DEFENSE NUCLEAR FACILITIES SAFETY BOARD

WIPP PUBLIC MEETING AND HEARING
April 29, 2015
12:00 p.m.
Walter Gerrells Performing Arts and Exhibition Center
4012 National Parks Highway
Carlsbad, New Mexico

Vice Chairman Jessie H. Roberson
Board Member Sean Sullivan
Board Member Daniel J. Santos

REPORTED BY: Mary Abernathy Seal, RDR, CRR, NM CCR 69
Bean & Associates, Inc.
Professional Court Reporting Service
201 Third Street, Northwest, Suite 1630
Albuquerque, New Mexico 87102

(2631L) MAS
1. Mr. John Pasko, Group Lead for Nuclear Materials Processing and Stabilization, DNFSB
2. Mr. Carter Shuffler, staff, DNFSB
3. Mr. Dermot Winters, staff, DNFSB
4. Mr. Mark Whitney, Deputy Assistant Secretary for the U.S. DOE, Office of Environmental Management
5. Mr. James Hutton, DOE Environmental Management Chief Nuclear Safety Advisor
6. Mr. Jose Franco, DOE Carlsbad Field Office Manager
7. Mr. Sean Dunagan, DOE Carlsbad Field Office Senior WIPP Recovery Manager
8. Mr. Robert McQuinn, Nuclear Waste Partnership President and Project Manager
9. Mr. James Blankenhorn, Nuclear Waste Partnership Recovery and Deputy Project Manager

REPORTER'S CERTIFICATE

Session 1 WIPP Recovery and Safety Improvements

Session 2 Actions Necessary to Safely Recover the Underground Prior to Resumption of Waste Handling Operations

Session 3 Actions Necessary to Safely Conduct Waste Operations

Session 4 Open Meeting of the Board
SESSION 1

WIPP Recovery and Safety Improvements

VICE CHAIRMAN ROBERSON: Good afternoon.

My name is Jessie Roberson, and I'm the Vice Chairman of the Defense Nuclear Facilities Safety Board. I will preside over this public hearing and meeting. I would like to introduce my colleagues on the Safety Board. To my immediate right is Mr. Sean Sullivan. To my immediate left is Mr. Daniel Santos. We three constitute the Board.

The Board's acting general counsel, Mr. John Batherson, is seated to my far left. The Board's technical manager for the Nuclear Materials Processing and Stabilization Group is seated to my far right, Mr. John Pasko.

Several members of the Board staff closely involved with oversight of the Department of Energy's defense nuclear facilities at the Waste Isolation Pilot Plant, or WIPP, are also here, seated behind us. Today's hearing and meeting was publicly noticed in the Federal Register on April 2nd, 2015. This hearing is held open to the public per the provisions of the Government in the Sunshine Act, as well as the Board's regulations implementing the Sunshine Act.
In order to provide timely and accurate information concerning the Board's public and worker health and safety mission throughout the Department of Energy complex, the Board is recording this proceeding through a verbatim transcript, video recording, and live video streaming.

The transcript, associated documents, and public notice will be available for viewing on the board's public website. In addition, an archived copy of the video recording will be available through our website for at least 60 days.

Per the Board's practice and as stated in the Federal Register, we will welcome comments from interested members of the public at the time specified in the published agenda for this proceeding. A list of those speakers who have contacted the Board is posted at the entrance of this room. We have generally listed the speakers in the order in which they contacted us or, if possible, when they wish to speak. I will call the speakers in this order, and ask that speakers state their name and title at the beginning of their statement. There is also a table at the entrance to this room with a sign-up sheet for members of the public who wish to make a statement but did not have
an opportunity to notify us ahead of time. They
will follow those who have already registered with
us, and in the order provided.

To give everyone wishing to make a
statement an equal opportunity, we ask speakers to
be brief and that their comments be relevant to the
subject at hand. The Chair may interject if a
speaker exceeds five minutes, but will then give
consideration for additional time when the agenda
permits.

Statements should be limited to comments,
technical information, or data concerning the
subject of a public meeting and hearing, and the
Board members may question anyone making a statement
to the extent deemed appropriate.

The recording of this proceeding will
remain open until May 25, 2015. Until this date,
members of the public, including those observing
today's hearing live via video streaming may submit
a written statement to the Board to be included in
the record. Contact information for submitting a
statement is available on the Board's website.

I would like to reiterate that the Board
reserves the right to further schedule and regulate
the course of this hearing and meeting, to recess,
reconvene, postpone, or adjourn this hearing, and to
otherwise exercise its authority under the Atomic
Energy Act of 1954, as amended.

The Board's enabling statute defines the
Board's role to advise the Secretary of Energy
regarding actions that may be necessary to ensure
adequate protection of public health and safety,
including safety of the workers at DOE's defense
nuclear facility. The Waste Isolation Pilot Plant
is a nuclear waste disposal facility under the
control of the Secretary of Energy and falls under
the Board's jurisdiction. Therefore, one of the main
goals of the Board with this hearing is to inform
the public and stakeholders on key actions needed to
protect public and worker health and safety as DOE
recovers the facility from the two accidents that
occurred in February of 2014.

WIPP's primary mission is to isolate
transuranic waste in a deep geologic repository.
DOE generated those wastes during decades of defense
nuclear activities such as the development,
production, and dismantlement of nuclear weapons and
the cleanup of contaminated defense nuclear sites.
WIPP must be operated in accordance with DOE's
safety requirements and standards, and failure to do
so could result in exposure of the public and workers to hazardous radiological materials.

In February 2014, two events -- a fire in the underground involving a salt haul truck and a separate release of radiological material from a transuranic waste drum -- challenged whether DOE was adequately meeting its safety requirements and standards. The Board is providing independent oversight of DOE's response and corrective actions as a result of these events.

Today the Board will hold four sessions. The first three sessions will be conducted as a hearing with the Board convening three separate panels of witnesses to discuss the safety issues related to these accidents. The fourth session will be conducted as a meeting of the Board with input from Board staff and the public. The witnesses during the first three sessions include senior managers from DOE's Office of Environmental Management, DOE's Carlsbad Field Office, and the WIPP contractor, Nuclear Waste Partnership, LLC.

The Board will receive testimony regarding actions taken following these two accidents to safely recover the WIPP underground and implement corrective actions in multiple programs to safely
resume and sustain waste operations. The Board will then hear testimony from its staff concerning actions taken by the Board before and after the two accidents, and ongoing Board staff oversight activities.

After the conclusion of this hearing, the Board will convene a meeting of the Board itself. In that meeting, the Board's deliberation will focus on the Board's planned oversight of WIPP recovery actions. The public will then be given an opportunity to comment during these deliberations also.

This concludes my opening remarks. I will now turn to the other Board members for their opening remarks. Mr. Sullivan.

MR. SULLIVAN: No remarks at this time.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

Mr. Santos?

MR. SANTOS: Thank you, Madam Vice Chairman. My name is Daniel Santos and I started with the Board back in December of last year. Since then, I have been visiting the various sites across the Department of Energy defense nuclear complex to gain a better understanding of their mission and
also the independent oversight role we perform
collectively as a defense board.

I would like to note that my visit back in
March to the Waste Isolation Pilot Plant was a
priority to me, and was also recommended to me by
the Board staff due to its importance. I have been
to the underground. I have met with the workers.
And I even also had an opportunity to participate in
one of the many frequent town hall meetings on the
topic of WIPP here in Carlsbad, New Mexico.

Throughout my various trips, I have
learned to appreciate and understand the role and
importance of WIPP to the entire and overall defense
nuclear complex. And I have also witnessed the
impact the events of February 2014 had not only on
the mission of WIPP but also across various other
sites. Therefore, I look forward to today's hearing
to listen and to learn to the Department of Energy
so I can get a better understanding of how they plan
to use this opportunity of these events to
strengthen, improve, and sustain long-term safe
operation of the Waste Isolation Pilot Plant.

Before I conclude my remarks, I would like
to first thank the people of Carlsbad, New Mexico,
and their officials for hosting us here today and
giving us the opportunity to have this public hearing.

I would also like to thank the invited panelists and distinguished officials for their willingness to appear, participate, and share information not only with the public but also with the Board. Special thanks to the Department of Energy Carlsbad Field Office and their workers, the Nuclear Waste Partnership and especially the workers at the facility for giving me what I consider to be a very informative, comprehensive, and most importantly, safe visit back in March.

And finally, I want to thank the Board staff, and all the people that provided support, both directly and indirectly, to making this public hearing. I appreciate and have witnessed the amount of work and attention to detail necessary to put this event together, and I want to thank you.

Madam Vice Chairman, this concludes my opening remarks.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos. At this time I would like to begin Session 1 by inviting Mr. Mark Whitney, DOE Acting Assistant Secretary for Environmental Management, to the witness table to provide a statement on behalf
of DOE.

Good afternoon, sir.

MR. WHITNEY: Good afternoon, ma'am.

VICE CHAIRMAN ROBERSON: Wonderful. I know you have a statement you plan to make. If you would like to submit additional written testimony for the record, please do so at this time. And we're ready to hear your statement.

MR. WHITNEY: Thank you. Good afternoon and thank you, Vice Chairman Roberson and distinguished members, Mr. Santos and Mr. Sullivan, the Defense Nuclear Facility Safety Board. I very much appreciate the opportunity to be here today to share our commitment and vision on the critically important topic of DOE's ongoing Waste Isolation Pilot Plant, otherwise known as WIPP, recovery and safety improvement efforts.

On behalf of the Department, I'm here representing Secretary of Energy Moniz, Deputy Secretary Sherwood-Randall, and the Office of Environmental Management. I have great respect and appreciation for the role of the Board in carrying out its important responsibilities. I believe we share a common goal of protecting the workers, the public, and the environment, and I appreciate the
opportunity to be here today to discuss the
important progress we are currently making in
recovering the Waste Isolation Pilot Plant.

First, let me state that safe performance
of our work is our overriding priority. It has been
my commitment, and has also been stated by the
Secretary of Energy, and it will not be compromised
by schedule pressures. This is the clear
expectation behind every decision and activity we
undertake in our WIPP recovery efforts. We look
forward to continuing to foster a constructive and
collaborative relationship between EM and the Board,
and with the goal being of maintaining safe
operations at our defense nuclear facilities while
meeting our critical cleanup mission.

Safety has been a core value and an
integral part of EM's vital mission from its
inception. Our goal is to continuously improve on
the performance and operations in the spirit of
integrated safety management. Reflecting on the
definition of safety culture, it is an
organization's values and behaviors modeled by its
leaders and internalized by its members that serve
to make the safe performance of work the overriding
priority for the workers, public, and the
environment. It is imperative to our recovery efforts and this starts with behaviors modeled by our managers at headquarters and in the field, both federal and contractor. I continue to set the expectation for the EM work force that safety is integral in the accomplishment of our mission.

The Board will hear more this afternoon and early this evening from Session 2 panelists, initially this afternoon Mr. Hutton, Mr. Franco, Mr. Dunagan, Mr. McQuinn, and Mr. Blankenhorn, who will present testimony to the specific actions necessary to safely recover the underground, actions taken and planned to address the indicative safety elements in WIPP recovery, including specific compensatory measures and controls to mitigate risks, fixes to the safety basis and our safety basis strategy, contractor assurance and the federal strategy to provide adequate oversight. While I will not be participating separately in Session 3, my expectations will be represented by those members of my senior leadership team who will be providing testimony.

I recognize there continues to be a perception among some of the work force that schedule pressures are taking precedent over safety.
I take this concern very seriously and continue to make clear to my management team and our work force that safety is the overriding priority. We will not let schedule pressures override the safe recovery of WIPP and the safety of our workers, public, and the environment.

We have made considerable progress toward safely recovering WIPP over the past 13 months. This includes immediate response to the incidents, evaluation, and investigation into these events, defining and implementing required corrective actions, and that's specific to the first two accident investigation reports and, of course, issuing the high-level WIPP recovery plan and a detailed baseline September of this past year.

The Department has a target to resume waste emplacement operations in the first quarter of 2016, but we will only resume operations when it is safe to do so. This means properly establishing the safety management programs and upgrading the documented safety analysis to the latest DOE standard, as well as developing a corrective action plan to address the Accident Investigation Board phase 2 report. Should at any time during the course of developing and implementing these
important program improvements we need to make
schedule adjustments, we will do so. Strengthening
safety management programs is among the highest
priorities within the Department and of great
importance, of course, to the Secretary and me and
that we do what we must to ensure that the events of
February 2014 do not happen again.

The AIB identified a number of weaknesses
in the safety basis and safety management programs
at WIPP that must be thoroughly addressed.
Headquarters, the Carlsbad Field Office, and Nuclear
Waste Partnership are implementing broad corrective
actions to strengthen WIPP's nuclear safety, fire
protection, emergency management, radiological and
maintenance programs. We are methodically working
through re-establishing a bounding safety envelope,
rigorously implementing training on new procedures
and processes, and responding to all our oversight
organizations' concerns. This includes the
New Mexico Environment Department, the Environmental
Protection Agency, of course the Defense Nuclear
Facilities Safety Board, the Mine Safety and Health
Administration, and the Office of Enterprise
Assessment.

We are currently working on corrective
action plans in response to the accident
investigation phase 2 report on the radiological release. We are in the process of upgrading the WIPP documented safety analysis to the DOE standard 3009-2014 that was issued last fall. When these programs, procedures, and safety bases are in place and the workers have been properly trained, we will then conduct a comprehensive review of operational readiness. This will include a formal operational readiness review at both the contractor and the federal levels, and this will ensure that we are prepared to safely restart operations.

Underground entries which were necessarily so painstaking in the weeks following the radiological event now are safely performed on a daily basis, and we have been working multi-shift operations in the underground since February. Restoration includes radiological surveys, radiological buffers in noncontaminated areas, ground control stability, roof bolting and equipment maintenance. Today over 1,800 bolts have been installed in the underground. We are finishing the cleaning of electrical equipment from smoke damage and we're about 75 percent on that activity.

Restoration and maintenance of required
equipment is also ongoing. The waste hoist was
returned to service in November, allowing more
personnel, larger equipment and materials to be
transported into the underground.

As an element of the formal accident
investigation we undertook Project Reach to perform
a comprehensive video inspection of panel 7, room 7.
Aerial videos over the waste stacks as well as
between the waste stacks were taken and completed in
January. Photographic and video examination found
no other breached drums. Successful completion of
Project Reach allowed for the issuance of the final
AIB report just recently, as well as a Technical
Assessment Team report. This was a critical step in
continuing our recovery operations.

Work is being performed in contaminated
areas. The decontamination approach for the walls
is to apply a water mist to create a crust on the
salt surfaces followed by a spray-on fixative for
areas of higher activity.

We are in the process of preparing floor
areas in the underground leading to panel 7. As you
know, adequate ventilation is required for life
sustainability, removal of dust during mining and
removing exhaust fumes during diesel engine
operations. Increasing ventilation capacity is a principal requirement for safe underground operations. Additional ventilation is necessary because the facility is now, as it has been since the incidents, operating in high-efficiency particulate air filtration mode at a reduced airflow of approximately 60,000 cubic feet per minute, which, of course, greatly limits the activities that we can execute underground.

Our plan is to increase ventilation in three phases to support increased underground operations and subsequent testimony later today will provide additional details on those activities.

The initial closure of panel 6 and panel 7, room 7, the underground areas containing the nitrate salt drums, is, of course, a priority for us and the New Mexico Environment Department, and this is needed in order to permanently isolate the suspect waste stream.

WIPP received an order from the State to perform expedited closure of these areas. Required activities include contaminated bolting, construction of bulkheads, and movement of salt for panel 6. The initial closure for the entrance side of panel 6 was completed on April 4. We are working
toward completing initial closure of panel 6 and
panel 7, room 7, by early summer.

To complement the AIB investigation, the
Department tasked a Technical Assessment Team to
determine the mechanisms and chemical reactions that
may have resulted in the failure of the waste drum.
The Technical Assessment Team was led by the
Savannah River National Laboratory and was composed
of scientists from Savannah River National
Laboratory, as well as Lawrence Livermore National
Laboratory, Oak Ridge National Laboratory, Pacific
Northwest National Laboratory, Sandia National
Laboratory, and Idaho National Laboratory. It was
truly a multi-laboratory team making up the
Technical Assessment Team, and included scientific
experts in a range of fields including sampling
analysis, forensic science, modeling and reaction
chemistry.

This team approach ensured that the
appropriate expertise was available to assess the
event and to support DOE's implementation of WIPP
recovery. The participation of many scientists
enabled the generation and peer review of
scientifically-based conclusions. The Technical
Assessment Team maintained independent authority to
direct all activities within its charter. The Technical Assessment Team visited Carlsbad and met with federal and contractor staff at WIPP, the Carlsbad mayor's independent task force and attended a special Carlsbad Town Hall meeting to answer questions on the final report that was released on March 26. They were able to make some key determinations, including the contents of the drum involved were chemically incompatible; the drum breached as a result of internal chemical reactions that produced heat and gas buildup, and drum 68660 was the source of the radiological release in the WIPP underground. The results of the Technical Assessment Team will provide useful lessons learned and tools as WIPP continues to move forward toward resuming operations at the facility.

These findings, coupled with the results of the recently completed phase 2 of the accident investigation lend support to the need and appropriateness of moving forward with panel closure, and that is the approach that we are taking.

The Accident Investigation Board's three reports evaluated in detail the salt truck fire and radiological events. The AIB identified weaknesses
with the site office and headquarters in conducting effective line management oversight and holding personnel accountable for correcting repeated issues. The AIB also identified weaknesses in the execution of the Nuclear Waste Partnership contractor assurance system, which did not identify precursors to these events.

On April 16, the AIB phase 2 report was released with 40 judgments of need. The AIB completed an exhaustive investigation at WIPP, as well as at Los Alamos National Laboratory, to examine the cause of the radiological release at WIPP and identify judgments of need regarding managerial controls and safety measures necessary to prevent or minimize the probability or severity of a recurrence of this type of accident.

Based on post-event chemical, radiological, and fire forensic analyses, the AIB concluded that the release was caused by an exothermic reaction involving a mixture of organic materials and nitrate salts in one drum that was processed at Los Alamos National Laboratory in December of 2013. The board also concluded that an underground salt haul truck fire that occurred at WIPP on February 5, 2014, did not cause or
contribute to the radiological release event. The
AIB's findings identified shortcomings within both
contractor and federal processes at LANL, WIPP,
Environmental Management, and the National Nuclear
Security Administration. I understand that Mr. Ted
Wyka, the AIB chair, briefed you recently on the
results of the accident investigation and will
further be discussing individual aspects of these
investigations in more detail during Session 3
today.

I said previously that our goal is to
continuously improve our safety performance and
operations in the spirit of integrated safety
management. The integrated safety management system
is the Department's enduring framework for the
approach to the safe performance of work. The
integrated safety management's guide, attachment 10,
safety focus errors and associated attributes,
outlines our vision for what a positive safety
culture and a safety-conscious work environment
looks like and feels like, providing specific
attributes of leadership, employee engagement, and
organizational learning. These are not just words.
They are values and expectations that the Secretary
and I expect to be demonstrated on a daily basis.
In summary, WIPP is an important national resource that will recover from this unfortunate incident. WIPP will resume disposal operations when it is safe to do so. The safety of our employees, the public, and the environment is first and foremost. We have kept the community and a wide range of stakeholders informed along the way of WIPP recovery, and will continue to do so. We will continue working with our regulators and stakeholders around the country as we move toward resumption of the safe operations at WIPP.

As always, I invite you to contact me directly if you ever have any concerns about our activities involving WIPP recovery or our other facilities, and thank you again for the opportunity to discuss the Department's efforts. I'll now be happy to answer any questions.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Whitney.

(A discussion was held off the record.)

VICE CHAIRMAN ROBERSON: Thank you, sir. And once again, thank you, Mr. Whitney, for your statement. Actually, I'm going to start out with the first question and then we'll let the other people chime in.
The Accident Investigation Boards, multiple -- I guess it was the same core set of people, but added and expanded for expertise -- the boards for the salt haul truck fire and the radiological release event identified a number of deficiencies with the safety basis and safety management programs relied on, relied upon at WIPP to protect the workers and members of the public from radiological hazards, and you talked a bit about this in your statement.

They also identify concerns with the contractor and federal organizations managing, executing, and overseeing the safety of nuclear operations.

During today's hearing we're going to explore with your staff and with your contractor actions taken and plans to correct the number of deficiencies identified. But what specifically -- I mean, you're in charge of this enterprise, not just WIPP, but the entire complex that is now also unable to benefit from the operation at WIPP. What specific lessons learned are you taking away from this event and, in particular, how are you incorporating them into your expectations for managing and overseeing the safety of operations at
WIPP?

MR. WHITNEY: Thank you, Ms. Roberson. You hit on it. Oversight, an effective oversight, is a recurring theme throughout the AIB reports and it was highlighted extensively in the phase 2 report that was just released. And so we have set out on a course to strengthen our oversight through many different mechanisms. And you also, I think correctly, alluded to the fact that this is not just a WIPP issue. This is something that we do need to apply across the complex.

But let me start by talking about Carlsbad first, and what we have done there.

VICE CHAIRMAN ROBERSON: Okay.

MR. WHITNEY: Of course, we have developed corrective action plans for the first two AIB reports, and are in the process of developing a corrective action plan for the third and final report, and those are very detailed. And the reports -- I think the team did an excellent job identifying the deficiencies and weaknesses, where they are, as well as the judgments of need, in giving us a path forward to resolving this.

So with Carlsbad, the oversight, we approach it kind of in a multipronged way. One,
resources was an issue. It did not have the
resources that they need, quite frankly, to do an
effective oversight job.

So shortly after the event, shortly after
I came on last summer, we authorized an additional
22 folks to work at CBFO, an additional 22 FTEs,
many of those in safety oversight functions,
including very senior folks in the organization;
also including facility representatives, nuclear
safety individuals.

Carlsbad also looked at their organization
and realized and found that not only was it
structured in a way that did not clearly delineate
the roles and responsibilities of the program and
the oversight, but also there were individuals
within the organization that were doing both roles.
So it wasn't just an organization that was with one
office doing this, but we had folks responsible for
both aspects.

So they reorganized, developed a plan for
reorganization, and created two divisions, one an
operations oversight division, and one a production
division. So trying to get the production and the
oversight separated so we could have some
independence on the oversight part.
They hired -- created a new assistant manager position for that oversight role, who reports directly to the CBFO manager.

Those were very initial and very important first steps for the organization.

They are also revising basic implementing procedures how they do things in the organization, specifically with those things in mind. They have revised a training and qualification program and they are currently working on that now for the individuals who have these areas under their responsibility.

They're doing things like revising position descriptions that make it clear if you have oversight responsibilities, you will be held accountable, and that's how your performance will be judged.

EM headquarters, trying to get maybe more broadly how we're applying this across the complex, was also provided additional resources to EM 40. (EM 50 would not help us in this, probably.) But EM 40, which is our deputy assistant secretary for safety, security and quality programs. We've just recently provided them some additional FTEs, many of them in the safety oversight area, with an agreement
to re-evaluate if those are sufficient in the near future, and so we will keep on that to make sure that they're adequately staffed.

As the head of that office, the Deputy Assistant Secretary Jim Hutton, has told me -- and he'll probably talk a little bit about this today -- we need to make sure that our oversight blanket spreads across the complex. And something else he'll probably talk about is a specific program that he is developing with that in mind.

VICE CHAIRMAN ROBERSON: So can I ask you -- I think providing the resources absolutely was critical. Do you think the expectations for oversight emanating from headquarters out into the field were clear, as well?

MR. WHITNEY: I think that the expectations when they were developed, the requirements, are clear, but we need to do a better job of reinforcing those, never being complacent. I think that's one thing that we've learned is complacency is not an option in what we do. And so we need to make sure that we are on that.

And I know the thing that Jim Hutton likes to say is: Anxiety is a good thing in this area, and anytime we feel confident that we have things
figured out, that's probably, you know, a problem.
So we need to continue to work on this.

VICE CHAIRMAN ROBERSON: I don't want to
hog all the time, so I'm actually going to let
Mr. Sullivan -- I think he has a question or two for
you, as well.

MR. SULLIVAN: Thank you.

Good afternoon, Mr. Whitney. The incident
back in February of last year, over a year later, as
best as we can tell, these were really two
completely separate accidents. Other than the
coincidence of time, there really was no
relationship between them; is that correct?

MR. WHITNEY: Yes. The AIB report did
find that the fire event did not impact or result in
the February 14th radiological release incident.

MR. SULLIVAN: So my question to you is:
I'm wondering, if we had only had one, would we be
where we are today? The fire accident, for example,
showed that there were many issues here, including
cultural issues, raised the question of whether the
work force and the oversight was treating this as a
mine and not a nuclear facility, and so that had
several significant issues.

From a nuclear perspective -- well, let me
go back to the fire. I mean, if I'm a worker and I
look at these two issues, that's probably the
scariest one. I mean, the workers -- their lives
were directly threatened by the smoke that they were
trying to avoid that day. Less scary for them would
be the radiation release event but probably has
greater wide-ranging implications for the
department, so there's a different set of things
there. And it's even more different because when
you go and find the real problem that instigated
that release, it wasn't here. That problem was
elsewhere, and not here with anybody who was doing
any work here at the site.

So again, I'm back to my question. It's a
long lead-in to my question.

What if we only had one? What if we had
only had the fire? Would we today be looking at the
safety basis and other issues that the rad release
has brought up? What if we had only had the rad
release? Would we be looking at the cultural-type
issues? You know, because the rad release didn't
originate here, would we have been looking at the
cultural-type issues?

Can you address whether or not this
coincidence in time has somehow multiplied the
effect of one accident greater, so that we're
greater than the sum of the two?

MR. WHITNEY: Yeah. Thank you,
Mr. Sullivan. And I cannot sit here and say that we
would be in the same place today with respect to our
actions moving forward in the area of, you know,
safety management programs, safety basis, what we're
doing with respect to oversight, because the AIB
reports they did have some different -- or not
identical findings and different judgments of need;
and so without the two events we wouldn't have had
the compilation of conclusions and judgments of
need. So I'm not going to say that we would be in
the exact same place, because that's clearly not the
case.

I do agree with you that the February 5th
incident was a very significant event, very
unfortunate event, and probably the greater of the
two with respect to risks to the worker. And so I
do feel that that event alone would have
necessitated the AIB that we had, the findings that
we had, which, on the other hand, even though they
weren't the exact same findings, there are some
findings -- many findings, actually -- that are very
similar with respect to safety management.
And so I think in many respects -- and oversight. And in many respects, we would be, on some of these broader issues that I think are applicable to the entire complex, we would be in the same position. But I can't say that we would be in the exact same position that, you know, the confluence, the coincidence of the timing of the two events that has led us to the point we are today with three different reports, very detailed reports that I think have allowed us to outline the path forward, not just to WIPP recovery, but to improving the way we do things across the complex.

MR. SULLIVAN: Okay. So you know, I think that the coincidence of time simply points up that the work force here -- and by extension, the public -- really deal with two different dangers, and they're both dangers, as dangers tend to be. First, they're in a mine. They're underground. They're confined. They have to rely on elevators and other systems to get them to the surface if anything goes wrong. And secondly, they're dealing with dangerous nuclear materials.

So the only way that this can be handled safely -- and it can be handled safely, as we've demonstrated in the past and I'm sure we'll
demonstrate again in the future -- is with a good strong culture. Now, you talked about trying to effect that through how you were reorganizing the oversight. So can you tell us a little bit more about what is being done here with respect to the oversight provided by the Department of Energy so that we can understand better where you're trying to go in establishing the right culture here?

MR. WHITNEY: Thank you. Yes, and the safety culture, of course, efforts that we're undertaking, there are the broader efforts that have been ongoing, and then there's specific efforts related to WIPP, the Carlsbad Field Office, the Nuclear Waste Partnership, as well. So let me start with that and some of the things that are ongoing here at the site.

One thing that has recently occurred -- and I think you're right. Safety culture -- let me step back one minute, because you hit something I think is very important.

You know, this mine has -- and it goes back to complacency and where we are. I think part of our success, you know, led to some complacency. We have not had these issues at WIPP; it's been such a stellar operating organization without incident of
significance for many, many years. And I want to just -- the workers and the work force -- they work hard, they do their job, and they're proud of what they do. And so I in no way want to attribute any blame to the work force.

You're right. The culture issues are things that we have to address. It's something we obviously have not fixed, that we need to continue to fix, continue to work on. At the previous hearing we talked more broadly about some of our efforts in that regard.

Here just recently, in December, the Nuclear Waste Partnership requested an assist visit from industry, from experts in the industry, folks from Nuclear Regulatory Commission, NASA, and Department of Energy, others, made up an info assist visit.

They came through and did a fairly in-depth review of the safety culture here. And I think now NWP and the site here are moving forward with looking at those findings and recommendations and ensuring that those are captured appropriately and acted upon.

We are, of course, continuing and re-emphasizing here at WIPP the efforts that we have
been undertaking with respect to safety-conscious work environment and ensuring that training is provided to all the work force. Just within the last few months we trained an additional 44 folks here onsite in safety-conscious work environment. And safety culture sustainment planning is ongoing, leading to a point where we will have developed a complex-wide safety culture sustainment program.

We have received -- building off of some of the self-assessments that were completed and some of the independent reviews completed at our sites, all of our sites developed safety culture sustainment plans, issued those to us at headquarters; we've done a review of those. We're always coordinating and communicating with the sites as we review to understand what's going on, and we will very soon be issuing -- I'll be issuing an approval of the plans or approval with conditions, depending on the site. So that's another effort.

But to me, it does go back to complacency. I don't want to sound like we have it all figured out and that we are in the exact right place we need to be with respect to safety culture. I can assure you that we are treating it very seriously, and safety is our priority in all that we do, and you'll
hear a lot about that today in how we're moving forward here at the site with respect to the safety basis and safety management programs, as well.

MR. SULLIVAN: And specifically, separating within the field office, separating programmatic responsibilities from oversight responsibilities, you think that will successfully contribute to the improvement here within the culture?

MR. WHITNEY: I think within oversight certainly, and I think that in itself will help with the safety culture. But as you know, it will take a variety of different things that we need to do, not just here but across the complex, to continue to improve the safety culture.

MR. SULLIVAN: Thank you.

MR. WHITNEY: Thank you, sir.

VICE CHAIRMAN ROBERSON: I just want to follow up on that line of questioning before I turn it over to Mr. Santos.

So the investigation board had five concerns with CBFO that CBFO had allowed the safety culture at WIPP to deteriorate, as evidenced by worker feedback, and workers did not feel comfortable identifying the last issues that might
adversely impact management direction, delay the
mission or otherwise affect cost and schedule.

So I kind of say, "Okay, that's CBFO."

But I would say, EM also has to look in the mirror
at itself, as well. So what is EM headquarters
doing to ensure a better safety culture at WIPP so
that you don't find yourself -- so we're talking
about recovery now. Other sites in your complex
have waste building up. I think EM headquarters has
a tremendous role to play here, and I guess I
just -- I understand you say you have increased your
staffing in your safety oversight organization. But
are there other principles or are there expectations
that would improve the oversight from headquarters,
as well, to ensure that there's a good safety
culture surrounding the site?

MR. WHITNEY: Yes, thank you. And because
it's related to this, I will add that, in addition
to the new hiring authorities, we have Jim Hutton's
office; and not just from headquarters, but from
across the complex, we've had folks on the ground
here in Carlsbad supporting Joe Franco and his team,
since very early on, for over a year now. Many
folks, nuclear safety experts, folks that are
recognized in the field with decades of experience
in working in the nuclear facilities. And that is, of course, another effort that we're trying to do from headquarters to effect that positive change with respect to oversight.

And with respect to what additional things that we're doing at WIPP, I personally participated, I guess is the right way to say it, in the INPO assist visit. I was interviewed by the folks and provided comments, and then also, you know, had an opportunity to read their findings and their recommendations.

And you're right, you know. My observation is part of it is that there is a perception within the work force that we have prioritized production over safety, quite frankly, and specifically as it relates to WIPP recovery. So that is an unintended consequence of trying to resume operations. But I think a point that we miss and haven't been as clear on as we should have been -- because it is our strategy and our focus -- is resuming operations at WIPP, first and foremost, involve establishing a safety envelope to resume operations. That's our first priority. And so when we talk about resuming WIPP operations and recovering operations, we should be explicit.
That's what we're talking about. Everything else will follow. And so we need to do a better job on that.

VICE CHAIRMAN ROBERSON: Mr. Santos.

MR. SANTOS: Thank you, Madam Vice Chairman, and good afternoon, Mr. Whitney.

Prior to the February 2014 events and even after those events, there continues to be evidence with some challenges and deficiencies identified by multiple teams associated with work planning and control, execution of procedures, the use of expert judgment, all of that. Is this unique to this facility? Do you also see this across the complex? And what are some of the actions you may be taking headquarters-wide?

MR. WHITNEY: I don't think it's unique to WIPP, unfortunately. It's a constant battle. I mean, these are, as you know, very complex facilities and complex operations, in many cases, with operations, procedures, and processes that, if you put them all together, you know, could probably fill this entire auditorium.

So it is a constant struggle and a constant challenge to stay on top of that, to make sure -- because things change. Our work changes.
We develop new work packages to advance to the next stage of whatever cleanup we're doing at sites. And so I would like to say that maybe it's unique, but it's not unique. And it will be something that we will continue to have to stay on top of and continue to work. And you know, it is a -- from my time at Oak Ridge, I know it is something that we spend a lot of time on, working with the contractor on these specific issues, work planning control, work packages, because that's where you get in trouble. And so you're right, but it's not only at WIPP.

MR. SANTOS: My next question goes back to oversight. How would you go about leveraging the methodologies, the composition, or the unique aspect of this Accident Investigation Board so you can leverage across your oversight initiative such that I don't need an accident or the composition of an accident investigation board to come up with some of the conclusions that may not even have to do with an accident like they reported, and we can strengthen the oversight?

MR. WHITNEY: Thanks, Mr. Santos. Yes, and that is precisely -- you know, it would be easy to want to focus on WIPP and focus on recovery,
focus on all the -- and Los Alamos -- on all the findings in the AIB reports. But we have to apply those findings across the complex. And they're not -- even the things that are directly related to TRU waste operations -- packaging, processing -- a lot of those things are directly applicable to other areas within the cleanup program.

And so what we have done is, for the first two reports, of course, we issued those to the field, to the field managers. We've had in-depth conversations with the field managers about those, seeking from them opportunities to -- lessons learned that they may take away from those, and we have continuously coming in, as we, you know, have additional findings, things coming in from the sites. We have a site manager who has detailed exactly what they have done with respect to WIPP. They don't have a repository, but they have an EM program and they have taken lessons learned. Now, many of them have the benefit of having folks that served here at WIPP after the incidents to help with recovery, to help with the AIB investigations, and so forth. And so we have specific examples of that. It's something that we continue to emphasize.

