provide rigorous training
8 programs through webinars and other means of
9 outreach. Third, EPA should enable a share of
10 best practices among the stakeholders.

11 We are hearing that many sites have
12 successfully adapted e-Manifest, and they can
13 share their experience with other sites which are
14 currently facing some challenges, issues in the
15 adaptation process. And finally, I think it is
16 very important that EPA provides multiple options
17 for customer service to all stakeholders regarding
18 any issues that they may be facing during the
19 implementation of all of these options with 24/7
20 available team. Thank you.

21 **DR. FRED JENKINS:** Okay. Thank you,
22 Tevfik. So we have Michael Hurley next.

1 **MR. MICHAEL HURLEY:** Hi, Fred.

2 Thanks. This is Mike Hurley. I was thinking on
3 this. If you were looking to, you know,
4 communicate the benefits of this and get the
5 information out there to encourage participation
6 is -- you sort of have to work backwards down
7 chain.

8 **DR. FRED JENKINS:** Michael, we lost
9 you. We lost your audio.

10 **MR. MICHAEL HURLEY:** Oops. Here I
11 am. I'm back, sorry.

12 **DR. FRED JENKINS:** Okay.

13 **MR. MICHAEL HURLEY:** Okay. Yeah.
14 So I'm sorry. I'm not sure where I broke up. But
15 in the communications with -- towards getting this
16 to be implemented, I think you need to work
17 backwards down the aggregation points, right? So
18 you start with TSDs because they dictate what the
19 transporters and most of the generators are
20 allowed to work with, you know, in conjunction
21 with them.

1 And then work with the transporters
2 because they're the ones picking up from the
3 generators. And really, the generators will just
4 fall in line with whatever their waste
5 transportation industry folks are doing because
6 again, as has been brought up over and over, most
7 of the time someone shows up at the loading dock
8 with a pre-printed manifest, right? So if the
9 pre-printed manifest is electronic, that's what
10 you're going to go with today. You know what I
11 mean?

12 And if it's the other way around
13 where there's paper offered, well, paper will be
14 used because they don't -- they're the wrong part
15 of the chain to actually make this decision that I
16 would like to be electronic. So really, again,
17 you want to work from TSD, transporter, and then
18 to the generator. And I think that would be the
19 best way to do it. Thanks.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Michael. Anyone else want to respond to Charge
22 Question 5B? Okay. Let's turn to the Agency.

1 Are you all clear on everything you heard in the
2 response to 5B?

3 **MR. STEVE DONNELLY:** This is Steve
4 Donnelly. Yes, we are clear. We do not have any
5 clarifying questions. Thank you.

6 **DR. FRED JENKINS:** Okay. Thank you,
7 Steve. So we are on to the last charge question,
8 so Charge Question 6A. Thank you, Board, for
9 keeping us way ahead of schedule and working magic
10 and get -- you know, effectively responding to the
11 charge questions. So we're now on the final one.
12 So, Mimi, can you please read Charge Question 6A
13 into the record?

14
15 **CHARGE QUESTION 6 (6A)**

16
17 **MS. MIMI GUERNICA:** Charge Question
18 6A, does the Advisory Board have other ideas
19 beyond re-engineering electronic signatures for
20 generators and transporters that EPA could
21 implement to encourage and increase the use
22 electronic manifests?

1 **DR. FRED JENKINS:** Okay. Lead
2 discussant, Thomas Baker.

3 **MR. THOMAS BAKER:** Okay. Thanks,
4 Fred. First, I just want to thank EPA for asking
5 this question. I think it's a good open-ended
6 question. Many of the questions are very narrowly
7 focused for the right reasons, but this one
8 obviously gives us the opportunity to provide some
9 broader input.

10 And when I looked at this question,
11 what I tend to focus on is what EPA is asking us
12 is to how we increase the use of electronic
13 manifests. And to me, it comes down to what is an
14 electronic manifest. And the focus of much of our
15 discussion is on increasing electronic manifests,
16 which has been implied as the full electronic
17 manifest, which means electronic signatures from
18 generators, transporters, all the way through to
19 the TSDF.

20 Situation that we've been wrestling
21 with now for a couple of years and how do we
22 implement that simply and integrate it with

1 business systems, which is quite challenging. So
2 that's kind of a focus of my response here. And
3 bear with me, but I think, before I get into some
4 of the recommendations, I want to give some
5 perspective on I think where we're at with this e-
6 Manifest project.

7 I feel at times that we lose sight
8 of what we're -- what we've accomplished to date.
9 And I think what we've accomplished to date should
10 help guide us to what needs to get done moving
11 forward and how we allocate those resources. So
12 on day one EPA presented the background on e-
13 Manifest. They talked about the goals of
14 launching e-Manifest.

15 There was the One Year Rule back in
16 2014 that implemented the e-Manifest Act. It had
17 certain goals and benefits that were highlighted
18 that was the real purpose of e-Manifest, focused
19 on trust and burden reduction on industry. If you
20 go back to that slide that EPA presented from the
21 One Year Rule, it was: number one, accurate and
22 timely information on the way shipments; number

1 two, rapid notification of discrepancies or other
2 problems related to particular shipments; number
3 three was creating a single hub for one-stop
4 reporting of manifest data for use by EPA and the
5 states. Four was increased effectiveness of
6 compliance monitoring of way shipments by
7 regulators. And number five was the potential for
8 integrating manifests on the RCRA binding
9 reporting process.

10 So those were the stated goals and
11 desired benefits of launching an e-Manifest
12 system. And I would really challenge EPA to go
13 back after this meeting and review those in more
14 detail and evaluate the successes that have been
15 achieved and really focus on where they believe
16 they need to focus their valuable resources and
17 time going forward to complete the e-Manifest
18 project. In my way of looking at this, we have
19 largely satisfied all of these goals.

