

UNITED STATES OF AMERICA
CHEMICAL SAFETY AND
HAZARD INVESTIGATION BOARD

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E.I. DuPONT DE NEMOURS and CO., INC.,
FLAMMABLE VAPOR EXPLOSION
DuPONT YERKES PLANT
TONAWANDA, NY NOVEMBER 9th, 2010

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PUBLIC MEETING

+ + + + +

THURSDAY
APRIL 19th, 2012

+ + + + +

6:00 P.M.

BOARD MEMBERS:

RAFAEL MOURE-ERASO, Chairman
JOHN S. BRESLAND
MARK GRIFFON

CHRISTOPHER WARNER, General Counsel

INVESTIGATIVE TEAM:

JOHNNIE A. BANKS, CFEI
MARK WINGARD, CFEI
CHRISTINA MORGAN, MPH

C-O-N-T-E-N-T-S

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1 P-R-O-C-E-E-D-I-N-G-S

2 MR. MOURE-ERASO: Good evening and
3 welcome to this public meeting of the U.S.
4 Chemical Safety Board, the CSB. Everybody
5 please take a seat and everybody, I think
6 there are enough seats here in the front if
7 somebody wants to, okay.

8 My name is Rafael Moure-Eraso. I
9 am the Chairperson of the CSB Board and with
10 me today are Board Members John Bresland and
11 Mr. Mark Griffon. And also joining me here on
12 the table is our General Counsel, Chris
13 Warner. On the other table are the CSB staff
14 members, Johnnie Banks, which is the team
15 leader for this investigation. Mark Wingard
16 one of the investigators. And also we have
17 with us Christina Morgan, who is a Senior
18 Member of our Recommendations Department.

19 The CSB is an independent non
20 regulatory Federal Agency that investigates
21 serious chemical accidents. The
22 investigations examine all aspects of chemical

1 accidents, including physical causes related
2 to equipment design as well as inadequacies in
3 regulations, industry standards and safety
4 management systems.

5 Ultimately, we issue safety
6 recommendations which are designed to prevent
7 similar accidents in the future. The purpose
8 of today's meeting is to present the
9 Investigation Team's findings and draft safety
10 recommendations into a November 9, 2010 hot
11 work accident at the DuPont facility here in
12 Buffalo, New York.

13 I would like to start with a brief
14 moment of silence to acknowledge the victims
15 of this accident, Richard Folaron, who was
16 fatally injured in the incident, and William
17 Freeburg, who was injured as a result of the
18 accident. So please stand with me.

19 (Whereupon, a moment of silence
20 was observed.)

21 MR. MOURE-ERASO: Thank you very
22 much. The accident occurred as a result of

1 sparks or heat produced from hot water
2 igniting the vapors within the tank. As you
3 will hear this evening, the CSB found that the
4 primary cause of the blast was the failure of
5 the company to require the interior of the
6 storage tanks, in which hot work is to be
7 performed, to be constantly monitored for
8 flammable vapor.

9 As we are a safety agency, before
10 we begin, I'd like to point out some safety
11 information from the facilities here. If
12 everything is normal and there is not an
13 emergency, you will exit through the same door
14 that you entered into the room. If however,
15 there is a fire or an earthquake or a tornado
16 or other emergency, please take a moment to
17 notice the additional exits, there are two
18 other exits on the side which you can use also
19 to get out. So that's the safety part from
20 the physical premises here. I also would ask
21 you to mute your cell phones so that these
22 proceedings are not disturbed, starting with

1 mine, that just came with a call.

2 I would like to acknowledge first
3 the CSB Investigation Team, who will be
4 presenting their draft report to us today.
5 They will describe their findings on the
6 incident and propose safer recommendations for
7 preventing future accidents.

8 As an introduction, in 2010, the
9 CSB issued a safety bulletin on the dangers of
10 hot work. This bulletin could be found on our
11 website, Hot Work Quality. That summarizes
12 eleven accidents that occurred during hot work
13 on or in the vicinity of chemical tanks. I
14 find it tragic that we continue to see life
15 lost from this hot work accident, which
16 continue occurring all too frequently, despite
17 long known procedures that we know that exist
18 that can prevent them.

19 Facility monitors have an
20 obligation to assure the absence of any
21 flammable vapor in areas where hot work is to
22 take place. Explosion hazards can be

1 minimized by testing inside tanks as well as
2 in areas around them.

3 Following the Team's presentation,
4 there will be an opportunity for myself and my
5 fellow Board Members to ask questions to the
6 Investigative Team on the recommendations they
7 are making for us to vote. Then we'll be --
8 we'll be opening the floor for public
9 comments. If anyone in the audience wishes to
10 comment publically, please sign at the tables
11 in the adjacent area so that we can be calling
12 them during the public period.

13 Please note that we will have a
14 limit on public comments to five minutes per
15 person. And if you take more than five
16 minutes, you are going to be taking the time
17 of the person next to you, so keep that in
18 mind. So please keep to the time limits. At
19 the conclusion of the public comments, the
20 Board will formally take a vote on the final
21 report and then the vote. The report will be
22 put on the website and also the video that

1 describes the visuals of this accident will
2 also appear on the website and will be
3 available for viewing and for downloading if
4 you would like to use it.

5 After that, we are going to have a
6 session in which, you know, after we finish
7 the part of the -- upon investigation, we are
8 going to have a brief meeting that is also a
9 public meeting, in which we are going to be
10 presented for the public or draft for the next
11 five years, the Strategic Plan of the Chemical
12 Safety Board and I will be telling you about
13 this once we finish the business of the DuPont
14 investigation.

15 I would not like to continue
16 without saying, that I -- that we thank the
17 DuPont Buffalo Investigation Team for their
18 strong commitment and dedication to their work
19 and I would also like to thank the audience
20 for being proactively interested in a common
21 hazard that can result in deadly consequences
22 if the hazards are not truly assessed.

1 I would now recognize my fellow
2 Board Members for any words that they have as
3 an opening statement. Mr. Bresland.

4 MR. BRESLAND: Thank you, Mr.
5 Chairman. I don't have very much to say this
6 evening as part of an opening statement, but
7 I -- it is distressing though on a regular
8 basis we do see accidents similar to this
9 where a flammable material is being used on
10 welding and burning is taking place close by.
11 Unfortunately, either through ignorance in
12 some cases that we have seen or through just
13 lack of diligence that these terrible
14 accidents occur.

15 And I have always felt as someone
16 who used to work in the industry, that there
17 are a couple of ways to get yourself killed in
18 -- if you're working in the chemical industry.
19 One is confined space, entering a tank. And
20 the other is burning and welding in a
21 flammable area. And unfortunately this
22 accident happened in -- above a tank where

1 burning and welding was taking place and a
2 flammable vapor was inside the tank, resulting
3 in the terrible tragedy that we're here to
4 talk about this evening.

5 I certainly look forward to
6 hearing from the Team and hearing what their,
7 the results of their investigation and what
8 their recommendations are.

9 MR. MOURE-ERASO: Thank you, Mr.
10 Bresland. Mr. Griffon.

11 MR. GRIFFON: Thank you. I would
12 first like to also offer my condolences to the
13 friends and families of Mr. Richard Folaron
14 and Mr. William Freeburg. I should note,
15 unfortunately, most of our investigations are
16 these types of accidents that result in
17 fatalities. It's the nature of our work.
18 This is yet another case, I feel, that
19 something that was highly preventable and yet
20 resulted in a fatality.

21 I also wanted to reflect on the
22 fact that we're here one week before Workers'

1 Memorial Day, April 28th, which is a day of
2 remembrance for workers killed on the job.
3 And I think the current numbers are
4 approximately 12 workers dying a day at the
5 job, which I think our message is clear and
6 we, as a global we, I think have to do much
7 better. And we're hoping that we can do a
8 small part in that with our findings and our
9 recommendations and our work on the Chemical
10 Safety Board. Thank you

11 MR. MOURE-ERASO: Thank you, Mr.
12 Griffon. At this time I would like to
13 introduce the CSB Lead Investigator of this
14 investigation, Mr. Johnnie Banks. Johnnie.

15 MR. BANKS: Mr. Chairman, Board
16 Member Bresland, Board Member Griffon and Mr.
17 Warner, ladies and gentlemen, good evening.

18 The DuPont Yerkes Investigative
19 Team is prepared to present our findings from
20 our investigation of a flammable vapor
21 explosion, which occurred at the DuPont Yerkes
22 facility in Tonawanda, New York. This

1 incident occurred on November 9th, 2010 and
2 resulted in the death of a contract worker and
3 the serious injury to another.

4 I'd like to take this opportunity
5 to provide an overview of the agenda for
6 tonight's proceedings. We'll begin with the
7 Team's presentation of investigation findings.
8 I will move from there to entertain questions
9 from the Board. The public will be invited to
10 offer comments. The Board Members will then
11 vote on the Team's proposed findings and
12 recommendations. And finally we'll have a
13 closing comment from the Chair.

14 Before I start, I'd like to take a
15 moment to also introduce the members of the
16 Team. To my immediate left, Mr. Mark Wingard,
17 CSB Investigator. And from our
18 Recommendations Group, our Recommendations
19 Specialist, Ms. Christina Morgan. Also, an
20 investigator who participated in that
21 investigation, who unfortunately can't join us
22 tonight, is Ms. Lucy Sciallo-Tyler.

1 Continue with the presentation of
2 tonight's agenda. We'll move to an overview of
3 the DuPont facility followed by a brief
4 description of the process. We'll illustrate
5 this with a presentation of a video animation
6 of the process and the chain of events that
7 led to this tragic incident. We will then
8 proceed from there to our investigation
9 findings and the key learnings and finally,
10 the proposed recommendations.