And then with this last AIB report, I
recently issued guidance to all the senior leadership team, including, of course, all our site managers, on what our path forward is with respect to this. And so, one, the expectation is that they not only read and review the report, but they talk about it with the contractors, they talk about it with their employees.

And then we are going to meet -- and Ted Wyka will be briefing each site individually on the findings within the next few weeks. And then in early June we are going to reconvene the EM senior leadership team specifically to look at this and specifically to consider what lessons we may learn and hear, you know, from some of the sites what they're already looking at and applying.

Oak Ridge, for example, within the last few weeks -- I received an e-mail from their site, which outlined in great detail what they did to look at the previous two reports and the lessons learned they took from those and how they're moving forward and developing their own corrective action plan to ensure that they don't have issues that result from some of the deficiencies that were found in the report.

So we do want to move forward aggressively
on that, and that's my expectation, that we will.

MR. SANTOS: I have one last follow-up question. And you touched briefly on operating experience and how you plan to share complex-wide. Any plans to share and evaluate lessons learned and leverage from international experience, similar type facilities or repositories?

MR. WHITNEY: You know, I think we do that. And to be quite honest with you, I haven't thought of it in terms of the AIB reports but just what we can learn from other facilities. Actually, one of our senior leadership team in the front office just recently returned from UK, where she visited the facilities, and she said she has a lot of lessons to bring back that we can apply to some of our facilities. And so I look forward to that.

So I think that's something that we do. We don't do it a lot. We have challenges at home that we're always trying to deal with. But it's important, you're right, because there are a lot of approaches that we may not have considered, and I appreciate the value of that. I used to work on international programs, including through EM, and for NSA, and so I understand the value that that can bring to a program.
MR. SANTOS: Thank you, Mr. Whitney.

Those are all my questions, Madam Chair.

VICE CHAIRMAN ROBERSON: Thank you,

Mr. Santos.

Mr. Sullivan?

MR. SULLIVAN: Thank you.

Mr. Whitney, I want to ask you specifically about emergency response, so let's talk about the rad release event in particular. While the work force here didn't cause the event, as the Accident Investigation Board phase 1 for that event report indicates, there were plenty of deficiencies in the response, the biggest one, in my view, being timely notifications weren't made back to folks in Washington, D.C., such as your predecessor, to respond.

I found out about that event on Saturday. And again, coincidence, we had a staff member here who was observing the entry into the mine post fire, and on Saturday morning that staff member came to the site, was given access to the site, because he was just coming back for that day's events. And then several -- about 9:00 I think in the morning -- so this is now ten hours after the first indication of a problem -- then they were told to shelter in
place. And so I found out about it because I had a staff member here who then made phone calls back to our agency to say that something was up. So I think there were many breakdowns in letting the folks know back in Washington, D.C.

So my question is: What's been done to fix that problem? Whether there was an issue here or somewhere else within the complex in the future, I'm sure you want to know about it so you can get the facts and begin to bring the expertise that you have available to you to help affect the problem. What are you doing to make sure that you're getting proper notification?

MR. WHITNEY: Thank you, Mr. Sullivan. As you noted, the first AIB report had a very large part to deal with the response to the fire and as well as the second report had a response to the release. Neither of those were adequate, for sure.

The NWP and our offices here have revamped the environmental -- emergency response programs, processes, systems. That includes not only equipment and systems, but also the way they do that, including a notification. That is something that we'll continue to work on moving forward. And I know that folks that will participate in the later
sessions will have more in-depth detail on what has been done.

MR. SULLIVAN: I have another question, which I think will be quick, but I'm shifting topics now. So DOE's Office of Enterprise Assessments, the office run by Mr. Podonsky back in Washington -- they came out and did a post incident review of the maintenance program and they issued a report in December. The executive summary for the report says they're going to do more such reviews, and I'll just quote from it quickly. It says, "As the recovery in transition to operational activities progress, the EA's oversight will also include a comprehensive review of WIPP's operations as requested by the Acting Assistant Secretary for Environmental Management," which is you.

So I guess my question to you is: What are you planning to request to have them do?

MR. WHITNEY: Well, one thing that we would like for them to do is take another view. I think it's always good and I respect the work of Glenn Podonsky's office. I think they do a very thorough job, and they can generally find things that we may not have found before. And so just general operational "what happened with the events
and why they happened," they may have a different angle, a different outlook that could provide us some additional ways of looking forward.

So that's what I would like. And I think, although sometimes I know that Joe and his team here probably feel like they're getting a lot of reviews and a lot of operational burden, I think they also recognize the importance and the value of that moving forward. When we do resume operations, we need to be sure that we're ready to do so safely.

I will just touch on, since you mentioned the maintenance in the first review that Enterprise Assessments did, we did reach out to all of our sites again as an attempt to take some of the lessons learned from WIPP, particularly the fire event, and apply that across the complex to direct the sites to provide a report on deferred maintenance, particularly focused on safety-related systems.

What we found from that, from the input that we received from the sites, was that generally across the board, safety-significant systems were well accounted for, well tracked, and well followed through upon, any type of work that needed to be done.
Safety-related systems, not so evenly applied across the complex. And so that's something that we're taking a very close look at right now in the area of deferred maintenance to, one, ensure that we're all accounting for it the same way, with the same rigor; and two, making sure that we fund those activities. The safety-significant systems are funded within the operational funds that sites receive. They don't need to request additional funds. They know that. That is something -- the expectation and responsibility is for them to fund those systems and the maintenance on those systems.

But the safety-related systems -- and I think we learned a very good lesson, unfortunately, from the fire event on why that's so important. But that's something we're going to be focusing on moving forward.

MR. SULLIVAN: Okay. Just quickly on the Enterprise Assessment's potential future reviews, is there anything scheduled yet?

MR. WHITNEY: I believe that they are conducting a review right now. Is that correct?

Okay. So the Board staff has the schedule on that. But my understanding is right now, or imminently, they're conducting a review.
MR. SULLIVAN: Thank you.

MR. WHITNEY: Yes, sir.

VICE CHAIRMAN ROBERSON: I guess just one more question, because we're running out of time, and maybe it's partly commentary, partly not.

I guess the two things that struck me from all the investigations -- and I'd just kind of like your straightforward reaction, whether it's here or for the record. You know, one was: Changes over time deteriorated really the understanding of the status of your safety basis for the facility. And the other was: I mean, this is a premier safety operation, it had a tremendous safety record, it was recognized not just nationally, internationally for safety performance. And then we have a thing go wrong and we find those foundational things underneath don't really support the conclusion.

I think one of the terms that I hear from leaders in the department these days is the perception of what existed wasn't the reality. And so when I look at EM headquarters, the investigation revealed a whole host of things. We're going to talk about a lot of those through the rest of the day. But I just wanted to get to what's the key takeaway for EM headquarters that will have an
effect on its oversight of WIPP going forward?

MR. WHITNEY: Thank you, Ms. Roberson.

You're exactly right on the first point. The changes over time really deteriorated our understanding of where we were with respect to safety basis, and so that in itself is a very key finding for us and allows us to move forward.

And so as we're developing the revisions to the safety basis now, we are, one, using the most recent standard as I mentioned, the 3009-2014, the DOE's safety basis standard, which was revised just late last year. And that has to be the priority for us before we resume operations at WIPP, is re-establishing the safety envelope and doing it correctly.

And then to your point about the stellar record and we thought we had it right before, and the event happens, and you know, what's to prevent maybe that from happening again?

You know, we clearly did not have it right. And it gets back to I think my point earlier that complacency, precisely because of the stellar safety record, you know, kind of was our worst enemy. And we can't get complacent. We have to continue to focus, continue to maintain that anxiety
that my colleague talks about, and move forward and
focus on this issue.

VICE CHAIRMAN ROBERSON: Thank you,
Mr. Whitney.
Any other questions?
Thank you for your testimony. Thank you for answering our questions. And you are free to leave the witness table.

MR. WHITNEY: Thank you, Ms. Roberson.
VICE CHAIRMAN ROBERSON: We're going to take a two-minute break so you don't ruffle things as you leave and we can prepare for the next session. Thank you.

MR. WHITNEY: Thank you.

(REcess from 1:02 p.m. to 1:14 p.m.)
SESSION 2
Panel Discussion: Actions Necessary to Safely Recover the Underground Prior to Resumption of Waste Handling Operations
VICE CHAIRMAN ROBERSON: All right. We're reconvening. Let's get this show back on the road. Thank you so much for your patience. While we're preparing to start Session 2, I want to acknowledge the presence of Mayor Janway, who is circling the aisle. Thank you, Mayor, for coming. We look
forward to any contribution you have to make today. Thank you.

So at this time, I'd like to begin Session 2 of the hearing, which will focus on DOE's actions necessary to safely recover the WIPP underground prior to resuming waste-handling operations. During this session, the Board will explore actions planned and taken by DOE to address the key safety elements in the WIPP recovery plan and how compensatory controls implemented under temporary safety basis documents and safety management programs will protect the workers and the public during recovery activities.

The Board will also address DOE's strategy for providing adequate federal oversight during the recovery phase.

I'd like to start this session by introducing Mr. Carter Shuffler, who is the technical staff lead for overseeing the safety of recovery activities at WIPP for the Board, and a member of the Board's Nuclear Materials Processing and Stabilization Team. Mr. Shuffler will provide testimony from the Board staff.

MR. SHUFFLER: Good afternoon, Madam Vice Chairman and members of the Board. For the record,
my name is Carter Shuffler. I am a member of the Board's technical staff responsible for overseeing the safety of nuclear operations at the Waste Isolation Pilot Plant, or the WIPP site.

In this statement I'll provide a brief overview of the Board's oversight activities at WIPP before and immediately after the salt haul truck fire and radiological release event in February 2014. I'll discuss the findings of DOE's Accident Investigation Board related to these events and the corrective actions proposed by DOE and its contractor, Nuclear Waste Partnership, or NWP, to address these findings. I will then discuss DOE's recovery plan for resuming waste operations at the site. And finally, I will discuss the staff's recent oversight activities at WIPP and highlight lessons learned from the February 2014 events that the staff is factoring into its future oversight at WIPP and other DOE defense nuclear facilities.

WIPP is a deep geologic repository for permanent disposal of transuranic, or TRU, waste generated as a byproduct of defense nuclear activities across the nuclear weapons complex. Deliberate, safe disposal of these wastes, which contain long-lived radioactive isotopes, is crucial.
to ensure the safety of the public, facility
workers, and environment surrounding the WIPP site.
Permanent disposal of TRU waste also improves the
safety posture at generator sites such as the Idaho,
Lawrence Livermore, Los Alamos, and Oak Ridge
National Laboratories and the Hanford and Savannah
River Sites.

NWP manages and operates the WIPP site
under contract to the Department of Energy. The
Department of Energy representatives, including
personnel located at the Carlsbad Field Office, have
the responsibilities for WIPP contract oversight and
regulation.

The Board and their staff conduct
oversight of defense nuclear facilities across the
Department of Energy complex, including operations
at the WIPP site. The Board's oversight consisted
mostly of monitoring and reporting on operations at
WIPP through 2009. The following year, after an
onsite review identified safety issues with work
planning and control, the Board began a more
aggressive oversight approach that resulted in a
series of communications to DOE, and in an October
2010 letter to DOE, the Board identified weaknesses
in the implementation of integrated safety
management at WIPP during activity level work planning and control. These weaknesses resulted in procedures that did not contain necessary controls and could not be performed as written.

In June 2011, after reviewing the WIPP fire protection program, the Board identified deficiencies with the WIPP fire hazard analysis, highlighting its failure to adequately address all fire hazards in the underground.

Finally, in a June 2012 letter to DOE, the Board identified weaknesses in the WIPP maintenance program, including poor-quality procedures that rendered many work control documents unable to be performed as written, or inaccurate. Many of the safety issues identified in these letters are similar to the recent findings of DOE's Accident Investigation Board that I will discuss later in this testimony.

In February 2014, two significant events occurred at the WIPP site. On February 5th, the fire associated with a salt haul truck occurred in the underground, requiring an evacuation. Eighty-six workers in the underground were evacuated during this event. Six workers were subsequently treated for smoke inhalation at Carlsbad Medical
Center, and seven workers were treated onsite.

DOE initiated an Accident Investigation Board and began deploying team members to the WIPP site within a few days after the fire event.

On February 14th, a radiological material release event initiated from one or more TRU waste containers located in panel 7 in the WIPP underground. A continuous air monitor detected the release and provided an interlock signal to switch from normal, unfiltered ventilation flow to filtered ventilation flow, which directs air from the underground through high-efficiency filters. The event started at approximately 11:15 p.m. at night and no workers were in the underground.

The high-efficiency filters significantly reduced the release of radioactive material but did not fully mitigate the event, in part due to leakage through two bypass dampers. Twenty-one individuals subsequently tested positive for low levels of internal contamination and small quantities of plutonium and americium were identified offsite.

On the day after the fire event, February 6th, 2014, the Board deployed a senior staff member stationed at the Los Alamos National Laboratory to the WIPP site. The Board subsequently deployed a
1 senior fire protection engineer from our Washington, D.C., office. These individuals were initially focused on oversight and observation of the fire response, investigation, and recovery activities, including walkdowns of the fire scene in the WIPP underground along with members from DOE's Accident Investigation Board.

The Board's representatives reported to the WIPP site on the morning of February 15th, 2014, along with members from DOE's Accident Investigation Board and other DOE and WIPP employees unaware of the radiological release. As information was revealed concerning the radioactive material release event, the Board's representatives maintained an oversight role and communicated with senior DOE and NWP officials. The Board's field representatives provided the latest real-time information to the Board and their staff, interfaced with senior WIPP, DOE, and contractor personnel on safety issues, observed response and recovery actions, and conducted field walkdowns of facility conditions.

The Board's staff in Washington, D.C., organized a support team consisting of staff experts in safety, emergency management, fire protection, ventilation, radiological controls, and other areas.
This team provided real-time support to the field representatives to ensure the best knowledge was being applied and communicated during and following the events.

Based on feedback from this team, the Board communicated with the Secretary of Energy on March 12th, 2014, on the important role the filtered ventilation system was providing at WIPP to confine radioactive material within the mine. The Board advised that DOE thoroughly evaluate the safety controls and contingency plans necessary to maintain confinement to ensure adequate protection of the workers and the public. The Board's field representatives and staff closely followed subsequent actions taken by DOE and NWP to ensure the filtered ventilation system is maintained as a highly reliable system.

Following the events in February, the Board deployed additional field representatives and subject matter experts to WIPP as warranted based on DOE and NWP response and recovery activities. This included a safety basis expert and health physicist. The Board maintained full-time oversight coverage at the WIPP site from February to early May 2014. After that, the Board staff participated in daily
calls with WIPP personnel to continue following investigation and recovery activities.

The Accident Investigation Board completed its reviews of the salt haul truck fire and the radiological release event phase 1 in March and April of 2014. The investigation revealed deficiencies in both the documented safety analysis and safety management programs relied upon at WIPP to protect the public and facility workers from potential exposure to radiological materials. The investigation board further identified weaknesses in the contractor and federal organizations in managing, executing, and overseeing the safety of WIPP operations.

I'll address each of these briefly, starting with the documented safety analysis.

DOE Standard 3009 provides guidance and requirements for preparing a documented safety analysis to meet federal nuclear safety requirements. The Accident Investigation Board identified several instances in which the WIPP documented safety analysis was inconsistent with the DOE standard, lacked conservatism, or contained errors and omissions suggesting a lack of rigorous contractor and federal reviews. In addition, the
accident last February revealed that the safety controls at WIPP for waste operations may not be adequate for some hazards and accident scenarios.

Continuing with safety management programs, the February 2014 events revealed weaknesses in important safety programs such as emergency management, fire protection, and maintenance. For example, in the area of emergency management, workers and managers did not fully comply with emergency response procedures, and important decisions regarding accident response were left to expert judgment rather than predefined action plans. Training and drill programs were ineffective in maintaining worker competence in accident response, and the emergency management organization was not structured in accordance with DOE requirements. As a result, workers had difficulty evacuating the underground during the fire event. In addition, the site failed to properly identify and initiate protective actions during the radiological release.

In the area of fire protection, the Accident Investigation Board concluded that the fire hazard analysis did not identify all credible fire scenarios in the underground. Fire protection
requirements promulgated by DOE and other regulatory bodies, such as the Mine Safety and Health Administration, were not consistently addressed in program documents, and combustible materials in the underground were routinely in excess of the loading limits established by the program for fire safety. These deficiencies increased the risk of a fire in the WIPP underground and complicated efforts to evacuate workers safely.

A disciplined maintenance program is required to maintain the operational readiness of critical equipment. In this area, the 2014 events revealed a lack of rigor in the development and implementation of WIPP's maintenance program. For example, maintenance practices for equipment deviated from vendor recommendations without a technical justification, routine inspections did not identify hazardous conditions such as the buildup of combustible fluids on the salt haul trucks, and instrument sensors were allowed to degrade in WIPP's harsh salt environment.

Collectively these issues led the Accident Investigation Board to conclude that NWP did not have an effective contractor assurance system. A healthy contractor assurance system is an important
part of DOE's oversight model for defense nuclear facilities. This model relies in part on contractors to self-identify and correct safety issues. The investigation board further concluded that DOE had not implemented effective line management oversight of the contractor to identify weaknesses in the contractor assurance system and safety programs.

NWP and DOE developed formal corrective action plans to address the findings of the Accident Investigation Board. For example, DOE and NWP are working on a major revision of the documented safety analysis to correct deficiencies in this area. Notably, DOE has committed to applying the 2014 revision of DOE Standard 3009 to the new DSA revision. The revised standard contains significantly improved safety requirements for preparing a documented safety analysis. The staff believes this commitment is a major step forward in improving the safety posture at WIPP. DOE's action is particularly commendable because it will be the first application of the revised standard in the DOE complex.

To correct the deficiencies in safety management programs and the contractor assurance
system, NWP committed to improving program
documentation and procedures and conducting
additional training for the work force. NWP is
planning reviews in the future to evaluate the
effectiveness of these corrective actions. To
improve oversight of the contractor, DOE similarly
committed to revising oversight programs and
providing additional training for employees.
Notably, after the February 2014 events, DOE
reorganized the Carlsbad Field Office by creating a
separate Office of Operations Oversight. This
office segregates operations, safety, engineering,
and environmental oversight from programmatic
production activities, thus enhancing oversight
independence. DOE has been challenged to fill
vacancies in the new organization, including
management positions responsible for safety
oversight. DOE is aware of the staffing problem and
pursuing options to attract and retain a
high-quality federal work force at WIPP.
While DOE and the contractor are
aggressively working on corrective actions, in most
cases it is too early to judge their adequacy. The
staff believes, however, that the corrective action
plan and commitments provide an adequate framework
for improving safety of operations at the WIPP site.

    In the interim, while corrective actions
are underway, DOE and the contractor are working to
recover the underground and prepare for the
resumption of waste operations. Activities at WIPP
today are focused on restoring the stability of the
mine, conducting cleanup and maintenance activities,
decontamination, and closing open storage panels as
directed by the New Mexico Environment Department.

    Since the radiological release, the
airflow through the underground has been exhausted
through high-efficiency filters. While necessary to
prevent potential radiological releases to the
environment, the filtered ventilation system does
not provide sufficient air flow to support all
recovery activities or planned waste operations. To
support these activities, NWP is pursuing the
installation of additional filtered and unfiltered
ventilation flow for the contaminated and
uncontaminated portions of the underground
respectively. The additional filtered flow will be
provided by the interim ventilation system. The
additional unfiltered flow will be provided by the
supplementary ventilation system. Those systems are
planned for installation this year.
To compensate for the identified deficiencies in the WIPP safety basis, DOE is authorizing recovery activities in the underground, including the installation and operation of the interim ventilation system through a series of temporary safety basis documents called Evaluations of the Safety of the Situation, or ESSs. These ESSs identify the hazards associated with specific recovery activities and the safety controls to protect the workers and the public. While providing the necessary safety basis coverage in accordance with DOE's nuclear safety requirements, ESSs are not a long-term solution for a deficient documented safety analysis. A rigorous documented safety analysis that complies with DOE standards is the only acceptable safety basis solution for WIPP.

The staff has continued providing oversight of DOE's recovery activities at WIPP and the development of a revised document safety analysis. For example, the staff observed a workshop last month in Carlsbad during which DOE and NWP discussed expectations and plans for implementing the new revision of DOE standard 3009. The staff has also provided oversight of improvements to safety management programs such as
emergency preparedness and response. Last December
the staff observed the site's annual site-wide
emergency exercise, the first activity conducted
under a reorganized incident command structure. The
staff has also observed bi-monthly emergency drills
for maintaining worker response proficiency.
Finally, the staff has performed focused reviews on
the interim ventilation system. While this system
is not being designed and procured as a credited
safety system, the staff understands that it is
DOE's intent to rely upon it as a credited safety
system in the documented safety analysis revision.
The staff's reviews have therefore focused on
understanding the safety, design, and quality
requirements applied to the system and the potential
gaps that DOE may need to address when the system is
upgraded to a credited safety control in the
documented safety analysis revision.
An additional recent staff activity was to
examine the Board's historical approach to oversight
at WIPP in light of the February 2014 events and to
identify lessons learned for future oversight
activities. The staff then developed a corrective
action plan to address these lessons learned. The
lessons learned highlighted several areas needing
improvement in staff oversight processes. Of note, the absence of a site representative at WIPP diminished our ability to observe WIPP operations closely and to detect negative trends that could result in unsafe conditions. Expectations for additional oversight at DOE sites without a site representative were not clearly established. Follow-up review activities with DOE to track identified safety issues to closure needed improvement. This was consistent with a finding of the Accident Investigation Board that deficiencies identified by external agencies such as the DNFSB were allowed to remained unresolved for extended periods of time. Finally, oversight activities at WIPP were deemphasized for the better part of the decade following the start of waste operations at WIPP in 1999. The reasons for this lack of emphasis were unclear, but are likely related to the Board's limited staffing resources and the relative risk posed by WIPP operations in comparison with other hazardous DOE defense nuclear facilities.

The staff is implementing corrective actions to address these improvement areas. For example, the staff is maintaining an increased presence at DOE sites without a site representative,
including WIPP. Technical staff management is deploying headquarters staff, many with field experience as site representatives and qualified for unescorted underground access, to conduct periodic oversight at WIPP on a rotating basis. The headquarters staff has also continued the regular status calls with WIPP personnel that began after the accidents to maintain cognizance of recovery activities and to discuss emerging safety concerns.

Other lessons learned, such as the lack of historical oversight emphasis at WIPP and poor followup on identified safety issues are being addressed as part of a larger agency effort to improve technical staff internal controls. This effort was underway at the time of the February 2014 accidents. As part of this initiative, formal expectations for site-cognizant engineers responsible for oversight at DOE sites without a site representative are being established. Formal processes for prioritizing safety reviews, tracking safety issues to closure, and elevating languishing issues for further action are also now in place.

The outcomes of the staff's lessons learned analysis and the revised oversight approach codified in our new control system is forming the
basis for the staff's future work plans and oversight activities at WIPP. Mr. John Pasko, the Nuclear Materials Processing and Stabilization Group Lead, will elaborate more on our future plans for providing oversight at WIPP during the public meeting portion of this proceeding.

This concludes my prepared testimony. I'd be happy to answer any questions from the Board.

VICE CHAIRMAN ROBERSON: Mr. Sullivan, do you have any questions for Mr. Shuffler?

MR. SULLIVAN: No, I do not.

VICE CHAIRMAN ROBERSON: Mr. Santos?

MR. SANTOS: No, I do not.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Shuffler.

I would like to introduce the second panel of witnesses who come from the Department of Energy's Office of Environmental Management, also referred to as EM, the DOE Carlsbad Field Office and the WIPP site contractor, Nuclear Waste Partnership LLC.

Would the panel members please take your seats at the witness table, as I introduce you?

Mr. James Hutton is the DOE Deputy Assistant Secretary for Safety, Security and Quality
Programs in EM.

Mr. Joe Franco is the current DOE Carlsbad Field Office Manager.

Mr. Sean Dunagan is the DOE Carlsbad Field Office Senior WIPP Recovery Manager.

And Mr. Robert McQuinn is the Nuclear Waste Partnership President and Project Manager.

And Mr. James Blankenhorn is the Nuclear Waste Partnership Recovery and Deputy Project Manager.

Thank you, sirs. The Board will direct questions to the panel or to individual panelists, who will answer them to the best of their ability. After initial answers, other panelists may seek recognition by the chair to supplement the answer as necessary. If panelists would like to take a question for the record, the answer to that question will be entered into the record of this hearing at a later time.

Does anyone on the panel -- I understand you all have statements. I just reemphasize we are happy to take your statements for the record. But if you would like to make a brief spoken statement, we'd be happy to hear it, as well, too, and we'll start with you, Mr. Hutton.
MR. HUTTON: Thank you. Good afternoon,
Vice Chairman Roberson, Mr. Sullivan, Mr. Santos.
Thank you for the opportunity to discuss WIPP today.
In my view, the most important thing that must occur
in order for us to restart operations at WIPP is to
re-establish the safety envelope of the facility,
including both the documented safety analysis and
safety management programs.

After the events of February 14,
inadequacies in the WIPP safety basis were
identified as a result of executing the Department's
unreviewed safety question process described in the
Department's rule 10 CFR 830, nuclear safety
management.

DOE began implementing operational
restrictions and compensatory measures at WIPP to
ensure controls for confinement of radioactive
material continue to protect workers, the
environment, and members of the public. To
compensate for these safety basis inadequacies and
allow recovery activities to move forward, the
contractor developed and CBFO approved a series of
temporary safety basis documents called Evaluations
of the Safety of the Situation, ESSs.

Recovery activities have been specifically
authorized by CBFO through the ESS process. These included initial reentry into the underground and other recovery tasks such as ground control in the underground. The CBFO staff, supplemented by DOE headquarters personnel and others from across the complex, performed oversight to ensure the requirements in the ESSs are properly implemented.

As described in the corrective action plans for the accident reports, DOE has taken a number of actions regarding improving the safety culture at WIPP. The safety culture assistance visit at WIPP was conducted with team members from the commercial nuclear industry, NRC, NASA, and the DOE complex. The team developed recommendations which both the contractor and CBFO will use to help improve the safety culture at WIPP.

DOE has also conducted training and leadership for a safety-conscious work environment for senior leaders at CBFO and the contractor, and one of the pilot sessions for DOE's first-line supervisor course was conducted at Carlsbad.

The WIPP DSA revision 5 will require CBFO approval and my concurrence. EM has directed the contractor to use the 2014 revision of DOE Standard 3009 for this update to clearly establish
expectations and requirements. The safety basis review team has been established and is co-led by the CBFO Nuclear Safety Senior Technical Advisor Jeff Carswell and the EM headquarters chief safety officer Dr. Robert Nelson. The EM headquarters director of the Office of Safety Management, Todd Lapointe, serves as a senior advisor to the safety basis review team.

With respect to emergency management and response, EM headquarters conducted a site visit in December 2014 in order to assess WIPP's progress in improving its emergency management capability. We reviewed the site's emergency responders, mine rescue team's capabilities, incident command training, emergency classification and categorization, as well as the emergency operations center configuration and communication capability with the DOE watch office, including the emergency management critical elements.

We identified a number of opportunities for improvement and some objectives we felt were not satisfactorily met. We are currently following up with the site on corrective actions and improvement suggestions we've provided.

DOE headquarters fire protection resources
have been working with CBFO fire protection and NWP contractor resources to understand and clarify the interdependency between the baseline needs assessment and Mine Safety and Health Administration requirements. In my view, there is no conflict between DOE, NFPA and MSHA requirements. Most recently, NWP briefed CBFO on proposed changes to the BNA, the baseline needs assessment, including the underground firefighting strategy. Once NWP submits the proposed BNA, DOE will review it and act accordingly.

EM's expectation is that our facility maintenance and engineering programs must be effective at keeping critical structures, systems, and components in a high state of operational readiness. We view this as a key component of ensuring the safety of our workers and facilities.

Finally, corrective action plans have been developed by NWP, CBFO, and EM headquarters in response to the fire and phase 1 accident investigation reports. Corrective action plan development for the phase 2 report is in progress.

We require an update on the corrective action status monthly. EM will require a review of the effectiveness of the corrective actions once
they are complete. Thank you, and I'm looking forward to our discussion today.

VICE CHAIRMAN ROBERSON: Thank you,

Mr. Hutton.

Mr. Franco.

MR. FRANCO: Good afternoon, Vice Chairman. I'm Joe Franco. I'm the Carlsbad Field Office Manager. I would like to thank you for the opportunity to address the Board today. As the CBFO manager, I have overall responsibility for WIPP and I'm here to tell you that the last 14 months have been particularly challenging for me. Despite those challenges, I believe we have made significant strides and are well on our way to recovering the facility and restarting waste emplacement, thanks to our dedicated work force.

The WIPP recovery plan that was issued on September 30, 2014, identified seven key elements as the strategy to safely resume emplacing waste at WIPP. The first key element, safety, is paramount to the overall recovery strategy. Immediately following the February events, actions were taken to secure and stabilize the plant, restrict onsite access to essential personnel, assess site conditions and status and evaluate potential
radiological releases and potential exposures to personnel.

As we began our internal analysis of the events, we initiated the deployment of new management and corporate subject matter experts to perform independent evaluation of safety management programs and implementation of compensatory measures to address any deficiencies.

A number of inadequacies, as have been identified, as you heard from Mr. Whitney and Mr. Hutton, were in the safety management program associated with the incident, so I will not cover that in this testimony, and I will put it in my record.

For the second topic, federal oversight, CBFO has made significant progress during the past 12 months in enhancing both the structure and effectiveness of oversight. Judgment of need from the fire event AIB report identified the need for CBFO to establish and implement an effective line management oversight program process that will meet the requirements for DOE order 226.1B, implementation of Department of Energy oversight policy.

The previous CBFO organization had a
number of positions which shared responsibilities in
both the program management, which is cost,
schedule, and scope, and contractor oversight, so
that each individual had multiple hats that they
were wearing at the time. But these
shared-responsibility staff were not able to fully
focus in one specific area and have a subject matter
expert in that area.

CBFO reorganized and segregated contractor
oversight from program management, and the result
was a creation of the two new offices, Office of
Program Management and the Office of Operations
Oversight.

A thing to note that I wanted to make sure I stated was that this was something that was in progress prior to the events. We had recognized that issue that we had.

New positions created in the Office of Program Management are intended to ensure that the cost, scope, and schedule for all CBFO-wide activities is fully integrated and managed successfully through recovery and throughout the expected life cycle of the facility.

In the Office of Operations Oversight, new facility representative positions were created, and
included in there we also included positions for radiological protection, industrial hygiene, confinement ventilation -- which is critical, as we've heard, for the ventilation systems -- mine safety, technical qualifications and training, nuclear safety, and work-control positions to increase CBFO oversight capabilities.

Initially, as a stopgap measure, we were able to obtain highly qualified personnel from around the DOE complex on detail to WIPP. As of today, 50 percent of the new CBFO positions have been filled. The organization is undergoing a positive culture change to be better equipped for addressing both the program management and oversight needs as it works its way through the WIPP recovery and the resumption of transuranic waste disposal operations safely.

I also wanted to discuss some of the actions that have been taken or planned to correct emergency management program deficiencies. Immediately after the February 2014 events, an independent assessment of the emergency management program was performed, utilizing corporate reach-back and subject matter experts across the DOE complex. Gaps identified from this assessment and
findings from the Accident Investigation Board fire
and radiological release phase 1 reports were
consolidated to define the corrective action plans
required to establish a healthy and compliant
emergency management program. The actions within
the plan were subsequently approved by CBFO. In the
interim, comp measures were put in place and are
implemented throughout the use of evaluation of
safety of the situation.

The emergency management program has been
restructured to align with the current national
incident management system, NIMS, and incident
command system principles, concepts, and
terminology. This allows for a well-managed and
coordinated response as well as the seamless
integration of external agencies that provides WIPP
mutual aid and support. These changes include
restructuring the emergency operations center staff
positions as well as the development of new training
and qualification programs for each position which
integrates Nuclear Waste Partnership and CBFO senior
management into the process.

There have also been significant program
enhancements to assist the emergency management
decision-makers with emergency categorization and
classification and timely emergency notifications to local, state, and federal agencies that you all have mentioned was lacking previously.

Furthermore, there has been a complete rewrite of Emergency Management policies, emergency plans and procedures, as well as significant upgrades made to the emergency equipment, systems, and facilities to ensure an adequate response and coordination of any WIPP incident.

A revitalization of the emergency management drill and exercise program has been completed to ensure consistency in drill and exercise planning, documentation, conduct, and after-action reporting which has significantly enhanced the overall quality and rigor of the program. The drill and exercise program is a combination of self-assessments, validate the adequacy of plans, procedures, training, equipment, and systems and overall program health. The program enhancements today are only a start in an ongoing cycle of preparedness that will drive continuous program improvements.

And that's all I have for right now.

VICE CHAIRMAN ROBERSON: Thank you, sir.

Mr. Dunagan, we can take it for the record.
or you can summarize, please.

MR. DUNAGAN: I will summarize.

VICE CHAIRMAN ROBERSON: Okay.

MR. DUNAGAN: Good afternoon, Vice Chairman, Board. Thank you for the opportunity to speak to you today. Today I would like to provide some additional details regarding the progress we have made at the Carlsbad Field Office relative to contractor oversight during the recovery phase activities.

As recovery manager, one of my responsibilities is ensuring that there's sufficient review, direction, and validation in recovery functions as well as responses to judgments of needs identified by the DOE's Accident Investigation Board. DOE is controlling the risk of activities to recover the underground and compensating, when needed, for safety deficiencies revealed by the February 2014 events and subsequent activities.

Immediately following the events at the WIPP site, work activities were curtailed and underground access was restricted. Limited reentry into the underground and limited work activities have been highly scrutinized on a case-by-case basis by DOE through the evaluation of the safety of the
situation process.

DOE will continue to use this activity-based work screen approach until the new documented safety analysis revision 5 is fully implemented. Through this approach, DOE is able to adequately control the risk of the activities.

As a follow-up to one of the judgments of need, as Mr. Franco just mentioned, CBFO restructured their organization to include the Office of Operations Oversight. The objective was to segregate operations, safety, engineering, and environmental oversight for WIPP facility operations from programmatic production activities to enhance oversight independence, particularly through the recovery phase.

I believe it is important to note that prior to the resumption of waste emplacement operations, the Department will conduct a full operational readiness review. This review will ensure readiness of the facility and personnel to restart the facility within the bounds of acceptable risk defined by the safety basis authorization and ensure the facility has adequate safety management programs implemented and sufficient controls in place to start waste emplacement operations within
those bounds. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, sir.

Mr. McQuinn.