20 First of all, we've launched the
21 national system for the correcting of manifest
22 data and managing that data electronically. The

1 industry -- the TSDFs have adapted their
2 manifesting systems to allow us to electronically
3 transmit over 2.5 million manifests via data and
4 image submissions, which again we talked about is
5 over 80 percent of all manifests are now being
6 submitted electronically to this EPA database.
7 Manifest data's promptly available to all
8 industries to the -- in the centralized database
9 that EPA manages, accessible by EPA, the states,
10 the public, and, of course, all the waste
11 handlers, generators, transporters, and TSDFs.

12 Another great gain is states are no
13 longer collecting paper manifests. Agencies now
14 have the ability to improve their compliance
15 monitoring through accessing electronic manifest
16 data where they may not have had that access
17 before. Manifest data quality's improving, and
18 errors and discrepancies are being reduced.
19 There's more transparency now than ever with
20 manifest data between all the parties involved.
21 And generators no longer need to maintain paper
22 manifest files for record keeping purposes.

1 They're no longer required to mail paper manifests
2 to the state agencies.

3 So these are all gains and real
4 successes since the launch of e-Manifest in 2018.
5 So I do realize there's a couple more gains to be
6 made. Some items that I think are on the top of
7 our list and an industry representative's list is
8 standardizing a method to confirm receipt of
9 manifest shipments to eliminate the need to mail
10 back paper copies from the TSDFs to the
11 generators.

12 That system exists, but without
13 registration of generators, it's not possible to
14 do that consistently for all of your shipments.
15 So we need to focus on the registration process.
16 We need full and bettering a creation of the
17 biennial reporting system into e-Manifest. We had
18 an ICR that we talked about on Day 1 that was
19 aimed at collecting potentially some additional
20 data points on the manifest form. That could
21 close loops in some of the biennial reporting

1 elements that aren't present today in the e-
2 Manifest system.

3 And then lastly, you know, and the
4 purpose of this conversation these past few days
5 was focused on the signature process and really
6 where does this CROMERR -- where -- what part of
7 the process needs to comply with CROMERR. We've -
8 - I think we've seen some gains in understanding
9 and policy from EPA that allows us some more
10 flexibility moving forward to focus efforts
11 appropriately and consider more broadly what is an
12 electronic manifest. So, you know, I would state
13 that a signature being applied -- so if a paper
14 manifest being used in the field and signatures
15 are being captured on paper manifests and used to
16 convey that information from the generators to the
17 transporter, if that shipments gets to the TSDF
18 and is signed electronically and that data's
19 submitted to the e-Manifest system in a CROMERR
20 compliant way, that activity, that shipment should
21 be considered fully electronic shipment. Nothing

1 have I read or understood from the e-Manifest Act
2 or the One Year Rule would say otherwise.

3 So I would challenge EPA to take a
4 close look at that. And I want to point out, too,
5 that, you know, paper is not the enemy in the
6 field. You know, I think paper is getting looked
7 at as it has to be replaced. It has to go
8 electronic. Well, we've talked at length now for
9 two years plus on how to eliminate paper in the
10 field. We've recommended and come up with several
11 solutions that we could look to implement.

12 The reality is you're not going to
13 find a simpler system to document the custody of
14 waste transfer from generators to transporters
15 other than paper. It's a low-cost, simplistic
16 approach. It's an efficient process that's
17 flexible and adaptable in many different aspects
18 and situations involving waste transactions. All
19 the other electronic options we've discussed at
20 length, lots of them have merits. Many are very
21 complex, viewed as inflexible, administratively

1 challenging to implement and, at the end of the
2 day, costly as well.

3 So that's not to say that manifest
4 data should only be existing in paper form.
5 That's not the case at all. Industry systems have
6 been managing manifest data for over 25 years, in
7 many cases electronically. And it's important
8 that EPA really acknowledge that those industry
9 systems are adequate and sufficient to manage the
10 electronic manifest data up until the point of it
11 getting to the TSDF.

12 Manifest systems that the industry
13 has in place today and in conjunction with the
14 paper transactions to document the signatures have
15 worked well for many years and should continue to
16 function in the foreseeable future, again,
17 provided we have signatures being provided at the
18 TSDFs that make these shipments electronic and
19 have the data then gets managed when it gets
20 pushed to the e-Manifest system. So I just want
21 to bring that perspective to the e-Manifest
22 project. I would encourage EPA to look again more

1 broadly at what is an electronic shipment, and I
2 think it'll help save extensive costs and time and
3 try to implement other solutions that quite
4 frankly won't be widely adopted in the field.
5 Thanks, Fred.

6 **DR. FRED JENKINS:** Thank you, Tom.
7 Joshua Burman, you're next.

8 **MR. JOSHUA BURMAN:** Thank you, Fred.
9 Thank you, Mr. Baker. First, an overall comment
10 and then I have a question for one of the Board
11 members, which may spur a discussion. And I can
12 do that separately after everybody's had
13 essentially a first turn and we see where we are.
14 If we want to do that, I'm very comfortable with
15 that.

16 I think Mr. Baker raised, almost as
17 an aside -- but he did refer to it. And I'm glad
18 he did -- a very important concept, which is the
19 question of what is a manifest? Many of us who,
20 at least in the regulatory side of things, have
21 been working with it for decades. And those in
22 the waste transporter industry have had to fill

1 them out for decades. And those in the generating
2 community have had them presented to them for
3 decades.

4 Being a form, a something that looks
5 very unique, something that's arranged and has a
6 unitary concept to it with a title across the top,
7 a bunch of data -- excuse me, a bunch of printed
8 lines and then signature lines at the bottom,
9 that's our mental construct -- or for many of us.
10 I can't speak for all of us. For many of us,
11 that's our mental construct of a "manifest."