11 In taking a look at the company
12 overview, DuPont Corporation is headquartered
13 in Wilmington, Delaware. It operates in more
14 than 90 countries worldwide and has more than
15 60,000 employees globally. In 2011, generated
16 revenue in excess of 32.7 billion dollars and
17 is the second largest chemical company in
18 revenues globally. It provides -- also
19 provides safety consulting services to the
20 industry.

21 The DuPont Yerkes facility is
22 located in Tonawanda, New York, right outside

1 of Buffalo and is the site of a 100 acre
2 facility that employees approximately 600
3 workers. DuPont has operated the facility
4 since 1921.

5 The facility manufactures
6 polymers and surface materials such as Tedlar
7 or polyvinyl fluoride or PVF, the chemical
8 process involved in this incident. PVF is
9 used in a variety of applications as a film or
10 a surface protector due to its resistance to
11 weathering and flammability lowering
12 properties.

13 The Tedlar process converts
14 flammable vinyl fluoride gas to PVF, a polymer
15 in water slurry. The PVF slurry passes to
16 insulated holding tanks and PVF -- PVF is
17 pumped from those tanks for further
18 processing. Now in this diagram here, which
19 is a simplified diagram of the process, vinyl
20 fluoride from storage on site is mixed with
21 water and is routed to a reactor, where from
22 there it proceeds to a separator where un-reg

1 vinyl fluoride is recycled through a
2 compressor back to the reactor and a solution
3 of PVF slurry is routed through piping with
4 steam injection into the slurry tank area.

5 Prior to entering the slurry tank
6 area, there is a flash tank where steam and
7 vinyl fluoride vent into the atmosphere. The
8 material is then, proceeds into one of three
9 slurry tanks, or at the time of the incident,
10 three slurry tanks. That's important to note
11 that since this incident occurred, slurry tank
12 number one has been removed and is no longer
13 part of the process.

14 There is an overflow seal loop, U
15 tube, right there that's depicted in slurry
16 tank number two. And once the material
17 settles into the tanks, it is routed to drying
18 and packaging via pumping on the bottoms of
19 those tanks.

20 The three-foot diameter flash tank
21 vents small concentrations of flammable vapor
22 directly into the ambient atmosphere, so the

1 area is equipped with a flammable vapor air
2 monitoring device to notify personnel when
3 explosion hazards are present. Continuous air
4 monitors are located on the cat walk near the
5 slurry tank three and on the flash tank vent
6 pipe.

7 Here's a photo of some equipment
8 directly involved in the incident. Slurry
9 tank number three. Here's slurry tank number
10 two. And as I mentioned earlier, slurry tank
11 one, which was in place at the time of the
12 incident, but which has since been removed.
13 You have an overflow line that connects all
14 three tanks. And here we have the slurry
15 flash tank overflow line.

16 The slurry tanks are eleven feet
17 in diameter, 19 feet tall and have a capacity
18 of about 10,800 gallons. The tanks shell and
19 top are one-quarter inch thick stainless
20 steel. Each tank has a hinge, unsealed steel
21 cover. The non combustibile PVF slurry passes
22 to one of three insulated slurry holding tanks

1 numbered one, two, or three. These are in the
2 tank form.

3 Under normal operating conditions,
4 slurry was pumped to slurry tank three.
5 Slurry tanks two and one were used as overflow
6 storage space in the event slurry tank three
7 was filled. Slurry tank one was generally
8 kept empty of slurry. The slurry tank feed and
9 drain lines were equipped with isolation
10 valves. Slurry tanks have a common equalizer
11 line near -- attached near the tops of the
12 tanks and blind flanges are installed in the
13 equalizer line to isolate one tank from
14 another if one of two tanks are operating
15 while the third is undergoing maintenance.

16 Looking at the properties of VF's,
17 it is a colorless gas. It is highly flammable
18 in ambient conditions with an ether like odor.
19 VF vapors are heavier than the air and will
20 accumulate in low areas. VF is classified as
21 a reasonably anticipated human carcinogen by
22 the National Institute of Environmental Health

1 Science Toxicology Program.

2 The maintenance contract for the
3 work that was ongoing at the time of the
4 incident was Mollenberg-Betz. DuPont hired
5 Mollenberg-Betz, a third-party contractor, to
6 do work on the SJ support. Mollenberg-Betz
7 operates a large steel fabrication facility in
8 Buffalo and has provided skill and maintenance
9 services to DuPont in the past.

10 The contract welder performed,
11 with welding experience, completed the work on
12 tank two, but delayed repairs on tank one as
13 necessary repair materials were not available.
14 Tank one work was scheduled for November 9th,
15 2010, after the unit restart. DuPont
16 engineers determined it was safe for the
17 slurry tank one to be completed after the
18 process restarted.

19 In the next portion of the
20 presentation, we'll present a series of
21 animation videos that will take you through
22 the chain of events that led to the incident

1 and that portion will be conducted by my
2 colleague, Mr. Wingard.

3 (Whereupon, a video was played.)

4 MR. WINGARD: The video you just
5 saw was only an excerpt of the full video that
6 was produced as part of this investigation.
7 Pending approval of the report tonight, the
8 full video will be available for viewing on
9 the CSB website tomorrow, at WWW.CSB.GOV. I
10 recommend you all go and watch the video to
11 get a better idea of the investigation.

12 Also, this presentation goes
13 through the report but the full report is also
14 out on the table and pending approval, will be
15 on our website as well. I recommend you all
16 go and read that to get a better understanding
17 of the case.

18 As the animation shows, this
19 incident occurred during hot work activities
20 at DuPont. Hot work is any flame or spark
21 producing operation, including welding,
22 grinding and cutting. By definition, hot work

1 generates multiple ignition sources. If these
2 ignition sources can reach combustible dusts
3 or flammable gases, they can ignite, leading
4 to fire and explosions, which can cause injury
5 or death.

6 Anytime hot work is going to be
7 performed, certain precautions need to be
8 taken to assure that it's carried out safely
9 and no injuries occur.

10 Unfortunately, CSB has
11 investigated hot work many times in the past.
12 In March of 2010, the CSB released a safety
13 bulletin which discussed the dangers
14 associated with hot work. This bulletin can
15 also be found on the CSB website. This safety
16 bulletin identified 60 facilities caused by
17 hot work in the years from 1990 to 2010.

18 The bulletin went into depth and
19 summarized eleven hot work incidents, nine of
20 which the CSB had investigated. From these
21 eleven incidents, seven key lessons were
22 taken. These key lessons, if followed, will

1 help reduce the likelihood of hot work
2 incidents.

3 Two of the key lessons from CSB
4 hot work bulletin point out failures which
5 occurred, which contributed to the incident at
6 DuPont. One of these key lessons, to monitor
7 the atmosphere, read: In the safety bulletin,
8 conduct effective gas monitoring in the work
9 area using a combustible gas detector prior to
10 and during hot work activities, even in areas
11 where a flammable atmosphere is not
12 anticipated.

13 Another key lesson, test the area.
14 Reads: When welding on or in the vicinity of
15 storage tanks, properly test and if necessary,
16 continuously monitor all surrounding tanks or
17 adjacent tanks.

18 If these key lessons had been
19 applied at DuPont on the day of the incident,
20 it is likely that the disaster would have been
21 averted.

22 How to safely conduct hot work is

1 generally well understood, however, power
2 incidents continue to occur with alarming
3 frequency. As a result of the continued
4 occurrence of hot work incidents, the CSB
5 continues to investigate this practice and
6 anticipates releasing a hot work product in
7 the future, which will include a large scale
8 recommendation.

9 The CSB is currently looking at
10 government regulations and industry standards,
11 which could be improved or implemented to
12 prevent hot work accidents, such as this, from
13 occurring again.

14 Effective air monitoring is vital
15 to safely conducting hot work. As the video
16 showed, on the day of the incident, DuPont
17 technicians monitored the air above the tanks
18 where hot work was to be performed but no
19 monitoring was done of the atmosphere inside
20 of tanks one, two or three. Had the inside of
21 these tanks been monitored prior or during hot
22 work, the contractors could have been warned

1 of the dangerous atmosphere inside the tanks
2 and would not have created the ignition
3 sources which led to the explosion.

4 When performing hot work, permits
5 are needed to ensure that hot work is done
6 safely and all precautions are taken care of
7 before the work begins. On the day of the
8 incident, the contractor foremen filled out
9 the hot work permit and had it signed off by
10 DuPont personnel as he was instructed to do.
11 However, the DuPont individuals who signed off
12 on the permit, had limited knowledge of the
13 Tedlar units in the slurry tanks. The
14 individuals who signed off on the permits,
15 were not aware of the crack in the seal loop.
16 They also would not have been aware of what
17 affect this would have inside the atmosphere
18 of the slurry tanks.

19 They also would not have been
20 aware of the loss of the compressor, which
21 increased the amount of vinyl fluoride going
22 into the slurry flash tank, which, the crack

1 in the seal loop, would increase the amount of
2 flammable vapor inside the slurry tanks.

3 Had the appropriate people signed
4 off on the hot work permit, they may have
5 insisted on increased precautions that could
6 have prevented this incident.

7 Process Hazard Analysis, or PHA,
8 is one element of OSHA's Process Safety
9 Management Program, which is a regulation that
10 covers chemical processes containing highly
11 hazardous chemicals or large quantities of
12 flammables, as discussed in this presentation.

13 PHAs, using several methodologies,
14 systematically assess a chemical process for
15 potential hazards and evaluate safeguards to
16 prevent incidents. PHAs are generally
17 performed by a team of experts and employees
18 who are familiar with the process. They are
19 required to be updated every five years. The
20 PHA's are a vital part of any safety program
21 at a plant or facility.