MR. McQUINN: Good afternoon, Vice Chairman and Board members. I am Bob McQuinn, Nuclear Waste Partnership President and Project Manager. I do thank you for the opportunity to address you today, and I'll give a very simple overview of three topics: Our safety basis strategy for recovery operations and upgrades, and then a very simple overview of what we're doing to improve conduct of engineering, conduct of maintenance.

First, safety basis strategy will involve three major elements that we'll talk about, I'm sure, at length in this session. First, we'll continue to use the approved evaluations of safety of the situation for our ongoing recovery operations. I'll revise those ESSs and develop new ESSs for some additional recovery operation scope, and that scope will include the construction and installation of the interim and the supplemental ventilation systems. We'll talk more about those.

And then finally, development of a comprehensive revision 5 to the documented safety analysis, that we'll talk about at length.
Shortly after arriving at WIPP, I made a number of organization structure decisions and I brought in very experienced safety management program leaders from other AECOM projects in order to address my most critical needs.

Structurally, I moved my engineering, emergency management, and contractor assurance organizations to become direct reports to me. Previously they were not.

The second week after my arrival, I brought in new leaders for radiation protection, emergency management, and nuclear safety.

So everything we’ve done to stabilize the plan and progress through recovery has benefited from these and a number of other strong experienced leaders.

Now, returning to safety basis, the revised DSA will incorporate lessons learned from both events, address inadequacies identified by the Accident Investigation Board and our planned recovery activities and ultimately return to normal operations. And until I finish implementing the new revision 5 of the DSA and TSR, I will use the ESSs to continue the recovery.

As you have heard -- I won't repeat
here -- the new revision, the DSA, will incorporate Standard 3009-2014. And you have heard, and I will leave for my testimony, a description of the workshop that I organized in order to bring together the right individuals to help us make that decision.

In terms of facility upgrades, the two enhancements to ventilation are planned. A skid-mounted interim ventilation system and an underground supplemental system. And I will assure and have assured that safety considerations are appropriately addressed early in both of these projects.

The available ventilation is enhanced through these initial modifications, but it will remain limited relative to the capacity that we need for a full operation. So a new permanent ventilation system is essential and is planned. When this system becomes operational, a subsequent revision to the DSA will support our return to a full operation.

For the permanent ventilation system, alternative design options have been evaluated, and two are being advanced through conceptual design. We are using Standard 1189-2008 to implement this permanent ventilation system design. This system is
in the initial stage of the project and is being executed in accordance with the order.

And finally, let me do an overview and finish my testimony by speaking to conduct of engineering and conduct of maintenance, and address some of the actions that we've taken and are planned.

We conducted independent assessments of all 17 safety management programs within the first month of my arrival, and specifically looked at engineering, fire protection, work control, surveillance, and maintenance. And the corrective actions not only from the Accident Investigation Board conclusions but from our own independent assessments have formed the basis for my improvement plans.

Now, my maintenance of work control organizations are fundamental to everything we do with respect to integrated safety, and I have brought in new managers for both maintenance and work control with years of nuclear experience from Pantex, Savannah River, Lawrence Livermore, and Hanford. And this was a strategic decision in order to use experience from other sites and lessons learned that have a more mature nuclear safety
culture than ours currently is.

Significant improvements have been made to conduct of engineering with what would be an expected emphasis on cognizant system engineering which was missing previously. As an example, we have incorporated into the annual system engineer walkdown procedure, a new, previously not existing, structured approach for system health reports which are now briefed to me on a monthly basis and include my senior team. These reports, as you would expect from other mature projects, form the basis for identifying and addressing emerging system deficiencies and trends, particularly my safety credited systems.

One other example of conduct of engineering improvement is my requirement that the fire impairment process be modified to require my fire protection engineer review and approval of compensatory measures, which did not previously exist, and to use my engineering organization to drive to my level the timely resolution of important systems like fire protection.

Finally, WIPP's job hazard analysis process has been enhanced through a work planning and control process that I'm sure we'll talk about
at length this afternoon to expand its thoroughness in the process checklist used in the walkdown and planning phases which now engage the worker, and I look forward to talking to you more about my vision for that.

I require executive review and approval of the high-hazard work evolutions, and through our re-entries, I led the safety management reviews of all high-hazard work control documents and I required -- we'll talk more about this -- that the field work supervisor and all the workers who are going to be involved personally deliver to me in a formal review process exactly what they were going to do in order to assure myself that their work had been -- their involvement had been included.

So that's an overview of what we'll go into in the testimony, and that completes my testimony.

VICE CHAIRMAN ROBERSON: Thank you, Mr. McQuinn.

And Mr. Blankenhorn.

MR. BLANKENHORN: Good morning, Madam Vice Chairman, members of the Board. I'm Jim Blankenhorn, the Nuclear Waste Partnership Recovery Manager and Deputy Project Manager. Thank you for
the opportunity to address the Board today and
discuss WIPP recovery and safety.

I'll be detailing how worker and public
safety is protected during WIPP recovery activities
by compensatory measures that have been implemented
while we strengthen our safety management programs.

Immediately following the February events,
independent assessments of each safety management
program utilizing industry subject matter experts
were performed for identification of weaknesses and
gaps from the requirements. Compensatory measures
were immediately put in place to address these gaps
and weaknesses.

In addition to compensatory measures,
corrective actions have been developed to address
findings from the safety management program
independent assessments and from the Accident
Investigation Board fire and radiological release
phase 1 reports.

Implementation and documentation of the
closure of each corrective action will be verified
through a line management assessment scheduled for
this summer. Effectiveness reviews will be
validated through the conduct of NWP
self-assessments later in this fiscal year. A
management self-assessment will be conducted to verify compliance and full implementation of the safety management programs and to declare readiness to perform contractor and DOE operational readiness reviews.

As part of the proceedings today, I look forward to discussing the actions taken to enable recovery activities and to provide specific discussion on actions related to restoring trust and confidence, establishing emergency preparedness and response programs that ensure workers in the underground can safely evacuate the mine in the event of an emergency, improving and emphasizing work planning and work control, the establishment of a consistent and enduring nuclear safety culture, re-establishing strong, disciplined operations, retraining the work force, and revising our programs and procedures to operate safely in both contaminated and uncontaminated conditions and areas.

Thank you again, Madam Vice Chairman. We are now ready to answer any questions you may have.

VICE CHAIRMAN ROBERSON: Thank you all. We will take your full statements for the record.

Thank you all for your comments. Now we're going to
start with board questions, and I'm actually going
to start.

I'm going to start with you, Mr. Dunagan.
You have huge shoulders in the job that you have
accepted.

The WIPP recovery plan describes the key
activities that must be completed to meet the goal
or the planned date for resuming waste operations.
These activities include resuming ground control,
bolting, closing panel 6 and panel 7, room 7,
increasing ventilation flow through multiple steps I
think you have laid out; completing surveys, cleanup
and maintenance activities, decontaminating portions
of the underground, completing readiness reviews,
and obtaining regulatory approvals. Did I get them
all?

MR. DUNAGAN: I believe so.

VICE CHAIRMAN ROBERSON: Is there another
big one I missed?

MR. DUNAGAN: No, ma'am.

VICE CHAIRMAN ROBERSON: So which of these
do you find -- do you view as the most challenging?
And along with that, what kind of risk management
strategy are you going to employ to ensure that
there's success and these remain integrated?
MR. DUNAGAN: Well, each of the key areas that you just identified presents its own unique challenges, to be sure. All of them are very important keys to safety and the recovery of the WIPP site, as well. The one that I would personally consider to be the most challenging, in my opinion, would be the ventilation. And the reason I say that is because it is a fundamental shift in the way that we have operated from the past.

Prior to the incidents, WIPP ventilation in the underground was not filtered. It was operating at roughly 420,000 cubic feet per minute. Following the incidents, we have maintained constant HEPA filtration mode since then, operating at about 60,000 cubic feet per minute, which this reduces the amount of work activities that can go on underground because filtration -- or ventilation, excuse me, is necessary for everything from life sustainability to the underground mining and bolting, to waste emplacement activities, anything that goes on underground, as well as the diesel equipment operation, in removing the diesel particulate.

So we are going to implement a three-phase approach to improve the ventilation system. As discussed earlier through several different people,
the first one is the interim ventilation system which is going to take the cubic feet from 60,000 cubic feet per minute to roughly 114,000 cubic feet per minute, and all of that will be under HEPA filtration.

The second phase would be the supplemental ventilation, which would increase it again to 180,000 cubic feet per minute. But that would introduce two circuits, if you would, into the WIPP environment: One for the contaminated area, one for the uncontaminated area.

The third phase will be the permanent ventilation, which will take years to implement. The reason I consider this to be the most challenging is because prior to the events we hadn't operated in HEPA filtration mode. We're doing that continuously now. The interim ventilation system will continually operate in that mode. The supplemental ventilation systems will operate at the same time on a different circuit. So this is a paradigm shift in the way that ventilation has been done in the past, and that's why I consider this to be the most challenging.

We are overseeing this from a DOE perspective in a number of ways. We are...
continuously interacting with the contractor,
Mr. Blankenhorn, who's my counterpart, to ensure
that the processes that they're installing, the
procedures, and the adequate engineering are
involved to make sure that the circuits will operate
correctly, that the bulkheads and the dampers will
sufficiently isolate one circuit from the other in
terms of the SVS through the IVS. Now, we have an
IPT, an integrated project team, which we meet
weekly and discuss these topics. We discuss issues
that are coming up, we discuss mitigation
strategies, we discuss ways that we can improve it,
and things that we can do, looking forward in the
future so that we can resume safe operations.

VICE CHAIRMAN ROBERSON: Okay. Thank you,
sir. So you're really the DOE's local face for the
recovery. Do you have -- would there be any
hesitancy on your part if you thought you were
pushing faster than you could really assure safety
with raising that to your management?

MR. DUNAGAN: No, ma'am, for three
reasons. One, as Mr. Whitney mentioned in the first
session, we have a tremendous amount of support, all
the way up to the Secretary of Energy, in ensuring
that safety is the priority for the WIPP site and
resuming operations. Schedule is a very, very
distant part of that. Safety has priority over
everything else.

On another note, we have the operations
and oversight, that change in the organizational
structure, which provides more safety, I believe
oversight, in my opinion, than there have been in
the past because there's not the confusion between
oversight and program management. There's not the
tendency to focus on schedule and program management
rather than oversight.

And the third reason for me personally
that I would say that I absolutely have safety first
in mind is because I'm locally from Carlsbad. I
have a beautiful family, young children, and in
addition to the coworkers and the environment and
the public, I have an innate sense of responsibility
to them to ensure that they will -- that the mine
will recover safely before any kind of schedule
conflicts.

VICE CHAIRMAN ROBERSON: Thank you, sir.

So Mr. Franco, how are you communicating
with the work force in general at WIPP so that
Mr. Dunagan doesn't have to make those tough
choices?
MR. FRANCO: Ms. Chairman, one of the things that we as -- in the Carlsbad Field Office, it's important for me and I did this from the very beginning -- I started here in 2012 -- that my role for the department here, for my work force, is that I'm their cheerleader. I will take their messages up and I will defend the messages.

Similar to the comments that were made by Mr. Sean Dunagan here, I also have family here. I have family that works out at the WIPP facility, and I have family that were in the underground during the events. So to me, it touches home that we have to -- and it's my job to make sure that my management team and headquarters does not forget what happened at the WIPP facility and push schedule ahead of safety. And I can tell you that from Moniz all the way down, we have had tremendous support on that very topic.

VICE CHAIRMAN ROBERSON: Thank you, sir. Mr. Sullivan.

MR. SULLIVAN: Thank you. I have some questions that I will ask the various members of this panel about the evaluations of the safety of the situation and how those interact with the documented safety analysis and safety management
I'd like to start by asking Mr. McQuinn for maybe a little bit of public education, since this is a public hearing, people are listening, heard all those terms already. Can you just take a minute or so and as briefly as possible explain the difference in these things? There's three specific things: Documented safety analysis, evaluations of the safety of the situation, and safety management programs.

MR. McQUINN: Okay. There are two equally important documents that are the basis for our nuclear safety program, and they're known as a documented safety analysis. And then flowing out of the documented safety analysis are the very specific requirements called technical safety requirements, and we comply with those rigorously.

I have 17 safety management programs that are named in both the DSA and have dedicated chapters in the technical safety requirements that basically form the basis for formality of operations and conduct of operations, and we've already named a number of those: Conduct of maintenance, conduct of engineering, conduct of operations. So that is our normal basis, and I'm held accountable to implement...
that rigorously. And if I find myself not to be in compliance, then the follow-up process reporting that and evaluating the cause of that noncompliance and fixing that.

When I arrived on March 16, Sunday, March 16, I found that there were some fundamental gaps at that moment, some inadequacies that we typically call either potential inadequacies of our safety analysis or positive unreviewed safety questions. And those terms aren’t intuitively obvious. But I found a particular gap with respect to the filtration system’s classification and a number of other issues.

And so Joe and I together, that very first week I was here, wrote the first temporary safety basis. It happens to have the name "Evaluation of safety of the situation," but it’s a temporary safety basis that’s authorized by the Department’s directives. So that first week we implemented a very rote and approved and implemented a very important temporary safety basis, ESS1.

To speed forward, I have written a total of eight of these ESSs, and they all exist, and I’m required to be in compliance with them all today. And as we’ve recorded in our testimony, they are a
necessary part of our basis to drive recovery until
the new revision, revision 5, to the DSA and the
TSRs is completed and approved and implemented. And
we'll talk a lot more about that. But that is a
fundamentally important activity but, in the
meantime, these temporary safety bases are an
important foundation for us.

MR. SULLIVAN: Thank you for that. Now,
so in the ideal world the way it's supposed to be or
the way it normally would be, except for these
accidents, we would have had a rigorous and complete
documented safety analysis. But today we now have
the documented safety analysis which then gives us
our TSRs, as you explained.

And we also have eight ESSs, evaluation of
the safety of the situation. It seems like there's
a lot of documents out there. Are these
coordinated? Are we having any issues with having
the work force be able to move from one to the
other, and have all of the requirements laid out so
that they can follow them? My experience is, when
you have things in many different places, it's easy
to look at one and miss something that's in another.
Can you speak to that, please?

MR. McQUINN: Okay. A couple of
additional terms, and I won't belabor them. But just to use the directive terms. So I'm required to maintain accurately what's called a safety basis list. And so in a perfect world there would just be two documents on that list: The documented safety analysis and the technical safety requirements.

But now I have a more complicated list, and so I have many documents, including these eight evaluations of safety of the situation, and we are managing that list rigorously. But complex is not necessarily good, and so we take that issue of configuration management very seriously.

Now, let me speak about the workers. So it's my engineering and nuclear safety organization that manage that list and its rigor, and I'm very comfortable and confident in that. These temporary safety bases -- we wrote those for particular needs, starting with habitability, but then as we executed the initial entries underground, we wrote new or revised ESSs to authorize those activities. And as an example, my authorization to close panels 6 and 7 are defined in these ESSs.

Now, you didn't bring it up, but let me bring it up. I had a violation of one of my ESSs last Monday, a week ago Monday. And I took that
seriously, and as we have -- we reported that and
evaluated that, we made note that over the last nine
months this was the fourth noncompliance with this
suite of temporary safety bases. And so we stopped
and we did a root cause analysis, an initial root
cause analysis, and I required last week, then, that
we go and look at the implementation of all eight of
these temporary safety documents. And as a result
of that, Sunday night I made a decision and starting
this past Monday morning we began a daily series of
work pauses across the whole organization. And
ultimately this week I have made a decision that I'm
going to consolidate and revise these eight
temporary safety documents.

Now, that wasn't an easy decision, because
I don't want to lose focus on the most important
task of rewriting the foundational documents. But
we'll be in this mode perhaps for another nine
months or so, and so I'm going to make -- I made a
conservative decision, Mr. Franco supported me in
that, and we're going to take the time to improve
these temporary safety bases. And if that affects
schedule, then so be it.

But ultimately there are some weaknesses
in those documents that we will address, and
ultimately there are some complexities in them that
make it difficult to implement rigorously. And I'm
going to take the complexity out and we're going to
simplify and make it simpler for the front-line
workers to understand and to implement the controls.

MR. SULLIVAN: Thank you.

So Mr. Hutton, I'm going to turn to you
now. So as Mr. McQuinn was just explaining, they
have eight of these ESSs, they had a number of
documents, and now they have found some issues,
which actually sounds to me like a glass half-full.
You know, we prefer to find no issues. But if there
are issues, at least the contractor in this case is
finding them themselves and taking action, and that
sounds good to me.

So my question for you is: What is the
guidance that comes out of the DOE headquarters?
Was there direction to do eight separate ones or do
them as necessary? Coordinate? Was any guidance
provided from the headquarters of Department of
Energy on how this safety basis evolution -- and I
think this is an evolution. We had a safety basis
before. Ultimately we will have one coordinated
document sometime in the future, and this is the
transition phase. Was there any guidance given on
how this was supposed to be done?

MR. HUTTON: Yes. The guidance principally is contained in the department's nuclear safety rule, CFR 830. And what it requires is this. When inadequacies in the safety basis are identified, then the contractor is required to immediately place operational restrictions on the facility, place it in a safe condition. They're required to notify DOE.

They're required to then perform an unreviewed safety question determination around that inadequacy to see if it is bound by the existing safety basis or not.

And finally, they're not allowed to remove those operational restrictions they put in place until an evaluation of the safety of the situation has been performed. So that's where it comes from.

And so, you know, exactly whether the contractor chooses to write one document or two or three, you know, is not specified. What we require is that when the safety basis is inadequate, before we undertake activities -- for instance, re-entering the underground, you know, following these events -- we require that controls be in place adequate to protect the workers, the public, and the
environment.

And so if the safety basis or the safety management program implementation has been inadequate, those, you know, temporary controls need to be put in place in order to allow those activities to occur. And of course, those activities need to occur, you know, in some period of time because otherwise, you know, eventually the underground wouldn't be recoverable if we waited long enough to do that. But it's got to be right. I think it was done methodically.

You know, then those requirements, you know, have to be implemented in a rigorous and disciplined manner. The procedures have to be maintained that implement those requirements. Those procedures have to be executed reliably and repeatedly in the course of the work that goes on. And that can be challenging, you know. It's challenging in all facilities.

I think mostly the folks that are, you know, working directly from the ESSs documents themselves, as Bob alluded to, are the engineering or safety folks. They're the ones that, you know, produce the procedures, but then the operators execute or, you know, other folks in the facility
execute.

MR. SULLIVAN: Okay. Do you think the guidance is adequate, though? You have guidance that addresses a situation where there's an issue raised with the documented safety analysis. I guess I'm not -- I'm wondering if the guidance is accurate for a case where you have actually had an accident. So you go from a scenario where we had a facility and we had a documented safety analysis for that, and now we really don't have the same facility anymore because of the accident. In this case, we had ventilation for a mine that wasn't contaminated and was never intended to be contaminated. Now it's contaminated. So it's really not the same facility anymore.

MR. HUTTON: It's a different situation, certainly.

MR. SULLIVAN: Right. And so that could happen somewhere else, a different facility; and with any accident, presumably the accident would leave the facility not in the same condition that it was before the accident.

So I guess my question to you is: Is this guidance specific enough? It sounds to me like the contractor was given some guidance on what to do,
but the contractor chose a course of action and now they're shifting to a different course of action to try to lessen the complexity by putting everything together. Do you think the guidance that you have is specific enough?

MR. HUTTON: I think that it is adequate, actually. You know, you get into the unreviewed safety question process and DOE has a guide on how to implement that, it's extensive, it's detailed. I think there's adequate guidance. You know, it's not going to be specific to any one particular facility or any one particular situation, because they're all different. But I guess I think it is adequate, yes.

MR. SULLIVAN: Okay. Mr. Franco, the role that your organization plays in this process -- again, a process going from the documented safety analysis that we had before to the one we're going to have in the future and whatever we have as a temporary measure.

MR. FRANCO: I'd like to add, you know, when we encountered the situation with the events, the stabilization of the facility was key, and so when we looked at and saw that the safety basis was inadequate, the initial view was that we needed to put something in place that reassured us that we...
were safely protecting our work force and the public and the environment. So that's where ESS01 came into play.

Now, from that point on, myself and Bob McQuinn and Jim Hutton actually had many discussions about the full -- you know, where we're going to end up at the end, and we knew we were going to have to rewrite the documented safety analysis. There was going to have to be a full rewrite.

Now, in the interim, as you remember when we started this process, and we also had -- your staff was there helping us through this process. As we went through this process, we identified what are the phases that we need to do to get to certain things. You know, we needed to get in the underground. We needed to evaluate what is actually happening in the underground, and so we wanted to take various ESSs to drive us through that because we didn't know the condition in the underground. We still didn't know what actually had happened that got us to this -- where we were at the time. We knew we had an event in the underground that was with a TRU waste. There was a lot of speculation that ranged from, you know, roof failure all the way -- and so we evaluated all of those things as we
started to enter the mine, in a methodical process, and we knew that we were going to have various ESSs to help us, guide us through, and make sure that we had covered all the safety bases.

The mine was in a different configuration. We had just had to fire all the SCSRs, and all those had been used that were brought to the station, so it wasn't like you could go down there and everything was still in the same configuration.

So we actually took a very methodical approach utilizing these ESSs, knowing that there's a risk also when you have so many of those and you add all of these requirements. Of course, 100 requirements are in there on how we're implementing today. The rigor of that is still important for us, to make sure that we have this cross-functional.

So I believe the decisions that we make today, taking our time, making sure we're doing these methodically, going through the various ESSs and making sure that each exercise and event that we -- activity that we start to perform in the underground is evaluated separately, and until we get to the final documented safety analysis, I believe this is the right approach.

MR. SULLIVAN: Okay. And Mr. Blankenhorn,
you're responsible for taking these ESSs and then
making sure that they get into each and every --
whether it's a safety management program or work
procedure, that they get appropriately flowed down
into those specific documents that the workers will
use; is that correct?

MR. BLANKENHORN: Yes, Mr. Sullivan.

Thank you. The process that we utilize, once CBFO
has approved the documents, we then go through an
independent verification process that maps the
individual controls to the implementing
documentation, and then we capture that information
on the linking document database, which then gives
us a ready reference on where the reference is and
where the controls themselves are captured. And
then the organization goes through training and
qualifications and then an oral board type process
for the folks that are responsible for implementing.
And that's all then done under an IBS process that's
then, once it's completed and the results are
finalized, then that goes back up through the
management chain for approval then to implement the
ESS as it's been approved.

MR. SULLIVAN: Okay. So if we just
take -- Mr. McQuinn referred to a violation that
occurred last week. If we just take that as an example, where was the breakdown? Was it in the flowdown of the requirements? Was it in the training, the qualification? What was the breakdown on that one?

MR. BLANKENHORN: You know, unfortunately, the methodology that we had chosen to be our implementing process was the linking document database. And in that process, there were a number of implementing documents that we had made some mistakes on in terms of how we populated this linking document database.

And there were also some issues with interpretation as the organization took the requirements out of the ESS and translated them into the work documents themselves. There were some translations that were made and the full intent of the control then were not fully captured in the implementing documents. And so as we went through and did the extended condition reviews that Mr. McQuinn referred to, we identified a number of those instances both in the implementing documents and the linking document database, and so we put in place controls now to address those issues, to train and qualify the work force, as well as to make those
corrections, and we put some additional compensatory measures in place while we're in the process of going through and making those enhancements to the program.

MR. SULLIVAN: Okay. So Mr. McQuinn -- I'm sorry, you want to add something?

MR. McQUINN: Can I add a thought, Mr. Sullivan? Because it's important. It's one of the important causes with respect to the events. When I arrived there, there was not a contractor or performance assurance organization. There was one individual who coordinated issues management, and I now am building a 15-person contractor assurance organization.

Now, let me relate that back to the importance of these controls in the temporary safety bases. So when we wrote each temporary safety basis, and operations and engineering implemented, it was an important lesson learned from around the complex of independent verification. And we did independent verification, but I used members of the operations organization to do that, and ultimately, I believed it to be fully adequate. And this past week I have concluded that it wasn't independent enough, and so I have decided and declared that all
of my future implementation, all future independent
reviews, will be done through my new contractor
assurance organization and contractor assurance
system.

So in that case, that line of defense, which I believed to be adequate, was not. But I'll
fix that through the rollout of my new contractor
assurance function.

MR. SULLIVAN: Thank you very much. I appreciate that.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

Mr. Santos?

MR. SANTOS: Thank you, Madam Vice Chairman.

I have several questions, follow-up questions. I'll start with Mr. Franco.

Looking at the technical assessment report and their conclusions regarding the particular drum
that had the release, it is my understanding that there are still several drums with a similar
composition in the underground which may have the possibility of another release. Can you explain to
the public in detail how the public and the workers are being protected in the potential event of
another drum release, please?

MR. FRANCO: Yes, I can. We have taken measures to make sure, from the time of the event, once we identified that it was a drum from the Los Alamos office that had caused the event -- we took a conservative approach and had put the safety basis items in place and the work constructions to make sure that we put all the proper protective equipment for our personnel, depending on where they were going to be in the mine, also to support any activities.

So before any work is done in any of the contaminated areas in the underground, there's a very rigorous work control process that's completed for that approach.

Now, what I can tell you also is that before anybody goes in the underground, we also took a lot of effort and changed the program. We talked about the emergency response program earlier, that that was one of the SMPs that needed to be upgraded. So what we did is, we made sure, before we even went into the clean area of the mine, that we had a robust system in place for the evacuation and accountability so we had continuous air monitors put in the underground for early detection and being
able to evacuate personnel that were in the clean area.

Also, you know, we continued to do the exercises and drills to make sure that they can evacuate, and the training that goes on with that approach.

Also, every work instruction has a job hazard. There's a prebriefing on a daily basis that covers all of the work activity that's going to be performed in the underground and very specifically addressed by each supervisor that's going to go perform that activity.

For the underground part of actually going into the contaminated area and going by where the containers are, that has another set of rigor that goes with it and that rigor is contained in the radiological work permit that ties into looking at what is the potential for an actual event. The personnel have monitoring devices that they carry with them that they're -- as they're going, and they also have respiratory protection. They're always upstream of the airflow for the underground.

Now, the ventilation system, as in ventilation and filtration, as we talked, and that's not going to change anymore. And so during -- if
you have an event, it's still in the filtration. That airflow is not changing and remains the fact that the emergency notification systems and the instrumentation the individuals have and the training that they receive is for immediate evacuation of the area and going up to the evacuation at the egress hoist station, which is the waste hoist, or normally, and the salt waste is secondary.

MR. SANTOS: I would like to follow up.

You mentioned continuous air monitors. It is my understanding that it was a continuous air monitor located in the underground that detected the radiological release and initiated the shift in the ventilation from unfiltered to filtered. But had the event happened, let's say, February 12th, two days before the event, that might not have been in place and the release could have been more significant. Is my understanding correct?

MR. FRANCO: That is correct.

MR. SANTOS: So what sort of -- have the requirements regarding continuous air monitoring changed since the event? And if so, can you elaborate on some of these details?

MR. FRANCO: Yes. And as we've been
talking about the ESSs, we captured where the
requirements have changed for the continuous air
monitors. Now, station B, that's the effluent
coming out of the HEPA filtration side. That
station did not have a continuous air monitor. We
have installed a continuous air monitor now that
actually provides a signal to the central monitoring
room that's there 24 hours a day, monitoring that
item.

Now, station A is previous to the
filtration system. That, we have fixed air samplers
there that we sample or take readings on. Now, and
also what we've done is, we've added continuous air
monitors in the underground in various areas that go
with the flow of the ventilation system and we're
monitoring those on a continuous basis.

MR. McQUINN: Mr. Santos, could I add a
thought? I agree absolutely with everything Joe
said. Remember, up until we found the LANL drum,
whether we should have or not, we were more
suspicious that there had been a structural failure.
So when we found the LANL drum and were faced with
there could be a noncompliant drum, we wrote a
potential inadequacy, a positive unreviewed safety
question determination, and one of the eight ESSs is
specific to the issue that there now was at least one and could be many more noncompliant drums. So we followed the process and one of the eight ESSs speaks to not only the safety of offsite individuals and co-located workers, but the facility workers, both aboveground and underground, and that ESS lays out many controls, particularly continuous air monitors, where they have to be and what their operability has to be, and the surveillance of that operability. So one of those eight was in direct reaction to the fact that we now had to assume that there could be other noncompliant drums, and that's one of the eight ESSs that has the controls both aboveground and belowground.

MR. SANTOS: A specific question regarding the newly installed continuous air monitor underground. Is there a requirement, for example, if they were to go out of service, to evacuate the underground? I understand you're under filtration flow, so you're mitigating releases to the environment. But underground there might be an opportunity where no radiological work is being conducted, you still have workers down there. Are there requirements regarding the in-service condition of the continuous air monitor?
MR. FRANCO: Yes, there are. And --

MR. SANTOS: And what would be the actions?

MR. FRANCO: So we have -- as we were talking about the emergency management program and we finalized some of the procedures which are -- the numbers are like 12 ER 4903 that includes all of the continuous air monitors for both -- now it can include both surface and underground. But right now they're separated. 4903 and 4904.

But they both address the evacuation. If you have -- for personnel to remove from the area of where the CAM is and take appropriate actions to move to the egress hoist station and assemble. So there's procedures that we have in place. There's also the emergency management program that then exercises those procedure changes to make sure that people understand what the actual immediate actions are for those items.

MR. SANTOS: I'll repeat my question. I understand that actions are being described in the event a continuous air monitor alarm may initiate. My question has to do with if you were to find them out of service, does that trigger some sort of action?
MR. FRANCO: Yes, it does. And we have procedures for that, because the radiological control technician who works for Mr. McQuinn here, that we oversee -- there are procedures involved for them to take actions. If you have a malfunction, out of service, you know, something that's happening with the CAM, any kind of alarm, we have an appropriate procedure for that. Also, if the radiological control technician gets up there and sees that something is not correct with the continuous air monitor, they're supposed to report immediately to the central monitor room and then go through the immediate actions there.

MR. SANTOS: So do I need to have the radiological technician available when a malfunction is detected by the worker?

MR. FRANCO: No. All workers are trained that if there's an alarm, doesn't matter if it's a malfunction or -- when they see an alarm from a CAM, all workers know what to do with that alarm. They have to respond. Am I -- I don't know if I'm answering that.

MR. McQUINN: So a couple of thoughts. The radiological workers are trained to respond to the sound of a CAM alarm. They do not have to be
able to see it. They simply respond to the unique sound of the alarm and they evacuate. Okay? So they do not require assistance from the RADCON technician.

And back to the first question, to add a little bit, so underground CAMs must be functional. Remember, we're in filtration mode. The first ESS says that I may not leave filtration mode. So the CAM is not required to make a decision about filtering or not. But the underground CAM must be operational at the beginning of the day in order to go underground. And in addition to that, the ESS requires that both the station A has to be checked -- that's before filtration -- to prove that there's no activity; and the station B CAM has to show that there's no activity.

So all those things have to be true before we go underground and clear the underground for work each day.

Mr. Santos: One question of Mr. Blankenhorn. It's my understanding that the filtration, the filtrated ventilation system needs to be in standby mode and is now being operated in a continuous mode; is that correct?

Mr. Blankenhorn: Yes, that's correct.
Most of the time, Mr. Santos, under normal operations prior to the events, the 700 series fans provided the ventilation for the underground. The 860 series fans -- and there's three of each -- the 860 series fans were specifically for shift to filtration and so they pull the air through the HEPA systems.

The systems themselves were designed to run periodically. As 700 series fans were either taken out of service or for repair or maintenance, they were also used to augment the ventilation system with the 700 series fans provided.

Now, I don't know that I would go so far as to say they weren't designed to run continuously; but clearly, prior to the events, it wasn't envisioned that we would operate the WIPP facility as a contaminated facility and therefore, wouldn't have the need to run through the filtered system continuously.

MR. SANTOS: Can you describe some of the challenges you have been having with this new mode of operation?

MR. BLANKENHORN: In terms of the fans themselves, Mr. Santos?

MR. SANTOS: Yes.
MR. BLANKENHORN: So I think the most important challenge or most significant challenge that we've been having with these fans is just the reliability. There are three. We need one of them to operate, and we need a second one to be as a standby. Ideally we'd have all three of them fully functional. But in order to run these systems and do the preventive maintenance checks and services on them, in some cases they have to be operational; in some cases they have to be turned off. And so we do have to cycle the fans to be able to perform the quarterly and annual preventive maintenance checks on them.

But more importantly, I think, the reliability of the systems is an ongoing challenge that we're spending a great deal of effort and putting a great deal of attention on. Obviously, again, with the thought that these fans wouldn't necessarily be needed to run in filtration mode for long periods of time, we're going through now and looking at how these fans operate, whether the damper systems are manual or automatic. The electrical systems that feed them. We're looking at all these things and looking at it from the perspective of now that we look at them as important
to safety, that's post events, we're looking at all
the things we need to do to increase the reliability
of these systems going forward and thinking that
we're going to have to operate them for a period of
years.

MR. SANTOS: Thank you.

VICE CHAIRMAN ROBERSON: Thank you,
Mr. Santos.

Just a couple of brief questions. First
for you, Mr. Hutton. Soon after the events, the
Board communicated to the Department its concern
about ensuring the viability of the confinement
ventilation system and the Board advised the
Department to evaluate the safety controls and
contingency plans necessary to maintain
functionality of the confinement system, and DOE
responded in April of 2014.

Since that time, you know, things have
progressed, more activities have come online. What
process is DOE using to ensure that the integrity of
the confinement system is maintained?

MR. HUTTON: I'm sorry, could you repeat?

I didn't quite understand the...

VICE CHAIRMAN ROBERSON: What review
process is DOE using to ensure maintenance of the
integrity of the confinement ventilation system in protecting the public and the worker?

MR. HUTTON: I see. That's been, you know, the subject of these temporary safety basis documents that we've put in place. You know, shortly after the event we started to -- you know, we recognized the significance of the ventilation system, and so we recognized the need to put in place controls that would maintain it functioning properly for confinement purposes, and so on.

And so we did that principally through the ESSs process, through the temporary safety basis documents that the contractor prepared and that DOE reviewed and approved. And so those put in place controls to preserve the operability and the integrity and the functionality of that system to perform its confinement function.

And then, of course, we perform oversight as Bob described -- or Jim. They do an independent verification, implementation of those controls. DOE provided oversight of that to satisfy ourselves that that was adequately put in place, things that would protect the integrity of those fans, combustible material controls, vehicle barrier controls, as well as routine monitoring of the filters and the fans.
and that sort of thing. So that's fundamentally the
process we have used to make sure that those systems
remain operable.

VICE CHAIRMAN ROBERSON: Okay. So
Mr. McQuinn, we talked about, you know, key controls
when it comes to radiological events. What are the
fire protection controls in place that are essential
to ensure the integrity of the confinement
ventilation system? What are some of the key fire
protection controls?

MR. McQUINN: Fire protection related to
the ventilation system?