12 I think it is very helpful to look
13 at, as Mr. Baker pointed out, what we've
14 accomplished and how that can affect that paradigm
15 and then how we can leverage that to promote
16 further beneficial change. And that is a manifest
17 at heart is a collection of information. We can
18 now call it data -- but a collection of data
19 documenting key actions and the parties performing
20 those actions in the lifecycle of a shipment of
21 hazardous waste. It's the cradle to grave
22 tracking of a shipment of hazardous waste.

1 That's a big concept, but that's all
2 it is. It's a collection of data. It is not a
3 form. It is not -- it doesn't have to be
4 presented in a certain way. It doesn't have to
5 have any particular look. From the state's
6 regulatory perspective, I as a regulator don't
7 care. I have no interest whatsoever in how the
8 manifest looks, as long as it has the data
9 elements I need and I can find those data
10 elements.

11 Yes, that does affect the look. Any
12 form designer will tell you that how you arrange
13 data impacts how -- whether it's completed, how
14 it's completed, and how easy it is to find that
15 data. But when we take a step back and say, okay,
16 what we really are talking about here then is a
17 system for collecting data points, sharing those
18 data points among various parties, and then having
19 somebody send those data points en masse as a
20 collection to a final party who will then hold
21 them and allow others to access and manipulate
22 them in its system, I think that opens the door to

1 a lot of possibilities because then we can look at
2 each of data points in isolation and say, "Is this
3 important? Is it not important? Is it something
4 that we've just been collecting from habit? Is it
5 something that we just started collecting that we
6 should have been collecting years ago? Is it
7 something required by a controlling law?"

8 And for an example here I'm going to
9 point to one we discussed a bit in the last
10 meeting -- and we flushed out in the written
11 submittal to EPA -- the waste minimization
12 certification. This is a statutorily driven
13 requirement. It's in RCRA.

14 Congress said, "Thou shall" -- that
15 the manifest shall contain a certification by the
16 generator that they have a waste minimization
17 program in place. Congress did not define what it
18 meant by "certification." As we discussed last
19 year, for convenience EPA said, "Hmm, well, we're
20 already collecting that signature. You know, if
21 somebody's going to sign something, then we might
22 as well have them certify as well because that's

1 kind of killing two birds with one stone. So
2 let's call that a signature for the waste
3 certification section."

4 That -- when we look at that closer,
5 okay, that's a data element. Congress said we
6 must collect a data element where a large quantity
7 generator and a small quantity generator make a
8 certification, when they ship hazardous waste,
9 that they have a waste minimization program in
10 place. That is -- okay, we've now confirmed
11 that's a data point. But how we collect that data
12 point and how we have the user input that data
13 point is really up to us.

14 And I think we can then take each
15 element in turn -- and I'm specifically going to
16 use as another example the question of user
17 identification. What do we need -- collectively,
18 what does EPA decide with input from the states,
19 from regulated parties, from the waste industry
20 for identification of a regulated party? Mr.
21 Hurley brought up earlier today that the simpler,
22 the easier, the faster, the better. You're

1 presented with something, you say, "Yep, that's
2 that," click that, okay, done.

3 I think it does bear examination of
4 what do we, collectively as a regulated industry,
5 as EPA, as the states, believe is necessary for
6 that data point? Do we need just the
7 identification of the generator corporate entity?
8 Do we need the identification of a representative
9 by position? Do we need the identification of a
10 representative by name? Do we need contact
11 information?

12 Now, we may want some of those data
13 elements to perform other actions. We need
14 contact information if we want to push anything
15 back out to them. If we want to send them an
16 email or send them a text, we're going to need
17 that text number. We're going to need that email
18 address. Do we need a name? Well, that's an
19 interesting question.

20 I would like to hear -- after all
21 the Board members have directly addressed the
22 EPA's charge question, I would be interested to

1 hear Mr. Hurley's response to what is the minimum,
2 absolute minimum data necessary to establish that
3 a regulated party has initiated a shipment? Is it
4 just a checkbox? Is it a checkbox with a name?
5 Is it a checkbox with a jpeg of a scribble? Is it
6 contact information that goes with that name? I
7 don't know. I'd be interested to hear reflection
8 on that.

9 But I think when we take that -- if
10 we take that paradigm, if EPA is willing to really
11 stop, take a breath, and say, "Okay, e-Manifest.
12 So we're collecting data." That's -- that is the
13 heart. How do we make it easy to collect that
14 data? How do we make it the absolute easiest for
15 industry to collect that data and then give it to
16 us?

17 That I think then bears fruit, and I
18 think EPA has done quite a lot of thinking on
19 that. I think the very establishment of the e-
20 Manifest system was the very big first step. And
21 I think we just keep going on that. Thank you.

1 **DR. FRED JENKINS:** Okay, Joshua.

2 Thank you. So as I mentioned earlier, Syed Hafeez
3 was our next associate discussant. He had a work
4 emergency, so he had to leave early today. But he
5 did leave us his response to Charge Question 6,
6 and I'm going to ask Tom Baker to read his --
7 Syed's response into the record. Go ahead, Tom.

8 **MR. THOMAS BAKER:** Okay. Thanks,

9 Fred. And I'll read this verbatim. It's just
10 notes from Syed so it might have a few missing
11 elements, but I'll just read through what he's
12 provided to me here.

13 "Number one, EPA should consider
14 allowing data plus image as part of the e-Manifest
15 process. 80 percent of the industry is already
16 maintaining data plus image, and it will
17 significantly increase adoption and compliance.
18 Number two, EPA can use the API ID and API keys to
19 allow industry systems to interact and submit
20 information electronically to EPA's central data
21 exchange system."

1 "And last, number three, in addition
2 to allowing signature confirmation of shipment via
3 SMS, which was identified in Method 1, EPA could
4 allow generators and transporters to sign into e-
5 Manifest as a guest and sign e-Manifests by
6 entering manifest number, site/EPA ID, and or
7 other related information. Allowing various
8 methods to sign and confirm shipments
9 electronically will help increase adoption."