22 Although the slurry tanks were not

1 covered under DuPont's PSM coverage, they were
2 included in DuPont's PHA. A PHA performed by
3 DuPont personnel prior to the incident
4 determined that vinyl fluoride could not reach
5 the dangerous levels in the slurry tanks. The
6 consideration of vinyl fluoride reaching the
7 slurry tanks creating a flammable atmosphere
8 was not considered.

9 I will now go through some
10 industry codes and standards that give
11 guidance on how to safely conduct hot work.

12 The National Fire Protection
13 Association is an industry consistent
14 organization that develops and maintains
15 standards and codes related to fire prevention
16 and response. Various federal, state and local
17 authorities have adopted NFPA codes and
18 standards.

19 As with any consistent standard,
20 when a particular standard is not a regulatory
21 requirement, individual companies can adopt
22 the standard as part of their own policies and

1 procedures. This is frequently in the best
2 practice in the industry.

3 The FPA 51B, titled Fire
4 Prevention, during welding, cutting and other
5 hot work gives general guidance for
6 contractors and property managers who manage,
7 supervise and perform hot work.

8 The NFPA standard is not intended
9 to contain all necessary safety precautions
10 and work practices involved in job specific
11 work such as hot work on atmospheric tanks.

12 The NFPA 51B, recommends purging
13 containers of flammable liquids and vapors
14 prior to initiating hot work. It also gives
15 sample hot work permits. It talks about how
16 to appropriately fill out and get clearance
17 for doing hot work.

18 NFPA 326, safeguarding tanks and
19 containers for entry, cleaning or repair, give
20 precautions specific to hot work performed on
21 storage tanks, like the tanks involved in this
22 incident. 326 states, that work on tanks or

1 containers, shall be permitted only after the
2 characteristics of the atmosphere within the
3 tank or container have been determined.

4 It also recommends isolating any
5 tank vents prior to initiating hot work. The
6 Occupational Safety and Health Administration,
7 or OSHA, issues and enforces standards and
8 programs for workplace safety and health.

9 OSHA Regulation 1910.252 regulates
10 hot work. It is titled: Welding, Cutting and
11 Brazing General Requirements. This document
12 provides industry requirements for performing
13 hot work. 252 prohibits cutting or welding in
14 the presence of flammable atmospheres and
15 requires all lines or connections to pipes or
16 vessels to be disconnected or blanked prior to
17 starting hot work.

18 The OSHA standard also
19 incorporates the 1962 Edition of NFPA 51B by
20 reference. After the incident, OSHA inspected
21 the DuPont facility and cited them for failing
22 to comply with Regulation 1910.252. This

1 regulation does not require companies to
2 monitor the inside of tanks prior to work,
3 doing hot work.

4 Process Safety Management, or PSM,
5 is an OSHA regulation which contains
6 requirements for preventing or minimizing the
7 consequences of catastrophic releases of toxic
8 reactive flammable or explosive chemicals.
9 Though enacted in 1992, vinyl fluoride is a
10 flammable gas, it is covered under PSM
11 anytime a process contains more than 10,000
12 pounds, such as the Tedlar process.

13 DuPont considered the Tedlar
14 process PSM covered up to the slurry flash
15 tank, however that was the end of their PSM
16 coverage for that section. They did not
17 consider the slurry tanks covered under PSM.

18 The CSB investigation, concluded
19 at the time of the incident, the slurry tanks
20 should have been PSM covered. Had the slurry
21 tanks been included in DuPont's PSM coverage,
22 management of change would have likely been

1 done on the failed seal loop. This would have
2 forced DuPont to analyze how operating with
3 this broken loop would affect the safety of
4 the system.

5 Mechanical integrity inspections
6 likely would have identified this failed
7 sealed loop and the tank corrosion earlier.

8 Now I'll go through a summary of
9 the findings the Investigation Team had in
10 this investigation. Number one, DuPont PHA's
11 made the incorrect assumption that vinyl
12 fluorides in the Tedlar process could not
13 reach flammable levels in the slurry tanks.

14 Number two, DuPont restarted the
15 unit after incorrectly concluding that the
16 defective seal loop did not increase the risk
17 of vinyl fluoride vapor transfer into tank
18 two. Flammable vinyl fluoride vapor flowed
19 directly from the flash tank into tank two.

20 Number three, DuPont did not
21 properly isolate and lockout tank one from
22 inservice tanks two and three prior to

1 authorizing hot work on tank one.

2 Consequently flammable vinyl fluoride vapor
3 passed directly from tank two into tank one
4 through the overflow line that accumulated to
5 a concentration above the lower explosive
6 limit.

7 Number four, the DuPont hot work
8 permit procedure did not require testing the
9 atmosphere inside tank one for flammable vapor
10 even though the work required welding directly
11 to the tank top.

12 Number five, the individuals who
13 signed off on the hot work permit, were not
14 knowledgeable in the operations and hazards of
15 the Tedlar process.

16 Number six, the repair work
17 created several ignition sources which most
18 likely ignited the flammable vapor. Welding
19 and grinding increased the metal temperature
20 significantly above the vinyl fluoride vapor
21 above the ignition temperature and generated
22 hot sparks

1 And finally number seven, OSHA's
2 hot work standard did not specifically require
3 gas monitoring inside containers intended for
4 hot work, even though it is recommended by
5 industry safety practice guidelines.

6 Now the following are key lessons
7 the Investigation Team hopes industry will
8 take away from this investigation. There a
9 three of these. Number one, welding to the
10 outside surface of a tank or container
11 generate heat and sparks near the weld area.
12 The extreme temperatures and sparks will
13 likely ignite flammable materials present
14 inside the equipment.

15 Number two, before starting hot
16 work activities, all process connections on
17 tanks and similar containers should be
18 completely isolated by closing valves,
19 installing blanks and disconnecting pipes to
20 ensure that all possible and known sources of
21 flammable materials cannot enter the
22 containers at anytime.

1 And number three, the atmosphere
2 inside any container previously containing
3 flammables, regardless of size, should be
4 tested before authorizing any hot work
5 involving grinding, cutting or welding on the
6 outside surface and the atmosphere must be
7 continuously monitored during the work.

8 Thank you. We'll now have
9 Christine Morgan go through our proposed
10 recommendations for this case.

11 MS. MORGAN: I want to begin with
12 a brief overview of the CSB's Safety
13 Recommendations, which we issue to protect
14 workers, the public and the environment.

15 Recommendations are the agency's
16 primary tool for effecting widespread and
17 lasting safety improvements. Recipients of CSB
18 recommendations include local, federal and
19 state governments with the ability to approve
20 laws and regulations and to enhance regulatory
21 enforcement activity, professional
22 organizations and trade associations which

1 issue voluntary consent standards, best
2 practice guides and industry safety alerts and
3 corporations and facilities that may improve
4 safety management systems to prevent the
5 occurrence of incidents.

6 Our recommendations are formulated
7 to specifically address the findings of CSB
8 investigations and studies and they focus on
9 system or management level improvements
10 necessary to prevent future accidents.

11 CSB's Office of Recommendations
12 follows up with the recipients of all CSB
13 recommendations and posts their status on line
14 at CSB.gov/recommendations.

15 With that, I will introduce the
16 four recommendations which the Investigation
17 Team are proposing to the Board for approval.
18 Although the CSB continues to review best
19 practices for hot work operations, this
20 evening the Team is proposing four
21 recommendations to the DuPont Corporation.

22 Recommendation 1 reads as follows:

1 Develop and enforce a corporate quality
2 control policy and procedure to require that
3 all DuPont facilities audit their hot work
4 permitting systems to ensure that all
5 potential explosion hazards associated with
6 hot work activities are identified and
7 mitigated before hot work is started. All
8 relevant forms required for permits are
9 complete in accordance with corporate policies
10 and industry standards, including NFPA 326 and
11 NFPA 51B, before hot work is started and that
12 appropriate DuPont personnel officially
13 approve hot work permits by signature or
14 equivalent consistent with DuPont's policies
15 before hot work is started.

16 R2 reads as follows: Revise
17 corporate policies and procedures to require
18 all process piping, vent piping or similar
19 connections to be positively isolated using
20 closed valves, blind flanges or pancake blanks
21 before authorizing any hot work.

22 R3: Revise corporate policies and

1 procedures to require that the atmosphere
2 inside a container be monitored for flammable
3 vapor prior to performing any welding, cutting
4 or grinding on the container surface

5 And finally R4: Revise corporate
6 policies and procedures to require air
7 monitoring for flammable vapor inside the
8 container for the duration of the hot work
9 consistent with industry standards NFPA 326
10 and NFPA 51B. Create a policy for determining
11 criteria for requiring continuous or periodic
12 testing for the duration of hot work.

13 And with that, I will turn it over
14 to the Board for questions to the
15 Investigation Team. Thank you.

16 MR. MOURE-ERASO: Thank you very
17 much, Christina. Following this formal
18 presentation from the Investigators, the Board
19 will ask questions on the investigation from
20 the Investigative Team. So I will ask first,
21 Mr. Bresland, if you have any questions?

22 MR. BRESLAND: Thank you. Thank

1 you, Chairman Moure. I have several questions
2 and maybe I'll ask one or two to start with
3 and then you can come back to me later. One
4 question I have that in thinking about your
5 presentation this evening that I find quite
6 puzzling, is the OSHA regulation on burning
7 and welding. What slide number is that, Mr.
8 Banks? I think this is the 20 -- 28, yes.
9 Where it says OSHA does not require internal
10 monitoring for hot work.