VICE CHAIRMAN ROBERSON: That are
important to ensure the functionality of the
confinement ventilation system.

MR. McQUINN: Okay. You know, there's a
whole suite of fire protection controls around life
safety, but sort of unique to the ventilation
system, the primary temporary controls because there
weren't any that were defined in the existing
revision for the DSA, are around combustible loading
to make sure that both inside the filter building,
exhaust filter building, and in the area that could
affect outside the building, the very first ESS
implemented transient combustible controls. And
that is the primary way there might be a scenario
where fire would affect the reliability of
confinement ventilation.

Now, as we write revision 5, obviously
we're taking a complete new look from a hazard
analysis standpoint. Ultimately, we could end up
changing the functional classification of the
existing system. But right now, through the ESSs,
it's mostly transient combustibles.

MR. HUTTON: If I could add one thing to
that, you know, and Bob knows this. But obviously
the filter system itself can be affected by, you
know, fire in the underground, and so controls on
cleanliness of diesel-driven equipment, hydraulic
systems so that they are not likely to create a
fire, limitations on diesel exhausts, ensuring we
have the proper air flow to the right places, both
to protect the people in the area, but also to
ensure that the filter system remains in service and
performing its confinement function as well as, you
know, the monitoring of the filter system, and then
various differential pressures in the underground.
So, you know, all controlled through the ESS
controls that are put in place.

MR. McQUINN: In fact, Jim triggers
another thought. Soot-loading from a fire that would make its way to the filters and blind the roughing filters and they, in turn, fail and potentially damage the HEPA filters -- that wasn't adequately addressed in the current DSA, and so that first ESS also addressed what happens if there was a fire and significant soot-loading. And so there's delta pressure controls that are embedded in that ESS that make sure that we replace filters so that if we had another event, we wouldn't have a pressure drop problem that would affect the HEPA filters.

VICE CHAIRMAN ROBERSON: So I guess, Mr. Franco, my last question on this topic is, I recognize, as Mr. Whitney cited, you guys are moving expeditiously to close panel 6 and to close the subject room of panel 7. What gives DOE confidence that the contractor has the right contingency plans in place, just in the event that you did have another drum event?

MR. FRANCO: What gives us the confidence is that we have seen, you know, drills and exercises as we continue to move forward with this process. Also, we have been provided a large amount of oversight on, as these things are being developed, all the way from the engineering to implementation
and the operations side.

And the other thing that I think, for me, that makes me feel real confident is that we have also reached out to the department and have received technical experts to come in that have not been normally engaged, so they're coming in with fresh eyes and are looking and they're coming back and saying, "Okay, this one fits and looks good, and we're going forward in this process."

So it's been a very -- for me it's a continuous effort where we continue to monitor, continue to oversee. We have the expertise now, you know, we have new employees with MSHA experience. Our team has a lot of mining experience. Now with the segregation again, as we talked about, for the organization, that -- you're starting to see the fruits of that. Our team is actually engaged in a lot of the detail of the oversight piece of it, and so, you know, it's good to start seeing the progress as we're moving forward, and still having the mentoring process ongoing. We will not stop that. Where we're having the expertise also come and support our field activities and making sure that we're applying the rigor that needs to for each of these items.
So so far, as we're moving forward, the planning and approach that we have taken, especially at these panels, panel 7, room 7, and getting that closed is a key component for us. And then also the decontamination that's going on now, that's critical as we move forward in the operation and that's going very well.

VICE CHAIRMAN ROBERSON: Mr. Sullivan?

MR. SULLIVAN: Thank you.

Mr. Dunagan, you mentioned earlier the challenges associated with bringing more ventilation online. You mentioned an interim ventilation system, supplemental ventilation system. I understand we need more ventilation in order to run more machines underground. Will there be any nuclear safety functions performed by the additional ventilation systems?

MR. DUNAGAN: The interim ventilation system is classified as important to safety. Through the DSA process, revision 5, it will be determined if it is required to be identified as safety-significant -- I believe that's the source of your question -- through this time. But it is being constructed with quality requirements that will allow it to be -- support commercial grade
dedication, so safety-significant, over time, but initially it's identified as important to safety.

MR. SULLIVAN: Okay. So these systems will be in the documented safety analysis as that document will be revised, Mr. McQuinn; is that correct.

MR. McQUINN: Yes. If I could add, so for both the interim and the supplemental ventilation systems, there are very likely to be ESS level controls for each of those, okay? So right now, we're using a temporary safety basis with respect to the construction of the systems, and then there will be a revision to that to authorize its startup. So Sean is right, we have functionally classified the systems as important to safety, but I'm certain that there will be ESS-level TSR-level controls related to both. And right now we are writing the new revision to the DSA and we're working our way through what is the correct functional classification for the existing system, and we're anticipating that that functional classification could increase. And so we're doing NQA1 quality construction of the interim ventilation system so that we can do commercial-grade dedication to it and back fit it to a safety significant functional
classification if it turns out that the revision 5 concludes that that's what it needs to be.

MR. SULLIVAN: How about NQA quality requirements in the procurement, in the pieces and parts? Are we going to have confidence that they are going to be made to nuclear standards for a safety-significant system?

MR. McQUINN: Jim, you want to help me with that?

MR. BLANKENHORN: Yes.

Mr. Sullivan, the contractor and the procurement process that we use verified that the vendors being used were all NQA1-qualified and that they also -- and you'd recognize the names -- they also provide products to the nuclear industry. So they're very familiar with the nuclear standards. And so in this particular -- in the IVS case and in the supplemental ventilation system, both those systems, the equipment is being procured to the NQA1-standards, not just the final product, but all of the manufacturing and their procurement processes for materials and equipment. That's all being -- following the process, and we've got inspectors that are there routinely watching the fabrication and manufacturing.
The permanent ventilation system,
obviously that will go through a different process
in terms of -- it's going through the 413 process,
and so it will have its own PDSA which will define
its functional requirements so it will not be in the
DSA rev 5. The IVS and SVS will. But its
procurement strategy will then follow whatever the
PDSA functional requirements require.

MR. SULLIVAN: Mr. Franco, my last
question. Is there anything about this interim
ventilation system that really makes it interim?
Could this be like the first P in WIPP where 15
years later, it's still a pilot plant? Fifteen
years from now, is this interim ventilation system
going to continue to operate?

MR. FRANCO: That's a very good question
because from the very beginning, when this approach
was discussed and then as we started to implement,
the permanent ventilation system is the key for us
to be able to switch from this interim ventilation
mode. And depending on the outcome of that, it's
going to be critical for us to make sure that that
stays on target so that this does and stays as a
temporary fix. It's critical for the ventilation
system and the habitability of the underground that
we move forward with the permanent ventilation
system to again not have these temporaries become
permanent.

MR. SULLIVAN: Well, my experience with
Washington, D.C., is that if you actually do it
right, you'll get penalized because then it will
work fine and somebody in the future will say,
"Well, I'm going to save money. I'm just going to
stick with this thing."

But in any event, just more commentary.

Obviously, it needs to be done; right? So I look
forward to seeing how the whole system comes
together with the right requirements, so that it can
operate as a safety-significant system.

MR. FRANCO: And again, for me, you know,
the WIPP project is a critical asset for the whole
nation. Where we are today has shown that we are
vital for the nuclear operation in this nation. And
so for us to leave temporary systems in place and
not go to a permanent ventilation system does not
make sense to me. And so I understand the thought
there, and I'm pushing hard that that will not
happen.

MR. SANTOS: I'd like to ask a follow-up
question. It is my understanding that some of these
interim ventilation systems are not only being procured or actually delivered to the site. Is my understanding correct?

MR. FRANCO: Yes.

MR. SANTOS: So my question to DOE is: Have you done any inspection that confirms that indeed there are like NQA1-type requirements, or are we waiting for some sort of gap analysis? I just want -- if I were to look at some of the documents, what would I find today?

MR. FRANCO: Yes, our QA department and my office has been overseeing that, the procurement of this system. And as we have received them, we've been following and doing the oversight with the contractor as they have started their receipt inspection of what -- so we were involved when they were building this, and we're involved now where it's been delivered.

MR. SANTOS: And as a quick follow-up, as you know, design takes time in getting the requirements all mature. It's very important. But have any of your preliminary analysis in support of the new revisions to the DSA, you know, hazard analysis, preliminary, shown the need to actually change some other systems, such as like diesels or
the electrical distribution? Any comment on that?

MR. FRANCO: I can tell you that we're going through that process now. There's still been a lot of discussion and you know, to get into some very specifics, you know, every one of those systems is being analyzed right now. Looking at the diesel-generated backups for emergency power, that's one of the evaluations. The other one is again the ventilation system that we have in place. But also, looking at the rest of it, we have, you know, the contact handle bay and the remote handle bay that are part of our safety base and making sure, and then the whole underground, looking at those. So as we move through the process, all of those items are open for review and discussion.

MR. SANTOS: So when do you expect that to be completed?

MR. FRANCO: Oh, we have put a team together, as we talked about that workshop. That safety basis review team has put a strategy and approach together to go through this process, and there's a schedule that shows when each chapter is being done, and we have extended an open invitation to one of your colleagues to be present with us as we go through these processes. And as each chapter
is being developed and analyzed, we're going through that. I don't have a schedule in front of me. I could give you the dates of that if you want that at a later time. But right now I don't have those dates.

MR. SANTOS: I asked a question, as we go to safety, my experience when we go to safety quality, the lead times tend to be longer, and having a good integration from the beginning is very important, especially as you integrate with your recovery effort. I just wanted to get an understanding of how all that was being, you know, properly integrated. Thank you.

VICE CHAIRMAN ROBERSON: Mr. Franco, if you would, if you could provide additional information to answer that for the record, that would be great. We'd appreciate that.

MR. FRANCO: Okay.

VICE CHAIRMAN ROBERSON: The February 2014 events revealed a number of issues -- and this is to Mr. Blankenhorn -- with WIPP's emergency preparedness program. For example, emergency response procedures were not followed, expert-based decision-making created more hazardous evacuation conditions. Critical communications were not heard
throughout the underground, and workers had
difficulty donning self-rescue devices.

What compensatory measures have been
implemented to address these deficiencies and ensure
that the workers in the underground, as a part of
recovery, can adequately evacuate, if necessary, are
protected during the recovery work?

MR. BLANKENHORN: Thank you, Madam Vice
Chairman. I'm actually going to describe for you a
phased approach to compensatory measures.

Immediately following the events, we did a very
in-depth, comprehensive, deliberate review of our
safety management programs, including emergency
management. And as a result of that, we identified
a number of deficiencies and the Accident
Investigation Board fire and AIB phase 1 also
identified a number of programmatic deficiencies
related to emergency management and emergency
response.

We put in place at that point in time
several compensatory measures that included, as Bob
mentioned, we went out right after the events and
obtained senior management experts from around the
complex, and we brought those individuals in to
provide mentoring and coaching and oversight of our
facility operations. We added conduct-of-ops mentors and coaches to our shift crews. We put senior mentors in the control room to provide assistance and guidance on classification and categorization. And then we added a requirement that our management team conduct and start implementing field management observations and assessments on a routine basis. So we put those steps in place almost immediately.

And then we went and we developed a dual path. We recognized that the emergency management program as a result of these assessments, was not compliant; it had not kept up with the NIMS requirements, the national framework; it didn't have incident scene command structure built into it.

And so while we were implementing the compensatory measures, we then have started down -- and we're probably 60 percent complete now -- with a complete overhaul and revitalization of the emergency management program. We have hired additional staff. We've hired a new emergency management manager who came in with a great deal of experience. We've restructured the organization. We have created new positions compliant with the current standards and requirements in the DOE.
orders. We've revised procedures and programs.
We've trained and qualified these people to their
new positions. We've run a number of drills and
exercises. We run two or three drills a week.

VICE CHAIRMAN ROBERSON: I was going to
ask you for an estimate of how many drills you think
you have run in the last year.

MR. BLANKENHORN: We run two to three
drills a week.

VICE CHAIRMAN ROBERSON: These are
tabletops? Is that what we're talking about?

MR. BLANKENHORN: Madam Vice President,
these are actual drills. We started early on
with --

VICE CHAIRMAN ROBERSON: Not Vice
President. But thank you.

MR. BLANKENHORN: You got my vote.

We started early on with tabletops and we
focused on the shift managers who were making the
decisions and we focused on the radiological
controls organization and the emergency management
organization. But we quickly moved to full-scale
drills that we run in the facilities.

We had a process check -- I'd call it a
process check. In May we ran a full exercise. It
was the first opportunity -- and this is in December -- to look at how far our program had progressed, and it had progressed quite a bit, but it also identified still a number of things that we needed to do to continue to improve on. But it was the first test of our new structure and our new organization and our new processes and procedures.

Going forward, we're going to build a new emergency operations center. We're going to continue to involve the organization for full and compliant program.

And so that brings me to the second phase of compensatory measures. We put in place in the underground -- or we wrote the document entitled "Emergency Management Fire Protection Compensatory Measures" and that was routed and approved by CBFO. And that included in it a number of things that we're doing in the underground as compensatory measures while we're building this program. And that included things like accountability programs that we needed to implement; it included communications systems that we needed to have in place to allow people in the underground. It restricted the number of people that we had in the underground at any given time. It required detailed...
prejob briefings to anybody going in the underground. It required fire watch, fire monitoring programs. It required each individual to go through and demonstrate, as part of their training and qualifications, that they could physically don the self-rescuers. It included drills and exercise in the underground where we exercise that, and we select a few people during a drill or an exercise to come out of their RADCON PPE, including PAPR, don their self-rescuer and demonstrate that they can do that in a timely manner and in a safe manner compliantly.

So those types of things are continuing to run. We've also implemented a number of other programs in the underground that include new equipment for both fire protection and emergency management, and we are continuing to use the senior mentors that I referred to earlier as part of our overall compensatory measures.

So a number of compensatory measures, but it's running in parallel with a revitalization and overhaul of the whole new program. It's coming along nicely.

VICE CHAIRMAN ROBERSON: In the major drill, the big exercise you did, what surprised you?
What didn't go the way you thought it would go?

MR. BLANKENHORN: I think I was a little surprised actually at how well it went.

VICE CHAIRMAN ROBERSON: Okay. You're not answering my question, right?

MR. BLANKENHORN: But the things that we noted during the exercise were the incident scene command still had not matured to a point yet where it was effective, and so we spent an awful lot of effort and time since then working on the incident scene command program, procedures, training qualifications.

And then while the construct of the exercise I think was a positive, on the back end of that, the whole hot wash AAR process, how do we learn, how do we collect, things to improve upon, that part of our drill program I believe was deficient. So I think, you know, clearly that's an area that we need to continue to improve on.

VICE CHAIRMAN ROBERSON: Okay. Thank you.

Mr. Franco, the Accident Investigation Board identified concerns with the failure to categorize the fire and radiological events as an operational emergency; is that right?

MR. FRANCO: That's correct.
VICE CHAIRMAN ROBERSON: So what actions have been taken to ensure that proper categorization and notification of events like this occur as intended in the future? What actions have been taken?

MR. FRANCO: What has been changed, Ms. Vice Chairman, is we have actually had a procedure change and process and program change and it's back-tied to the emergency management programs we've been discussing. Within that program, the categorization side of the procedure has become more extensive but easier to follow per -- you know, what we're really looking at, as they mentioned, they're talking to facility shift managers. They're the first line of personnel that get to make that first determination so that the notifications go out appropriately and expedited. So one of the things that I have been -- our staff have been overseeing has been the actual implementation of that procedure and making the categorizations of where the -- watching the training with the facility shift managers and providing them -- watching the training organization, providing the shift managers a comfortable pathway including from coming from Mr. McQuinn that it's okay to be conservative in
your initial response. And in watching that.

VICE CHAIRMAN ROBERSON: So let me just ask, it's not -- I mean, we always turn to procedures or we need more specificity. I just want to be clear, because it's my understanding, as well, too, that we need to work on the comfort in making calls like that.

MR. FRANCO: That's correct.

VICE CHAIRMAN ROBERSON: To make a conservative call if that's what needs to be the call.

MR. FRANCO: That's correct. And I can relate to that because I was a facility shift manager here at the WIPP facility before, and as we have discussed and have -- I have seen the oversight, and when I go out at the facility, again, I have an office out there and I've worked with them. They feel real comfortable coming and telling me what's working and what's not. And this has been one of the items that they had expressed that they were feeling more comfortable with this. The other one, as they moved through the whole program, you know, from the emergency management side that they can now make these calls without any kind of questioning, okay --
VICE CHAIRMAN ROBERSON: Why do you think they were uncomfortable?

MR. McQUINN: Could I have a point, Joe, to that?

Joe knows my work force extremely well. But let me relate this to safety culture. So let me connect this back to one of the real root causes that we're working on.

In my first week, I was very concerned about why would my shift managers and my shift engineers and my crisis managers be reluctant to categorize and classify and declare an operational emergency? So by the end of the first week, I had met with every qualified shift manager, shift engineer, and crisis manager in private meetings, group meetings, face-to-face. And they convinced me that they felt criticized at times in the past for declaring when it wasn't necessary.

And that I think is a commentary on part of the safety culture issue. And so, you know, with Joe's support, it's really my job to get this right. My emphasis has been completely on recognizing people that have the courage to make a conservative decision and stop work.

Now, there is accountability for not
getting things right. But the emphasis certainly up
until now has been all around recognizing people who
stop, even if they didn't need to. And so the
safety culture piece is hugely important. I think
we're making great progress, but we have to protect
that all the time.

VICE CHAIRMAN ROBERSON: Thank you.

Mr. Santos had a follow-up?

MR. SANTOS: Yes, quick follow-up. I
agree with the Vice Chairman. I think specifics are
important. So this question is for Mr. Franco, but
others can feel free.

So let's go to specifics. I understand
your development procedures training, the whole
set-up, improvement, initiatives. I think that's
good. But what would happen today? Let's say right
now, we can postulate an event. What is the
expectations today, even as your leadership sits
even in this room, what would happen, if you could
explain the process in specifics so the public can
understand?

MR. FRANCO: Let's take a scenario where
we have an underground event. Immediate
notification to the central monitoring room happens.

Central monitoring room sets off the alarm, makes
the notification. The facility shift manager goes up to the central monitor room supporting the new application, starts making the notification to all senior staff. Activation of EOC. All of those activities.

The activation process then gets initiated, which has been one of the programs that has been enhanced. We now get pager and cell phone tests more than twice a week, and as we get those, you know, how fast can you respond, and so all of that gets initiated right way.

That part of it has been tested in the drills, and we actually perform those functions. So that's not something that's simulated. It's actually conducted during these events. So if an event was to happen today, as we're sitting right here, we would get the notification, we would have to tell you that we got to leave, and we would leave. We could -- you know, for me, we would tell you later what was going on as we would go back to our offices there. The joint information center is stationed here at our office. We would activate there.

Now, what's coming in the future is, EOC is going to be actually in place here at this
facility here in town. As you know, most DOE facilities, their emergency operation center is not located inside that facility itself. WIPP, we did that from the beginning as the pilot, and part of the lessons learned here is that we need to have this segregation. So that would happen immediately from the events. So that's immediate actions that are taken, we would get notified immediately again, so...

MR. SANTOS: And a follow-up on that.

This is for Mr. Hutton. When will DOE headquarters will come in in this scenario, and when will other like federal and local partners be integrated? And then finally, when will the public be notified? If you can extend --

MR. FRANCO: Sure, I can extend.

Immediate action is, as soon as the facility shift manager makes notification, the EOC is activated. Once the EOC is activated and the people are in the emergency operations center, the notification to DOE goes off at that moment. There's a DOE representative that has the responsibility to make that call to the headquarters.

Then I have a responsibility also to notify my management chain, and Mr. Hutton has
provided guidance for us from -- like from the FAC Reps, for them to provide immediate notification. So there's three tiers of notification now that go back to the headquarters, letting them know where we are with activity. And then from the EOC, all of it is governed from the EOC on what needs are required and needed. So if I need some support from outside agencies, everything is coordinated from the emergency operations center following the NIMS process.

MR. McQUINN: Jim probably has a thought. So right now we track scheduled drills in our plan of the day meeting. Okay? We track every one. And it takes Jim or my approval to postpone a drill. That's how serious we take it. We run many unannounced drills and we run them when there are people in PAPRs in the radiological area where there's real risk of running the drill with people down in panel 6 or panel 7, but we do it anyway, because it's important.

So the unannounced drills, it takes Jim or me to approve those. Nobody else know it's going to happen. And we run those. And then finally, in terms of me becoming a little more comfortable that the shift managers
will make a conservative call, about a month ago, we had an off-site oil release, but it was on the property. And it turns out -- and we ran that and we activated the EOC and we ran the EOC for several hours, and then later we concluded that we probably didn't need to do that. But we still thanked the shift manager and the crisis manager for making a conservative call.

Now, we learned a lesson in terms of when do you need to and when do you not need to. But in that case there was no reluctance to actually run the EOC for several hours before we were comfortable that we didn't need to be activated. So I don't want to become complacent, but I'm becoming more comfortable that conservative decision-making is understood as an expectation.

MR. BLANKENHORN: I would just add, Mr. Santos -- okay. So a couple other things I'd just like to add to what Joe described. So Joe described when the CMR gets the notification, they start to take actions. And the first thing they do, because they have been trained and qualified, is they take immediate actions, but someone in the control room is opening up the procedures and following step by step the requirements for immediate action. The
organization itself, though, so all the workers, are
taking immediate action in response to the event,
whether that's evacuation or shelter in place.

And then, as Joe mentioned, as we follow
through on your question about the notifications,
there are specified requirements for how long we
have to notify DOE. I believe, Joe, it's 15
minutes, isn't it, that we have to get something up
to DOE? But that's spelled out and you know, it's
one of the action steps in our response procedures.

There's also, then, requirements I think
within 30 minutes for us to make notifications by
phone and by fax to local enforcement, to local
emergency management centers, to the state emergency
management. So we call all of the action officers,
the on-call action officers, who then are
responsible for making the notifications to the
actual staffs of the emergency management systems.

VICE CHAIRMAN ROBERSON: I think we're
going to scrub this some more in the evening
session, I mean, because these were in place before.
I mean, they're not new. So I think what we're
going to want to do later is dive into what is
different.

So Mr. Sullivan.
MR. SULLIVAN: Thank you. So Mr. Hutton, we heard about some changes within CBFO to improve their performance. So my question to you now is: Is the EM satisfied with the structure of the field offices that exist now? Do we have the right division of responsibilities within the office? Do we have the right number of people? Do those people have the right skills, training, experience, et cetera?

MR. HUTTON: I think we're quite happy with the change in the organization that's been described, you know, separating the oversight function from the production. I think that was essential. It was a good change. I think that's beginning to work well.

I'm quite pleased with some of the folks that have been brought on board. We've participated in the hiring process, interviews, and so on, for the folks that have been recruited and brought into CBFO. Some of them are quite strong, have a lot of experience of other facilities in the complex, and they bring that to bear in this at CBFO. So I think that's very positive.

I have not been happy that we've been able to hire people quickly enough. It's been difficult
to bring -- to attract people to be, you know, willing to come to this area. That's frankly been a bit of a problem. And I would like to see more of those folks in place, but I'm quite encouraged with the number of the people that have been brought in and their skill and abilities. I think they're strong.

So was there something else?

MR. SULLIVAN: No. I have some follow-up questions, taking those things one at a time. So with respect to dividing the responsibilities between programmatic responsibilities and oversight responsibilities, is this something that's been instituted throughout the DOE complex?

MR. HUTTON: Most all -- there is no specific requirement about that that I'm aware of. However, most all sites have that kind of separation. Most all sites that I'm aware of have that kind of structure.

MR. SULLIVAN: Okay. My experience is, it doesn't magically fix things. In some cases you just end up with a little bit of head-butting between two groups.

MR. HUTTON: Well, perhaps there should be a little bit of a healthy tension there. I think
that would be appropriate. But I do think it's important that just -- that folks understand their clear role and responsibility. And sometimes, you know, they have to take off one hat and put on another. Do it too many times, pretty soon they forget which hat they're wearing. So I think it's helpful. I think it's helpful to have that structure.

MR. SULLIVAN: All right. So with respect to some of the hiring issues, Mr. Franco, can you comment? Are there things that you'd like to see Mr. Hutton do back in Washington to fix some issues here?

MR. FRANCO: We have actually been working that issue from the start with and have had great support from Mr. Hutton as our driver in D.C., so that's been a positive. I can tell you that it hasn't been without effort there. The amount of offers that have been made and the incentives that I have been provided, to be able to provide -- I have the highest incentive authority right now for the work force as I hire them, and we are maxing them out, and they still are coming back and saying, "No, you know," and I'm getting various things from, you know -- that includes just -- what's within this
region, there has been for medical reasons and
there's also been, because of the economy here, the
housing market is a lot higher than where most
people are wanting to come from. So that becomes a
challenge for them to be able to accept that. With
the boom in oil, even bringing them in and even
seeing the hotel prices, which have started to come
down some, but those have been some challenges that
we have.

And we track this and we report it to
headquarters on a weekly basis. I know that my
management team, Mark Whitney and company, have
monitored this. They're trying to help us as much
as they can. The postings are going out as fast as
they can, and then you know, when you have four
turndowns on a specific -- even in a grade 14 level,
that's huge. And so it's just those kinds of
things.

Now, what we have been really fortunate
with is, we have brought in a lot of good people for
the nuclear safety side of the house and the
oversight piece. So you know, I have a senior
nuclear safety technical advisor now, and he has
definitely -- and he's leading this, and the safety
basis review team, and if you get the chance to talk
to your staff, he has really taken control of this
and has been a great leader in that side.

And then again, the efforts that we're
doing to try to get the employment levels up --
we're still about -- the organization is going to
change over 50 percent, so it's a totally -- it will
be a totally new organization when we're done.
We're going from about 50 to all the way to 77 type
amount. And then I'm having attrition also as that
happens. So a huge turnover from the concept of new
folks coming in. And most of them -- all of them
are not born and raised in Carlsbad, like we have
currently a pretty good setup.

So that hiring process is still a
challenge for us, and we have advocates up in
headquarters, including Mr. Hutton, that really
drive and help us through those processes. Wherever
we get a hang-up on anything that drives that,
whether it's human capital or any of those -- and
we've been just moving through this process and
making sure that we stay within the requirements of
the hiring process, but it's been a challenge.

MR. SULLIVAN: Well, short of trying to
destroy the local economy to help yourself, are
there other things that you can do? For example,
are some of these programmatic functions -- can somebody back in Washington do some of these things?

MR. HUTTON: Yeah, and that's exactly what we've been doing, is supplementing CBFO staff with our staff, with staff from other sites, and with some contractor support, as well; very strong people, frankly, that have been spending a great deal of time doing nothing but worrying about WIPP and helping out performing on some of these functions. But that's not a good long-term solution. You know, but it certainly is necessary right now. And so that's what we've been doing.

MR. SULLIVAN: All right. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, gentlemen. I don't have any additional questions.

Mr. Sullivan, any more questions from you?

MR. SULLIVAN: I'm probably done.

VICE CHAIRMAN ROBERSON: I'm done for this at this point. If you want to go back to --

MR. SULLIVAN: Well, yes. Let me go ahead and go back, then. Go ahead.

MR. SANTOS: Can I interrupt? A follow-up question to your last question.

MR. SULLIVAN: Certainly.

MR. SANTOS: It's just for the record. I
would like to get on the record: What is your current shortage from a staffing standpoint?

MR. FRANCO: Right now, we -- to meet, you know, the where we were headed with our current organization, 18.

MR. SANTOS: Eighteen?

MR. FRANCO: So we've had, you know, hired -- initially we had 22. We've hired nine new personnel, but I had five attrit, and then -- yeah.

MR. SANTOS: Thank you.

VICE CHAIRMAN ROBERSON: Mr. Sullivan.

MR. SULLIVAN: Mr. McQuinn, you mentioned earlier some preventive maintenance issues that were brought out in specifically the fire accident investigation report. So as I recall from that report, it was like a whole page of things that were being done on, for example, the salt trucks that had the fire. There was a whole page of things that were being done here at the site by the maintenance organization that were different than what the manufacturer had recommended, so different periodicity, what they were using, different equipment, or instead of washing down the truck with water, they were using compressed air. Can you talk about how it got to be that way and what's been done
to change that?

MR. McQUINN: The overall preventive maintenance or that specific --

MR. SULLIVAN: Yeah. The overall preventive maintenance program.

MR. McQUINN: So I think there is no doubt that we weren't putting the priority, both financially and organizationally, in day-to-day execution on preventive maintenance, particularly safety-related preventive maintenance. And so one of the new managers, new experienced managers that I brought in was to take over the maintenance organization, and this is an individual who has particularly a high experience base from Pantex with respect to both deferred maintenance and replacement of critical equipment. So we have a new leader to make sure that we execute the preventive maintenance properly. Of course, we'll talk a lot more about work planning and control, and that plays a part in making sure that we're ready to do preventive maintenance when it's needed.

So a new manager, a lot of emphasis on the execution of the work.

But I think part of the root cause was -- as my organization made hard priority decisions,
there wasn't enough priority on preventive maintenance. Okay? One of the tools that I'm going to use is a brand-new standard that AECOM has produced based on all the best practices from all of the projects, and nobody has it exactly right. I'm going to adopt a new standard on how to evaluate preventive maintenance and make important priority decisions.

And then we've launched as part of our baseline an improved integrated priority list to make sure that Jim and I understand what decisions we have to make with the funding and the resources that we have.

And then sort of from a process standpoint, in the last two months I have added one more, one last direct report to me, and I call the function project integration. And so I'm borrowing a very experienced project integration manager from Savannah River. But I think that function I need to keep us honest as we look right now at a very good funding scenario and how to spend that money not only on recovery but on infrastructure things that are needed.

And so I have created a new function with an experienced person, so I think that the
decision-making around what to put priority, both money and resources, on and then the maintenance manager to execute that well when we give it priority. So those are some of the things we've already done and some things that are yet to come.

MR. SULLIVAN: All right. So some of the examples were, for example, battery maintenance required at 250 hours, and instead it was being done at 500 hours. If for some reason somebody in the organization today wants to do something like that, the manufacturer says this should be the periodicity and they believe they're going to use a different periodicity, what's required to get that approval?

MR. McQUINN: Well, I think the maintenance process is adequate. I think the piece that was primarily missing that most of the mature sites have is, there is a strong cognizant system engineering program and system engineering program up in -- a year ago the system engineer didn't have to be involved in making the decision or agreeing with the decision to defer the maintenance on a battery from 250 to 500 hours.

Now, we're still early in getting cognizant system engineers qualified and in place, but what we're adding to the process is engineering
has got to step up; not that the maintenance guys
don't have good reasons to consider a change like
the one you discussed, but I have got to have an
honest broker, and that's my system engineer,
involved in assuring that that's defensible,
particularly for the safety-related preventive
maintenance.

MR. SULLIVAN: And when it comes time to
do the maintenance, then, who is responsible, other
than the worker who gets assigned to do the
maintenance, to make sure it gets done right? Is
there somebody who's going to be watching
periodically or some sort of random check to make
sure that when the maintenance is done, we're using
the right equipment, we're not taking shortcuts, we
are doing what's supposed to be done? How is that
process going to work?

MR. McQUINN: Well, let me start. Jim,
you help me remember what I'm overlooking.
The maintenance line organization is
primarily accountable to me to make sure that
they're looking at the quality of their work. If
it's a safety-related credited system, then there
better be some kind of surveillance related to that
maintenance that proves that the functionality
that's required has been achieved.

And then ultimately, for all of us, including myself, that have to get into the field, right now all of my emphasis as we go into the field is going to be around technical safety requirement compliance, but there will be times when I'll instruct the whole senior team, "When you go out this week and you do your field monitored assessment and you report that back to me, take a look at PMs that are going on."

And so it starts with the line organization. There is an engineering oversight part when it's safety-related, and then it's all of us that do field observations.

MR. BLANKENHORN: Yeah, I think the only thing that I would add is the work packages themselves, depending on the piece of equipment and the maintenance required, will spell out exactly what Bob just described, which is that there may be independent verification steps, QA, hold points, peer verification, supervisor requirements. And so those are being documented and it will be captured in the actual work control documents to ensure that the work is being done in accordance with the requirements.
MR. SULLIVAN: Thank you. You have a follow-up?

MR. SANTOS: I have a follow-up. I would like to direct a similar line of questioning to -- Mr. Dunagan can probably pick up on this one.

What is the oversight role of DOE when it comes to this example that Mr. Sullivan highlighted regarding some of the identified gaps between actual practice and manufacturing and maintenance? Are you solely relying on the contractor system, or are you actually going to be performing independent oversight gap analysis? Can you elaborate what some of your actions are regarding this item?

MR. DUNAGAN: Yes, I will. Thank you very much for the question. Yes, DOE is actively involved with the oversight of these activities. We have FAC Reps here onsite who are involved with all of the oversight, as well as the different members of the operations oversight organization. They are continuously following and monitoring the situations, as well as maintenance, and whenever vehicles are being maintained, DOE is notified and they are involved and included in the -- they have the opportunity to include in the prejob or the plan of the day meeting, so they can be aware of all the
activities that are going on and be able to be
involved with them as much as possible, as well as
being involved with the oversight of all the
documentation that goes on with it.

Joe might have more to add to this.

MR. FRANCO: I can add to that. In our
organization, it's not just the oversight group. I
have an independent quality assurance program that
is deeply engaged with that, and what we do is, from
the construction of any of the, you know, purchases
that are being done, our quality assurance
department is engaged, we send people out in the
field wherever the manufacturing is happening, and
we provide those.

Also, we have a planned inspection and
evaluation program that we perform out at the site,
including anything from conduct of operations at the
SMS to work packages. So they go out. And then
they also monitor the CAS system for the contractor.

Also what we do is, as we're moving
through the year, if we see a trend on something, my
quality assurance director or manager comes in and
tells me, "We're seeing a trend in this, and let's
get with the director there and let's put some focus
on this activity."
And that's a program that is in place today.

MR. SANTOS: Thank you. I'm done.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos.

Any additional questions, Mr. Sullivan?

MR. SULLIVAN: No.

VICE CHAIRMAN ROBERSON: Mr. Santos?

MR. SANTOS: No.

VICE CHAIRMAN ROBERSON: Thank you, gentlemen. Mr. Hutton, Mr. Franco, Mr. Dunagan, Mr. McQuinn, and Mr. Blankenhorn, thank you for your time and you're excused from the table at this time.

At this time, per the Board's practice and as stated in the Federal Register notice, we will welcome comments from interested members of the public. A list of those speakers who have contacted the Board is posted at the entrance to this room. There is also a table at the entrance to the room with a sign-on for members of the public who wish to make a statement but did not have the opportunity to notify us ahead of time. If you wish to make a statement and have not signed up, you may add your name to the list at this time.

So I think I don't see any movers, so it
appears to me -- we have the list of the speakers, and we will call them out in the order in which they wish to speak, in the order that they signed up.