10 Thanks, Fred.

11 **DR. FRED JENKINS:** Okay. Thank you,
12 Tom. So that is the last charge question for this
13 meeting. I want to thank the Board so much for --

14 **MS. KATHLEEN SALYER:** Excuse me.

15 **DR. FRED JENKINS:** -- all your hard
16 work --

17 **MS. KATHLEEN SALYER:** Wait. Fred?

18 **DR. FRED JENKINS:** Oh. I'm sorry.
19 Oh, my goodness. Oh, my goodness. Sorry about
20 that, you all. I got a little bit overly focused
21 on moving on. But okay. So let's go back. Let
22 me back up, and I'm going to ask the Board --

1 Terry Baer has his hand raised. Sorry about that,
2 you guys. Terry Baer, you can follow up.

3 **MR. TERRY BAER:** Thank you, Fred,
4 but I think Mike Hurley had his raised before me
5 if you want to allow him to go first.

6 **DR. FRED JENKINS:** I'm not sure if
7 Mike -- because Mike's hand had been raised for a
8 while, and I don't know if that's intentional.
9 But Mike -- Michael, did you have anything to add?

10 **MR. MICHAEL HURLEY:** Hi, Fred.
11 Yeah, actually I do. So this is Mike Hurley.

12 **DR. FRED JENKINS:** Okay.

13 **MR. MICHAEL HURLEY:** Yeah. I would
14 like to sort of speak quickly on what Tom Baker
15 was saying. And I'm a bit more of an optimist, so
16 I would say about 85 percent of the current -- you
17 could round up a little bit -- submittals are data
18 plus image. And I think those should be counted
19 as electronic records.

20 You know, you do have -- you know,
21 as Tom was saying, you've got the paper in the
22 field, which is simple, easy to work with. Good

1 enough, I guess. And then we get the electronic
2 submittal at the end with the paper image for
3 reference for QA/QC and other, you know, purposes.

4 And I think the -- that other 15
5 percent really needs to be focused on. Like, how
6 come people are only -- are 15 percent in the
7 split between the, you know, the mailed paper and
8 the image only? Like, why are they still doing
9 that? I think some outreach should be done there
10 because that's where the higher costs come in, you
11 know, to pay -- with the data entry centers and
12 things like that.

13 But beyond that, I don't have a
14 whole lot more really to offer on ideas because I
15 feel like we've really gone over the bulk of them.
16 Other than -- there would just need to be -- to go
17 full electronic, you need a simple solution that
18 makes a total obvious sense to the people in every
19 step of the process. You know what I mean?

20 Where it is as simple as the paper
21 and it -- perhaps the solution does not lie in a
22 complicated tech-centric data exchange back and

1 forth, but it just should be as simple as the
2 paper. You get an image of what you've done, you
3 sign something, and it's gone. You can go look it
4 up in the system as you need to.

5 Because the people on the loading
6 docks, they won't need to go look this up in a
7 system. It'll be somebody in a different part of
8 the organization who'll be pulling that image up
9 to make sure that, you know, everything they've
10 paid for has been realized. The shipments have
11 got to TSD and all of that.

12 That's all I really had. Thank you.
13 And I'm really pleased that EPA was willing to
14 look at the CROMERR piece because I do see that as
15 -- if you could let go of some of that stuff at
16 the signatory -- what do you call it -- the
17 signing ceremony at the loading dock and with the
18 transporter, it would make this process a lot
19 easier. Okay. Thank you very much.

20 **DR. FRED JENKINS:** Okay. Thank you,
21 Michael. I believe Terry Baer is next.

1 **MR. TERRY BAER:** Thank you, Fred.

2 Terry Baer. So excuse me. So I did want to echo
3 on some of what Tom said. And I know that
4 sometimes in these questions and this discussion
5 that we've had, you know, we don't recognize I
6 think all the positives that has come out of
7 everything the EPA has done. I do want to applaud
8 them for everything that they have done because,
9 quite frankly, you have taken a very daunting
10 system. You took it on head on. You've, you
11 know, got some challenges have come up, but
12 nonetheless it is quite the success to celebrate.

13 With that being said, as my other
14 colleagues kind of alluded, I do think this is
15 kind of a phased approach. You know, as Mr.
16 Hurley was just saying, you know, if the industry
17 is doing one method at 85 percent, I think a focus
18 on how to build on that, you know -- is there a
19 way of taking the image and having the image be
20 translated into the data? You know, I did that
21 with my W-2s this year on doing my taxes. I just

1 took a picture, and it automatically populated it
2 in the software.

3 So I think the technology's there.
4 And if industry has already adopted and are so
5 well keen to that, how do you build on that? I
6 mean, obviously I think the end goal is to get to
7 fully electronic. But I think we should continue
8 to take the successes that we have and build on
9 those.

10 With that said, I do think that it
11 requires further investigation into the potential
12 of apps. You know, the fact is the world is
13 moving into an app-centric environment. You know,
14 I'm in a unique position here in Arizona where
15 I've actually got all of solid waste and haz waste
16 underneath me. And so that includes our
17 inspections, our permits, our recycling, pollution
18 prevention, everything involved.

19 And so, you know, for my inspectors,
20 we're currently piloting an app for doing our
21 inspections, something that allows our customers
22 to be able to sign and see it, and then they get

1 the real live data results of the inspection right
2 then. It's not, you know, a delayed thing waiting
3 for a report to come in the mail or in email. Our
4 UST program, they're looking at apps for their
5 customers to be able to submit their record
6 keeping. Our pollution prevention program has
7 been piloting apps for our customer base and
8 getting the reductions done. So it's just -- it's
9 becoming more and more prevalent. I definitely
10 think it's worth looking into.