11 And in thinking about this, I
12 guess I just don't -- I don't understand why
13 that would be the case. And I would assume as
14 we go through this process in the months
15 ahead, that we'll have a recommendation coming
16 out of this to OSHA because most of the
17 incidents that we see involving hot work
18 involve tanks that are blowing up. It doesn't
19 seem logical that they wouldn't have a
20 requirement for monitoring inside the tanks,
21 although I am sure that most companies who are
22 doing hot work, would be monitoring inside

1 their tanks to make sure there isn't any
2 flammable materials.

3 But in the cases that we have
4 investigated, that has been a failing. Any
5 idea why that would have been left out of the
6 OSHA requirements or the current OSHA
7 standards?

8 MR. WINGARD: No, I mean, we
9 agree, we think it's an issue that bears
10 further investigation and recommendations.
11 We'll say that the OSHA regulations seems to
12 be outdated based on the 1960, on the NFPA
13 work, so it could be that if we learn more
14 about hot work, OSHA is just not changing
15 their regulations to keep up with the times.
16 I agree with you.

17 MR. BANKS: And also, as was
18 discussed earlier today at a press conference,
19 there is an ongoing discussion and study of
20 hot work incidents throughout the country
21 where we have developed more expansive
22 recommendations to address those perceived

1 shortcomings.

2 MR. BRESLAND: In this particular
3 incident, at the -- had there been a
4 requirement at the DuPont plant for monitoring
5 inside the tank, how would that have -- what
6 -- how would that have taken place? What
7 would they have done or what should they have
8 done?

9 MR. BANKS: I think prudence would
10 have dictated that some type of gas testing
11 internal to the tank to determine absolutely
12 that there were no flammable materials in that
13 tank. And if there were say some structure to
14 doing that where it was done every time, we
15 presume it would have been done. And in the
16 incident that we have coming through our
17 screening service on a routine basis, there's
18 a lack of that adherence to absolutely
19 determining that the tank or equipment that's
20 being welded on or hot work is ongoing, that
21 there is an internal check to absolutely
22 determine there are no flammable material

1 inside.

2 MR. BRESLAND: But it's not a
3 difficult procedure to carry out, if you
4 connect a piece of hose to the measuring
5 device, drop a hose into the -- or a piece of
6 tygon tubing.

7 MR. BANKS: Yeah, there are
8 devices that can be used to make that
9 determination. They can be operated by plant
10 personnel, by plant fire department personnel,
11 to evaluate the amount of flammable
12 concentrations in the tank, if they need the
13 oxygen content. If there's any other toxic
14 material such as H₂S, that would be in the
15 tank as well.

16 MR. BRESLAND: I'll pass for now
17 but I'd like to come back.

18 MR. MOURE-ERASO: You wanted to
19 add something, Mark.

20 MR. WINGARD: I would say that for
21 confined spaces, this is frequently, they do
22 these tests inside tanks, so, I mean, the

1 technology is there and it's easy to
2 implement, so just say expanding that to do
3 the hot work as well would be a very simple
4 way to make a very strong change for safety.

5 MR. MOURE-ERASO: Thank you, John.
6 We'll ask Mark, if you have any particular
7 questions.

8 MR. GRIFFON: Sure. Just to stay
9 on the OSHA permit theme, can you tell me,
10 just to clarify, I think you noted in the
11 presentation in the report, that a procedure
12 and permit in this case were not followed or
13 -- and that resulted in the problems and the
14 incident. But did you also examine the
15 procedure and the permit, you know, as it
16 existed and whether it complied with OSHA
17 requirements, with other requirements?

18 MR. BANKS: Yes.

19 MR. GRIFFON: And what did you
20 find, I guess, is the question?

21 MR. WINGARD: Sure. In looking at
22 DuPont's corporate hot work permitting policy,

1 it seems to follow 51B pretty well. If they
2 had done as the policy calls correctly, it
3 seems like they could have caught this.
4 Whether or not they would have evaluated the
5 seal loop crack effectively and said that we
6 shouldn't do this hot work due to the
7 possibility of vinyl fluoride, is hard to say
8 with any certainty.

9 But it really was the practice of
10 signing off on the permits and getting the
11 affected people. So the structure was there
12 to do it correctly based on the regulations
13 and standards that exist. It was just
14 actually doing it where they failed.

15 MR. GRIFFON: And just to
16 follow-up on that, along those same lines, did
17 -- in the sign off, I think this is of a
18 particular interest to me, the supervisor
19 signing off on the permit, apparently didn't
20 have a working knowledge of this operation.
21 Is that fair -- fair to say? And my question
22 would be, why was this person signing off?

1 Why was this person the designated person to
2 sign off on the hot work permit?

3 MR. WINGARD: Well, for the hot
4 work done that day, he should not have been
5 the person to sign it. The department that
6 signed off, where individuals signed it off
7 from, having worked with these contractors, as
8 they did work in a different area, that they
9 were allowed to sign off hot work permits. So
10 the contractors believed that this was the
11 appropriate person to get the signatures from.
12 And so when they went there, the person should
13 have realized it was work outside the -- or
14 should have -- DuPont should have not allowed
15 him sign off on those.

16 MR. GRIFFON: I think, I am not
17 trying to focus on the individual either. I
18 think the individual thought he was approving
19 the work to move ahead, authorizing the work,
20 not necessarily signing off on the hazards
21 that they might face. But I guess my question
22 is, how could that system have -- have -- it

1 seems like that system was broken.

2 MR. BANKS: I guess as best we can
3 make out, because there was an ongoing working
4 relationship between the gentleman that had
5 signed off and the group that was doing work
6 on work that was in another area, they felt
7 comfortable going to sign off on work. That's
8 how team events occurred, just one worker
9 trying to help folks get the job done.

10 MR. GRIFFON: And just the last
11 and then I'll let Rafael go.

12 MR. MOURE-ERASO: We'll have
13 another round.

14 MR. GRIFFON: Yeah, one more
15 follow-up on this line of questioning. Just
16 on the permit, I noticed and I -- in the
17 report it mentions that there was someone
18 monitoring the area, not inside the tank but
19 monitoring the area at some point in the job.
20 And in reading the procedure, my understanding
21 was for this type of area, monitoring wouldn't
22 have been required by DuPont's procedures. So

1 I am wondering why -- why was this person even
2 monitoring for this work? They didn't expect
3 flammables to be in this particular tank, so
4 why was the monitoring being done at all and
5 was it under the direction of the Health and
6 Safety group or -- or who was -- who sort of
7 authorized this to go ahead?

8 MR. WINGARD: Well, the
9 information we gained from talking to
10 individuals at DuPont, was that at the
11 facility, anytime any hot work is done, no
12 matter where it is, the technician comes out
13 to test, to do the air monitoring to make sure
14 that there's no flammables present.

15 So it's unfortunate that although
16 they have this, and they go above and beyond
17 when hot work is done, there is no policy
18 requiring them to do the same for inside
19 containers or tanks. But anytime, from what
20 we gained, anytime any sparks was done
21 anywhere in the plant, there was a lab
22 technician out there to make sure there was no

1 flammables.

2 MR. GRIFFON: Does that lab
3 technician report through the Health and
4 Safety sort of chain or are they, do you know,
5 I don't know if you know?

6 MR. WINGARD: I can't say off the
7 top of my head, I don't know

8 MR. GRIFFON: Okay. I will turn
9 it over to Rafael.

10 MR. MOURE-ERASO: Thank you. I
11 have a kind of a simple technical question
12 that I am trying to understand about the chain
13 of events. They -- you -- you put in the
14 graphics and it was also in the video, a crack
15 seal loop, I guess, in tank number two, and I
16 am not clear about what role that cracked seal
17 loop have in the accident?

18 MR. BANKS: Well, we surmise that
19 the crack occurred when material in the pipe
20 froze and fractured it. Unbeknownst to the
21 operating crews, there was -- the expectation
22 there would be a seal that would prevent

1 vapors from migrating from one tank to
2 another.

3 Once that fracture occurred, the
4 liquid seal was lost, and so vapor was allowed
5 to -- VF vapor was allowed to migrate over
6 into tank one.

7 MR. MOURE-ERASO: It first
8 accumulated in tank two and from there it
9 migrated to tank one?

10 MR. BANKS: Yes, sir.

11 MR. MOURE-ERASO: Okay. You have
12 another question, John.

13 MR. BRESLAND: Getting back to
14 this issue of who signed off on the permits.
15 It's always been my experience if you're
16 signing a safety permit, you're really signing
17 to protect somebody's life and make sure that
18 nothing bad happens. And I am just really
19 puzzled as to how someone at this facility,
20 and I visited the facility several months ago,
21 and I saw this sort of geographical distance
22 between where the accident took place and

1 where the person who was or one of the people
2 who was signing off on the permit was located
3 and it was, geographically, it was quite a
4 long distance away.

5 I am just puzzled as to how
6 someone could sign off on a permit without
7 understanding what the hazards were. That
8 just doesn't -- doesn't make sense to me that
9 that would be allowed to happen. Do you have
10 any -- maybe I am not asking the right people
11 to explain this to me.

12 MR. BANKS: I think that there was
13 an honest expectation that there would not be
14 flammables in the tank to begin with. I think
15 that's -- you can, just point one. As I said
16 earlier, just point two, is that they had
17 relied on individuals to sign off and give
18 them access to equipment in the past without
19 incident. And those are the pieces of
20 evidence that we found that -- that kind of
21 point in the direction of how things, you
22 know, evolved the way that they did. And if

1 -- do you have anything to add?