I ask you to make sure everyone who has demonstrated a desire to speak -- we ask speakers to be brief to allow time for others. The Chair may interject if a speaker exceeds five minutes, but will then give consideration for additional time should the agenda permit.

Statements should be limited to comments, technical information, or data concerning the subject of this public meeting and hearing. The Board members may question anyone making a statement to the extent deemed appropriate.

As a reminder, anyone, including those observing today's hearing live via videostreaming, may submit a written statement to the Board to be included in the record, which is open until May 25, 2015. Contact information for submitting a statement is available on the Board's website.

We want to thank all the members of the public who have come here and been a part of these discussions today. And so the first person on my list is Mr. Don Hancock.

MR. HANCOCK: Thank you, Madam Chairman
and members of the Board. I appreciate very much your being here, as well as the Board's work over the last many years around the DOE facilities and sites, and I look forward hopefully to continued and further involvement of the Board with WIPP, which I think is very important.

My name is Don Hancock. I'm with Southwest Research and Information Center, a 44-year-old nonprofit organization based in Albuquerque.

Among other things, we've been watching WIPP for more than four decades. I want to address -- and given the shortness of time, I want to address a couple of issues related to the recovery plan elements that have been talked about today, and then spend briefly some time on what I think is a very fundamental flaw in the entire recovery process and to get the safety culture back in place.

So regarding safety, on February 15th and 16th, after the radiation release, DOE and Nuclear Waste Partnership assured workers and the public that there was no contamination of workers' equipment or facilities on the surface.

It wasn't until February 19 when the only
independent monitoring at the time, the Carlsbad
Environmental Monitoring and Research Center,
released their information from their sampling on
the surface that there was contamination released.

That shows me a couple of things that I think are important. One, the problems with
radiation monitoring and detection of DOE and Nuclear Waste Partnership. It also shows the
importance of independent monitoring, which is very important going forward.

I appreciate what the Board is doing today in terms of talking to DOE and the contractors, but
that's not sufficient for safety, and I think this incident clearly indicated. So among the things
that needs to happen going forward that hasn't been mentioned today is the continuing funding for CEMRC,
as it's called, the Carlsbad Environmental Monitoring and Research Center, and the New Mexico Environment Department to have independent monitoring actually functioning at the surface in
addition to what's required by DOE and the contractor.

Another thing that resulted in that is:
Workers were told that they weren't contaminated when they were, and in at least one case it was
three months after the event before the worker was notified.

So those are very unacceptable practices that have to be not only fixed but demonstrated that they're fixed, not just, you know, on paper, et cetera. So that's very important, going forward in terms of the safety questions.

In terms of regulatory compliance, which there hasn't been much discussion today, the recovery plan states that by March of 2015 -- in other words, a month ago -- on page 16, the EPA recertification has to have been completed. That not only hasn't happened, there isn't even a complete application to the Environmental Protection Agency for recertification.

So one of the important questions in terms of regulatory compliance is: What is the role of recertification in EPA approval for any reopening of WIPP?

Obviously, the other important regulatory body is the New Mexico Environment Department. There are numerous ongoing permit violations of the existing permit. The recovery plan unfortunately presumes that the facility can reopen next year with many violations, health and safety violations, of
the permit still in place.

That's an unacceptable position from a health and safety standpoint, from a regulatory standpoint, and from a public confidence standpoint. So one of the things that needs to happen is the recovery plan needs to be changed, DOE headquarters needs to specifically say that those kinds of modifications have to be done, and compliance with the permit has to be in place.

Important to both of those things that I just mentioned is, it is not possible for all of those things to be done with EPA and New Mexico Environment Department in the first-quarter-of-2016 schedule that's in the recovery plan and you heard referred to again today.

On the one hand, we're told over and over we're not schedule-driven, but the recovery plan, which is the headquarters document that's out there says that that is the schedule. So among the other things that needs to happen is that headquarters needs to agree now and soon that that's not the schedule, not just say we're not schedule-driven; they actually need to physically change the schedule in the recovery plan.

I guess the other thing I want to mention
in terms of these regulatory processes, these are
the processes that the public is engaged in, and
must be engaged in, and will be engaged in, and you
can't short-circuit the timing and the nature of
those processes.

Let me talk briefly about this one
fundamental flaw that I referred to that hasn't been
addressed. A fundamental cause of the declining
safety culture and these releases is the fact that
what I call the internal pressure. In your Federal
Register notice you talked about external pressures
for schedule and to not comply with safety
requirements.

There is a very essential internal
pressure that's going on and has been going on
recently that I and other people noticed and knew
that the safety culture was declining, and that is
the Department of Energy and its contractors is very
focused on expanding the WIPP mission, not complying
with the Start Clean Stay Clean safety mission that
it's required to do under law and under every other
practice.

We're 14 months after the February 2014
release, and DOE still has five, count them, five
formal environmental impact statement processes
going on to expand the WIPP mission for high-level waste tanks -- waste from high-level waste tanks at Hanford; commercial waste from West Valley, New York, greater than class C commercial waste from reactors around the country, the surplus plutonium from the Savannah River site, and a fifth one that isn't even related to nuclear, bringing 10,000 metric tons of mercury to store on the surface at the WIPP site. And in addition, they want to do heater tests in the underground at WIPP to demonstrate the site for high-level waste.

So all of these expansion things take time, effort, money, management and attention from both headquarters, DOE, CBFO, and the contractors to do these things. It is no surprise that they can't focus on the safety mission. Unfortunately, none of those six things has been formally dropped or rejected. They're still out there, and my strong view is that headquarters has to formally reject all of these expansions, most if not all of which are also illegal under existing laws and permits, before we can talk about reopening the facility, reopening the facility for what? Not to be a safe facility.

VICE CHAIRMAN ROBERSON: Mr. Hancock --

MR. HANCOCK: I understand. My time is
VICE CHAIRMAN ROBERSON: Okay.

MR. HANCOCK: So this is very important that headquarters needs to make these changes to the recovery plan and to their decision-making process, and the kinds of things WIPP is being designed for. Otherwise, we're not going to focus on the WIPP mission; we're going to focus on expanding WIPP to do other things. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, sir. And if you would like to submit a document for the record, we'd be glad to take that, as well.

Our next speaker is Kyle Marksteiner.

MR. MARKSTEINER: Good afternoon. My name is Kyle Marksteiner, and I'm a contractor to the mayor's Nuclear Task Force. I actually have a two-page letter from Mr. John Heaton. If it's permissible, he wanted me to read that for the record, if that's okay with you.

VICE CHAIRMAN ROBERSON: Absolutely.

MR. MARKSTEINER: Slowly. Okay. I talk a little fast.

VICE CHAIRMAN ROBERSON: You can also summarize it and submit the actual document.

MR. MARKSTEINER: Okay. I want to leave up.
it in his words, or he'll be upset with me. But
I'll do the best I can.

Good afternoon, esteemed members of the Defense Nuclear Facilities Safety Board, and thank you very much for holding this hearing in Carlsbad.

Vice Chairman Roberson, I'm sorry I missed seeing you, and thank you for being here. We recognize that the rarity of such a public hearing indicates the significance of both the Waste Isolation Pilot Plant itself and the severity of the mistakes that led to last February's fire and radiological incident.

I know all of you must feel deeply ashamed that you didn't enforce your fire findings at WIPP or that you failed to identify the shortcomings of the waste treatment process or poor AK documentation of that treatment at Los Alamos, as well as the incompetence of the CCP programs there and at CBFO to identify and assure how that treatment was occurring.

Certifying waste for disposal at WIPP that does not meet the WIPP WAC is inexcusable. It shakes the very foundation of trust and moral responsibility to one's fellow man. I apologize for not being there today, but I have a prior commitment
I am unable to get out of. I hope this hearing is productive, and look forward to watching the archived online broadcast.

My message today is to emphasize the absolute need for transparency, at the WIPP level, in Washington, D.C., for regulators, and yes, for the DNFSB. Transparency is not passive. For many years the DNFSB indicated concerns about a possible fire at WIPP in letters to the Secretary of Energy that were admittedly published on the website. However, the back-and-forth discussions on these concerns and their apparent lack of resolution were not brought to the public's attention and obviously not resolved in spite of corrective action responses.

While I understand that your primary mission is to report to the Secretary, the reality is that we live in an area where the media, the public, and host communities need to be directly brought into the discussion to make sure changes are made. It is true that we could have found your letters on the web page and made a bigger deal of them to local WIPP management or our congressional delegation, but we are also very busy people and we feel you are the experts.
I hope the DNFSB and all regulators will strive to do a better job of bringing the message directly to the community. The public should be informed immediately and directly after every visit you make to the site in the form of an exit conference when the public -- when your findings or judgment of safety breaches against WIPP are reported directly. You should then report the response by WIPP in the way of corrective actions, the intent to implement -- getting close -- and whether responses are adequate. We should then have a minimum of a monthly report from you to the mayor as to which corrective actions are completed and which are outstanding. Too often we hear about some concern and then never get the follow-up about whether it was addressed or why it was not addressed.

Furthermore, this information from your findings should be presented in a way that is understandable to the public, not recorded in a way where even people directly involved have trouble understanding the concern. Many of these concerns tie in with our attempt to develop a community assurance program. Vice Chairman Roberson, I was gratified by our meeting in DC several months ago.
when you agreed that the DNFSB would be pleased to participate in such a program. You pointed out several instances where there may be inconsistencies between regulators, and such a meeting of these regulators would allow those and others to be cleared up, as well as finding gaps in oversight.

We don't believe introducing a new regulator to WIPP is the solution, so much as we think the focus should be to tie in the existing regulators, eliminate the "silo effect," caused by each group handling its own process and sometimes missing key issues, and finally turning these reports into something that is digestible by the public.

We appreciate your willingness to be part of this community assurance program, and we understand its development is part of the State of New Mexico's negotiations with the Department of Energy.

As a closing statement, the final goal here is the restoration of the Waste Isolation Pilot Plant. The salt beds in that area have and will continue to do their job. This is an exceptional resource for the permanent disposal of transuranic waste. We just need to keep working to eliminate
human error.

Thank you again for being here today.

John Heaton.

Thank you.

VICE CHAIRMAN ROBERSON: Thank you,

Mr. Marksteiner.

Our next speaker is Russell Hardy.

MR. HARDY: Good afternoon, and welcome to Carlsbad, and thank you for taking your time.

My name is Russell Hardy, and I am the director of the Carlsbad Environmental Monitoring and Research Center, also known as CEMRC for short.

For those of you who don't know, we are an entity of New Mexico State University. We are funded by the Department of Energy to conduct an independent environmental monitoring program of the WIPP site on behalf of the citizens of Carlsbad and southeast New Mexico. And I want to thank Mr. Hancock for acknowledging CEMRC and advocating for future funding for our cause.

One of our missions is to make all of our information available to the public. And that's very important to us, whether it's good, bad, or indifferent.

Just a little history on CEMRC. We began
our environmental monitoring activities in 1997, which was about two years before any waste was emplaced in the underground at WIPP. What that did was allowed us a good baseline of about two years to establish normal or background radiation activities from thence we would compare all post-operational activities to. And for about 15 years, we had to look to the tenth decimal place in order to find any activity. In fact, for 15 years, we found absolutely zero impact to the environment, as a result of the WIPP waste emplacement activities. Of course, that pertinent track record ended on midnight of February 14, 2014. As Mr. Hancock mentioned, the CEMRC was the first entity on February 19th to announce that trace levels of radioactive contamination, primarily americium 241 and plutonium 239/240, have been detected at an ambient monitoring station located approximately half a mile northwest of the facility.

Since that time, CEMRC has collected more than 1,000 environmental samples consisting of WIPP exhaust air, both before and after HEPA filtration, ambient air on and around the WIPP facility, soil samples collected near the WIPP facility, and surface water and sediment samples collected from
the three public reservoirs in our area.

In addition to our environmental monitoring activities, we have a whole-body counter at our facility that we use to count the radiation workers at the WIPP site, but that we also open up to the public for free whole-body counting services. Since the WIPP release event, we've counted approximately 185 WIPP workers and approximately 70 public citizens, all looking for the presence of WIPP-related transuranic isotopes.

Based on all of these sampling activities, both the environmental and the WIPP workers and the public citizens, I can unequivocally state that the safety-related aspects of the repository worked as designed, maybe not perfectly, but they worked and they mitigated the release to the environment and that we have found no detrimental impact to the environment or to public health.

This is not to say that there were not problems or issues or that the operational and radiological responses to the event worked perfectly. Obviously, as we've heard today, there were many problems. But it is my belief that many of these have been or are being addressed at this time.
From my perspective from being involved
with the activity both before the event as well as
being very closely involved after the event, I do
believe that there's considerable progress being
made primarily in the areas of transparency,
communication, both with the public stakeholders as
well as WIPP regulators and with CEMRC as a whole.

I think that the training for contractors
and employees has been strengthened considerably,
and I think that the radiological characterization
and radiological response is being improved as we
speak.

Like Mr. Sullivan, I did not get a
telephone call alerting me to the fact that there
was a release at the WIPP site. I found out about
2:00 on Saturday afternoon from a Facebook post.
But since then, I have been invited to participate
on what was at one time daily teleconferences with
WIPP regulators and is now weekly, and I get all
kinds of e-mail notifications, text messages,
personal phone calls, anytime there's going to be
some type of an operational change that may lead to
a release at the WIPP site.

So while I do believe that much remains to
be done in order to have the entire complex ready
for a resumption of waste emplacement activities, I am pleased with the progress that's been made to date, and I am confident that waste emplacement activities will resume and will be performed in a safe and efficient manner. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Hardy. Thank you so much.

Our next speaker is Scott Kovac.

MR. KOVAC: Thank you, Madam Chair and members of the Board. Welcome to New Mexico. My name is Scott Kovac, with Nuclear Watch New Mexico.

I would just like to say that there was a lot of talk about safety bases today, and it's my understanding that safety bases are due to be updated annually and the question is, you know, what was the current status of WIPP's safety basis at the time of the accident?

I do know that recent reports for Los Alamos' safety basis show that they're all two or three years out-of-date, and this was a problem in the past, and the Board through their efforts and other people for a brief time in 2012, most of the safety bases were all updated, and they seem to be slacking off again. And this just kind of shows, you know, the attention, the constant attention,
that needs to be paid to these issues.

The DNFSB has a long history of questioning corrective action measures with their sites, with the DOE sites. The corrective action plans and measures are all maybe very detailed but the follow-through is historically what's been lacking. Your weekly site representative reports from your hardworking site reps are just littered with, you know, corrective actions that were in place for many, many things, but, you know, they're not so much about this one worked or this one was followed through. They're all just, you know -- just seems like the immediate reaction of a site is to say, "Well, we'll do a corrective action." And you know, the follow-through just seems to be lacking.

So I would request that the WIPP, you know, not open until all the corrective actions for the WIPP site are implemented. And in the AIB, the phase 2 report, there were 40 judgments of needs, and I can only imagine the corrective actions that those will generate. Very many, I would think, for each one.

I would request that, you know, all those be met, too, before WIPP reopens, because if safety
is the priority, all those judgments of needs need
to be addressed and verifiable, and that's why I
would ask the Board, if there's any way possible
that you could certify or verify the judgments of
needs that the AIB 2, phase 2, you know, came up
with, that you know, if you guys could certify or
verify that, that would be most helpful, because the
public has no way of knowing what happens when those
corrective action plans are implemented.

Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Kovac.

Are there any other speakers, any other
members of the audience that would like to speak?

Seeing no movement, thank you all for your
comments. And at this time as noticed in the agenda
we will take a recess. The Chair calls a recess of
this public hearing. We will reconvene at 5:30 p.m.

Thank you.

(Recess from 3:57 p.m to 5:31 p.m.)

Session 3

Panel Discussion: Actions Necessary to Safely
Conduct Waste Operations

VICE CHAIRMAN ROBERSON: Welcome back,
everyone. I would like to call this hearing to
order. Let's begin a third session of today's proceedings which will focus on DOE's actions to safely resume waste operations at WIPP. During the session the Board will explore DOE's plans for correcting deficiencies and safety management programs such as emergency management, maintenance and engineering, fire protection, and nuclear safety, as well as DOE's plan for improving federal oversight.

I would like to introduce the other Board members. To my left is Mr. Sean Sullivan. To my right is Mr. Daniel Santos. To my far left is the Board's general counsel, John Batherson. And to my far right is the Board's technical manager for nuclear materials processing and stabilization, Mr. John Pasko.

Thank you. The three of us constitute the Board. For those who were not in attendance during our earlier session today, the Board heard from Acting Assistant Secretary Whitney, from a panel of management from DOE and its operating contractor, Nuclear Waste -- NWP, and from a panel of management from DOE and its WIPP operating contractor regarding actions necessary to safely recover the underground, and we heard from the Board staff which provided
testimony on the Board's oversight activities at
WIPP before and after the salt haul truck fire and
radiological release events that occurred in
February of 2014.

The testimony also summarized some of the
key safety concerns revealed by the February 2014
event to be discussed during this hearing. A copy
of the staff's testimony is available on the table
at the entrance to this room.

We welcome our third panel witnesses at
this time. Three of the four witnesses for this
panel have already testified today, and I would like
to recall each of you back to the witness table.
Mr. James Hutton, DOE Deputy Assistant Secretary for
Safety, Security, and Quality Programs and
Environmental Management. Mr. Joe Franco is a
current DOE Carlsbad Field Office manager. And
Mr. Robert McQuinn is the Nuclear Waste Partnership
president and project manager.

This evening you'll be joined on this
panel by a fourth witness, Mr. Theodore Wyka, the
WIPP Accident Investigation Board chair.

Thank you all for coming back. And
welcome, Mr. Wyka.

The Board will either direct questions to
the panel or to an individual panelist who will
answer them to the best of their ability. After
that initial answer, other panelists may seek
recognition by the chair to supplement the answer as
necessary. If panelists would like to have a
question for the record, the answer to that question
will be entered into the record of this hearing at a
later time.

Mr. Wyka, do you have a statement that you
would like to deliver to the Board?

MR. WYKA: Yes, ma'am. Good evening,
Madam Vice Chairman and distinguished members of the
Board. My name is Ted Wyka. My testimony is
documented in the three large Accident Investigation
Board reports so I'll keep my remarks very short.

I was appointed as the Accident
Investigation Board chairman to investigate the fire
that occurred in the underground on February 5,
2014, and then the radiological release event that
occurred nine days later, on February 14.

The AIB was on the ground for almost 13
months during both events. The Accident
Investigation Board was tasked to perform an
accident investigation and to prepare an
investigation report in accordance with the
Department of Energy order 225.1, titled Accident Investigations. The scope on the investigation was to identify relevant facts, analyze the facts, to determine the direct, contributing, and root causes of the event, to develop conclusions, and to identify judgment of needs for actions that, when implemented, should prevent the recurrence of the accident.

Facts relevant to the event were gathered through interviews, through reviews of documents, and other evidence, including photographs, videos, and other forensic evidence.

A hotline was also established to allow personnel to communicate concerns or other related information to the Accident Investigation Board. Facts were analyzed to identify the causal factors, using event and causal factors analysis, using barrier change analysis, root cause analysis, as well as integrated safety management and human performance analysis. So various analyses were the methods used.

The accident investigation reports, all three of them, covering these events have been issued, have been made available to the public, and discussed at public meetings, at the four public...
meetings. The radiological release event was broken into two phases because access to the underground was restricted for several weeks following the radiological release event. But the conclusions and findings found in the initial part of the radiological investigation were critically important to the WIPP recovery efforts.

For the underground salt truck fire on February 5, 2014, the Board identified the root cause of this accident as the failure to adequately recognize and mitigate the hazards regarding the fire in the underground. This included recognition and removal of buildup of combustibles through inspections and periodic preventive maintenance, and the decision to deactivate the automatic onboard fire suppression system.

The Board identified contributing causes in the areas of preventive and corrective maintenance, fire protection program, training and qualification of the operators and supervisors, the central monitoring room operations in response to the fire, emergency management and preparedness and response, nuclear versus mine culture, oversight at all levels of follow-up on repeat deficiencies and conduct of operations.
Now, for the phase 1 of the radiological release event on February 14, the Board identified the root cause as a cumulative effect of the inadequacies in the ventilation system design and operability compounded by degradation of key safety management programs and safety culture that resulted in a release of radioactive material from the underground into the environment and a delayed ineffective recognition and response to the release.

The Board identified contributing causes in the areas of conduct of operations, radiation protection program, maintenance nuclear safety, emergency management safety culture, execution of contractor insurance system, and again, oversight at all levels.

I will submit my detailed testimony for the record and I will now be happy to answer any of your questions.

VICE CHAIRMAN ROBERSON: Okay. Thank you, sir. And we have entered the statement from the other three of you into the record, if that's okay.

MR. HUTTON: Yes.

VICE CHAIRMAN ROBERSON: Yes, thank you.

Thank you.

First of all, I'd like to thank each of
you for your continued testimony again this evening.
And with that, we are going to continue with
questions, and I believe we will start with you,
Mr. Santos.

MR. SANTOS: Thank you, Madam Vice
Chairman.

I would like to start with a question for
you, Mr. Wyka. The Accident Investigation Board
report described that the actions taken by the
underground workers in response to the truck fire,
including the truck operator not immediately
releasing the onboard fire suppression systems and
operators attempting to move a 300-pound fire
extinguisher to the fire location, led to your
conclusion that, quote, "the response of the fire
and the worker actions in response to the fire in
the underground are not clearly defined and training
was inadequate."

Can you for the public and the record
please elaborate on some of the evidence in a
summary fashion that led you to that finding?

MR. WYKA: Yes, sir. You know, right off,
as I think has been mentioned before, the workers on
underground were actually heroes that day. I did
make that clear at the public meeting as well. They
did what they needed to do to get out, as well as help their teammates get out. So there were a lot of the systems and programs and processes sort of that let them down that day, and that obviously we're working on now and the site has made a lot of improvements, especially in the area of training. A lot of the -- there were inadequacies and we've had several examples, one in just the use of the self-rescuers and the SCSRs. They're very complicated to use. But that's the first time you're going to use it, is when there's smoke all around you and there's a lot of tension and anxiety. So it's something that you really need to practice on a regular basis to be able to do that with your eyes shut, do that in high-stress situations, pull out the SCSRs and self-rescuers and put them on. And many in the underground that day did not have that level of knowledge to be able to do that, that experience to be able to do that. They received a lot of help from their teammates on, you know, to how to put on the equipment and how to take it off. A lot of it had to do with training. First of all, the drills were not set up for the individuals in the underground to practice that. You know, their training was inadequate. There was
really no time, even on the annual refresher, to actually pull it out and put it on. It was watching a video.

I don't know whether you had an opportunity to operate one of the SCSRs, but it's a complex piece. It's about ten steps in order to effectively take it out and use it. And the self-rescuer is equally difficult, as well, again, especially in stressful conditions. Evacuation drills. You know, there wasn't really an effective program of testing that process, testing evacuations.

Use of portable fire extinguishers. Many of the individuals didn't really know how to use it, nor was there really any operational experience on using the fire extinguishers. Wrong time to learn how to use it is when you need to know how to use it.

You know, looking at training and qualification and the CMR, the central monitoring room, just operating the alarms, operating the -- conducting -- doing the right announcements, when to turn on the strobe lights. There were significant time delays in all of those activities, and you know, they were also ineffective, as well as just
shifting ventilation within the --

(A discussion was held off the record.)

Yes, ma'am. Sorry about that. The other
area is responding to fires. And the policy wasn't
all that clear on when to fight the fire and when to
flee. And then that brings into the question of the
training, whatever decision you make, and having
your equipment right there at hand to implement the
policy. But there was confusion about whether to --
to fight a fire or flee, and it's all sort of based
on the level of -- if it's incipient or if it's a
form that, you know, an individual can easily put it
out. But that's hard to make that call, you know,
in a short period of time.

And then also operating the manual fire
suppression systems. Several of the operators, you
know, had problems doing that. So a lot of this
just fed into the training and qualification area,
so put them in a position to succeed when they
really needed to.

MR. SANTOS: I have a follow-up. You
mentioned you'd been on the ground with your team
about 13 months and in that period not only were you
performing your investigation, but I imagine you
were already communicating with both the field
office and the contractor. Where are we today from your perspective? If you were to do the investigation starting today, how much progress and how much more do they have to do?

MR. WYKA: You know, I think a lot of the areas that we found issues with, you know, are still being worked, you know, especially in the programs, processes, systems, procedures. But there's also a tremendous amount of improvement, you know, over the last 13 months. And as you state, you know, I made underground entry, you know, in the last 13 months to the waste face with the teams and stuff, and you know, so in all phases of the operations, let me just point out a couple. Radiological protection, where, you know, I think they had significant issues, you know, 14 months ago. In fact, to the point where we needed, you know, assistance from Los Alamos and Savannah River and from some of the other sites, and some of the basic activities associated with radiological protection.

Over the last 13 months they have grown where, you know, I think their level of confidence is equal to, you know, their mentor, so to speak, you know, from the work that they have done and from the people that they have brought in and the
management team providing them resources, the
effective training now.

   So yeah, I can see definitely see, you
know, a definite increase in the level of expertise,
in the level of knowledge, in radiological
protection, conduct of operations, and you know,
several areas especially with the work force.

   MR. SANTOS: Thank you.

   VICE CHAIRMAN ROBERSON: Mr. Sullivan?

   MR. SULLIVAN: Let me ask the same
question, then, of Mr. McQuinn. Where are we today?
Were the workers able to put out a fire today?

   MR. McQUINN: We have more to do. We
have -- Joe and I are going to approve a baseline
needs assessment that was in significant need of
updating. And to be honest with you, when I got
here a year ago, I disagreed with some of the
conclusions from previous BNAs. And we're taking
very seriously, you know, simple questions like:
How much do we fight a fire before we evacuate
everybody underground? And that's a hard question,
and we're not quite done with settling that.

   But to give you some examples, in terms of
emergency management, there were three emergency
management staff a year ago, professional staff.
Now there are 12. In terms of firefighters, there were 12 and now today there are 28, and those 28 are going to have a level of qualification similar to what a municipal firefighter would have. Now, that doesn't mean that we'll have him fight every fire underground. It means that we'll have him do what's safe to make sure that everyone can evacuate. So it's not about protecting property. It's about life safety underground.

So we're investing a lot of resources in both emergency management and firefighting.

Culturally, I think we're turning the corner and I think we'll sustain what needs to be done in terms of people believing in the importance of drills, people accepting the importance of being told during the drill stress that they have got to put on a self-rescuer.

Another simple example -- and you know, Mr. Santos, you experienced this -- a year ago, a high-level visitor, a VIP person, would come with not very much training and be escorted underground. So now, no one comes. It doesn't matter who you are. You're going to get trained and you're going to prove that you can put on a self-rescuer before we take you underground. So some simple things like
that.

And then there's no question we meet fire protection requirements for Mine Safety and Health, but we need to go beyond that, and so we're trying to -- you know, we're becoming zealots when it comes to fire prevention underground.

And we've got more to do. I'll give you a simple example. I declared no smoking. There was a point early on when I simply said we will not smoke underground. Now, that wasn't an all-around balanced decision, but until I was comfortable that we knew how to control smoking, we were not going to start a fire by something as simple as smoking. And that didn't meet with everybody's agreement, but ultimately, we worked our way through that and we brought even that simple thing under control. So there's some cultural things that go along with that.

And then we've been fortunate this year, we got everything we asked for in terms of funding. Joe and headquarters provided that. And now from a firefighting/emergency management standpoint, we're replacing with very modern -- very modern equipment with auto suppression systems that are modern age.

And so I think all those pieces are coming
together. We're not there yet. But I think we're
on the right path and I'm particularly encouraged
with the work force.

MR. SULLIVAN: Okay. How about with
procedural requirements, the individual who's in
charge in the central monitoring room, the procedure
that that person has in order to direct the proper
actions? Have those been fairly scrubbed, revised,
as necessary? Do the people there -- are you sure
the people there know the right things to do?

MR. McQUINN: So the central monitoring
room operator is a very, very important position,
and the shift manager that supervises him. And the
immediate changes -- I'll give you a simple example.
The question of should you switch ventilation while
people are evacuating underground. We made that
very simple. We simply made a very strong procedure
change that prohibited any switching of ventilation
until the evacuation is completed. Now, maybe we'll
revisit that if we become more technically
sophisticated with underground ventilation modeling.
But you know, that was an example of where the
Accident Investigation Board said that that
contributed, you know, significantly to confusion,
so we eliminate that confusion. So that CMR
operator and shift manager understand from me that
they do not have the authority to switch ventilation
until the evacuation is completed.

So simple procedure changes like that
where we had given them -- we had made the
procedures complex, wanting to give them authority
to make decisions as an emergency would evolve, but
in that case we made it simple. So I think the
procedures are adequate for today and they'll get
better over time.

MR. SULLIVAN: Okay. I want to switch a
little bit and ask you about configuration
management, which was also in the accident
investigation report on the fire.

Specifically there was a lot of things
about doors. These are doors in the underground
that were operated manually, and so some of them
were chained open. Others were operated and left
open. I think there was a particular door that was
important to the filtered ventilation flow path
which was open after the fire, and did get shut
prior to the rad release on a subsequent entry, but
had there not been that entry, had it not been shut,
it might have -- I believe it would have
significantly complicated the amount of the
underground that got contaminated.

So configuration control is different than a maintenance issue in that things aren't necessarily broken. A door that's made to be open that is open isn't broken. How are these things now being controlled and what procedures have been put in place to make sure that everything that may affect, for example, the ventilation system is actually known and controlled in terms of what position it's in?

MR. McQUINN: And this one I may ask Joe to help me, you know, when I finish.

There are four control doors that are fully functional and by requirement in the central monitoring room are required to remain functional and in remote control. Okay? Now, that doesn't mean that we don't have problems where the floor will lift up and heave and cause a door to become inoperable.

But there are four control doors and they're all operable and they're all operable remotely. And there are five primary dampers, regulators, that we remotely control ventilation with, and they're all operable, functional, right now. And then that, like fire impairments, you
know, is a matter of system status, you know, that we talk about each day at the plan of the day meeting.

Now, there are bulkhead doors underground where there has been floor heave where doors are not currently functional. So there are problems with doors. But the main ventilation control doors are fully functional in remote control.

Now, out of fairness to the folks that preceded me, there were some upgrades going on that affected the doors that were held open manually. I'm not excusing that, but there were some reasons that those doors were not operable. But right now we make that a priority.

MR. SULLIVAN: Okay. Mr. Franco, are you satisfied with the way all these doors are being controlled so the ventilation system will be known to work properly?

MR. FRANCO: Mr. Sullivan, right now with the configuration of the underground, I am satisfied with where we are with that configuration. There is a sense of still, for us, that importance for the configuration to be still a high item for the cognizant engineer, for them to understand, especially right now with the limited amount of
ventilation that we have -- before, when we had the
425,000 cubic feet per minute going through the
mine, you could run and open a man door, or a couple
of them, and it wouldn't impact any kind of
ventilation flow for the rest of the mine.

We have over seven miles of drift in the
underground. And when you look at that, at 60,000
CFM, it's a premium. That ventilation is a premium.
So when the procedure for the four -- pretty easy to
just go do these, Bob's team has implemented a
process there where the folks, as part of the prejob
briefing, knowing where the work activities are
going on, because the underground services in
coordination with the facility shift managers, the
underground services provide information to the
facility shift managers, they have to understand
exactly what the lineup is in the underground.

So if you do have an event, they know.
And the CMR operator has to be able to explain to
the folks that are evacuating from the underground
which pathway they can take to be safe. And that is
part of the -- every day, as the activities are
going on -- we just fixed the control doors. There
was one that was out of service because of the floor
heave, as Bob was mentioning, as that was being
repaired, the operators needed to know that.

   We monitored an oversight, making sure
that the turnover that was conducted by the shift
managers -- that that was something that was carried
over into -- you know, from manager to manager. So
that process continues to be. It's something that
is of high importance for us to monitor, especially
with sensitivity at 60,000 CFM.

MR. SULLIVAN: Okay. Thank you.

VICE CHAIRMAN ROBERSON: Mr. Santos?

MR. SANTOS: I want to shift a little bit
to the communications. This question is to
Mr. McQuinn.

Can you describe some of the more
significant changes that have been implemented
regarding the communication systems used to notify
underground workers of emergencies and the need to
evacuate and the interface with the central
monitoring room?

MR. McQUINN: By the end of March -- and
I'm going to get quickly to emergency management and
detection and notification, communication. By the
end of March, I had done an initial triage of all
the safety management programs, and with Joe's help
produced a document of compensatory measures.
And then by the end of April, it was clear that we needed even more definition for emergency management and fire protection, and so we produced a stand-alone compensatory measure document for emergency management and fire protection, and we're on revision 4 to that now.

And in that document we followed the trail of: How do we detect -- underground how do we detect a fire, how do we notify with communications, and then how do we respond and evacuate and the count, and then how do we exercise all of that with drills.

There were a number of significant notification or communication issues with inoperable public address indications and with indications on the walls of the underground in terms of the visual signal, you know, in terms of whether you're on the right way out or not. There were way too many cases where those indications were covered or missing.

So we proved that our regular surveillance procedure that looked at all the aspects of communications was adequate. We ran it. Then we fixed the communication, the communication not only underground but with the central monitoring room, and then we run that frequently, weekly, to prove
that the communications are adequate. So we
increased the frequency and then we pay attention to
the communication piece.

    We're going to improve it. We're going to
try to move into some of the modern -- more modern
age than the system that we have right now, so we
have projects planned that we're doing conceptual
design for that would even -- that will strengthen
communication and all aspects of emergency response.

    You know, a simple example. When you
entered, you brassed in and you got a unique button
that indicated who you were and when you entered.
And that was important from an accountability
standpoint. But the technology is available, and
Joe and I are determined to implement it, so that
we'll have a locator on every individual and we'll
not only know that you're underground; we'll know
exactly where you are underground. So we have a lot
of plans for some technology improvements that will
make a difference particularly in terms of emergency
management.

    MR. SANTOS: So to follow up on
communication, you already have -- appear to have
implemented training changes, procedural changes, as
of today, to improve those communications; is that
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1 correct?

2 MR. McQUINN: Yes.

3 MR. SANTOS: During my visit, my
4 understanding was there were also some preliminary
5 discussions about some upgrades to the central
6 monitoring room; is that correct?

7 MR. McQUINN: That is. So I did a human
8 factors analysis of the room. And the room is
9 adequate, but you know, it's 20 -- it's a generation
10 old in terms of its technology.

11 So we looked at the human factoring, you
12 know, particularly around the emergency response,
13 and a simple example is the confusion that resulted
14 at the time of the fire for the way the CMR operator
15 activated the communication, the strobe lights and
16 the notification. So there's some human factors
17 things that we'll do and we have. It won't happen
18 this year, but we have a project in conceptual
19 design to completely renovate the central monitoring
20 room.