11 I'm not sure whether that would be
12 more of a software integration versus a complete
13 reengineering because I know that you said that
14 anything outside of that -- but once again, I do
15 want to thank everyone at EPA for all that you
16 have done. It truly is a success and happy to be
17 a part of that to help keep moving it forward.
18 Thank you.

19 **DR. FRED JENKINS:** Okay. Thank you,
20 Terry. I believe Cindy Walczak is next.

21 **MS. CYNTHIA WALCZAK:** Yeah. Thank
22 you. I would like the Agency to consider using

1 the hybrid manifest or extending the hybrid
2 manifest to allow transporters to use it, which is
3 the same way generators use it -- which is to say
4 let them sign in ink on a hybrid manifest. That's
5 all I've got. Thank you.

6 **DR. FRED JENKINS:** Okay, Cindy. I
7 think it's Joshua, then Jill Macioch. Joshua, go
8 ahead.

9 **MR. JOSHUA BURMAN:** Fred, if it's
10 okay, I think I'd like to let Jill take precedence
11 -- excuse me, Ms. Macioch take precedence. I had
12 a follow-up to Mr. Hurley, but she probably has
13 primary comment that should come first. Thank
14 you.

15 **DR. FRED JENKINS:** Okay. Okay.
16 Okay. Thank you. Go ahead, Jill.

17 **MS. JILL MACIOCH:** Thank you. Jill
18 Macioch. Actually, just a really quick comment --
19 and thank you to everybody I think over the last
20 few days. We've had just wonderful discussion,
21 and some good recommendations should come out of
22 this. And thank you to the EPA for your active

1 listening and for all the presentations and also
2 for all the public comments, both written as well
3 as oral.

4 Anyway, I'm really glad to hear by a
5 lot of my fellow Board members with regard to the
6 data image. I think that should be considered as
7 a fully electronic option, or at least utilized as
8 such. I just wanted to point out we have come a
9 long way, especially, not only in the last year
10 but the last six months in terms of backlog of
11 manifests. The information is now readily
12 available. It's available, at least for the
13 projects I've been involved with, within 30 days.
14 Or whenever I'm going to look for a manifest, it's
15 typically in the system.

16 There's been additional enhancements
17 that have been quite useful. You know, we do get
18 the weekly updates. I did mention yesterday how I
19 was waiting on two manifest, and lo and behold, I
20 get -- I receive this email. And I could tell
21 those two emails were in the system. I could go
22 into it, print them off I wanted to.

1 Terry, Mr. Baer brought up quite an
2 interesting comment, and there are times for us as
3 a small TSDF and also as a generator that does
4 prepare a lot of our own manifests -- but this
5 whole option of being able to maybe take a photo
6 of a manifest in order to upload the information,
7 as a TSDF, I mean, we work with some of our own
8 internal generators that have three pages of data.
9 And that is a unique consideration that I -- we
10 may have talked about, but I don't remember. So
11 those features are also something maybe not now to
12 consider but down the road. So I just wanted to
13 thank everybody again, and, you know, most of my
14 comments that I had were already echoed by my
15 fellow Board members so thank you.

16 **DR. FRED JENKINS:** Okay. Joshua.
17 You have some comments, Joshua?

18 **MR. JOSHUA BURMAN:** Yes, sir. Thank
19 you, Fred. And thank you, Ms. Macioch, for going
20 there. I think that was a good order. I regret
21 that I inadvertently did not preface my remarks to
22 this sort of closing charge question with giving a

1 huge commendation and thanks to the EPA e-Manifest
2 team, not only for their work -- which I think
3 we've pointed out is under unarguably adverse
4 conditions with limited resources in a very
5 complex and challenged environment. And they've
6 done great things.

7 But in particular, since the last e-
8 Manifest meeting, I was personally and frankly
9 amazed when I opened up the first copy of the
10 white paper that was distributed to the Advisory
11 Board members and read Option 1. And I had to
12 read it a few times before I said, "Okay. This
13 means that they're really pulling way back on the
14 CROMERR assumption that was discussed heatedly at
15 the last meeting at great length."

16 And this is a potential game
17 changer. This opens up a lot of doors. I think
18 it must have been some very deep consideration at
19 EPA, and that's not easy to do. And I really want
20 to commend them for that because it was unexpected
21 but I believe extremely positive and will have

1 very beneficial effects. So I just wanted to make
2 that very clear point.

3 The other thing that I wanted to
4 reflect back, and I don't think it was clear
5 enough previously. I want to specifically ask Mr.
6 Hurley or Mr. Baer -- if any other Board members
7 have input as well -- but Mr. Hurley had earlier
8 mentioned that only the barest minimum of
9 information may be necessary to collect from the
10 representative of a generator or other handler --
11 again whether that's one transporter handing off
12 to another transporter or a transporter handing
13 off to a receiving facility -- needs to be
14 collected. And if so, then what's kind of your
15 view or what's your at least rough idea of what
16 those minimum data standard -- elements would be?
17 Not the quality of the data, but what actually
18 data points do you think are the bare minimum that
19 we really need to have? Because I think that then
20 drives some of the options or some of the -- how
21 those options would be implemented is how detailed
22 we think we need to be. Thank you.

1 **DR. FRED JENKINS:** Okay. Thank you,
2 Joshua. Cindy, I see your hand raised. Did you
3 have anything else to add?

4 **MS. CYNTHIA WALCZAK:** No. I forgot
5 to put it down. I'll do that now.

6 **DR. FRED JENKINS:** Okay. Okay.
7 Michael Hurley, go ahead.

8 **MR. MICHAEL HURLEY:** Sure. Oh, hi.
9 This is Mike Hurley, and I'm just sort of
10 responding back to Joshua's question -- Joshua's
11 challenge. Yeah. So we -- you could, for a
12 minimum, right, is -- okay. So you got -- you
13 could have a PIN number and, if you are using a
14 pad or something like that, just a signature.
15 That would be fine. That would correspond with
16 their identity, either depending on the option, if
17 we're working with those constructs. And we're
18 still -- yeah.