2 MR. WINGARD: I mean, I'll say
3 you're right, that the person not involved in
4 the unit shouldn't -- shouldn't sign off on
5 hot work in that unit. It just seemed that
6 the practice at DuPont had, the individual who
7 signed off, didn't -- didn't think of it that
8 way or hadn't been taught to view it like the
9 way you said you would view it if you were
10 signing hot work permits. I think it shows a
11 failing more on DuPont's part than the
12 individual's part.

13 But in the past there was really
14 no -- no one came through to check on this
15 person signing off on hot work permits and
16 saying this is appropriate and this isn't. So
17 I believe he was just signing off for them to
18 go do their work. He didn't view it as him
19 being responsible for their safety, which
20 wasn't communicated to him.

21 MR. BRESLAND: No more questions.

22 MR. MOURE-ERASO: Thank you, John.

1 Mark, do you have another question?

2 MR. GRIFFON: Yeah, just another
3 one on this question of the sign off, I don't
4 want to harp on this for too long, but my
5 understanding was that this wasn't the first
6 -- I mean, this person had been signing off on
7 other projects where -- where -- we he -- was
8 that appropriate in the other cases or was it
9 equally inappropriate, and just that no
10 accidents happened?

11 MR. BANKS: I think the area that
12 he was working on was in, I believe the
13 utilities were, piping that wasn't likely to
14 be involved with material that was volatile as
15 was involved in this case and that became part
16 of the way they were signing off on the -- on
17 the hot work.

18 MR. GRIFFON: And -- and does
19 anybody review these works, these hot work
20 permits? Do they go somewhere into the Health
21 and Safety System? Does someone do a quality
22 review on these things and is there at some

1 point that somebody that looks at several of
2 these that are signed off by an individual
3 that might not have been appropriately signing
4 off and, you know, is there a mechanism to
5 catch this sort of thing, I guess is what I am
6 asking?

7 MR. WINGARD: I will say not that
8 we have seen. Doesn't mean completely that
9 there isn't one but, I mean, there does not
10 seem to be one in the permits that we checked.

11 MR. GRIFFON: Let me switch gears
12 for one more question. Question on management
13 of change, I know you brought that up and --
14 and I guess my question is that when they
15 identified, in this work they identified the
16 defective seal loop, loss of the compressor
17 and also they had removed insulation from the
18 tanks, was there -- I know there wasn't a
19 formal management of change process, I think
20 because it wasn't identified as a PSM area,
21 but was there any kind of -- did you find any
22 -- I can't imagine that they wouldn't have

1 stopped the work and said wait a second, we
2 got some -- we got some changes here. We need
3 to reassess. Was there any informal
4 reassessment and did you -- did you look at
5 what they -- what they reviewed and how they
6 came to the conclusion that it was okay to
7 proceed?

8 MR. WINGARD: So the information
9 we have is that when they saw the seal loop,
10 it was cracked and the group who looked at it
11 and discussed it, realized that it was a non
12 insulated line. It wasn't electrical trades,
13 so they determined that it must have cracked
14 the first winter it froze and so when it was
15 installed it must have been cracked and that
16 it had been operating in this condition for
17 some numbers of years and so just they didn't
18 consider the hazard that this crack was a
19 safety interlock with a slurry flash tank
20 above, so they figured it was there for years,
21 so they could continue to operate and wait
22 until next turn around and get the unit

1 restarted.

2 But they discussed it and
3 determined that it had been there for so long
4 that it was probably not a new hazard and it
5 didn't pose a hazard, which obviously proved
6 to be incorrect.

7 MR. GRIFFON: And you said they
8 figured that it was there, I mean, wasn't
9 there a question as to when the seal loop was
10 put in and why it was put in? I mean, did
11 they even know why the seal loop was -- this
12 was a modification to the original design,
13 wasn't it? I mean, did they even know why it
14 was put in?

15 MR. WINGARD: It does not seem to
16 be that they knew why it was put in. And the
17 PN -- PNID's for the unit actually don't
18 indicate that seal is there.

19 MR. GRIFFON: Okay, I will turn it
20 over to the Chairman.

21 MR. MOURE-ERASO: Thank you, Mark.
22 I have just one last question, I guess. I

1 understand that there was an OSHA inspection
2 after the accident, and I would like to -- to,
3 if you could describe what was -- what were
4 the OSHA citations and also, why do you think
5 that OSHA didn't site this particular
6 procedure under PSM?

7 MR. BANKS: Well, there were, I
8 believe nine citations and most of them were
9 for failure to make the workers aware of the
10 hazards. The fines totaled 61 -- 61,000
11 dollars in fines for the -- for the breach.

12 MR. MOURE-ERASO: And why did was
13 not considered PSM operation?

14 MR. WINGARD: You have to talk to
15 the OSHA investigator inspectors. We
16 determined that it should have been PSM
17 covered. So if they went in and only focused
18 on the failure of the lockout tag out and the
19 hot work, which were a number of the citations
20 and just didn't focus on that aspect, you'd
21 have to talk with them.

22 MR. MOURE-ERASO: Okay. All

1 right. Well, if there's no more questions
2 from the Board.

3 MR. GRIFFON: Can I?

4 MR. MOURE-ERASO: Yes, one more
5 follow-up.

6 MR. GRIFFON: Yeah. Yeah. Just
7 on one final topic, I promise. The last
8 section 4.9 I think it is in the full report,
9 on the audits, you noted in that section that
10 DuPont internally, I am not sure if it was
11 corporate level audits or if it was site level
12 audits, but that they had -- had scored very
13 highly in two previous audits in 2006 and
14 2010, and actually I want to get the words
15 that were used, the audit report stated that
16 the PHAs were, quote, "very well managed and
17 executed" and are of, quote, "consistently
18 high quality".

19 And these were done I believe in
20 -- in 2009 and 2006, I think. I may not have
21 that right, I guess I am asking, did the team
22 review these audits and do they agree with

1 these conclusions?

2 MR. BANKS: Well, we did review
3 them and we felt that there was -- that they
4 didn't measure up to the assessment of these
5 -- these PHAs indicated.

6 MR. GRIFFON: So you agree with
7 their conclusion?

8 MR. BANKS: No, we did not agree
9 that they measured up to these conclusions
10 that were captured in this assessment.

11 MR. GRIFFON: Okay.

12 MR. BANKS: In the PHA.

13 MR. GRIFFON: And can you point to
14 any, I know it's not in the report, but you
15 say they missed, you feel they missed many
16 deficiencies that were brought out in this
17 investigation. Can you give me an example of
18 some deficiencies. I guess the PHA for this
19 process line would be one, or I don't know.

20 MR. WINGARD: Well, I mean, you
21 and I can say the PHAs don't consider the seal
22 loop consideration at all. And it's an

1 interlock controlling a flammable from a PSM
2 process to an area where they don't expect
3 flammables to ever be. And this isn't
4 discussed in the PHAs at all, even though its
5 failure obviously let flammables get to an
6 area that they classified as no flammables
7 being in.

8 MR. GRIFFON: Can I just, I mean,
9 I guess I just wanted to make one last
10 statement before we move onto voting on the
11 report or -- but I mean, I view this -- this
12 investigation in this incident as a little bit
13 more than just a hot work incident. I mean,
14 I think it, you know, you touched on many
15 questionable decisions and activities that
16 were leading up to the incident and I think
17 some of these suggest a failure in safety
18 systems, management safety systems and I guess
19 I just would -- I urge all of us going forward
20 internally to being more rigorous at
21 identifying and investigating these higher
22 level issues because I -- I note that our

1 recommendations don't go in that direction but
2 I think, you know, these higher level findings
3 on management systems can have serious and
4 important impacts on not only this local
5 DuPont Yerkes facility, but broader
6 industries, other industries and nationally.

7 So I think -- I just think that
8 there, at least there's some questions that I
9 have on the organizational issues and the
10 management of safety at this facility. But I
11 agree with the decision not to include that in
12 this report because we didn't quite pull the
13 strings far enough to identify some of those.
14 But I urge us in the future to -- to consider
15 that seriously. Thank you.

16 MR. MOURE-ERASO: Thank you, Mark.

17 At this time, we're going to
18 proceed to public comments. We have a list of
19 people that signed up for public comment and
20 I am going to start first with the person that
21 signed first. That doesn't mean that anybody
22 from the public, when we go through the list

1 afterwards, also could approach the microphone
2 and have their five minutes of comments.

3 I will start to ask that the
4 person that goes to the microphone, spell
5 their name and please spell it so that the
6 person taking records can get it exactly. And
7 also describe their organization that they're
8 representing or, you know, and also, as I
9 mentioned before, please limit the -- the
10 comments to five minutes.

11 So the first person that I have in
12 the list is, I guess, Mr. Gary Guralny. So if
13 Gary could please do better work than I did,
14 spelling your name, please.

15 MR. GURALNY: It's Gary Guralny,
16 G-A-R-Y G-U-R-A-L-N-Y. I am President of the
17 Local Union at the Yerkes facility and I am
18 also President of Council of Unions within the
19 USW Steel Workers Union. And I have contact
20 with other workers within DuPont as well.

21 I had a question, if I could ask,
22 was there any consideration given to the fact

1 that with the October shut down, the vent line
2 that ultimately allowed the vapors to cross
3 across all three tanks, had been totally
4 disconnected and the maintenance department
5 was directed to reconnect that vent line, and
6 the -- there was some mechanics that
7 questioned the rationale with that, given the
8 fact that they knew the work wasn't done on
9 tank one, did that ever come out in your
10 overall investigation or was it considered at
11 all?