21 MR. SANTOS: Are the operators
22 participating in that design process?

23 MR. McQUINN: All the qualified operators
24 participated in the human factors analysis and
25 they'll be right in the middle of helping us
redesign.

MR. SANTOS: Thank you.

VICE CHAIRMAN ROBERSON: Are you done, Mr. Santos?

MR. SANTOS: Yes, ma'am.

VICE CHAIRMAN ROBERSON: Okay. Thank you.

Mr. Hutton, the DOE accident investigation identified significant weaknesses in the WIPP fire protection program. We talked a little bit about that earlier. But notably, the contractor -- one of the weaknesses was the contractor did not ensure the baseline needs assessment, addressed requirements of DOE order 420.1C, and the Mine Safety and Health Administration with the results completely incorporated into the implementing procedures.

How will the baseline needs assessment approach reconcile DOE and mine safety requirements? And I recognize in our earlier session you were emphatic that you see no conflict. But bear with me, because some of our technical folks, yours included, think there is a conflict. Why do they think there is some conflict between the two sets of requirements?

MR. HUTTON: Well, I can't tell you why they think what they think. But frankly, you know,
the requirements are all directed at the same thing.
You know, it's the same thing we all learned in
kindergarten when we were five years old. We
learned: If there's a fire in the house, get out of
the house.

All right? And the only question that
arises when you're in the underground is, it's
pretty far to the door. And so one of the things
that has to be dealt with, like Bob was mentioning
earlier, is, you have to think about what is the
right strategy to ensure that the 75 people can get
out of the house safely? Because they have a long
way to go.

So that strategy needs to be put together.
And it's not impossible, but it does need to be
well-articulated, have the right equipment, right
training, and effectively implemented.

So the baseline needs assessment is being
revised, it's pretty close to being submitted to us
for review, as I mentioned earlier. The draft that
I have seen is significantly improved over the
earlier document. I think it's well-based in the
standards, things like the NFPA requirements, Mine
Safety and Health Administration requirements. What
I have heard about the strategy for underground
firefighting I think is promising. I need to -- I
want to see the final document before, you know,
passing judgment on that, of course.

We intend to perform -- you know, as part
of our corrective action plan, we've developed
criteria review and approach documents for the
emergency preparedness function. We'll perform an
integrated assessment at the site, and 90 days
after -- target of about 90 days after the
contractor implements their emergency plan, planning
hazards analysis, the new EALs, emergency action
levels, and the new baseline needs assessment, we'll
go do an evaluation of that. So you know, that's
what we're going to have to do, I think, to make
sure we have, you know, solid processes in place, I
think, to deal with the eventuality of a fire.

And my honest opinion is that the main
thing we need to do is, first of all, prevent a
fire. If we never have a fire, we never have to
react to one. So that's what I'd actually like to
see happen the most.

I'm encouraged to a degree, you know, like
I toured the underground in February, and toured the
underground yesterday. I could see a fair degree of
improvement between those two in terms of the amount
of materials being removed. I think, as Bob said, there's a lot of work to be done yet, because I don't think it meets, as yet, the standards that we'd like to have going forward. But I do think we're headed in the right direction and I think that the plan that the contractors developed for fire protection improvement and for emergency response improvement is, in fact, heading in the right direction. If it's properly implemented, I think we'll probably be happy with the results.

You know, they made a number of changes in terms of how the facility shift manager responds to an event, made the provision which is, you know, pretty standard in most emergency response organizations where that person -- once the emergency response organization has been staffed, they turn over the responsibility for managing the emergency to the staff at the ERO, at the EOC. That's, you know, very standard process. That wasn't the process that was in place over a year ago. Now it is. I don't think it's -- they still have work to do to get good at that, frankly, but I think that, you know, it's headed in the right direction at this point.

VICE CHAIRMAN ROBERSON: Thank you for
that, and let me just add a clarification. I don't think there is any conflict between the goals of the different safety requirements, it's the debate about which tools, and I guess what I heard you say is, you're confident that there's a suite of tools that can be put in place that satisfy all safety requirements.

MR. HUTTON: Yes.

VICE CHAIRMAN ROBERSON: That's what I heard; right?

MR. HUTTON: Yes.

VICE CHAIRMAN ROBERSON: Okay. I just wanted to make sure. Thank you.

Are there any lessons learned -- and this is to you, too, as well, Mr. Hutton, since you're representing headquarters. Are there any lessons learned that should be shared with other underground defense nuclear facilities? I mean, there aren't a lot of them, but there are some. Are you guys doing anything to share your lessons learned?

MR. HUTTON: Yes. Certainly we have -- as you know, the reports, you know, are published on the department's website. So they're available to frankly everybody in the department, including the public. So that information is out there.
And certainly we have shared that appropriately with the other program offices. And you know, I expect that they'll take that to heart. I mean, that's what we do in operating, you know, complex nuclear facilities. They'll take that -- I would expect that the other program offices would want to say, "Gee, there but for the grace of God go I. Maybe I should look at this and satisfy myself that I don't have the same vulnerabilities."

And so I'm sure if you ask General Klotz that, I'm sure that's what he would say they're doing. We've briefed the results of the Accident Investigation Board specifically to the NNSA senior leadership, so -- Ted did. So they're certainly aware of the issue, and you know, my expectation is they'll act on it just as we will.

VICE CHAIRMAN ROBERSON: Did you have a follow-up, Mr. Santos?

MR. SANTOS: Yes, I want to just follow up on this discussion. Mr. Hutton, you or Mr. McQuinn described -- and I went through it when I had the visit of the underground -- that it doesn't matter who's visiting; this practice of now having to go through and put up the self-rescuer and show that you can actually handle the equipment. I guess a
1 good litmus test for me will be when I go visit the
2 Nevada underground site where I expect to see a
3 similar type of practice.
4
5 MR. HUTTON: That would be a fair thing to
6 expect to see, I think.
7
8 VICE CHAIRMAN ROBERSON: Thank you,
9 Mr. Santos.
10
11 And I have one last question at this time
12 for Mr. Franco. The Accident Investigation Board's
13 fire report identified that several recommendations
14 from the 2010 and 2012 revisions to the baseline
15 needs assessment were not completely addressed.
16 CBFO approved these revisions without comment. And
17 I guess kind of much like we talked about under
18 emergency preparedness, I think it's important to
19 understand why people make decisions they do. I
20 think we can put a lot of tools in place, but what
21 is your understanding -- how does that happen?
22
23 MR. FRANCO: The approval of the baseline
24 needs assessment -- I think if you go back and look
25 through the AIB report, it wasn't one day the events
26 happened, you know, the change happened to the
27 safety bases, to the baseline needs assessment. It
28 was over the years, again, of complacency of how
29 well we had been doing.
For myself, you know, when I look at this, you know, I started out here as an entry-level technician in 1989, and was here for the opening of WIPP and actually left the contractor side in 2006. So I got to see the full spectrum of how things were generated.

And then us opening and filling the pipeline was the terminology you were hearing throughout the process. As the facility matured and then on the safety aspect of these things, I believe that it was a course over time and not, you know, something immediately.

And you know, great lessons learned for us now, I can also add to Mr. Hutton's here from the lessons learned. Mr. Whitney sent us an e-mail with direction for all shift -- all facility managers that our next conference that we have together that we will be going over the lessons learned from these. So he has made it mandatory for all of us to be ready to discuss this at the next field managers' things, which is next month or so.

So we -- you know, and I think that can happen with anybody that's doing really well. We definitely took -- and when Mr. Wyka showed up, even for the fire, my thing was: I need to know what is
broke, and I am open to whatever you need to
discuss, if you need a separate room for folks or
whatever, so that I can understand exactly what
failed here.

And so we were pretty open and provided
everything to Mr. Wyka, so that we could get this
type of detailed report so that we could now
progress in fixing the things.

I did -- again, it's over a course of
times. I came in and actually took a tour of the
WIPP facility before I returned. I returned on
February 13th of 2012. And I took a tour in October
of 2011 and had seen some -- how it started -- it
wasn't the same as when I was there when we first --
the grand opening, and it included the personnel,
right, and just didn't have the same atmosphere that
we had when -- and so I wanted to come back and make
a difference for that.

VICE CHAIRMAN ROBERSON: Thank you,
Mr. Franco.

Mr. Sullivan.

MR. SULLIVAN: Thank you, Mr. Franco.

I'll stick with you. The fire hazard analysis had
errors in it when the Board and Board staff looked
at it back in 2011. And then after the accident,
Mr. Wyka and his team noted that there were still deficiencies in the fire hazard analysis. Supposed to analyze for all credible fire scenarios. Has that been fixed? Do you now have a fire hazard analysis that you feel confident analyzes all credible fire scenarios?

MR. FRANCO: So on the fire hazards analysis, right now I'm comfortable with where we are today. Does it capture all -- we are going through that process right now, as we're going through the safety basis and those and making sure if there's anything that comes up that we haven't addressed, we'll definitely go back into it.

What I am really comfortable with is the process that we've been using on how we're going back and folks are being open to going back and looking and re-evaluating this fire hazard analysis and did we capture everything, including, you know, as you toured the underground, you know, what's the fire loading that we have in the underground? What are we -- where is it located? How are we managing that? How are we managing the fire suppression for the equipment in the underground?

All of those things that are particular for the safe operation of the underground, we're
moving through on the fire hazards analysis. So
right now, I am comfortable with it. Not to say
that, you know, as our teams every day are
discussing these items, if anything comes up, we
will put it right back into the fire hazard
analysis, a process which Bob McQuinn will run
through his, and we will be providing that oversight
with our fire protection engineers and also reaching
back to the headquarters side of the house for the
expertise in this very specific item. So very close
watch from us right now on this particular one.
Yes.

MR. HUTTON: If I could just add to that,
you know, as Joe alluded to, we are intimately tied
in with CBFO in the review of both the document
safety analysis that's being prepared, as well as
the safety management programs, including the fire
hazards analysis, the BNA, and so on. And we'll
continue to do that until those things are approved.
And then we'll provide oversight of their
implementation.

MR. SULLIVAN: Thank you.

Mr. McQuinn, some more specific corrective
actions from the fire incident. Will all vehicles
in the underground going forward be using
fire-resistant hydraulic fluid?

    MR. McQUINN: Yes. Now, there's some
cases where the manufacturer -- there's a limit to
the manufacturer's ability with respect to the
fluids, but the straight answer is yes. They're all
at least fire-resistant, and we're pushing hard to
get the vendors to find a vendor who can give us the
highest level of resistance, but they'll all be
fire-resistant.

    MR. SULLIVAN: Okay. How about fire
suppression systems on those vehicles? I think the
salt truck that had the fire -- appears that the
automatic fire suppression system did not function
on that truck, if I'm correct. What's being done
going forward to make sure that every vehicle has a
fire suppression system that will work?

    MR. McQUINN: I want to piggyback on what,
you know, Jim Hutton said. Our first goal is to
find equipment that isn't liquid-fuel-powered, and
we're having some success, you know, with electric
forklifts, electric bolters. There will be some
equipment that we're not -- we simply are going to
have to power with liquid fuels, but all liquid
fueled equipment will have automatic suppression
installed.
MR. SULLIVAN: Okay. Does that mean an electric -- every vehicle can't have a fire, or doesn't need an automatic fire suppression system?

MR. McQUINN: That's a good question, Mr. Sullivan. I hadn't thought about the electric forklift.

MR. FRANCO: I can answer that because I have. When we developed this PISA for the operation of, you know, the hydraulics, we also looked at it on the surface, because we have hydraulic equipment on the surface, and that.

But we also looked at the electrical side of the house, and for us and the DOE, one of the things that we continue to apply -- we were talking about the expertise -- is that we would provide -- as these things come into play and we start to put them in our processes is that they would have a fire suppression system on them. That is a requirement, and that is something that we're going to make sure that happens for the operation in the underground.

MR. SULLIVAN: Okay. Now, generally there's a DOE order covering nuclear facilities that says there should be a fire suppression system throughout the facility. So you know, if we're building a building, we would be putting a fire...
1 suppression system in it that runs throughout the building.

Perhaps in this mine it doesn't quite make sense, yet if it doesn't make sense, I think there's a technical procedure to follow in order to have some resolution as to what exactly is necessary if we're not going to meet the requirement. Have we looked at that and what we should be doing with respect to the mine? I'll ask Mr. McQuinn.

MR. McQUINN: So I won't speak to the directives. But what we've done -- here's what we've done. If you think about the -- I'm going to go back real quickly to the fire hazard analysis. My current FHA has been driven by nuclear safety and protecting the nuclear source term. But it wasn't adequately driven by life safety the same way as we applied it to the nuclear source term. So now we're going to apply it to the concept of life safety, even though there may not be a nuclear source term.

If my underground services organization has a home base and there's a life safety issue with egress and transient combustibles, then I want my FHA to speak to that, even though there's no risk of the nuclear source term. So in that case, the nuclear directive doesn't necessarily completely get
the life safety answer, but we're applying the
concept of the nuclear directives.

I lost my train of thought, Joe.

MR. SULLIVAN: Well, I was asking
specifically if there's a DOE Order 420 requirement
in the nuclear facility fire suppression system.

MR. McQUINN: So what we did was, we took
the NFPA requirements that certainly do apply
aboveground and we made an honest effort to apply
them underground. And then from that, we asked
ourselves, you know, does it make sense to put water
sprinklers in in all eight miles of the drifts?
Probably not. But are there aspects of what came
out of that, the gap analysis, where it would make
sense, you know, regardless of whether the directive
specifically applied?

And so we took NFPA, just like we applied
aboveground, and we evaluated underground, and went
through the exercise of saying, "Okay, are we going
to comply? If not, what would an equivalency or an
exemption look like, you know, to basically inform
us?"

And then with all of that, that was one of
the things that caused us to put together our future
project plan for underground fire protection
improvements.

So that exercise of looking at NFPA underground as if we had to comply with it or else exempt ourselves and get approval on that helped us define many of the physical improvements that we're planning going forward.

MR. SULLIVAN: So do you expect there will be areas in the underground where there will be some sort of fire suppression system installed?

MR. McQUINN: Well, there are some areas, a fuel bay. So the intent would be that there will be significantly more fire suppression. Okay? And we looked at it from a life safety standpoint to define -- so it wasn't about property protection. So it wasn't about maximum property loss. It was exclusively looking at life safety.

MR. SULLIVAN: Okay. Mr. Franco, again, are you satisfied that we're meeting the requirement of the DOE order with respect to a fire suppression system in a nuclear facility; I mean, to the extent we can't do it throughout the entire eight miles, that there's a good technical justification for where it is and where it is not?

MR. FRANCO: I'm comfortable with it now, but also comfortable with the process that we're
following to get it better. The approach that we're taking to make it better, you know, looking back at the fire hazard analysis, the fire loading in the underground, looking at certain areas in the underground where we may have some fire suppression needed for where there's accumulation of, let's say, some Conexes or things like that, that continues to be an ongoing process and we're working with the contractor to make sure that those are covered as we move forward in the process of implementing those in the underground.

Again, with the fire suppression, also, in the water side of the house, understanding that you may create a hazard that's worse because of the salt in the water and creating caverns and things like that when you displace. But there are other mechanisms we can use for fire suppression as we have, like in the fuel bay in the underground, and that's what we're looking at.

MR. SULLIVAN: Okay, thank you.

Mr. McQuinn, I want to shift now over to the rad release event.

MR. SANTOS: Can I have a follow-up on that? Thank you. So I understand you're going through the processes of the updates and FHA and
very thoroughly, NFPA, all the requirements. It sounds to me in the follow-up that most of the strategy today is concentrated in combustible loading management. Is that an accurate statement?

That a primary element today until all those analyses are put in place is heavily focused on combustible loading management?

MR. McQUINN: Much emphasis on combustible loading, but I would tend to start with fire prevention.

MR. SANTOS: Sure.

MR. McQUINN: So I think it starts -- it's all about prevention. And then when we go to combustible loading, here's what we're doing right now. We're thinking, what if there was a nuclear source term where we had to control the propagation of the fire to the nuclear source term? And so we're taking that approach to fire propagation and defining combustible -- transient combustibles and how much is too much. We're taking that concept and we're applying it to what we're going to call a combustible restricted area, and it's aimed at life safety. It's where the air comes in, it's the zone around the air intake shaft, the salt shaft, and waste away shaft. And we're drawing a big circle
around that, and we're defining that as our combustible restricted area and applying the concepts of TSR kind of approach to transient combustibles and trying to take that kind of approach to something that's strictly life safety. So that's something -- you saw the beginning of that, and so we're going to take that concept. It won't be directly driven by the nuclear safety basis, but that's an idea where we're going to make that as much as is humanly possible a completely combustible-free zone. It won't be completely free, but we'll manage that area in an extraordinary way.

MR. SANTOS: So my follow-up question has to do with: Will it be prudent to take some additional measures while all these analyses are completed? For example, some of the experts that have advised me have told me that this existence of self-contained mist-type fire suppression system which will not result in the issues of a cavernous type water everywhere, but they're very effective at putting out a small fire. I'm just thinking, is there more that should be prudent that could be done from a fire mitigation while we wait for all this analysis to be done in addition to what already is
being done? Mr. Franco?

MR. FRANCO: You know, we continue to evaluate all of those things, too, and see which ones are easier to place, what are things -- one of the key items that we initiated in the very beginning -- again, we're still working on getting all electrical systems up in the underground, so there's still a lot of work activities to even get, you know, where we can say the recovery piece now.

And so now we're in the enhancement side of the process. But one of the big things that we have done is, everybody that's trained to be in the underground, the 40-hour miner is required to take a live firefighting training with a fire extinguisher that we weren't doing before. So that's a positive in this aspect.

But we will continue to look at those items that you mentioned. I can't tell you that it's an ongoing activity that's pursuing, but those have been some things that we have been looking at, implementing those and seeing how they can be of a good source for us, even like detection where we get a smoke alarm or those that would be an early detection to even support evacuation of the mine.

And so part of that also -- just to finish
with this part -- is that we also have a plan to expand the wifi part of the underground that provide the networking services that we need with the higher technologies that are all-encompassing there, tying back to the changes we were talking about in the central monitoring room so that we have a state-of-the-art facility. If this facility is an asset for the nation, the only one with a true sense, then why are we not at the point where we are at the top technology side of the house? And that's where we're driving to on that. So I appreciate your comment there.

MR. SANTOS: Thank you.

MR. McQUINN: I'll take my turn back real quickly, Joe, and you can help me with this. This started partially with a question about directives, and let me give you another example of where the directives don't have a specific requirement but we're going to do the right thing.

So right now we're buying rescue chambers and there's no directive -- MSHA doesn't require that, but we're buying them, we're buying the right number, we're going to put them in the right places. So it's not required by MSHA, it's not required by the nuclear safety basis, but we're going to do it.
Okay? It's clearly the defense-in-depth concept, you know, applied to mining.

And did I get the name right, Joe, rescue chambers?

MR. FRANCO: That's correct.

MR. McQUINN: Okay. So a simple example of where we're going to do a thing that probably we could argue isn't required, but it's the right thing to do.

MR. SANTOS: Thank you. Mr. Hutton.

MR. HUTTON: I just want to mention, I think, you know, your lines of questioning, Mr. Santos, you're on to something, in my opinion. That was the focus of my tour of the facility yesterday. I gave Joe a list of, you know, "Here's some things I think you better look at," you know, because I think that there are some improvements that could be made in the underground short of eight miles of sprinkler systems to wet down salt. You know, I think there's a fair amount that can be done, so along the lines of the kinds of things Bob mentions here.

And some of those initiatives, you know, that Bob brings up are things that Joe is taking action to put in the performance evaluation
measurement plan for the contract this year.
There's specifically addressed things like, you
know, fire impairments, combustible material
control, the refuge chambers that Bob's referred to,
reliability in the ventilation system. You know, a
number of specific actions that -- a fee is at stake
for the contractor, depending on how well they
implement it. That hasn't quite been approved yet,
but that's in the process right now.

MR. SANTOS: Thank you. Thank you, Madam
Chair.

VICE CHAIRMAN ROBERSON: Mr. Sullivan?

MR. SULLIVAN: Thank you. So I'm still
sort of on the theme of trying to ask about specific
deficiencies that were found during these accident
investigation reports, but I'm shifting now from the
fire to the rad release.

So Mr. McQuinn, on the rad release, when
the event happened, the person in the central
monitoring room had difficulty reaching a
radiological controls individual to provide support.
That individual wasn't onsite, and it took him a
while to get hold of somebody and get him in onsite.
Has that problem been fixed?

MR. McQUINN: Yes. So like many of the
safety management programs, I told you a little bit about the staffing investment in emergency management. There were ten radiological control technicians at the time of the events, and there are now 30, and I'm still using some temporary experienced staff while I raise up some of the newest RCTs. So I now have significantly more radiological control technicians on shift, and I have a supervisor of the RCTs on shift as – like a watch bill requirement. That doesn't flow right out of my DSA yet. But that's the way I approach the minimum staffing for rad protection staff on shift.

MR. SULLIVAN: Okay. Thank you. Another deficiency was that the CAM, the monitor, stopped working after 30 minutes, and so what we now know is there was a release from one of the drums, and so some of the debris that came out I believe clogged the CAM sensing line, so it stopped working. Would a similar thing still happen if we had another one of these events?

MR. McQUINN: I believe -- and Ted could probably help me with this -- I think that what happened was the CAM, as it plugged, kept automatically switching filter papers until it came to the end of all the available filters, and so it
couldn't function because all the filters had been plugged.

MR. WYKA: Right.

MR. McQUINN: Now what we have is -- and it was an unusual day that day, obviously. There typically would have been more than that one CAM operating, but -- so now we have multiple CAMs. But in the case of the debris, you know, what comes out of the room, plugging, the defense would be multiple CAMs, but there would be some vulnerability that they could all -- you know, they could all be affected. I don't think they would be, and to be honest with you, I hadn't thought about the placement of the CAMs in that context, but I'll go away and do that.

MR. SULLIVAN: Thank you. I think that's all I have.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

I actually have a follow-up before I turn it over to Mr. Santos. In the earlier session I think Mr. Santos kept asking a question about -- and I'm not sure I understood the answer, so I'll ask it in my simple way.

So you have TSRs associated with -- you
know, in your ESSs, you have requirements associated
with having a CAM operating. That's factually true;
right? And the question was: What if the CAM
fails? Do you have to evacuate the underground?
And I don't think I ever heard the answer to that.
And I mean, to me, it's kind of a no/yes. No? Yes?

MR. FRANCO: Bob, you want to --

MR. McQUINN: Yeah, and I want to be
careful. And I'll follow up, you know, in the
testimony with an absolutely precise answer. I know
for a fact -- Joe, help me -- in order to begin the
day --

VICE CHAIRMAN ROBERSON: I got that.

MR. McQUINN: -- as we go underground to
begin the day, I know for a fact that the ESS
requires CAM, requires a check of station A and a
check of station B, and I simply do not remember if
the CAM -- see, there are so many CAMs that are
operating underground, I will find out precisely
what the ESS says.

VICE CHAIRMAN ROBERSON: I would
appreciate it if you would just follow up for the
record. That would be great.

Did you want to add, Mr. Franco? I'm
happy -- making sure we get the correct --
MR. FRANCO: I'll allow Bob to submit that for the testimony.

MR. McQUINN: So I don't want to misspeak. And I'm not sure.

VICE CHAIRMAN ROBERSON: Okay. All right. Thank you.

Mr. Santos.

MR. SANTOS: I want to thank Madam Vice Chairman for reasking my question. That's exactly what I was trying to get at. Thank you.

Related to the release and my own personal experience, I mentioned earlier that I was very happy to go visit the various sites. So I was at Lawrence Livermore, and I had the great opportunity to visit the National Atmospheric Release Advisory Center, state-of-the-art centralized federal asset for plume modeling when an emergency happens, both radiological but also chemically.

And after they gave us the tour, a lot of their -- several of their staff members started to discuss the WIPP event. And after a little bit of probing, they started expressing some concerns with the amount of uncertainty they were dealing with in coming up with an accurate model and providing the emergency decision-makers with accurate plume
modeling data which, as you know, is critical for evacuation-type decisions.

So my question is for Mr. Hutton. What are we doing about that, whether it's through a lack of sensor data or the communication to the NARAC center? How is that all being addressed? And not only for WIPP, but for all the other sites?

MR. HUTTON: One of the things that contributed to that degree of uncertainty you're speaking of was a lack, frankly, of real-time effluent data. We didn't have real-time effluent data. We had, you know, the equivalent of a portable air sampler drawing air through a filter and then every so often you'd take it out and count it, as opposed to, you know, a real-time monitor that's giving you effluent discharge information, you know, with enough frequency and enough fidelity that you can more effectively model.

So that contributed significantly to the degree of uncertainty. And I can perhaps -- you know, I know one of the things that Bob was frankly most insistent on when he first arrived at the site was making sure that we had a real-time CAM on the effluent discharge from the ventilation system. So I don't know -- maybe you want to talk about some of
the specifics there.

MR. McQUINN: Yes, let me -- two thoughts.

So we have a very modern background subtraction
continuous air monitor at station B, and it has all
the QA on it and it is directly linked to my
emergency action levels. So the direct reading
coming out of that monitor, which didn't exist and
it required probing of the filter paper -- that's
now directly tied to the EALs.

Now, in terms of plume monitoring -- and
I'm going to forget the names of the models, so I
won't try to tell you -- but right now we are using
the standard nuclear safety accident analysis
models, okay, and we're using the standard emergency
response accident analysis protective action models.
And forgive me for not remembering their names, but
we are using the standard models. There may be some
questions that I'm not aware, you know, of about
more modern models, but we're using the same models
that the other DOE sites use.

MR. SANTOS: So I just want to follow up a
little bit on my question then, too. With the state
of affairs today, would the folks at NARAC -- are
they going to be getting more timely, more complete
information in the event of an emergency, regardless
of the site?

   MR. HUTTON: Based on the monitoring
that's now in place, they should get better data
than we were able -- than the site was able to
supply them when this occurred.

   MR. SANTOS: So is the contractor
responsible for feeding that information in a timely
manner to those folks in Livermore?

   MR. HUTTON: Yes.

   MR. SANTOS: Okay. Is that part of your
procedures and all that?

   MR. McQUINN: Yes.

   MR. SANTOS: Okay. Any other sites you
feel need improvement?

   MR. HUTTON: I wouldn't represent to you
that nobody doesn't need improvement. I think it's
fairly well accepted that the sites have, you know,
effluent monitoring, they all coordinate with NARAC
in the event of an emergency, as WIPP did, to get,
you know, their sophisticated plume modeling. So I
think that is in place at our EM sites. I wouldn't
represent that there's not a weakness out there
somewhere.

   MR. SANTOS: Thank you.

   VICE CHAIRMAN ROBERSON: Thank you,
Mr. Santos.

    Well, I want to ask a few questions about
the expansiveness of the corrective actions so all
the investigative -- all the investigations are done
now. And Mr. Hutton, the WIPP contractor and CBFO
have developed extensive corrective action plans to
address the findings and recommendations in the
accident investigation reports. Efforts to
implement these plans are ongoing, but significant
work remains. How is DOE headquarters going to
go
ensure that all corrective actions are
satisfactorily completed?

    MR. HUTTON: Well, the process we went
through for the generation, first of all, of the
corrective action plans was that NWP generated
corrective action plans. Those plans were approved
by CBFO with our concurrence. CBFO corrective
action plan was approved by me, and then the
headquarters, EM headquarters' corrective action
plan was approved by Mr. Whitney. So that's the
progression that we used to generate the plans to
begin with.

    Similarly, as corrective actions get
completed, you know, CBFO will review the NWP -- the
effectiveness of those actions, the completeness of
them, whether they have adequate objective evidence
that they have actually implemented the requirement,
whether it's been -- the corrective action, whether
it's been properly implemented. We will assist them
in doing that as part of our oversight function.

In addition -- and so then when CBFO
completes corrective actions, it will fall to us --
you know, they will have to satisfy themselves that
they have properly implemented it, and then it will
fall to us to validate that, you know, to the degree
that we feel is necessary. You know, look at the
objective evidence, perhaps do our own reviews. As
we discussed a little while ago on emergency
preparedness, we'll be doing, you know, a complete
assessment.

So that's the process that we will go
through to do that. Then, of course, you know, the
department has the Office of Enforcement, you know,
Office of Enterprise Assessment, and I think as we
mentioned at one of the earlier sessions here, we
asked them to do a couple of things for us last
year. We asked them to -- first of all, as we
developed and approved our correction actions, we
asked them to give us feedback on those, and they
have done that on the plans themselves.
And then further, we asked them to come in and look at our operation and perform assessments, you know, to give us the outside look. And so that will be occurring. And as we mentioned this morning, there's a schedule for that.

VICE CHAIRMAN ROBERSON: Okay. So thank you for that. So the three key corrective action plans, recognizing there's something for other groups, but Mr. McQuinn has a corrective action plan, Mr. Franco has one, and Mr. Whitney has one.

MR. HUTTON: Correct.

VICE CHAIRMAN ROBERSON: Are all of those integrated with the recovery plan? And how are they? I'm assuming the answer is yes.

MR. HUTTON: Yes. The answer is yes.

VICE CHAIRMAN ROBERSON: How does that work?

MR. HUTTON: How does that work? Well, we frankly worked together to ensure that those plans married up, you know. There was -- we conducted -- similar to the workshop you did on safety basis review a few weeks ago, we brought together folks from headquarters, folks from NWP, folks from CBFO, because you know, those things have -- those plans have to flange up. The actions that we're going to
take have to fit together, and they have to align, you know, with the recovery plan, as well. And in some cases, you know, we may -- if we come up with the corrective actions necessary that's not in the recovery plan, that will cause us to add it to the recovery plan.

VICE CHAIRMAN ROBERSON: So I understand what you're saying, and actually, either you or Mr. Franco can answer this one. So I'm assuming in the corrective action -- well, don't let me assume anything. Let me ask. Do all the corrective actions have to be done before you resume operations in the underground?

MR. HUTTON: The corrective action plans have to be completed before we begin operation.

VICE CHAIRMAN ROBERSON: All corrective actions?

MR. HUTTON: Well, I think some corrective actions probably have long-time effectiveness assessments, but you know, so there -- and I wouldn't want to say that we won't decide that we need to come back a year after something has been completed to make darned sure that it stays completed. But yes, the corrective action plans need to be completed.
VICE CHAIRMAN ROBERSON: So the recovery plan really encompasses completing all the corrective actions, and if you decide later -- you may decide later that there's other activities you want, but there's no parsing right now.

MR. HUTTON: No.

VICE CHAIRMAN ROBERSON: Okay.

MR. HUTTON: Now, of course, you know, we haven't completed the development of the corrective action plan for the most recent.

VICE CHAIRMAN ROBERSON: For the phase II.

MR. HUTTON: Phase II report. So you know, I suppose there may be things that come up that need to be addressed in the recovery plan as we work on that.

MR. FRANCO: And tied with all of that, you still have the operational readiness review that has to be completed and the validation that we are ready to operate that -- you know, that's a process that we have in place.

VICE CHAIRMAN ROBERSON: Okay.

MR. McQUINN: We're specifically meeting the requirements of Accident Investigation Board issues, management corrective action plan. But we're approaching the restart as if it were a new
startup. And so I don't want to diminish the importance of the corrective action plans, but that won't be our basis for resuming. So I will do a management self-assessment that will do 100 percent review of the flowdown of the requirements and the effectiveness of the requirements like a new startup. So we're going beyond just what the judgments of needs and those causes were. But we are going to very specifically comply with requirements to close the corrective actions.

MR. HUTTON: And there will be corrective action plan items that say, "In 2017 come back and make sure that you know this or that has remained fixed, if you will, and is fully effective."

But you know, the actions -- the problems have to have been addressed prior to startup.

VICE CHAIRMAN ROBERSON: So one more question before -- I know you have a follow-up to Mr. McQuinn. Earlier you communicated that you have done a review of all of your safety management programs. Did I misunderstand that?

MR. McQUINN: No.

VICE CHAIRMAN ROBERSON: And so have all actions from those reviews been incorporated into the recovery plan, as well?
MR. McQUINN: Yes. So -- and I know it may seem awkward, so the CAPs are very specific to the AIB conclusions and judgments of need. But flowing out of the 17 independent assessments there were many more than the AIB conclusions, weaknesses that I found in the SMPs, and those are also documented in my issues management corrective action management program. So it takes both of those to come together for a restart.

VICE CHAIRMAN ROBERSON: And is the integration of the issues management and the recovery plan obvious?

MR. McQUINN: I think it is. In the end, the field office and headquarters worked with us so that the CAPs have a -- you know, they have a heavy flavor of complete SMP rebuilding and reverification. Now, we didn't want to lose sight of the facts, so we had to prove -- of the fact that we had to prove the specifics, but the CAP goes beyond, you know, and describes an overall SMP approach. Okay?

VICE CHAIRMAN ROBERSON: Okay.

Mr. Santos.

MR. SANTOS: Thank you, Madam Vice Chairman. It's more of a comment. I learned early
that my correct terminology is critical. And I see a difference between -- following along your line of questioning -- between corrective action plan and actually implementing the corrective action. And I'm interested in the implementation of the corrective action.

So to me as a Board member, or maybe it's for the public, I think it would be extremely beneficial to have a very transparent clear understanding of what are the actual corrective actions that would have to be implemented? Not the plan. The actual implementation of the corrective action prior to resuming the operation. Because I see a difference, slight differences in the terminology. I just want to be very clear.

VICE CHAIRMAN ROBERSON: I appreciate that.

MR. McQUINN: If I could take a shot, and it follows Madam Roberson's question. So if you looked at my baseline, and it's 8,000 actions, all the corrective actions, some came from the AIB, some came from my own self-assessments. All of them are in the baseline, and I evaluate our progress against all of them once a week at my plan of the week meeting. Okay? So every action is defined. You
can even tell whether -- they're labeled -- as to whether it came out of a judgment of need or whether it came out of a self-assessment. But they're all defined and they're all tracked.

MR. SANTOS: Is your baseline easily filtered to those that you expect must be completed prior to --

MR. McQUINN: It's really designed for those that are all prerequisites. It's designed that they're all prereqs now. As we evolved and we evaluate effectiveness, you know, it could be that I would make a judgment, but right now they're all designed to be prestart requirements.

MR. SANTOS: So my question to DOE. Is that information something that could be shared with the Board and the public, the list of those implemented corrective actions?

MR. HUTTON: I think it could. You know, I don't know that we have placed it in the kind of form that you described, to make it really crystal-clear to people: Here's the corrective actions that have to be completed, you know, a little tick mark next to them or something, you know. But I don't see why we couldn't.

MR. SANTOS: Thank you.
VICE CHAIRMAN ROBERSON: Mr. Sullivan.

MR. SULLIVAN: Thank you.

Mr. Wyka, the accident investigation report for -- the phase 2 report for the rad release showed that the root cause essentially was incompatible materials being put into a particular drum at Los Alamos. And if I remember the details correctly, that drum was packed in December of '13, sent here in late January of '14.