19 So if we work with those constructs,
20 that could correspond to the -- their identity in
21 the system, with the assumption that either
22 somebody had either populated their sort of

1 preparer level profile in the system or if they
2 had to have an account themselves. But that's all
3 they would really need to have. They wouldn't
4 have to, say, for example, call up their whole
5 record set. They could just put their PIN number,
6 and that would link them back to it.

7 But it all depends. I mean, that's
8 -- it all depends on what system you were using
9 and how you were building out. Each one would
10 have different constraints, I think. I don't
11 know. I'm not sure if that helps, Josh.

12 **MR. JOSHUA BURMAN:** Thank you, Mr.
13 Hurley. Fred, a clarification back to Mr. Hurley.
14 It sounds like what you're suggesting is you
15 believe it might still be necessary to identify a
16 person versus a position or simply a corporate
17 entity. Is that correct?

18 **MR. MICHAEL HURLEY:** This is Mike
19 Hurley responding back to Joshua. Thank you for
20 that. That's a great clarification point. No, I
21 don't. If we had to, then my prior answer, I
22 think, would stand. If we do not need to and --

1 you know again, perhaps we don't need to -- we
2 just need to know that the -- as we were
3 discussing, right, staff come and go. Site
4 managers come and go, but the corporate entity
5 tends to stay.

6 And as long as there is somebody in
7 that corporate entity that's registered with this
8 system at some place, the person or the entity
9 who's signing for this chain of custody transfer
10 would not have to -- I don't think would need to
11 pass any CROMERR validations or anything extra as
12 the current paper system, right? Did that answer?
13 I think that answers your question better.

14 **MR. JOSHUA BURMAN:** It does indeed.
15 Thank you. I think that opens the door to
16 consideration of what the very minimum data
17 necessary to collect at transfer points needs to
18 be. And that then drives exactly how we can
19 collect that data, which I think when we talk
20 about implementing Option 1 or Option 3 can raise
21 or lower significantly the complexity that we may

1 need to have or not need to have. Thank you very
2 much.

3 **MR. MICHAEL HURLEY:** You are
4 welcome.

5 **DR. FRED JENKINS:** Okay. Thank you.
6 Terry Baer, did you have anything else you wanted
7 to add?

8 **MR. TERRY BAER:** Yeah. I just
9 wanted to respond to Mr. Burman's question. And
10 yeah. I would concur with Mr. Hurley stated.
11 Thank you, Fred.

12 **DR. FRED JENKINS:** Okay. Thank you,
13 Terry. Do any other Board members have any other
14 -- more responses to Charge Question 6A? Okay.
15 Let's turn to the Agency. Are you all clear on
16 everything you heard and the Board's response to
17 6A?

18 **MR. STEVE DONNELLY:** This is Steve
19 Donnelly. Yes, we are clear. Thank you very much
20 for your answers.
21

CLOSING REMARKS

DR. FRED JENKINS: Okay. Thank you.

So it -- as a tradition what we normally do is we have the each of the Board members just give a brief closing remark. I'm going to go around the roster as we close out the meeting, and then I'm going to ask a representative of e-Manifest team - EPA to give a brief closing remarks to help close us out. Then I'm going to pass the microphone on to Kathleen Salyer so she can provide closing remarks as the Acting delegated Chair of the e-Manifest Advisory Board. And then I'll close us out with some administrative remarks I need to provide.

So with that said I'm going to go around and ask each of the members, do you have any closing remarks? And before I do that, I want to thank you all again so much for your service this week. Starting with Terry Baer.

MR. TERRY BAER: Thank you, Fred.

Terry Baer. So yeah. As I was saying before, I do want to applaud EPA for their continued work in

1 trying to bring more visibility to e-Manifest
2 system and to, obviously, everything that kind of
3 takes place around the country. I do think that
4 within context of the methods that were presented
5 for this session -- I do think that Method 1 is
6 probably the more prominent one, followed by maybe
7 Method 3 with, obviously, the context of what
8 we've already discussed during this session about,
9 you know, getting a CROMERR compliant signatory
10 device. I think there's ways of still
11 accomplishing that goal without getting -- within
12 that limitation that would be much more industry
13 accepted.

14 One thing I always, kind of, tell my
15 staff is, you know, let's try to problem solve
16 first, and then we'll evaluate the how it applies
17 to the rules and stuff later. So just keep the
18 thoughts going and, once again, thank you for what
19 you're doing. And like I said before, happy to be
20 a part of it. Thank you, Fred.

21 **DR. FRED JENKINS:** Thank you so
22 much, Terry. Tom Baker.

1 **MR. THOMAS BAKER:** Thanks, Fred. I
2 think I largely covered my closing comments in the
3 response to Charge Question 6. But quite simply
4 is, ask EPA to look at a broader perspective on
5 this e-Manifest project and what they consider to
6 be an electronic manifest and then focus their
7 resources on areas that really benefit the overall
8 system the most -- that'll have the most affect
9 when getting us to a point where the system is
10 functioning as expected. But again, thanks for
11 three days, Fred, and facilitating the meeting.

12 **DR. FRED JENKINS:** Thank you, Tom.
13 And Joshua Burman.

14 **MR. JOSHUA BURMAN:** Thank you, Fred.
15 I think I essentially gave most of my closing
16 remarks regarding the substance of the charge
17 questions and recommendations to EPA somewhat
18 inadvertently in my response to Charge Question
19 6A. So I won't repeat those now.

20 I will thank very much my fellow
21 Board members. This is a little more stilted.
22 I'm getting used to interacting this way with the

1 Board. In particular, I'm used to sitting across
2 from Mr. Hurley and doing a lot of communication
3 using facial expressions and, in particular, just
4 him sparking ideas by looking at him, thinking,
5 and then saying ah, yes. And similarly, I'm used
6 to sitting next to Mr. Baker and having just what
7 he's talking about as I'm kind of listening out my
8 one ear spark ideas and so it's been -- I thank
9 them for bearing with me. Sometimes my long,
10 rambling speeches in this venue are a little less
11 directed.