12 MR. BANKS: It did not come up in
13 our investigation, no.

14 MR. GURALNY: Pardon me?

15 MR. BANKS: It did not come up in
16 our investigation.

17 MR. GURALNY: Okay. And one other
18 thing, I was there that day and it has
19 affected my life and I feel for the people
20 that knew both individuals, Mr. Folaron and
21 Mr. Freeburg, and my condolences once again on
22 behalf of my local to those people. And I

1 just -- I can't say enough about how badly the
2 people that work at my place felt about
3 everything that happened. Thank you.

4 MR. MOURE-ERASO: Thank you very
5 much, Mr. Guralny. The next person is Mr.
6 James Valenti.

7 MR. VALENTI: Yes, thank you, Mr.
8 Chairman. My name is James Valenti, V as in
9 Victor, A-L-E-N-T-I. I am an International
10 Representative with the United Steel Workers
11 of America, District 4 Safety, Health and
12 Environmental Coordinator.

13 We're here today to comment on the
14 U.S. Chemical Safety Hazard Investigation's
15 Board Case Study of the November 9th, 2010
16 explosion at the Yerkes DuPont facility in
17 Buffalo, New York that killed one worker and
18 injured another.

19 In May of 2011 OSHA fined DuPont
20 61,000 and cited them for nine violations
21 related to this explosion. In January of this
22 year, OSHA has opened yet another

1 investigation in its plant regarding workers'
2 health. That's an ongoing issue.

3 Those who follow the workings of
4 the Chemical Safety Board know that last
5 September the Board approved its 173 page
6 investigative report into a series of three
7 chemical releases that occurred over a 33 hour
8 period on August 22nd and 23rd, 2010 at the
9 DuPont Corporation's Belle, West Virginia
10 Chemical Manufacturing Plant.

11 One of these releases was a deadly
12 phosphine gas and it took the life of one
13 worker and others were exposed as well. OSHA
14 fined DuPont 43,000 dollars related to these
15 releases, including serious violations for not
16 performing a thorough process hazard analysis
17 for its phosphine operation, and not training
18 workers to properly work with chemical and
19 installing energized electrical conductors.

20 In addition, OSHA cited DuPont for
21 failing to properly record workers' injuries
22 and illnesses. Last fall, OSHA again was

1 called to this facility to investigate
2 occupational illnesses of three workers. Last
3 month OSHA again cited the facility, this time
4 for violations of hazard communication
5 standard that requires employers to provide
6 health and safety information about hazardous
7 chemicals to its workforce.

8 Some have expressed surprise that
9 the company involved in all of these incidents
10 is DuPont, after all, DuPont touts a very low
11 injury and illness rate and even has one
12 facility that claims to have gone 60 years
13 without an OSHA loss work day injury.

14 DuPont has devoted part of its
15 business to consulting other companies on
16 process safety and occupational risk
17 management. And in their literature they
18 quote "drawing on over 30 years of real world
19 DuPont experience." Our expert consultants
20 help protect our organizations, people and
21 assets from process dangers, operational risks
22 and potential cause of hazard industrial

1 processes.

2 DuPont was awarded the National
3 Safety Councils Green Cross Safety award in
4 2006. And just this week, 17 DuPont
5 manufacturing facilities across the U.S. were
6 awarded CSX transportation's 18th annual
7 Chemical Safety Excellence award. One of
8 those 17 plants was the DuPont Yerkes facility
9 here in New York.

10 One recent headline wrote quote
11 "Even best in safety had bad days". DuPont
12 has long been praised for what has been seen
13 as its safety accomplishments. In the 2004
14 American Society of Safety Engineering
15 Symposium entitled Achieving World Class
16 Safety, Samuel Gowardo, MACSP, stated this,
17 quote, "companies who have exceptional safety
18 management processes in place utilized line
19 management as the foundation for their
20 success".

21 DuPont used this concept while
22 operating black powder mills in Brandywine

1 River in Delaware over 200 years ago. Not
2 only were line managers personally responsible
3 for the start up operations at these mills,
4 but their families were required to live
5 adjacent to them. They learned the concept of
6 line safety management ownership and
7 accountability from a self preservation
8 perspective.

9 Two hundred years later, it
10 remains the primary reason DuPont has been
11 consistently recognized as one of the safest,
12 if not the safest, company in the world. That
13 article, by the way failed, to mention that in
14 1818, 40 workers were killed in an explosion
15 at the same DuPont Brandywine, Delaware
16 gunpowder manager facility.

17 The fact is, between the 1818
18 explosion at the DuPont facility in Delaware
19 that took the lives of 40 workers and today's
20 hearing focusing on the explosion that took a
21 worker's life at the DuPont facility in New
22 York in 2010, there has been a history of

1 worker injury, illness, death, as well as
2 community, environmental and public health
3 harm, all related to DuPont.

4 In addition to the most recent
5 tragedy at DuPont's Belle and Yerkes facility,
6 the following examples from this history:

7 1997, DuPont settled a lawsuit with more than
8 400 residents of New Jersey for 38.5 million
9 dollars regarding lead, mercury, arsenic and
10 chemical solvent contamination from the
11 munitions plant in Pompton Lakes, New Jersey.

12 In 2003, DuPont agreed to provide lifetime
13 medical monitoring for 15 hundred current and
14 former residents.

15 February 1999, DuPont agreed to
16 pay a \$70,000 penalty to OSHA for failing to
17 record 117 occupational injury and illness
18 cases in '97 and '98 at its Seaford, Delaware
19 plant.

20 2005, more than 75 residents,
21 including police, fire and ambulance crews
22 near a DuPont plant in Northeastern Kentucky

1 filed a lawsuit over their exposure to an
2 October 2004 chemical leak of sulfuric acid.

3 DuPont had created a new warning
4 system for notifying people in a ten county
5 area of any problems at their Greenup County
6 plant as part of an agreement with PA after
7 the previous leak. But the system was not
8 used on the afternoon of October 11th, 2004
9 when a break in a pipe released hundreds of
10 pounds of sulfuric acid onto the ground, air
11 and water around the plant. 179 residents
12 eventually sued DuPont over this incident. In
13 July of 19 -- of 2009, a jury returned a
14 verdict of over 1.25 million for six of those
15 who sued. In October 2011, all of the
16 litigation regarding the October 2004 chemical
17 -- chemical release, was officially settled in
18 U.S. District Court for an undisclosed amount.

19 December 2005, DuPont settled an
20 EPA case paying 16.5 million regarding
21 accusations that the company had concealed
22 information about the dangers of a chemical

1 used to make Teflon. The agreement presented
2 the largest civil administrative penalty to
3 date reached under federal environmental laws.

4 2007, DuPont agreed to pay 70
5 million dollars in penalties and
6 recommendations to resolve air pollution
7 claims against four of its sulfuric acid
8 plants in four states.

9 June 2010, EPA ordered DuPont to
10 pay 59,000 dollars for the discharge of
11 pollutants in violation of Clean Water Act in
12 its polymer fiber facility -- manufacturing
13 facility in Kingston, North Carolina.

14 December 2010, DuPont agreed to
15 pay a 3.3 million dollar fine to EPA for
16 failing to report possible health risks
17 involving its chemicals. This agreement
18 settled 57 toxic substance violations dating
19 back before May 2006.

20 November 2011, former DuPont
21 chemical plant worker won \$500,000 in a
22 whistle blower retaliation lawsuit. The New

1 Jersey Superior Court Appellate Division
2 upheld the lower court's decision to award
3 500,00 to a former DuPont chambers works New
4 Jersey employee who said he was retaliated
5 against for filing an OSHA complaint. He had
6 raised concerns about what he believed to be
7 potential public safety hazards in a phosgene
8 reactor.

9 While the CSB's case study
10 regarding DuPont Yerkes plant here in Buffalo
11 has identified some of the specific
12 attributing factors to the November 9th, 2010
13 explosion, what has yet to be undertaken is an
14 analysis of why this company is again the
15 subject of a CSB report for workplace fatality
16 less than a year after another CSB report
17 detail chemical releases in a fatality at yet
18 another DuPont plant.

19 When faced with such devastating
20 history of injury, illness, loss of life and
21 environmental danger year after year after
22 year, we do not believe that the tragedies at

1 DuPont Yerkes and Belle plants can be viewed
2 in isolation from each other, from this longer
3 history of serious and ongoing harm regarding
4 occupational and environmental health and
5 safety.

6 In order to determine what has
7 gone so wrong in DuPont's corporate culture to
8 allow for this history of harm, we strongly
9 recommend that an in depth study be taken to
10 identify underlining or root causes that are
11 responsible for multiple and continual and
12 devastating programs and policies that are
13 greatly in need of correction.

14 Until or unless this is carried
15 out, we fear that tragedies will continue and
16 we will be at yet another hearing regarding
17 CSB reporting concerning a DuPont facility in
18 the not so distant future. If the CSB does
19 not have adequate funds to support such in
20 depth corporate culture investigation, we
21 recommend that an independent panel be created
22 similar to the Baker panel following the BP

1 Texas explosion in 2005.

2 The CSB could be very helpful in
3 selecting independent voices for this panel.
4 The United Steel Workers International and the
5 members of our USW Local at Yerkes DuPont
6 appreciate the efforts of the investigators
7 and the Board relative to this tragedy at this
8 plant.

9 Our members at DuPont expect their
10 employees to live up to its reputation of
11 being the best. They deserve no less, lives
12 and livelihoods are at stake. Thank you

13 MR. MOURE-ERASO: Thank you very
14 much, Mr. Valenti. We appreciate it. I would
15 like to say that we acknowledge your request
16 and that the Board will deliberate and listen
17 to it and will listen very carefully.