MR. WYKA: Yes, sir. It was packed in early December, 72 days before the breach.

MR. SULLIVAN: Okay. And then it sat here aboveground for just a couple of days after being received, and then it was placed in the underground and again, at the very end of January, two weeks later, once it got in the underground, we had the exothermic reaction and the rad release.

So this could have happened here, sitting aboveground, while the drum was aboveground. So Mr. Franco, can you just elaborate, how would events have transpired if that had happened?

MR. FRANCO: If it would have happened aboveground?

MR. SULLIVAN: Correct.

MR. FRANCO: You know, the process that we
have for waste handling is: The drums were received in a TRUPACT-II. We take them off the trailer and put them inside the contact handle bay. And inside the contact handle bay is where the waste is actually removed from the -- you know, from the TRUPACT-II containers packaging or the -- so the drums would have been, like we normally did, we removed them, we put them in a facility cask, and then we actually put them in the bay for storage as we get ready to be transported to the underground.

If the events would have happened at that point, then any breach or any item like that that is identified by any individual that would have seen there was, you know, at this point they wouldn't have had MGO, they would have been able to see the breach going, with the smoke that we saw that was on the CAM filter. It would have been an immediate evacuation of people going through the air lock, they'd call the CMR, tell them that they just had this event happen, they follow their process there from -- it's WP-ER-4903.

But anyway, they go through this process where they make a notification. The CMR then makes a notification to the FSM and starts notifying the folks to, you know, get the activation to make sure
that we can then, you know, see what's going on, and
also the monitoring of the individuals for any
contamination. And then the emergency operation
center would have been activated.

MR. SULLIVAN: Are you confident it would
all have been contained within the bay?

MR. FRANCO: Yes. The bay is maintained
under negative differential pressure to the
atmosphere with a HEPA set of -- a ventilation
system that's going through the HEPA system at all
times. So that would have been maintained in the CH
bay. And we have two sets and we run one set at a
time, and as they get to, you know, a clogged state
where we have a differential pressure, we switch
over to the other.

MR. SULLIVAN: Okay. So I think I'm
simply asking you the same scenario with slightly
different sequence of events, and have we thought
about that? And are we confident that for the sake
of the public that people are protected from that
scenario? And I'm hearing the answer is yes.

MR. McQUINN: In fact, if I could add, so
the current DSA revision 4 considers that a credible
event. And so this is a fully functionally
classified credited confined ventilation system that
Joe is describing. And for worker protection, credited continuous air monitors. Unlike the event underground that was judged to be not credible, this one is described and properly protected, so the protections are defined well in the DSA and they work.

MR. SULLIVAN: Okay. Thank you.

Mr. Wyka, back to you. So how did this happen in Los Alamos? Can you briefly explain what errors were made? While it wasn't made here, it certainly had a big impact here.

MR. WYKA: Yes, sir. There were numerous errors in the packaging and preparation and the treatment and the processes of putting that drum together from the parent drum. There was a breakdown at all levels. You know, there was the use of -- within the glove box procedure; really didn't define, you know, the technical evaluation of the materials that was put into -- being placed in that drum and whether they were incompatible.

You had organic absorbents with a neutralizing agent with nitrate salts, you know, with other possibly incompatible materials, and there was really no technical evaluation, you know, of the change in the absorbent, the change in ratio
of absorbent, what neutralizing agent is being used, change in the neutralizing agent. So there was, you know, in terms of work controls processes, as well as oversight at all levels, this was not a new issue.

You know, there was extensive research on the incompatibility between organic absorbent with nitrate salts. So oversight pretty much at all levels, you know, sort of failed to pick that out that, one, it was in a procedure; and that secondly, it was actually being implemented, and that was what -- at the local subcontractor level, at the LANS level, at the field office at Los Alamos, as well as the natural TRU program, and even in headquarters, you know, there were many opportunities to sort of pick out that incompatibility of materials being placed in the drum.

MR. SULLIVAN: All right. I just want to be clear, because I recall reading an earlier report of somebody quoting something that made it into an open press report that said this happened as a result of a transcription error, which made it sound like someone innocently wrote down the wrong thing. But reading your report, I don't get the sense that
this was a transcription error; is that correct?

MR. WYKA: The wrong information was put into the glove box procedure. Some say it was just a transcription error. You know, I think it was a transcription error. You're not flowing down the change in the procedures correctly. It wasn't even picked up at the oversight levels.

And you know, I think there were discussions. Again, this was not a new issue. And I think maybe the person heard, you know, organic versus inorganic. So it wasn't simply just -- you know, it ended up as the wrong word being used, but it was the process and the missed opportunities all the way through the chain that should have been able to pick it up. And that's really the defense in depth is, you know -- we rely on that in everything we do, that if somebody makes an error like that that's picked up someplace. There were many opportunities to do that.

MR. SULLIVAN: They didn't intend to make this mistake but they did intend to revise the procedure and they did intend to change the absorbent that they were using; they just got it wrong; is that correct?

MR. WYKA: That's correct.
MR. SULLIVAN: All right.

MR. HUTTON: If I can add something to that. I think what Ted is referring to, you know, that will happen; right? We know people are going to make mistakes. Individuals are going to make mistakes, period. That's going to happen. But the bottom line is that our systems, our processes, our programs have to be robust, we have to have defense in depth, such that an individual mistake cannot propagate to cause an event. So the fact is, those processes and programs didn't work to prevent an event in this case. And Ted, you know, identified in pretty good detail in the report the kinds of things that were missed there.

MR. SULLIVAN: I understand. I appreciate that. I also think it's important to know what kind of a mistake it was. And there's sort of difference between a transcription error, which to me sounds like someone types something and they made a mistake. It's almost like you had auto correct on the computer and you hit the wrong key and it changed to another word and nobody caught that. That's not what happened here. People who intended to change the procedure intended to change the absorbent. They talked about what they were
supposed to do, and then they just ended up doing
the wrong thing and exactly why, who said what to
whom I think is unclear from your report.

But nevertheless, what is clear is that
there was a process that was used and it reached the
wrong decision. And then there were other
breakdowns after that that should have caught it.
That's simply what I was getting at.

MR. WYKA: And if I can add, you know, as
discussed in the report, you know, which feeds into
an error like that is, you know, the level of
knowledge, capabilities and capacities and
competencies, were dealing with that type of
reaction. And not understanding the hazards
associated and the reactions associated with the
ingredients that you're using and the potential
impacts --

(A discussion was held off the record.)

MR. WYKA: You know, lack of experience,
understanding, competencies, you know, at both the
worker level and the first-line supervisor level and
understanding the reactions they were dealing with
and the hazards associated and controls associated
with those reactions.

MR. SULLIVAN: So Mr. Hutton, if you could
then speak to: What is DOE doing now to make sure
that not only in Los Alamos, which I think is
still -- I guess Environmental Management Department
now has taken that over from --

MR. HUTTON: They're in the process of
transitioning that work. Hasn't completely happened
yet.

MR. SULLIVAN: From the National Nuclear
Security Administration. But even in the other
places around in the complex where waste is
packaged -- mixed and packaged, what are you doing
to make sure that the processes by which people
create procedures and review them ensure that
technical accuracy exists within those procedures?

MR. HUTTON: There have been a couple of
steps taken. One of the things that was done was we
did a series of reviews at the generator sites
looking for exactly those kinds of issues to satisfy
ourselves that the processes and the programs were
in place.

We found that they basically are in place.
You know, we didn't find, you know, significant
deficiencies. If you look hard at something, you'll
always find something that could be improved or, you
know, that might have a weakness. But we did not
find, at least in that first round of reviews, a significant issue.

I think we're going to have to go further than that. I think that's what the Accident Investigation Board report tells us. In my view, it's much like a quality assurance function that one performs for buying new parts to put in your facility that are supposed to have a certain pedigree. You satisfy yourself that not only does the producer of that component have the proper quality assurance procedures and processes in place, but you satisfy yourself that you can actually observe that work going on and periodically you come visit them and maybe there are certain critical characteristics that you have to verify for yourself, because they're just too important to allow a breakdown on the producer to get through.

So I think that's the kind of process that we're going to have to put in place. We're working with CBFO right now and the central characterization process and how they go do their reviews. We've participated or observed one down in Oak Ridge. We'll be observing one in Idaho I believe it's June. Is that right, Joe? I think it's June. And to pick out, okay, exactly, you know, what is it we should
be doing to give ourselves more assurance, because
we sure can't let this happen again. Right? So
that's what I think needs to be done.

MR. SULLIVAN: Okay. So that could be
more thorough reviews, could be more frequent
reviews, or you think maybe Los Alamos was just an
outlier and the reviews otherwise that we have
throughout the complex are fine?

MR. HUTTON: I have been operating nuclear
facilities for a long time and as Mark mentioned
this morning, I think it's an important trait for
people who do that to have healthy anxiety that
things are going to go right. I would never leap to
the conclusion that any performance deficiency is an
outlier. That's real -- that's sort of the
rose-colored-glasses approach. I'm not an advocate
of that.

I think it's our job to be a little bit
skeptical and satisfy ourselves that, you know,
maybe some site is doing a great job today, but how
do I know they're going to still be doing a great
job a year from now?

So we have to have the systems in place
that allow us to detect those kinds of problems
before they cause, you know, an event.
MR. SULLIVAN: All right. Thank you.

VICE CHAIRMAN ROBERSON: Thank you,

Mr. Sullivan.

Mr. Santos?

MR. SANTOS: I'd like to change topics to one that has to do with maintenance. I have several questions on it, so bear with me.

I'll start with Mr. McQuinn. The Accident Investigation Board identified that the Nuclear Waste Partnership used different maintenance approaches for waste handling and nonwaste handling equipment. Could you comment on that and some of your actions moving forward regarding that?

MR. McQUINN: Yes. The nuclear safety basis clearly drives, based on scenarios where a nuclear source term can be affected by anything, you know, including the fire that might start on a piece of liquid-fueled equipment. So the nuclear safety basis drives the understanding of those hazards and the selection of the controls well. Okay?

But beyond the nuclear source term, we had not done an adequate job of looking at what's the consequence of having a fire two miles away from the nuclear source term but in just the wrong place to produce both smoke or carbon monoxide that would
make the air unbreathable yet no effect on the source term but could have every effect on life safety.

So we've already talked about our analysis of those hazards to understand how to prevent that thing from happening.

Now, with respect to maintenance, we've got a lot of improvement that we need to do, partly execution, and a lot of that mostly driven not by the maintenance personnel, but by the adequacy of the work planning and control documents that my maintenance personnel use. And so, you know, we've had a legacy, unfortunately, at WIPP of being weak over a period of years in the work planning and control process, and that's critical to any successful maintenance program. So we've got to be able to execute.

Then we talked earlier in Session 2 about preventive maintenance, and I mentioned earlier, but it's worth repeating, for whatever reason -- I don't have to understand it -- when I arrived, I found my engineering organization buried under the operation and maintenance organizations. And that simply is not the way that we normally guard the safety envelope, even the life safety envelope, you know,
at our Department of Energy sites.

So I elevated engineering to be a direct report to me and then we're revitalizing the concept of cognizant system engineers for the nuclear crediting systems and system engineers for all of the others.

But a simple example that was brought up earlier, before the maintenance leader could decide to change the nature of the PM -- or the frequency of the PM. No more. Now the system engineer defines the PM, and the system engineer has to agree to any changes to the preventive maintenance.

So some of those checks and balances which I think were probably in place at startup, you know, weren't in place a year ago and we're re-establishing those.

MR. SANTOS: Is it fair to say that you're moving to a more integrated maintenance approach whether it's -- regardless of whether classification or nuclear versus nonnuclear?

MR. McQUINN: Yes. And not just integrated, but raising the significance of the role played by the system engineers, so that they keep an eye not only on the nuclear safety envelope, but all of the safety systems. And we've talked about
underground there are some that aren't driven by nuclear that are just as important to us.

MR. SANTOS: I'll follow up. A recent assessment by the Department of Energy Office of Enterprise Assessment looking at your maintenance programs said that you currently do not implement a predictive maintenance program. And as you know, you are in a little bit of a harsh deteriorating environment. Could you comment on where you stand with that recommendation?

MR. McQUINN: Yes. We're not where we want to be in terms of predictive maintenance. I am putting my priority on reestablishing the preventive maintenance, but there are -- as an example, for these uniquely important exhaust fans, these 860 alpha, bravo and charlie fans, we're implementing more predictive approaches there. So right now the top priority is on preventive maintenance, but we are anticipating looking ahead to what many of the other sites, the more mature sites, have done in terms of predictive maintenance.

MR. SANTOS: A question to Mr. Franco. If one were to look at the quick metric called maintenance backlog and I were to look at it previous to the event and today, do I see a
significant improvement on maintenance? Like for example, how does today's maintenance backlog compare to, let's say, a year ago?

MR. FRANCO: I would say that, you know, if you look at back from the 2012 time frame when I got here, that the backlog has remained about the same. Because of the events and the focus on the recovery and moving through, you can see there have been a lot of pluses and then a lot of things that continue to break as the facilities continue to age.

One of the things that we have done within the Carlsbad Field Office is that back in 2013, in October 2013, we initiated -- or FY-14 -- the first major change to the fee structure for the contractor -- actually the year before also -- is that we used to -- really, the incentive was based on cubic meters in place in the underground. After we received a new contract in place and then we started to put the performance management plans in place to evaluate the contractor, we restructured their fee to be based on the preventive and predictive corrective maintenance and deferred maintenance list.

So 75 percent of that fee then started going back in. So again, that was implemented in
the FY2014 PEMP, that we call, and then we had the events. So we were not able to get that fully implemented.

That wasn't something that I was really paying attention to. The new PEMP that we have for '15 also has a huge amount of focus on the maintenance and infrastructure upgrades for the facility. It's important that we get that back up and running.

MR. SANTOS: So Mr. McQuinn, can you give an estimate of what's today's -- let's just pick, for example -- preventive maintenance backlog in terms of weeks?

MR. McQUINN: Yes. Right now my metrics would clearly say that the backlog is not improved compared to a year ago. That's the straight answer. So we have metrics, I look at them every month, and that's unsatisfactory.

Here's an interesting case. So I'm going to bring this back to safety culture. I still have a very heavy emphasis on the preventive maintenance procedure must be adequate to my maintenance mechanic, and if there's any question in your mind about it, stop. The work control document -- you must be happy with it. I don't say "happy." But so
right now I'm thanking everybody who stops. So we're stopping way too much now.

I'm supposed to deliver more than safety. I'm supposed to deliver work safely. So I have to get more work done. And I can do that safely. Now, in my culture plan, it's time for me now to not just stop and thank everybody, but to begin talking to my mechanics about the difference between what's a fully adequate PM, a fully adequate work control document, reviewed and approved by their brother and sister mechanics versus what they prefer to have.

But I'm being very careful not to push too fast on that concept and lose any ground on the idea that I want the technical work instructions to be right.

But it's time in our culture improvement plan to begin to talk about it is okay, you know, there's a difference between what you would prefer to have in your PM procedure versus what is fully adequate. But right now the backlog is not acceptable.

MR. SANTOS: Okay. My last question, Mr. Hutton. So in your perspective, how far is WIPP from your expectations of a hazard analysis to a nuclear facility when it comes to maintenance? How much more do they have to go, from your perspective?
MR. HUTTON: I think there's -- I have seen improvement. For instance, when we drove around, I was very happy to see, when I drove around the underground yesterday, that the control doors all worked. And I made the guy take me through every control door so I could see it work. And I wanted to satisfy myself that that was, you know, the case.

So I think that there has been a degree of improvement. Certainly some reliability improvements have been made to the ventilation system fans. You know, the contractor did quite a bit of work with the vibration monitoring and balancing of those fans to improve their reliability. I think that's been significant.

There is still a lot of work to be done. There's still a lot of degraded equipment. There's still a number of components that need to be brought up to, you know, what I would consider to be an acceptable level of reliability and performance. I don't know if I can give you a number to categorize it.

MR. SANTOS: I just want to get your sense.

MR. HUTTON: That's my sense of it.
MR. SANTOS: I appreciate your answer.

Thank you.

VICE CHAIRMAN ROBERSON: Thank you,

Mr. Santos.

Mr. Hutton, earlier both you and Mr. Franco discussed some of the organizational changes that are occurring on the DOE side, in headquarters and your office. Mr. Whitney talked about strengthening your office with additional resources, and Mr. Franco spoke of reorganization and increase in the number of resources in his office, as well, too.

I guess my question is: In both cases -- and we'll start with you -- well, we'll start with you, Mr. Franco. How will those actions improve CBFO's ability to oversee maintenance and engineering programs at WIPP?

MR. FRANCO: Okay. Well, back in the organizational structure, what we had before, again, you know, we were being challenged for head count at the time, and one of the things that we had were folks that actually had multiple hats that they were wearing. We had SSOs doing the oversight that were also doing the management for the project, and the program management side, the schedule, scope, and
cost. And so they were balancing both activities as
they were doing the oversight function.

With the new organization and how we have
split that up, the focus from these individuals --
and we have one with more control. We have some for
each of the identified specific systems that we have
identified at the site and personnel coming in, and
they now focus on the actual oversight for those
items.

And the project management folks are
managing the project management piece of it and not
being engaged with, they do -- we have them
interface, of course, to make sure we're keeping an
alignment there. But the actual split provides us a
great opportunity for the oversight folks to focus
on what is important for the facility and be able to
just work on what is not being done, what is being
done, lessons learned from both sides, and making
sure that we are providing it.

So now, is that the only thing? No. One
of the other things that we continue to do is, again
the mentoring side of the house as we're getting
some new folks in, understanding the DOE processes,
making sure that we have the good mentors that have
years of experience within the department,
understanding what the oversight role is. Also, we've hired some very experienced supervisors that have come with a lot of experience that are driving and helping work through this.

It's part of a culture change. Imagine having somebody for ten years doing both jobs, trying to split now and making sure that their only focus mainly on the oversight. So that's where the mentoring comes in from these other folks, and so headquarters have been supporting us with that as we've reached out to Richland, Los Alamos, Idaho, getting those folks in Savannah River and Oak Ridge to support the activity.

VICE CHAIRMAN ROBERSON: Are you having to -- have you thought about whether you need to make some additional investment in training? I mean, I understand mentoring.

MR. McQUINN: Yes.

VICE CHAIRMAN ROBERSON: And understanding the DOE requirements.

(A discussion was held off the record.)

VICE CHAIRMAN ROBERSON: So in addition to mentoring, are there other investments that you think will need to be made to ensure that the investment of those resources and the time, the
increased time commitment, are going to pay off?

      MR. FRANCO: Yes. Yes, the investment
that we're putting in with the training is also
something unique right now that I really am excited
about. We hired our nuclear safety technical
advisor, senior, and he has a lot of experience and
so the program the FAC Reps is now under -- he's
working on that and helping with the training
organization. We're hiring a training coordinator
to help with our training coordinator to expedite
some of these items.

      We are all going to be -- I think it's
next week -- the forum for the training, and again,
it's also sending them out to another facility to
get -- see what's actually been happening out there.
Now, we actually started that before the events. We
were sending our FAC Reps out to other facilities.
We need to continue to do that and provide them
that. But the training is definitely a key
component. The qualification cards, all that
process we're working on and making sure that we
enhance that.

      VICE CHAIRMAN ROBERSON: I think that's
good, because I think it's important even if you
were doing it before, I think it's important to
recalibrate after so people understand that expectations may be different.

Thank you, sir.

Mr. Sullivan?

MR. SULLIVAN: Thank you. I want to come back to the contractor assurance system,
Mr. McQuinn. In a moment I'm going to ask you if you would sketch for me the Bob McQuinn version of how the contractor assurance system should work in a perfect world.

But back in the imperfect world of Washington, D.C., we seem to fluctuate between when the flap of the moment is cost overruns and schedule delays, then there's just too much oversight. And then the flap of the moment is something has gone wrong, such as a security incident in 2012, Y12, in Oak Ridge, or when we had the problems here at WIPP, then the question for all the oversight folks is, "Well, where were you? Why didn’t you prevent this?"

So we struggle with this and I know already tonight we've mentioned that in addition to your organization, Mr. McQuinn, trying to police itself, you have CBFO, you have folks from the Department of Energy headquarters including the
separate Office of Enterprise Assessments, you have us, you have the State of New Mexico, the EPA has been mentioned. So how does this work in a perfect world?

MR. McQUINN: In a perfect world, I would have a robust issues management system where my work force, even my front-line workers, would believe that I wanted them to write their issues down. And I don't have that today. Okay? But they would write their issues down. And there would be many of them, so they'd be statistically significant.

I would be good at statistically trending those to know, you know, whether the needle was going up or down or staying level.

I'd have a set of metrics that would be completely separate from production and obviously -- and my job is to get production done, but I'd have a set of metrics that was aimed all around the safety management programs and the integration of them.

I would be doing self-assessments, the entire line management organization, all the functions, doing hard-hitting self-assessments. And then frequently, at least once a year, I would be doing an integrated self-assessment, as much as is possible through my contract assurance organization,
bringing people in that would tell me the truth
about how it was going and not that there would be a
requirement to do it, but I would do it.

And then all of that information would
come together to help me make money decisions, where
to put my staffing, basically to help me make
priority decisions about money and people, because
ultimately -- and where I'm going to focus my
attention.

We had an issues management system. It
was poorly fed. There weren't a lot of issues in
it. I want to be very careful that I don't just
pretend that if I fix every individual issue, that
will add up to the right answer, because I have been
places where I have tried to do this. So I need it
to all be integrated for me, and I have created a
new senior management board. Everybody has a board.
I call mine the Environment Safety Quality Review
Board, where I set policy and I make decisions about
trends and ultimately where to put priority.

And so one of my greatest fears is that
I'll allow the contractor assurance to be driven
just around individual issues and whether they're
all getting closed on time, which is important but
sometimes, if you're not careful, that becomes the
goal and you miss the bigger picture of where you put your priority.

So to me, it's mostly about -- it's mostly about setting priority properly.

MR. SULLIVAN: And you said you're not there today, and I know that you personally have announced plans to move on from this job. But I'm going to assume that whoever comes in to take it over from you is going to be just as good as you are. How long do you see this process taking here?

MR. McQUINN: We have a very experienced leader and a very experienced deputy, and I have the money to staff the organization, some with incumbents and some with temporary experienced staff.

So I think in a year, you know, by restart, I believe we can have an adequately functioning -- not mature, like some of the sites have -- but we can be on the right path. And my successor, who I'm grateful that I got to hand-choose, views things -- he's relieved me before, he's followed me before, and he's been through much of the same experience as I have, and he views -- we tend to view things about the same way.
MR. SULLIVAN: I appreciate the work that you have done. I know it hasn't been easy. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

A question for Mr. Wyka. The radiological release accident investigation report identifies a reduction in conservatism in the documented safety analysis and technical safety requirements and throughout the day we've talked about some of those. We talked about CAMs. We talked about the underground ventilation. Even somewhere along the way somebody mentioned the roof fall. So we talked about some of those examples.

I guess what I'm more interested in is, for one, the department has this requirement for an annual review of this safety analysis. I'm assuming the investigation team kind of looked at the changes over time, and I guess what I'm wondering is: Is that requirement robust enough? Was that review occurring? Was it robust? So I'm asking you what does the investigation team conclude or investigation work conclude were the underlying reasons why that deterioration was allowed to continue over time?
MR. WYKA: If you look at some of the specific examples, it did happen over time, you know, sort of a change in this, you know, significant reduction in level of conservatism. For example, just elimination of a lot of changes or SACs, specific administrative controls. There were a handful of those that were sort of eliminated, as well as even eliminating 15 out of 22 designed basis accidents without really the technical evaluation to support some of the changes being made. They weren't also reviewed by the federal component either, you know, the changes as those were made. As well as you mentioned, Vice Chairman, just the head of analysis didn't drive the appropriate classification of some the key systems, like the CAMs and some of the ventilation systems. In fact, they sort of possessed the lowest classification balance of the plant, could be taken out of service prior to any DOE or NWP nuclear safety review.

You know, lack of -- so that also means lack of TSR as limiting conditions of operations and TSR surveillances associated with that, as well as design and modifications not subject to the same scrutiny, you know, because of the classification that they had.
So this was over time and they were never really reviewed or picked up in any assessments. And we even found that looking at some of the -- both on a contractor federal level, some of the reviews that should have been done on the design basis weren't done, you know, on the periodicities that they were supposed to be.

VICE CHAIRMAN ROBERSON: Thank you. So this is actually a phenomenon the Board sees often and we communicate to the department across the department. So I guess in this particular example as it relates to WIPP, I would ask you, Mr. Hutton, what do you foresee as the actions to take so that you don't see this cycle reoccur in the near term future, at least?

MR. HUTTON: Yeah. Well, I think, first of all, it's important that we have the right staff at the facility and at headquarters to provide the level of oversight for the foreseeable future that's going to be needed. Not just at this site, but at all the sites. That's -- you know, we won't be successful without that.

Second, in the case of WIPP specifically, you know, we have -- we know that the current DSA is deficient. That's why we have these temporary...
safety basis documents in place. And so building a robust safety basis which, you know, we've directed the contractor to do in accordance with the latest standard, I think is exactly what's necessary to build the basis beyond the safety envelope, I like to call it, that will operate the facility within.

So you know, that's crucial, putting that in place. And then we frankly are going to have to be darned sure that we don't allow the resources that put that in place to atrophy, you know, in the future. That's going to be necessary.

One of the things that I have been working on at headquarters, sort of beyond the specifics of WIPP, is: You know, what are the implications of this for our entire oversight program? In my view, the oversight program -- I call it the blanket -- our oversight blanket needs to be big enough and robust enough that it gets us information early enough in time to intervene to change the outcome. That's what we need.

And so I think that requires a comprehensive approach where, you know, we understand what all the functional areas are, we understand that we periodically, you know, according to some frequency at a minimum we have a baseline
inspection program or oversight program that we apply. We have to have a certain number of performance indicators that give us another look at things. And then systematically we have to assess, you know, what is this picture telling us? Where do we see problems developing? Where do we see trends developing? Where do we see something that might cause us to intervene and change the outcome?

So that's what we're working to put in place right now. I have shared some of that with your staff, and John, I know, is aware of some of that, of our current thinking. But that's what we're working on right now, because I think, you know, for the long haul, we have to have that systematic comprehensive approach that give us confidence that the whole -- that all the bases are covered, you know, adequately and something isn't slipping through the cracks; we're adequately monitoring and we have thresholds that cause us to take action, form reactive oversight where we see problems developing, and hopefully intercede so that we, you know, change the result, and prevent events from happening. Because that's really what our function is in the oversight world is, largely preventive, you know. Support the mission success
by preventing the events which, as we see here, can
dramatically affect the success of the mission.

VICE CHAIRMAN ROBERSON: So the Board
actually issued a recommendation to the department
because it was concerned about kind of drift in this
area. And out of that came the revised 3009. Is
that going to be robust enough? I mean, I
understand it all has to do with people, but I guess
my question is: Are DOE's requirements robust
enough to help contribute to preventing that kind of
atrophy five years from now?

MR. HUTTON: I think the new version of
3009 is significant improvement. It took us a long
time to work through it. I'm sure it's not perfect.
I'm sure as we gain experience -- this will be a
valuable experience -- we'll find things that need
to be addressed in the course of utilizing it. But
it's clearly, in my view, easier to understand, it's
not as ambiguous as the previous guidance, it's much
more specific, it's much clearer. I think that's
helpful in terms of implementing the requirements.
So I think it's pretty good, frankly, right now.
You know, we'll find out as we implement it, but as
far as I can tell right now, you know, it does a
better job of spelling out for folks just what it
takes to develop the documented safety analyses. I call it the instruction manual for how to write documented safety analyses. That's basically what it is. The nuclear safety requirements haven't changed. The rule hasn't changed, but we've learned over 20 years of implementing the old version of 3009 that, you know, we could be more specific, give people clearer guidance, and so that's what we've tried to do.

VICE CHAIRMAN ROBERSON: Okay. Did you want to add anything, Mr. Franco?

MR. FRANCO: No. Just, you know, we're following the lead with the headquarters folks. We're implementing. I think that for me, again, we talked about earlier the changes with all of these things, as a site is doing real well, is to pay particular attention to that, is my lessons learned for me is, because those are the ones that we tend to not focus on.

And so one of the things for me as lessons learned as a manager here is that as these -- any of these activities where you're giving them accolades for a great job is also making sure that they -- you know, that you're not removing the focus from them, and also looking at when you do the changes to these
1 design bases, that in any of the changes that you
2 do, is really looking backward of all the changes
3 that have happened, because over the course of
4 transition as you're moving forward with all these
5 changes, then what happens is, you end up eventually
6 one day saying we had a lot of these changes that
7 contributed here just over the course of time.

8 MR. HUTTON: If I could add to that, you
9 know, I think it's very important that we not --
10 that we allow ourselves not to become, you know,
11 confident that things are going to go -- really go
12 well. Right? You know, anytime in my past lives
13 when I was confident that something was okay, I
14 could always live to regret it, I have got old scars
15 to prove it.

16 So you know, I think maintaining a healthy
17 anxiety, maintaining a little bit of skepticism
18 about, you know, are things really going to go right
19 and what is about to go wrong, that I need to
20 prevent, you know, I tell people, you got to ask
21 about 100 things for every one thing you find that
22 really has a problem, or you're not looking hard
23 enough.

24 And so you know, I think that's what we
25 need to do. I think we're going to need to continue
to do that going forward.

VICE CHAIRMAN ROBERSON: Thank you, sir.

To you, Mr. Santos.

MR. SANTOS: I would like to have some quick follow-ups on the same line of questioning, and it has to do with the 3009. And I'm very encouraged by DOE applying this 2014 revision at WIPP. Is it now part of the contract? Is it going to be fully implemented without exception? Is it now in the language?

MR. HUTTON: The contract -- the way we do it, the contractor has been directed by a letter from the contracting officer to implement the standard. So you know that's what has to be done.

MR. SANTOS: So for the benefit of the public, you mentioned there has been a lot of improvement with the documents and that you guys worked a lot harder on this document. From a technical standpoint, can you give me one or two examples of what are some of the major technical improvements from the previous version for clarity?

MR. HUTTON: Sure. So the older version of 3009 was not as precisely worded as we might have liked. And so reasonable people could disagree over whether this or that level of analysis in a
documented safety analysis actually met the nuclear safety requirements in the rule. The new version of 3009 is much more precise in that it states clearly if you meet all the applicable "shall" statements in the standard, you are satisfying the rule. That seems simple, but in the language of 20 years ago, when the standard was written, that wasn't spelled out quite so precisely. So that kind of thing, you know, is I think extremely important.

MR. SANTOS: And any new type of analysis be required or any -- I'm trying to get a little bit of technical flavor --

MR. HUTTON: Well, it's very explicit about analysis of system functionality. The new standard is very explicit about making, you know, a solid analysis that the systems will perform their safety function, that they have the capacity and the reliability and so on to do that. That's explicitly described in the new standard, and wasn't as well alluded to in the old one.

So you know, I think over a period of about 20 years with the old standard, there were a lot -- there was a lot of knowledge in the department, in DOE, about what it took to satisfactorily implement the requirements of the
rule, but it wasn't all spelled out, you know, as well. So I don't know if that makes sense.

MR. SANTOS: Okay. And my last question has to do with: It's my understanding that this is the first implementation of this version in the complex here at WIPP.

MR. HUTTON: That would be. I can't speak for what other programs may or may not be doing.

MR. SANTOS: Okay. Any special consideration or concerns given that WIPP is undergoing so many changes and they're going through this maturity such that your return on investment might not get diminished -- as you're trying to implement 3009, you think it's good, but we are trying to implement it on a site that's going through a tremendous amount of change. Any words there?

MR. HUTTON: Well, one way or another the nuclear safety rule hasn't changed, and we have to meet it. So if I was going the write a DSA, I would want to use the best instruction manual possible to do that. And this one I believe is, and the Department believes is, and I think your staff, you know, would agree with that.

It's a challenge to do it, okay, so that
means that we need to apply the right resources to assist the site, the CBFO and the contractor in doing that. So what we've done is, we've marshaled resources -- in fact, a lot of the people that we had at the workshop that we conducted on the DSA development were the folks who wrote the standard, who can authoritatively describe: This is what we're trying to get at here, you know, when people have questions, or they don't understand.

And we have those folks involved in the in-process reviews, which is a process that is described in DOE Standard 1104 for developing safety evaluation reports. We have those people involved in real-time working with the contractor to assure that nothing languishes, that they get the immediate real-time feedback that they need to produce, you know, a high-quality document but as effectively and as efficiently as we possibly can.

MR. SANTOS: Thank you.

MR. HUTTON: That's what we've tried to do to make that really solid. And putting together, I believe, the safety basis review team that we put together, I mentioned it at the beginning of the other session, it's co-led by one of my staff along with Jeff Carswell, who's the nuclear safety senior
technical advisor at CBFO, very sharp guy, a lot of experience at Savannah River; Dr. Robert Nelson, from my staff, very sharp guy, also intimately involved with the development of the new 3009 and in training folks across the complex in its use. We brought that training program to the site, to CBFO, and conducted it in order to -- you know, so they didn't have to go anywhere, so we brought the training to them so we could give them the best leg up we possibly could to help them be effective in implementing it.

MR. SANTOS: Thank you for that response. I'm done with questions, Madam Vice Chair.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos.

Mr. Sullivan, any additional questions for now?

The Board may have questions for the record that we'll submit to each of you. We want to try to stay on our schedule.

I think, though, one thing I'd say as we are starting to close out this session, Mr. Sullivan mentioned, Mr. McQuinn, that you at some point would be leaving and I, too, want to echo my appreciation for the hospitality that you have extended to us
here at the site during your tenure.

    And Mr. Franco, we understand there has been an announcement, as well, and I personally would like to tell you I have walked this plant with you, I know of your commitment to the community and to the operations, I know the employees and the public around this area really appreciate your commitment, and I wish you well and I'm sure we'll see you in the next chapter. Thank you so much.

Thank you both.

So you're excused from the witness table.

Thank you all for your testimony.

I'd also like to acknowledge, if they're still here, I understand we had some staff from Senator Tom Udall's office, or if you're here, you're welcome to stand. They may have left. But they were here, and we appreciate it.

And also I understand we had some staff from the New Mexico Environment Department. Are they still here? Thank you very much. We appreciate your attendance.

This now concludes the hearing portion of this proceeding. I want to reiterate that the record for the hearing portion of this proceeding will close on May 25, 2015. So if any member of the
public would like the Board to consider any
additional statements or information on the topics
presented in Session 1 or 2 this afternoon, or from
the third session this evening, please mail or
e-mail them to the Board by that date. This
includes those individuals from the public who have
viewed this hearing via live video streaming on the
Internet.

Contact information to send in additional
information can be found on the Board's public
website, DNFSB.gov.