12 As well, thank you very much to the
13 e-Manifest team at the EPA. Your -- particularly
14 when Mr. Jenkins asks if anybody -- excuse me, Dr.
15 Jenkins, has any clarifying questions from EPA, I
16 realize they're not all in the same room. And so
17 they're not able to look at each other and say,
18 "Yeah. Do you have any questions?" So kudos for
19 adapting to them as well.

20 Finally, Fred you've done a great
21 job corralling a bunch of people on phones that
22 aren't used to interacting that way. So thank you

1 for being flexible and patient. That's all I
2 have.

3 **DR. FRED JENKINS:** Thank you so
4 much, Joshua. Let's go to Mike Hurley.

5 **MR. MICHAEL HURLEY:** Thank you,
6 Fred. Yeah. I just wanted -- I would just like
7 to say thank you, Fred. Thank you for putting
8 this on and really -- Josh is right -- corralling
9 all of us and keeping us all on a good clip. And
10 I also want to thank all the public commenters for
11 their time and just their really great comments.
12 They were very helpful.

13 And as always, I would like to thank
14 the e-Manifest team for their -- at EPA for their
15 heroic efforts in this endeavor. I mean, you guys
16 have done a great job. And thanks again also to
17 all of our co-Board members. And that's all I
18 have. The rest of it I covered earlier. Thank
19 you so much.

20 **DR. FRED JENKINS:** Thank you as
21 well, Michael. Dr. Tevfik Kosar.

1 **DR. TEVFIK KOSAR:** Thank you, Fred.

2 This is Tevfik Kosar. In closing, I would like to
3 thank EPA staff for all of the efforts they have
4 put together to prepare this detailed plan to
5 increase the adaption of the e-Manifest. All
6 these three options proposed are reasonable, and
7 all together, they kind of just spin off the
8 issues discussed.

9 Also, I would like to reiterate and
10 ask the EPA staff to reconsider the CROMERR
11 compliance requirement for Method 3. The waiver
12 of this requirement will definitely have a
13 significant impact on the success and adaption of
14 this method. I also want to request from the EPA
15 staff to continue taking the community input in
16 the development process and make sure the feedback
17 from the community is integrated into the solution
18 that they are providing. Thank you very much.

19 **DR. FRED JENKINS:** Thank you so
20 much. Jill Macioch.

21 **MS. JILL MACIOCH:** Thank you, Fred.
22 This is Jill Macioch. And I forgot that we had

1 closing remarks, and I pretty much gave the
2 majority of mine already. In addition to the
3 thank yous that I already said, you know, one
4 group that I'm not sure that we did thank -- but
5 the public participants that have called in and
6 have sat through, you know, various parts of these
7 -- the dialogue over the past three days and, you
8 know. Thank you to all the public participants.
9 I think that's helpful, give them ideas for also
10 submitting comments and questions to the EPA. I
11 know it's helpful for myself for ideas as well.

12 In terms of the options, you know,
13 each one -- I think one of the points that was
14 made early on is that there's not a one size fits
15 all or a one option fits all. And these options
16 may complement each other. So you know, we'll
17 have to look at those strongly. You know, 1
18 certainly sounds good. 2, I would hate to
19 completely see go away.

20 You know, we have over the last few
21 days talked about the CROMERR compliant
22 restrictions may be being eased up a little for

1 all those users that have already set up in the
2 system, you know. Maybe it would be nice to be
3 able to ease their requirements up a little and,
4 you know, they're already registered. They're
5 already in the system. Perhaps maybe they just
6 don't have to go through that challenge question
7 if they choose that option.

8 Question three, always a great one,
9 especially if we can use existing devices and keep
10 costs down. So I'm kind of that relator, and I
11 see benefits in all of them. And it'll be
12 interesting to move forward throughout this
13 process and submit our recommendations. So thank
14 you to everyone with the EPA, including our EPA
15 operator who's done a lot throughout the last
16 three days.

17 **DR. FRED JENKINS:** Okay. Thank you,
18 Jill. And lastly, Cynthia Walczak.

19 **MS. CYNTHIA WALCZAK:** Yeah. Thanks,
20 Fred. Thank you to Fred and thank you EPA for
21 once again putting together some really good and
22 helpful presentations for us. I'd like to thank

1 to all those that submitted or presented public
2 comments. I found those very helpful. And with
3 that I wish everyone good health. Thanks.

4 **DR. FRED JENKINS:** Thank you so much
5 Cynthia. I'm going to ask my EPA colleagues: do
6 you all have -- from the e-Manifest side, do you
7 have any closing remarks to provide?

8 **MS. MIMI GUERNICA:** Hi, yeah. This
9 is Mimi Guernica. And I --

10 **DR. FRED JENKINS:** Yes, Mimi.

11 **MS. MIMI GUERNICA:** -- just wanted
12 to say that I very much appreciate the input of
13 the public and our Board members. I also
14 appreciated that you recognized the progress that
15 we've made. It is an iterative effort, and we
16 will continue to work to improve the system. I
17 also want to thank the e-Manifest team for their
18 creativity, persistence, and adaptability.
19 Holding the meeting in this virtual format was
20 challenging, but the team rose to the occasion.
21 And I want to thank them for that. Thank you.

1 **DR. FRED JENKINS:** Thank you so
2 much, Mimi. I'm now going to turn the microphone
3 over to Kathleen Salyer. She is, of course, our
4 Acting Delegated Chair -- for her closing remarks.
5 Kathleen.