18 MR. VALENTI: Thank you, Mr.
19 Chairman.

20 MR. MOURE-ERASO: The next person
21 that we have is John Scardella.

22 MR. SCARDELLA: Thank you, Mr.

1 Chairman. My name is John Scardella,
2 S-C-A-R-D-E-L-L-A. I am the Program
3 Administrator for the United Steel Workers
4 Charitable and Educational Organization and
5 was the assigned investigator for the USW and
6 with the Local investigating this accident.

7 In promotional materials produced
8 for DuPont's sustainable solution documents in
9 2011, DuPont asserts that they can help your
10 business in providing ways to prevent process
11 related injuries and accidents achieved,
12 sustainable improvements in business
13 continuity and assessed productivity, among
14 other business attributes.

15 This can be done by using DuPont's
16 collaborative approach to process safety and
17 operational risk management using world class
18 process safety performance. Quote, "Achieving
19 a competitive edge, also requires a system
20 that drives continuous improvement and
21 protects the companies, employees, its
22 surrounding community, the environment and its

1 profits". DuPont believes that sustainable
2 safety performance requires a robust PSM
3 system driven by operational discipline, in
4 addition to occupational and behavioral safety
5 management systems.

6 Equally important, DuPont
7 contends, focus on both the cultural aspects
8 of an organization, the technical elements
9 will help your business sustain improved
10 process safety management performance.

11 I raise these points from their
12 promotional material to illustrate stark
13 differences from what they say and what they
14 practiced on November 9th, 2010.

15 I'd like to walk through the case
16 study to illustrate the ineffectiveness of
17 DuPont's process safety in this accident while
18 keeping in mind that these significant errors
19 are related to the corporate culture of safety
20 that works its way down to the local level.

21 In Section 2.3 of the case study,
22 it states that Mollenberg-Betz was selected to

1 repair the heavily corroded agitator support
2 due to their availability on site. This
3 raises the question of how such prior planning
4 for this repair was done, because the
5 contractor was already on site and available.
6 I think Mr. Banks had said it was basically
7 get the job done.

8 In Section 3.1, the study
9 indicates that the engineers concluded the
10 slurry tank could be returned to service
11 without repairing the split in the U leg seal
12 loop. DuPont engineers believed that its
13 likely purpose was to limit steam in the flash
14 tank from flowing into the slurry tank, as
15 Dennis Hendershot demonstrates, not
16 understanding the engineering intent of
17 systems can result in catastrophic events.

18 Further, no management of change
19 was carried out for the process to continue
20 with this compromised seal loop, which is
21 required under the PSM standard. Further, the
22 studies state that on November 8th a

1 compressor within the Tedlar unit
2 malfunctioned and a unit was restarted without
3 the compressor, significantly increasing the
4 VF vapor present in the PFS slurry flow,
5 flowing into the slurry flash tank. Again,
6 this was done without management of change.

7 And Section 3.2, on the morning of
8 November 9th, the contractors completed a hot
9 work permit. The contractors did not check
10 out the valves on the slurry tank with any
11 DuPont employee prior to starting the hot
12 work, a failure of their own hot work
13 practices.

14 4.1 reiterates the importance the
15 management change that was not done in the
16 previous section cited. The DuPont have
17 document -- documented -- documented analysis
18 of the potential of VF in the tank given these
19 changes within the system.

20 They proceeded with a defective
21 seal loop and the compressor out of service,
22 so who deemed this safe? As stated in the

1 Section 4.3, the hot work procedure was within
2 the guidelines set forth in NFPA 51B. This
3 procedure recognized that the contractor may
4 be -- may be unfamiliar with process safety or
5 activities in the area that would be
6 performing work and does require a
7 construction field engineer in an area
8 proprietor responsible for assuring that the
9 contractor understood the potential hazardous
10 conditions. The permit was designed primarily
11 for contractor use, and the contractor is
12 required to complete the Safety Task
13 Assignment, STA, to address potential hazards
14 in the hot work area. All employees doing the
15 hot work were required to read this STA and
16 sign and then -- read it and then sign it.

17 The question that must be asked at
18 this juncture is, how are they trained to
19 recognize these hazards? We see none from the
20 report. What were the hazards that were
21 identified in that STA prior to the accident.
22 DuPont determined that the construction field

1 engineer in that area propriety would be
2 responsible for helping the contractors
3 understand the potential hazardous conditions.

4 The contractor did not know what
5 the -- what the flash tank was or which
6 chemicals were present inside it, again,
7 raising the question of the training for the
8 project and the hazards associated with
9 welding and grinding.

10 Lastly, the construction
11 supervisor and construction field engineer
12 completed the hot work permit without
13 answering the questions. They were left
14 blank, according to the report. Are chemicals
15 present? What chemicals and flammables,
16 combustibles present? They were left blank on
17 the permit. If a permit has blanks, does
18 DuPont deem the permit complete? On November
19 9th, DuPont violated its own process safety
20 procedures by allowing a construction engineer
21 to sign the permit who had no work knowledge
22 of the Tedlar process.

1 Further, the construction engineer
2 obtained the proprietor's signature from
3 someone in the service department. I believe
4 Board Member Griffon asked a significant
5 number of questions about this. The service
6 department is responsible for mail, yardwork
7 and related tasks. It was not located near
8 nor was it related to the Tedlar process.
9 DuPont's policy clearly states that the
10 proprietor should be knowledgeable about the
11 area they are signing off on, and that the
12 proprietor should walk down the area where the
13 hot work is being done. This was also not
14 done.

15 In Section 4.5 concerning the
16 lockout procedure, clearly states that
17 isolating piping systems and hazardous
18 processes should include blocked valves and/or
19 a blind flange. The issue here is what is the
20 best industry practice, especially from a
21 world class leader in PSM, that isolating a
22 piping system and hazardous processes, must be

1 blocked or blind flanged.

2 In Section 4.7.3, states that if
3 DuPont had included the slurry tank and slurry
4 tank flash tank overflow line in their PSM
5 program, they would have been required to fix
6 the cracked loop seal before starting the unit
7 or ensuring that the cracked seal loop poses
8 no safety hazard.

9 DuPont concluded that OSHA's PSM
10 coverage did not extend to the slurry tanks,
11 despite the CSB's safety bulletin of 2010 on
12 hot work permit and its safety bulletin in
13 2001 on management of change. Yet this is a
14 world class leader.

15 Section 4.9 states: a corporate
16 audit in 2006 that performed an audit --

17 MR. MOURE-ERASO: Mr. Scardella,
18 one minute.

19 MR. SCARDELLA: Yes.

20 MR. MOURE-ERASO: One minute.

21 MR. SCARDELLA: Oh, I am sorry.

22 4.9 states the corporate audit in 2006 that

1 performed -- performed an audit of PSM system
2 in the Buffalo facility but it did not include
3 the contractors. Again, this was raised by
4 the Board.

5 All of these issues listed above
6 are from the company that searched the
7 collaborative approach to process safety and
8 operational risk management using world class
9 process safety.

10 Lastly, the United Steel Workers
11 would like to request further investigation
12 into the safety practices of DuPont from a
13 corporate perspective. This request is based
14 upon the facts repeated herein since DuPont is
15 instructing other corporations in world class
16 process safety performance, we believe these
17 institutional concerns should be investigated
18 at the corporate level, faulty and fatal
19 practices and the instructions of those
20 practices and process safety should be a
21 concern of this Board. Thank you.

22 MR. MOURE-ERASO: Thank you, Mr.

1 Scardella. The next person on the list is Ms.
2 Erin Heaney.

3 MS. HEANEY: Heaney.

4 MR. MOURE-ERASO: I am sorry,
5 please, you can spell your name and identify
6 your organization.

7 MS. HEANEY: My name is Erin
8 Heaney, E-R-I-N, H-E-A-N-E-Y. I am the
9 Director of the Clean Air Coalition of Western
10 New York. We are a grass-roots environmental
11 health and justice organization that represent
12 the folks who live up against the DuPont plant
13 and the surrounding neighborhood. Several of
14 our member are here tonight.

15 I was going to make a very similar
16 argument that Jim Valenti made earlier, that
17 DuPont aspires or claims that they have an
18 incredible commitment to sustainability, and
19 yet their track record over and over again,
20 much like the workers safety track record,
21 shows that that is not the case, but I won't
22 bore everybody with detail. There's just a

1 few things I want to point out.

2 DuPont has consistently been named
3 one of the dirty dozen by PERK organizations
4 because DuPont puts over nine million
5 residents in potential danger if a chemical
6 catastrophe were to occur. DuPont has over 20
7 super fund sites. It is the number one
8 producer of dioxin in the United States
9 according to the EPA TRI, and has been sued
10 several times by the EPA for withholding
11 evidence showing harmful affects of its Teflon
12 chemical.

13 In Tonawanda, DuPont has been out
14 of compliance with the DEC for the last three
15 years. DuPont emits 21 percent of the
16 emissions for all of Erie County. And DuPont
17 emits several things into the air that our
18 residents are exposed to day in and day out.

19 So I just have a few things to
20 say. I find it extremely mind boggling that
21 there are no air monitoring being done when --
22 when this incident happened. Air monitoring

1 is something that the residents have pushed
2 for in the neighborhood surrounding the plant
3 for years and we're glad that it's part of
4 recommendations tonight.

5 We would also encourage this
6 Chemical Safety Board to push the
7 Environmental Protection Agency to use the
8 general duty clause of the Clean Air Act to --
9 to force facilities like DuPont and many other
10 large Title 5 facilities, to actually
11 substitute out chemicals like vinyl fluoride,
12 vinyl fluoride from the manufacturing process
13 to begin with.

14 There's over 100 labor unions and
15 environmental organizations that have asked
16 President Obama to direct EPA Administrator
17 Leader, Lisa Jackson, to use the General Duty
18 Clause to help phase out the toxic chemicals
19 that are also highly flammable.