At this time I'd like to take a short
recess and we will reconvene in five minutes for the
meeting part, Session 4, of this public hearing and
meeting.

(Recess from 7:43 p.m. to 7:48 p.m.)

VICE CHAIRMAN ROBERSON: At this time, I
would like to transition to the final part of
today's proceedings and convene an open meeting of
the Board.

This meeting is convened under the
Government in the Sunshine Act as noticed in the
Federal Register and is open to the public. In this
meeting the Board will review and discuss its
planned approach to providing oversight of DOE
activities to recover the underground and resume waste operations at WIPP. The public will have an opportunity to provide comments during the meeting.

I will begin the meeting by turning to the other Board members for their opening remarks.

Mr. Sullivan.

MR. SULLIVAN: Thank you, Madam Vice Chairman. I look forward to hearing from the staff on what we're going to do, and as I heard from the staff earlier, we've looked at ourselves with respect to what we did as an organization prior to these accidents and from the perspective of what might we have done better. So I think this is a useful exercise, and I look forward in this meeting to hearing on how we're going to improve our own performance going forward as an oversight agency with the goal, of course, of improving operations here at WIPP. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

Mr. Santos?

MR. SANTOS: I have no remarks.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos.

The Board now recognizes Mr. John Pasko,
who is standing in for the technical director of our staff. He is going to briefly describe the staff's proposed plan for WIPP in fiscal year 2015, to set the stage for the Board's final deliberations and vote on the plan.

Mr. Pasko, please proceed with your statement and report.

MR. PASKO: Thank you. Good evening, Madam Vice Chairman and members of the Board.

(A discussion was held off the record.)

MR. PASKO: I thank you for the opportunity to be here tonight. I intend to present Mr. Stokes' testimony, and then I look forward to the opportunity to be able to talk about what we did following the WIPP events as far as our own development of lessons learned and corrective action that we've put in place going forward.

So I'll now continue with Mr. Stokes' remarks. He had planned to present the technical staff's proposed work plan for the remainder of fiscal year 2015 to the Waste Isolation Pilot Plant. However, before discussing the plan, Mr. Stokes wanted the following information to be presented as background.

On March 5, 2015, the Board officially
approved the Office of Technical Director's work plan for fiscal year '15. The plan accounted for work at WIPP in addition to the remainder of the technical work throughout the Department of Energy complex for fiscal year '15.

The proposed WIPP work plan discussed this evening is derived from that original Office of Technical Director fiscal '15 work plan, meaning that the resources devoted to the proposed plan at WIPP did not deviate from the work plan that has already been approved by the Board. Moreover, the as-proposed WIPP work plan presented tonight does not reduce or adversely impact the oversight of planned activities for other defense nuclear facilities.

Now, the proposed WIPP work plan for the remainder of the year, fiscal year, identifies the following work areas: Development of revised safety related documents. These reviews will evaluate the adequacy of the safety basis development and implementation, including reviews of the Department of Energy review and approval of the evaluation of nuclear safety. I'm sorry. And approval.

The second part: The evaluation of nuclear safety systems. These reviews will evaluate
the adequacy of structured systems and components relied upon for safety. This area includes design and construction for new or modified safety systems, such as the ventilation systems.

The work plan also accounts for the evaluation of safety management programs. These reviews will evaluate the content and implementation of the safety management programs. They may include fire protection, emergency preparedness and response, conduct of maintenance, electrical safety, and conduct of operations.

Also, the plan accounts for the observation, evaluation of WIPP operational readiness activities. These reviews will evaluate the Department of Energy and the contractor preparation for the resumption of operations at WIPP.

We will also evaluate the operational awareness at WIPP. The staff has planned site visits for the specific purpose of evaluating and observing ongoing DOE and contractor activities. The following proposed reviews are being planned. For safety basis related reviews, the objective is to evaluate the adequacy of the hazard evaluation performed by DOE, the identification, adequacy, and
implementation of nuclear safety-related controls,
and the contractor's ability to conduct work safely
at the WIPP site. These reviews will also evaluate
DOE's ability to effectively oversee the WIPP
contractor.

The proposed safety basis related reviews
will require four Board staff members with the
appropriate level of expertise. For the proposed
reviews of our safety systems, our objective is to
evaluate the adequacy of the ventilation systems.
These reviews will require three of the Board staff
with appropriate expertise.

For the proposed reviews of safety
management programs, our objective is to evaluate
the current adequacy and DOE's planned improvements
for safety management programs. We propose that
these reviews will be initiated during the remainder
of fiscal year 2015 in two of the following areas.
And I say two of the following, because we tee up
five. The department and WIPP have demonstrated
that these should be available to review in 2015,
but we will pick the first two that are available
out of this group of five and commence that
activity.

So we propose reviews in the following
areas: Fire protection, emergency preparedness and response, conduct of maintenance, electrical safety, and the conduct of operations.

The resources required for these reviews are five of the Board staff with the appropriate levels of expertise. Proposed reviews in the area of operational awareness will evaluate DOE and contractor activities to maintain operational awareness and identify negative trends and safety performance.

The staff is planning for three site visits between May 2015 and the end of September. The proposed work plan just described reflects the Board staff's current understanding of DOE and contractor activities at the WIPP site and as mentioned previously, reflects the Board's overall oversight priorities throughout the DOE complex.

Additionally, the staff has begun planning for work conducted in fiscal year 2016. Work that will be proposed by the technical staff to the Board for the WIPP site in fiscal year 2016 will be developed consistent with the Board staff existing operating procedures and at the present time is expected to include proposals for the technical staff's review of DOE and contractor readiness.
reviews and the continuation of any of the items mentioned above.

That concludes Mr. Stokes' remarks. If you have any questions, I'm ready to try to answer them now.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Pasko.

Mr. Sullivan, do you have any questions?

MR. SULLIVAN: Yes, thank you. Mr. Pasko, would you elaborate on the review that was done by our own staff regarding our own performance as an agency in oversight of activity at WIPP? So specifically, just by way of background, for the fire accident that happened last year, we look back and the Board had identified back in 2011 time frame some significant issues here with fire hazard analysis and with combustibles that were beyond the loading that was necessary. Yet it appeared that the actions taken here locally were not what they probably should have been in response to that, and so perhaps our follow-up was lacking with respect to the rad release incident.

The documented safety analysis had been revised here locally over the course of some years from like 2008 up until 2014, and although we
routinely review documented safety analysis throughout the complex, I don't think we reviewed the documented safety analysis here during that time frame.

So opportunities we had as an agency to perhaps provide the type of advice that would have either avoided or mitigated the accidents, we didn't get. So I think we've looked at ourselves, and would you please elaborate on what came out of that review?

MR. PASKO: Thank you, sir. Well, as you know, I took over responsibility for the NMPS group in May of last year. About that time, at the Board's urging, you were interested in what lessons learned had been developed from the Board's perspective. That married up pretty well with my new responsibilities, so I volunteered to take the lead on that effort.

There were ten lessons learned overall. I would say that a handful are particularly germane, starting with the decision was made long ago not to have a site representative located here in Carlsbad onsite, as we do at Los Alamos and Oak Ridge and so on. So without an onsite representative, the amount of oversight you're able to do is limited. You only
gets what's reported to you. You don't get the ability to observe and develop your own set of concerns and indicators.

Another problem that was identified -- what we tended to do at the sites without site reps is report periodically on what was happening. We tended to tell the news instead of identify what potential issues were. So we weren't really aggressive in the way we produced our oversight.

As a sidebar to that, there was not a feedback function to develop people's ability to ask good questions, the ability to ask why that happened and pull the string. So at the WIPP site and the others that were without site reps, we have a limited picture of what's actually occurring.

I would say the staff did not aggressively follow up on the corrective action being taken for the concerns and issues that they developed. As you alluded to, we had done a review of FHA and found issues with combustible loading in the mine, but it still remained there on the 5th of February last year.

And I would say the last one that was particularly germane is that we have gone a long time since we did an actual review of the documented
safety analysis here at the WIPP site.

So they're the lessons that I think that we developed that are most applicable. If I may, I'll continue on.

You know, coming into the job, my real question was: What don't I know I don't know? So here at the WIPP site, you know, we had convinced ourselves that things were more secure, safer than they actually were. What other things don't we know?

So in response to the lessons learned and with that thinking, I developed a corrective action plan that I'd like to go over, if you'd like to hear that.

So what we're trying to do now is track our oversight and increase the level of oversight that's provided. So as a metric, we are on a monthly basis tallying up the amount of effective oversight that we have here at the WIPP site and at the other non-site-rep sites: Idaho National Labs, Sandia, Nevada, and Lawrence Livermore.

What we're trying to do at the sites is risk-rank the DSAs, the documented safety analysis. We just completed that at the Idaho site, and we determined, you know, a ranking of what we should
look at, and now we're going to proceed to work our
way through those DSAs, and WTP is the first DSA.
We just kicked that review off last month. So we're
going to do that at the other sites, as well.

In the Hanford area, I have a particular
concern with the amount of facilities that are no
longer in operation but are not in the D&D process
yet that haven't been looked at. So they're in a
cold standby condition, and they're difficult to get
into, so you can't really walk through them and
assess their material condition. And we haven't
really paid attention to those.

I also am interested in getting better
analysis and reports from the cognizant engineers
who are on staff and responsible for these sites so
we have implemented a process where they provide a
weekly written report, much like the site reps do,
on a weekly -- excuse me, a monthly report much like
the site reps do on a weekly basis. So hopefully
that will allow us on a periodic basis, recurring
basis, to get some insight into what's going on at
these sites, and it's long enough that, you know,
there have to be some issues there.

Now, I have been doing that for four
months now at the Idaho and the WIPP site, and we've
made significant progress in the quality of those
reports and the type of issues that are being
developed. So I think that has -- that looks like
it's going to provide us some positive results.

And also we've improved the qualification
process for these people being assigned as cognizant
engineers. So it's now formalized, there's some
quality control, and hopefully we'll develop a
better backup cognizant engineer for these sites, so
he's going to have to be a little bit more
aggressive and he's going to have to be a little
more intent on developing issues.

And lastly, we've committed to two weeks'
programmatic onsite reviews at these sites each
quarter.

So I think those things taken together
will help us be able to identify, you know, those
things that we didn't really know we didn't know.
And I'm particularly interested in not only the
corrective action here at WIPP, but what's the next
event that we aren't smart enough to be looking at.
Okay.

MR. SULLIVAN: So that's reflected in this
plan. We still don't have an onsite site rep, but
we will have at least two weeks onsite per quarter?
MR. PASKO: We're trying to get two weeks of onsite, two man weeks onsite per month at WIPP and Idaho and the other sites.

MR. SULLIVAN: Okay. And there will be a monthly report that I'll get to see?

MR. PASKO: There will be a monthly report. The monthly report will have a section where we track the number of days that month and the year to date on oversight, so you can see if we're behind or, you know, on track.

And we also will have a list of the things that the site -- you know, we requested from the site that we haven't yet accomplished. So for example, with the DSA review, we understand which chapters of the new DSA revision 5 are proposed, and we have a due date. We have a tracking system so we make sure that we don't forget those things that we're waiting for, you know, to review for adequacy. So those things we're doing differently.

MR. SULLIVAN: Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

Mr. Santos, do you have any questions?

MR. SANTOS: Yes, Madam Vice Chairman.

Thank you, Mr. Pasko. Could you elaborate
a little bit what's going to be different or more unique about these three site visits that you mentioned in terms of the approach you use? Some more specifics of what --

MR. PASKO: We really didn't have anybody that periodically came out here. So now we have a pool of folks that were previously site reps. We have one individual was a site rep in Hanford, who is now located out west and is conveniently able to fly, to visit, our Idaho site, our Nevada site, and this WIPP site here. So we've taken -- we've created a pool of folks who had the experience of having been onsite at one of our manned sites, and we're using them to look at the conduct of operations, the day-to-day maintenance, get a flavor for how well the site is performing. They have kind of a jack-of-all-trades experience base, and based on what they identify, it will help us be able to target programmatic reviews in particular areas.

MR. SANTOS: So for clarification, there will be a monthly report generated by the cog engineer. Will there also be like a trip report?

MR. PASKO: Yes. We'll make weekly entries, and those reviews we do like of a programmatic review, we'll do what we do everywhere
else. There will be an agenda developed, there will be a weekly entry when that agenda is sent to the site. There will be a weekly entry when that visit is complete. And then whether it -- we'll make an assessment of what we found and it will either be an information report or we'll elevate it to, you know, an issue report.

MR. SANTOS: Will all these be publicly available?

MR. PASKO: Only the ones that rise -- as we do right now, the things that rise to the level of an issue, that merit, you know, becoming a Board issue, and are communicated to the Department of Energy or NNSA, they're publicly posted.

MR. SANTOS: Like for example, the weeklies, they follow a process and eventually get --

MR. PASKO: We've not made a determination yet on whether the monthlies will get published on the -- you know, put on the website. I think the technical director wants to watch that process for a couple of months before he makes a recommendation to you all if we should do that. It's been discussed.

MR. SANTOS: Okay. And I have a follow-up on the issue of follow-up. As a new Board member, I
come in and I look at the public website, and I can see our recommendations and I can see which ones are open, which ones are closed. But I couldn't do the same regarding with a lot of the letters that the Board issues when it comes to identification of issues and how those issues are followed up to completion in a more transparent manner.

What are your thoughts on that? I'm especially reacting to your earlier testimony -- explanation that some of the self-reflection was the Board-issued letters, some of those issues never were followed up.

MR. PASKO: One of the things that came hand in hand -- it's not really part of my corrective action plan, but the Board has been working hard the last year or two years to develop a set of procedures to control the way it does business. And it also has developed an information tracking system that we now proceduralize entries that have to be made.

So when an issue -- when the Board does a review and identifies an issue they think is a safety issue, it's required to be entered in that IACTS system. When we present that information to you all and you agree it's an issue, then it's
elevated to a Board issue and it's tracked that way.

So if we were to provide correspondence to the department on a series of issues here at WIPP, our procedures would now require us to make an IACTS entry on each of those individual issues. And we report the IACTS number when we write the issue report to you, so there's a kind of -- we close the loop, and then that IACTS system is reviewed periodically to determine that those tracking -- issue tracking dates are up to date, they haven't fallen in arrears, and then we have the performance assessment group just periodically does a review.

In fact, I just got an e-mail today saying that mine are all up to date. They have congratulated me on that. So there's a system to kind of follow up to make sure those issues get logged and then that they aren't forgotten.

MR. SANTOS: Since a letter on issues are made public, do you have any opinion on increasing the transparency of that tracking of issues to interested members of the public?

MR. SULLIVAN: Well, if I may, let me jump in. Because I think what Mr. Pasko is giving us is a good tool used by the technical staff, but they use tools that are for us. You're looking for a
tool for the public. I'm not sure that tool would translate to the public. But there are certain things that I think we can do. They just fall in our IT department, which is outside of the technical staff. It resides with our general manager. But I agree with you. I think there's an awful lot we can do on our website. The public looks at a letter in 2011 that we sent, and there's no way to tell, just looking at the website, what happened as a result of the letter.

MR. SANTOS: At a new Board member, I went through that myself.

MR. PASKO: From my perspective, we would not want to publicize an issue that is still at the staff level and have it be confused as a Board issue. We reserve -- you're right -- to determine whether those issues are --

MR. SANTOS: No, I'm just exploring the concept at this point. I'm not looking for a final solution. Just to kind of air out some of the concepts.

VICE CHAIRMAN ROBERSON: Do you have more questions?

MR. SANTOS: One last question. Have the staff communicated clearly to DOE what sort of list
of documents and by which dates you need to be inserting yourself in the reviews so this federal effort is kind of well-coordinated and laid out?

MR. PASKO: There's a process to do that, and I would tell you that the process it followed works. But there's some -- there's nonuniformity. Some sites do this better than others. Some cognizant engineers track it better than others. Hence, you know, this formal qualification process so we can take the best practices that we have and institutionalize those, because if you ask for documents from a site and they don't provide them and you don't ask again, well, you have kind of eroded, you know, your credibility.

So it's important to ask for what you want, and track what you get, and not ask again for documents because you don't want the site to waste their time reproviding it. But you need to have a trackable system to be able to make sure you're getting what you want when you need it.

Now, I have tried -- there are two schools of thought on reviews of a documented safety basis. For example, you can review it in parallel with the department, or you can wait for the department to complete their review and then review.
Now, there's pros and cons to each. I particularly prefer to do them in parallel, and then, you know, it's easier to come to a consensus on what things need to be improved.

For the WIPP DSA, we have an extensive schedule built, chapter by chapter, of the DSA and TSRs. We have teams built to do the initial review and teams built to do the follow-on review, and we just received the second chapter of the DSA yesterday, and we have a system set up to track that, so that we don't cause any unnecessary delay in the approval of that document.

MR. SANTOS: Thank you. That concludes my questions.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos.

Mr. Sullivan has another question.

MR. SULLIVAN: Just a procedural. We're over 15 minutes past the point where we were going to have the public comment period. I can ask my question now or we could take comment from the public and we come back to my question.

VICE CHAIRMAN ROBERSON: The public may benefit from hearing your question. We have a short list of speakers so I would say ask your question.
MR. SULLIVAN: Okay, I'll go ahead. One of our speakers from the public who stood up this afternoon asked if we were going to track whether or not the judgments of need got completed from the Accident Investigation Board reports, so I will turn around and ask you.

MR. PASKO: We intend to do that.

MR. SULLIVAN: Okay. Will we be evaluating those independently of DOE? In other words, when we say we're tracking them, we're not just going to take -- you know, are we simply taking a report from DOE that suggests we did it?

MR. PASKO: No, I think what -- we will track the completion of all of those but they fall into different areas. You know, some of those are headquarters, some of those are the field office. We will particularly look at those aimed at the safety basis, nuclear safety, and the safety management programs. They're the ones that fit in directly with our oversight.

And also those that -- you know, one of my concerns -- and it was mentioned today, you know, we have a mine and we have a nuclear facility. And I personally think the most challenging area is going to be converting this to changing that culture of
operations. So all the judgments needed in that area, we'll have a program to review those and assess that they have been -- because I think that's where the --

MR. SULLIVAN: Just to reiterate, then, I'm just going to repeat back what I heard from you to make sure I heard it right. With respect to judgments of need dealing with nuclear safety issues here at WIPP, when the question -- when I ask a question to our staff of whether or not that judgment of need got accomplished, I'm going to get an answer that reflects our staff's independent review of what actually happened, as opposed to simply getting, "Well, yes, the Department of Energy has reported it complete." Is that correct?

MR. PASKO: Yes, sir.

MR. SULLIVAN: Okay. Thank you.

VICE CHAIRMAN ROBERSON: Any additional questions, Mr. Sullivan?

MR. SULLIVAN: No.

VICE CHAIRMAN ROBERSON: Mr. Santos?

MR. SANTOS: No, Madam.

VICE CHAIRMAN ROBERSON: At this time, per the Board's practice and as stated in the Federal Register notice, we will welcome comments from...
interested members of the public. A list of those speakers who have contacted the Board is posted at the entrance to this room. There is also a table at the entrance to the room with a signup sheet for members of the public who wish to make a statement but did not have an opportunity to notify us ahead of time. If you wish to make a statement and have not yet signed up, you may add your name to the list at this time.

Mr. Kovac. I will add you to the list.

MR. KOVAC: Thank you.

VICE CHAIRMAN ROBERSON: Do we have another? Mr. Hardy? Is that what it was?

MR. HARDY: Correct. Thank you.

VICE CHAIRMAN ROBERSON: Thank you.

Seeing none other, your names have been added to the list and I think we are done with that process.

We've generally -- well, you know how we've listed the speakers. I just listed them.

Those who have added their names on the sign-up sheet will follow those who had already registered with us in order to afford everyone the opportunity to speak.

Please remember, the chair may interject if a speaker exceeds five minutes, but will then
give consideration for additional time should the agenda permit.

    Statements should be limited to comments, technical information or data concerning the subject of this public meeting and hearing. The Board members may question anyone making a statement to the extent deemed appropriate.

    I do want to make clear that while the Board will be providing the opportunity for public comment during this meeting, unlike the hearing portion of this proceeding that we held earlier today, where the record closes May 25, 2015, once the business of this meeting ends and we adjourn, there will be no additional comment opportunity and the record of the meeting will be closed.

    And with that, we'll begin. Our first speaker -- and I hope I have this right -- Mr. George Anastas.

    MR. ANASTAS: Start the clock, five minutes.

    Thank you, Vice Chairman Roberson, members of the Board, and staff. My name is George Anastas. I'm a professional nuclear engineer, board certified health physicist, board certified environmental engineer, fellow of the Health Physics Society and
also a fellow of the Australasian Radiation Protection Society. I cut my teeth in this business in 1966 at Purex, in the 200 area. So I have about 50 years' worth of hands-on -- that may not be the right word -- experience in this.

I have one comment which follows the last question. Will the Board staff assure that there are no cross-impacts of these fixes that were talked about today, and their implementation of the fixes? So two key things. Cross impacts of the fixes, and the implementation of the fixes. You don't have to answer the question, but it's something that you might want to think about.

Second of all is that I'm a proponent of knowledge management. Waste drums in the complex have detonated, caught fire, over the years. A reference, a great reference is out of Nuclear Safety, volume 33, number 2, April-June 1992, pages 220 to 228. "An Assessment of the Flammability and Explosive Potential of Defense Transuranic Waste." I did not write the paper. But it's an excellent paper. The staff may wish to get that.

I'm going to take a second and read a conclusion from that 1992 paper if I can get some light here. "The evidence also indicates the
accidents such as fires and explosions have occurred at several facilities in the DOE complex because guidelines and procedures have been inadequate, improperly used, or not used at all. That observation suggests the future accidents of a similar nature must be anticipated, that workers need to be aware of the potential hazards of working with these materials, and that clear and consistent guidelines and procedures should be in place and in force to ensure maximum safety," et cetera, et cetera. 1992. I didn't write it. But it fits the situation very well.

Last item. I spent the last ten, fifteen years doing accident investigations, not only in the United States, but overseas, as well. George Santana -- and I'm going to quote from him -- "Those who cannot remember the past errors are condemned to repeat the errors."

So knowledge management is an important consideration in nuclear mine safety, and what I'm recommending to the Board for your deliberation is suggest to DOE that pull all this information together about the drums, make it available, and test the people who are packing the drums and the supervisors for the drums.
In my experience at a glove box, if a drum is spewing yellow-orange smoke, there's something very wrong with that. Okay? And you can't just dismiss it.

Last item. Safety culture has been bandied about. There's safety leadership that comes from the top. Now, the safety culture is developed by the people implementing the work. If they see that there's a disconnect between what the leadership says and what the leadership does, what are the workers going to do? This is what they're doing. Okay? So don't pin it all on the folks doing the work that leadership has to follow up on what they say. What they say and what they do have to be the same. And then the workers will pick that up and the safety culture can be brought up.

Last item. WIPP worker morale. That's something I think the board should focus on, because the folks doing the work there have been beaten over the head for quite a while. They have had a number of problems there. So anything the Board can do -- is anyone here from DOE? Anything that the Board can do to assist in the morale will really help the recovery of the WIPP. That's it.

VICE CHAIRMAN ROBERSON: Thank you, sir.
Thank you so much.

Do any of the Board members have a question for Mr. Anastas? All right.

Thank you, sir, so much.

Mr. Scott Kovac.

MR. KOVAC: Thank you, Madam Chair and members of the Board. I just wanted to say a quick thank-you, and I wanted to appreciate the fact that the safety board is one of the few eyes that the public has into the inner workings of DOE, and I really appreciate any more documents that you make public, any more transparency. I appreciate the work you do. Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Kovac. Thank you so much.

And Mr. Hardy.

MR. HARDY: Thank you again for the opportunity to speak. I appreciated the comments earlier, Mr. Santos, about thinking of ways to provide additional fire protection capability in the underground. What I would ask is that if your group makes a recommendation, that you consider the environment in which that equipment will operate. The underground, of course, is a salt area; it's very corrosive, it's very dusty. So smoke detection
devices are likely to get clogged pretty quickly, and any type of fire suppression system, especially if it's water-based or metal, is likely to corrode or deteriorate very quickly. So keep those items under concern, or under your, you know, purview as you make those recommendations.

Case in point. I think one of the reasons the automatic fire suppression systems were disengaged on the salt trucks were because they were difficult to maintain and that they were subject to accidental discharge. And so because of those issues, they were switched to a manual system. I'd hate to see a lot of money and time and effort spent on a fire protection system get implemented that is either, A, difficult to manage or maintain; or B, that is undone in a year or two because of the corrosive environment.

So thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Hardy. Does either of the Board members have any questions for Mr. Hardy?

Are there other comments from the public? Hearing none -- I'm sorry? Yes, sir.

MR. WALTERSCHEID: Okay. Madam Chair, thank you for asking for other comments. My name is
James Walterscheid. I'm a farmer in Otis. One of my hay buyers lives on the Mobley Ranch. It's on Mobley Ranch Road. He told me when this accident happened, they weren't aware of it for quite a while, and they were pretty upset that I guess whoever was operating the WIPP site didn't inform them. I think they informed Stacy Mills, who's a rancher nearby, but not them. So that's something I just wanted to point out. Thank you very much.

VICE CHAIRMAN ROBERSON: Sir, could you spell your last name for me?

MR. WALTERSCHEID: Okay.

W-A-L-T-E-R-S-C-H-E-I-D.

VICE CHAIRMAN ROBERSON: Thank you so much. Thank you for your comment.

Are there any other public comments? Yes, sir.

MR. FLETCHER: I'm Kenny Fletcher. I'm an editor with Weapons Complex Monitor, and I wanted to follow up on the idea of the monthly reports from the sites that do not have representatives. The weekly reports from the site reps have been a valuable source of information for me, and I would strongly urge the Board to make those monthly
VICE CHAIRMAN ROBERSON: Thank you, Mr. Fletcher.

MR. FLETCHER: Thank you.

VICE CHAIRMAN ROBERSON: Any other comments from members of the public? Hearing none, the floor -- Mr. Pasko, you may resume your regular seat -- the floor is now open for Board member discussion of the work plan, the public comments, and everything associated with that.

MR. SULLIVAN: May I be recognized?

VICE CHAIRMAN ROBERSON: Mr. Sullivan, you are recognized.

MR. SULLIVAN: So I think the plan is a good one. The three reviews with three to four people per review here between now and September for a 100-person agency -- that's a pretty good investment.

I also think we run the risk -- we have to be careful because we run the risk of basically playing our version of Whack-A-Mole. They had a problem here, so now we're going to go look here, and meanwhile, we're the other place that might have a problem.

So we have to be careful not to
overcommit, and I think the staff has struck the
ing right balance with the work plan that has been
presented to us, so I intend to support it.

    I think there's some issues here that we
probably should consider. I think one of them,
Mr. Anastas just mentioned, and it was about testing
people on what they know. I think generally
speaking throughout the DOE complex, this is an area
that we may want to look at. It would be separate
from our WIPP-specific work plan, but the training
and specifically the testing done within the
Department of Energy and its various contractors
seems to me to be very inconsistent. Even where the
training is good in terms of the training that they
give their people initially, or even follow-up
training and recurring training, what I don't see,
which I am used to in rigorous nuclear training, is
written exams with rigorous grading in order to make
sure that people really do know what they're
supposed to know.

    And I'm not aware of any DOE requirements
for this sort of thing. And so, for example, the
rad release incident here may have uncovered an
example where out in Los Alamos the people who were
responsible for creating the procedures, doing the
technical engineering for mixing waste -- if those folks had at some point been asked the question whether or not you should mix nitrate salts with organic kitty litter on a written exam, we might have avoided all of this, assuming it was graded properly.

So I think we ought to take a look at that area, but I think the staff should consider that. I know the staff is probably already working on our follow-on plan for the next fiscal year. That might be an area where we should consider looking at.

And I think long-term here at WIPP, we should also just think about a follow-on opportunity. I think the great risk is not actually in the immediate future, when they have had the problem, they have gotten an lot of attention, they're going to get a lot more attention because there are regulators out there that they actually have to satisfy. I mean, we are in an advisory role, but they're going to have to satisfy the State of New Mexico and they're going to have to satisfy EPA on some things. And in doing that, much work will be done and much attention will be paid.

The question, of course, is going to be two, three years down the line, how much of it
remains, how much -- you know, if there are judgments of need which are decided, you know, which DOE evaluates and says, "Well, there are some follow-on things to do, but that doesn't need to happen prior to resuming waste operations," once the waste operations actually begin, will those get appropriately tracked?

So I think we ought to probably think about perhaps coming back maybe in two years to look at, okay, now that all of the dust has settled from this and the waste operations have begun again and are in full swing -- which I certainly hope for the good of the nation and the complex that that is true in two years -- then we should be perhaps considering coming back to look at the overall state of affairs here at WIPP and making sure that the fixes that were made were, in fact, permanent.

Thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Sullivan.

MR. SANTOS: Thank you, Madam Vice Chairman. I also think the plan is a good one. I'm very interested to get an understanding and see how the staff will leverage all their findings to the
other sites as they go through their own reviews.
They're going to go -- you are going to find best
practices issues, and making sure that that is
disseminated throughout the entire Board staff, it's
very important that it happens.

And so I don't know what sort of processes
need to be updated to make sure that flows
naturally, and we don't have to do like, oh, after
we do all these reviews, now we have to go back and
see what we can learn. I would like to see that
kind of flow out of the work plan as they go through
it.

And as I expressed earlier, I'm very
interested to following Board-approved procedures
and processes to try to encourage and make as much
as we can publicly available and transparent, and
that's something we can have further discussions on
at a later date, even separate from this plan before
us.

That's all.

VICE CHAIRMAN ROBERSON: Thank you,
Mr. Santos.

I too agree with a lot of the comments
that my fellow Board members have made. I think we
do have to be careful not to take all of our assets
and run to one place when there are so many eyes watching. But we have to make sure the activities we do undertake are really going to be the ones that count as it relates to our function and mission for assuring nuclear safety.

I do also agree that once we are out of the test mode, the Board should determine if there is -- if the monthly reports are something that would benefit the public from being made public. But I do want to make sure that we -- it's a new animal the staff is creating, and we need to let them get out of test mode.

I also think -- I don't think it affects the staff's work plan directly, and if it does, I think it's something the Board could decide and modify later. I do believe that a Board member should conduct another visit to this site before the fiscal year is over, as well, too. I think those visits do help drive organization of things like the status of corrective actions and other things, and although I do not recommend it as a modification to the proposed work plan today, I think it's something I would ask the Board to consider as a modification to the work plan at some day not too distant from today. But today I plan to support the staff's
proposed work plan because I think it is comprehensive, I think it addresses the key areas that the Board should be looking at, and I think it incorporates the lessons learned that the Board should be implementing.

So those would be my comments.

MR. SULLIVAN: I would add that Dan and I had good fajitas last night at Lucy's, and so you need to come back so that you can have good fajitas at Lucy's.

VICE CHAIRMAN ROBERSON: I would happily do it.

Any other comments from Board members? Are we prepared to vote on the staff's proposed work plan?

MR. SULLIVAN: I'll be happy to make a motion. I'm so recognized?

I move that the Board approve the work plan for the Waste Isolation Pilot Plant that is dated April 2015.

MR. BATHERSON: Madam Vice Chairman, the action on which Mr. Sullivan has moved for a vote is approval of the staff's proposed work plan for safe recovery and resumption of operations. At this point I will proceed to call the roll of the Board
members for their vote.

Mr. Santos?

MR. SANTOS: Aye.

MR. BATHERSON: Mr. Sullivan?

MR. SULLIVAN: Aye.

MR. BATHERSON: Ms. Roberson?

VICE CHAIRMAN ROBERSON: Aye.

MR. BATHERSON: Hearing three votes to approve, the proposed work plan is approved.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Batherson.

Do the Board members wish to move for a vote on any other proposal for Board member action not specifically set out in the agenda but related to the business of this meeting? Mr. Sullivan?

MR. SULLIVAN: No, ma'am.

VICE CHAIRMAN ROBERSON: Mr. Santos?

MR. SANTOS: No, ma'am.

VICE CHAIRMAN ROBERSON: Having concluded the voting process, with that I am going to turn to the Board members for their closing comments, and then I will end with my own comments.

Mr. Sullivan.

MR. SULLIVAN: Thank you. I think this has been a useful exercise. I have learned a lot.
I know that there's a lot of attention on this site, and I know that there's a lot of people working hard to get this site back up and running, and I think it's very necessary for the country that that happen.

I think it's very unfortunate that it took accidents in order to get the attention of people in charge in order to make certain fundamental corrections, and I hope that as a Defense Nuclear Facilities Safety Board, we can help the department avoid that in the future.

Thank you.

VICE CHAIRMAN ROBERSON: Thank you.

Mr. Sullivan.

Mr. Santos.

MR. SANTOS: Thank you, Madam. As we know, given all the deficiencies identified and the events itself, it could have been much worse than it actually happened, and I think this is a great opportunity to learn the lessons learned and to not minimize them, so they are not quickly forgotten, and they actually get more institutionalized, not only throughout DOE, but nationwide and also even internationally, so we can all remember and avoid repeating the mistakes.
I know there's a lot of attention right now. I'm very concerned about the long-term sustainability of all those improvements. And one item we didn't talk about is also the aging work force, the turnover, the changes, and how is all that going to be managed and provide that sustainability? So that is something I personally would like to continue to explore, not only on WIPP but across the complex as I visit the various sites.

I again want to thank everybody, from the people in Carlsbad, the workers, they're very hard workers and I'm very proud of their work. The partnership, the DOE leadership, and our own staff for all the support. Everyone's trying to do the right thing, but we all recognize there's a lot of work. So we just have to be ever vigilant when it comes to safety. And it's something we can never rest. So with that I conclude my remarks, and thank you.

VICE CHAIRMAN ROBERSON: Thank you, Mr. Santos.

You took many of the words right out of my mouth. I think the only thing that I would add is, this is the first public hearing that the Board has conducted in Carlsbad, and so we appreciate your
patience and your attendance.

    I want to thank all of our witnesses for their statements, for their answers, and for their patience. I want to thank our staff and I want to thank my fellow Board members. And mostly, I want to thank our staff, the Board staff. This is the first public hearing we've had in Carlsbad, and it may be the only the second public hearing that the Board has conducted. So we understand the importance of the mission of this site. We understand how important it is to assure that it restarts safely, and we will be watching.

    And with that, this concludes this public meeting of the Defense Nuclear Facilities Safety Board. We are now adjourned. Thank you for attending.

    (The proceedings adjourned at 8:43 p.m.)
STATE OF NEW MEXICO

COUNTY OF BERNALILLO

REPORTER'S CERTIFICATE

I, MARY ABERNATHY SEAL, New Mexico Certified Shorthand Reporter, DO HEREBY CERTIFY that I did report in stenographic shorthand the proceedings set forth herein, and the foregoing is a true and correct transcription of proceedings.

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