6 **MS. KATHLEEN SALYER:** Great. Thank
7 you, Fred. So first, I want to thank the Board
8 members for a really robust and engaging
9 discussion over the last three days. As I hope
10 you can see, EPA remains committed to maximizing
11 the benefits of the e-Manifest system, and these
12 Advisory Board meetings serve as a pivotal -- as
13 pivotal moments in our journey in doing so.

14 As you've heard at several points in
15 this discussion, EPA takes your recommendations
16 very seriously and uses these to chart the future
17 direction of our program. We appreciate the time
18 you've spent with us these last three days and the
19 time you'll spend developing the next set of
20 recommendations. EPA values your expertise, and
21 we recognize your critical role in representing
22 our e-Manifest community.

1 I want to thank other EPA offices
2 who worked very closely with us over the last few
3 months to arrive at the policy decisions that made
4 possible our proposed options for executing
5 electronic signatures. And I want to thank Fred
6 Jenkins for doing a fantastic job of facilitating
7 this meeting and the e-Manifest team more broadly
8 who have worked hard for several months to lay the
9 groundwork for this meeting's discussion and for
10 moving the ball forward to accomplish our program
11 goals of achieving wide adoption of electronic
12 manifests. Additionally, I also want to thank
13 those who submitted public comments and everyone
14 who has listened to the discussions over the last
15 three days for your continued interest and
16 engagement in the e-Manifest Program.

17 And finally, thank everyone for your
18 patience and adjustment to the virtual meeting --
19 virtual public meeting format. I recognize these
20 are challenging times for all of us, and we
21 appreciate your understanding and adaptability.
22 Thank you all for your time and engagement as we

1 move forward together. And I will turn it back to
2 you, Fred. Thank you.

3 **DR. FRED JENKINS:** Thank you so
4 much, Kathleen, for those wonderful closing
5 remarks. So I got to say I am so proud to say
6 that we got through our first fully virtual e-
7 Manifest meeting. A whole lot of hard work went
8 into -- and preparation went in support of making
9 this meeting happen. We had been planning months
10 in advance for a face-to-face meeting as we
11 normally do. In the last -- within the just
12 matter of two weeks, we had to all of a sudden
13 convert it into a virtual meeting.

14 And I am so grateful to everyone
15 that chipped in to make it happen. I want to say
16 thank you for all of your hard work in making this
17 a very successful e-Manifest fully virtual public
18 meeting. Thank you very much to Kathleen for your
19 leadership and service and support as the Acting
20 Chair of the e-Manifest Advisory Board. Public --
21 and you actually did it the toughest way, to do it

1 virtually. It's never been done before. Thank
2 you so much for all your support.

3 And I want to say a big thanks to
4 the Board. You all did a great job. Thank you so
5 much for your significant preparation and your
6 participation and your tremendous flexibility in
7 preparing for this meeting. And on behalf of the
8 Agency, I want to thank you for your service and
9 thank you for adapting so well in this virtual
10 meeting format.

11 Special thanks to Peter Wright, our
12 Assistant Administrator of the Office of Land and
13 Emergency Management, for his support and insight
14 in helping us prepare for this meeting. And thank
15 you for everyone -- big thanks to everyone in the
16 OMIO -- the number of OMIO people managers, staff,
17 senior managers that helped us in supporting us in
18 preparing for this meeting.

19 And of course, I've got to thank the
20 ORCR, my e-Manifest team family and leadership,
21 for all your work and support in preparing for
22 this meeting. Thank you so much Mimi Guernica,

1 our Associate Director of Program Implementation
2 and Information Division; Steven Donnelly, the e-
3 Manifest Program leads; Amanda Kohler, my direct
4 supervisor, also very involved in Manager of
5 Leading the e-Manifest Program; David Nicholas out
6 of the OMIO. Thank you so much for your efforts
7 and support -- tremendous support and efforts.
8 Scott Christian, e-Manifest Technical Lead.

9 Thank you so much to Brian Gross.
10 Thank you to all e-Manifest team members and EPA
11 staff that were involved in supporting this
12 meeting. Oh, special thanks to the ORCR
13 communications staff for being so active in taking
14 some of the communication changes we had to make.
15 To the public and ORCR administrative staff that
16 were quick in supporting. And thank you very much
17 to our public commenters for their participation.
18 And thanks to the public for attending this fully
19 virtual meeting. And I want to also thank our
20 meeting support contractors for their support
21 during this meeting.

1 The meeting report itself will be
2 completed no later than 90 days at the close of
3 this meeting. The meeting report will consist of
4 the recommendations that the e-Manifest Advisory
5 Board provided and discussed during the meeting.
6 The Advisory Board essentially writes the report.
7 My role as the DFO is to facilitate that write up,
8 make sure it's done on time, and the report is
9 accurate and published on time. The Board -- I'm
10 sorry, the Agency will review these final
11 recommendations and advice that the Board
12 provided, and then sometime later -- afterwards,
13 the Board -- the Agency will provide a formal
14 response to the Board's recommendations.

15 Also, quick note to the e-Manifest
16 Advisory Board, after I officially close the
17 meeting I'm going to ask you all to meet me very
18 briefly in a virtual meeting because I've got an
19 administrative federal advisory committee meeting
20 I need to have with you all. It essentially
21 involves getting us doing -- getting initially
22 organized to write the final meeting

1 recommendations. So with that, I just want to say
2 this meeting is officially adjourned and everyone
3 have a wonderful upcoming weekend and please stay
4 safe. I've really enjoyed you all this week and
5 everyone have a nice evening. This is Fred
6 Jenkins, U.S. EPA e-Manifest team. We're signing
7 out.

8 **JEROME:** Thank you, presenters, and
9 thank you, ladies and gentlemen, for joining e-
10 Manifest Advisory Board's meeting. This concludes
11 today's conference. You may now disconnect. Have
12 a good day and enjoy the rest of the day.

13 **DR. FRED JENKINS:** Thank you,
14 Jerome.

15 **[MEETING ADJOURNED]**