20 This is very important because the
21 chemicals that exploded or caused the
22 explosion is a known human carcinogenic highly

1 flammable. DuPont said it was at safe levels.
2 There's no amount of -- there's no safe level
3 of a human carcinogenic for workers or for
4 communities. And so we would wonder, can
5 DuPont be using a less toxic substance to
6 begin with or something that is less flammable
7 to begin with.

8 We would also recommend that
9 DuPont, in future accidents, you know, heaven
10 forbid there ever be them, communicate with
11 residents in the neighborhood. Residents who
12 live close to the plant, were not notified
13 except through the general media, like over,
14 you know, the mainstream media, that DuPont be
15 in communication with residents.

16 In this case, the residents were
17 not exposed to anything harmful, but that
18 could easily happen in the future

19 And then finally, we would just
20 lift up with what the steel workers are
21 calling for today, calling for a further
22 investigation into the root cause of these --

1 these accidents that happen that really we
2 believe stem from a corporate culture. This
3 is not just the one isolated incident. It's
4 part of the corporate culture at DuPont.
5 That's all.

6 MR. MOURE-ERASO: Thank you very
7 much. Are there anymore statements?

8 MR. COOK: I'll be very brief.
9 Roger, R-O-G-E-R, C-O-O-K, former Director of
10 the Western New York Council of Occupational
11 Safety and Health, and a member of the
12 Advisory Board of the New York State Pollution
13 Prevention Institute in Rochester.

14 I think most of the concerns I
15 have, have been raised, but one of the
16 gentleman on the Board did say that he felt
17 that this was a failure of management safety
18 systems and has real questions of
19 organizational issues to the extent that your
20 investigatory team has not raised that and it
21 seems to me that the report is incomplete and
22 that we should have a total investigation of

1 the entire system that failed here and I would
2 hope that you would consider -- the Board
3 would consider that we go back to the drawing
4 board on that issue, particularly because the
5 amount of vinyl fluoride that is stored on
6 site.

7 The fact that there are releases,
8 we don't know how much is getting into the
9 air. We don't know how much worker exposure
10 there is. We do know that it's a carcinogen,
11 and -- or a suspected carcinogen. And
12 further, when it, of course when there's --
13 when there's a flame involved, it turns into
14 hydrogen fluoride and we have acute exposures.

15 I think those broader issues
16 should be part of the mandate of this
17 investigation and I would just urge that the
18 Board consider the report incomplete and that
19 a total report be issued that would address
20 the larger organizational systems failures as
21 others have raised. Thank you.

22 And I would say the Advisory -- I

1 will report to the Advisory Board of the New
2 York State Coalition Institute on this, if
3 there is ways you can see some collaboration,
4 as Ms. Heaney mentioned, if there are
5 substitute products or things like that, I
6 think that we need to begin to investigate.
7 That's an awful lot of vinyl fluoride and that
8 -- that potentially could cause a catastrophic
9 situation. I think just as we deal with near
10 misses in the workplace, maybe we ought to --
11 the investigation ought to look at what if
12 this thing went even larger than it did. What
13 are the worst case possible scenarios? I
14 think that community and those workers deserve
15 nothing less, so thank you.

16 MR. MOURE-ERASO: Thank you.

17 There's another.

18 MR. PACE: My name is Keith Pace,
19 I'm -- that's K-E-I-T-H, P-A-C-E. I am not
20 affiliated with any of the parties involved in
21 this. I am here as a private citizen here
22 tonight.

1 I have a couple questions for the
2 Investigative Team. One, because I didn't
3 hear it come out, was the permit for the other
4 tank that was repaired during the shut down,
5 was that permit signed off by the same
6 department or by a different department within
7 DuPont?

8 MR. WINGARD: The -- in the tank,
9 slurry tank two, the appropriate person signed
10 off on the --

11 MR. PACE: So it was a different
12 department that signed that. Thank you. And
13 then in your key lesson number three on -- on
14 slide 43, it was very specific that flam --
15 vessels that had been involved in flammable
16 service should have certain things done. In
17 the recommendations you have launched, any
18 reference to vessels that have been involved
19 in flammable service and that's all very
20 generic to all vessels, which to me seems to
21 dilute the focus on the areas where the
22 highest hazard is, which is areas that are

1 known to have handled or potentially have
2 handled flammables.

3 In this case, one might imply you
4 should treat a tank which had been in nitrogen
5 service or water service, the same as one
6 which had been in gasoline or toluene service,
7 is there a reason for that, the loss of that
8 focus?

9 MR. MOURE-ERASO: Well, if I might
10 say, you know, in our process, the public
11 doesn't -- the director, they are questions to
12 the -- and you know, like, we'll take your
13 questions into consideration and try to answer
14 --

15 MR. PACE: Okay.

16 MR. MOURE-ERASO: -- directly but,
17 you know, we wouldn't like to on the specifics
18 of the findings of the report with the -- with
19 the investigators. We will very glad consider
20 your question and try to answer on that
21 specific, you know.

22 MR. PACE: Okay.

1 MR. MOURE-ERASO: I would like to
2 put that in the record.

3 MR. PACE: Thank you.

4 MR. MOURE-ERASO: Is there
5 anything else?

6 MR. PACE: No, that's it, thank
7 you.

8 MR. MOURE-ERASO: Okay. You gave
9 us your name and --

10 MR. PACE: Yes.

11 MR. MOURE-ERASO: -- we need your
12 address and some additional information.

13 MR. PACE: I can fill it out.

14 MR. MOURE-ERASO: Another comment.
15 A lot of comments. Two comments.

16 MR. ELOPHANT: Good evening. My
17 name is Bruce Elophant. I am with the New
18 York State Office of Fire Prevent -- sorry,
19 Fire Prevention and Control and the Hazardous
20 Material Bureau. I was on the scene the day
21 of the accident. I just -- I had -- while I am
22 not refuting the causation or finding of

1 anything of the Investigative Team, it's more
2 of a technical question about the slide show.
3 Does the slide presentation become part of the
4 record on the website of public viewing as
5 well as that video or is it just the report?
6 Give me -- give me -- give me two minutes --
7 give me one minute here and I will explain why
8 I am questioning this. I am going back to
9 slide --

10 MR. MOURE-ERASO: Your question
11 from counsel here is that what goes in the
12 website is the report and the video.

13 MR. ELOPHANT: Okay, let me just
14 --

15 MR. MOURE-ERASO: This is just an
16 aid for the report.

17 MR. ELOPHANT: Okay. Relative to
18 slide 28 that was mentioned earlier, slide 28
19 was -- was about, does not require internal
20 monitoring for hot work relative to 1910 252.
21 In 252, just to be clear, that doesn't give
22 the wrong inference, it states that -- that

1 when the nature of the work can be performed
2 falls within the scope of -- of a previous
3 paragraph, which refers to not being able to
4 move that area or put up proper further
5 guards, certain additional precautions may be
6 necessary.

7 Further, it goes on, that in the
8 presence of explosive atmospheres, mixtures of
9 flammable gases, vapors, liquids or dust with
10 air, more explosive atmosphere, a chemistry
11 that may develop inside uncleaned or
12 improperly prepared tanks or equipment which
13 had previously contained such materials or
14 that develop in areas with an accumulation of
15 combustible dust.

16 So what this is saying is that
17 certain additional precautions may be
18 necessary and if the workers have been trained
19 to monitor accordingly, they should use those
20 tools. But it doesn't specifically say what
21 wrench to use either. But I believe that is
22 inferring that further monitoring should be

1 done based on your environment. I just wanted
2 to point --

3 MR. MOURE-ERASO: I am sorry, you
4 are -- you are referring to the slide 28?

5 MR. ELOPHANT: Slide 28.

6 MR. MOURE-ERASO: Slide 28, where
7 you were reading from is the OSHA standard?

8 MR. ELOPHANT: Is the OSHA
9 standard, CFR 1910 252. Specifically it was
10 1910 252 A2, which is special precautions. And
11 then the subsection I was referring to beyond
12 that is 1910 252 A2 6 VI, subsection C beyond
13 that. So A2 VI and then C, I just wanted to
14 point that out, okay. Thank you.

15 MR. MOURE-ERASO: Thank you.

16 MS. MAJEROWSKI: Good evening. My
17 name is Karen Majerowksi, M-A-J-E-R-O-W-S-K-I.
18 I am a member of the Clean Air Coalition and
19 a concerned citizen. I do not live far from
20 DuPont. Last year I was involved in a
21 chemical incident that left us breathing in
22 toxic chemicals for over 23 hours. And I can

1 tell you, I can smell different toxins coming
2 from the industry, you know, the different
3 companies and industries within the
4 neighborhood I live in.

5 You know, safety is first. Safety
6 for their employees. Safety for the
7 community. There's no communication within
8 any of the companies within the Tonawanda area
9 that when there's an incident involved, that
10 they notify the community and I think that
11 should be DuPont's number one issue, is safety
12 for their employees and the people who live
13 around their community. That's all I have.
14 Thank you.

15 MR. MOURE-ERASO: Thank you very
16 much. Any other statements? Yes, please.

17 MR. CARIDI: My name is Joel
18 Caridi, C-A-R-I-D-I District 4, Local 2777
19 with the USW. I have just got one question,
20 maybe for the Investigative Team or the people
21 here from DuPont. Do you have any records
22 that those tanks periodically, maybe once a

1 year, are entered and checked for broken
2 agitator blades, excessive wear on the side
3 walls? Did you see any of that in your
4 investigation? Thank you.

5 MR. MOURE-ERASO: I think probably
6 you should ask that question directly to -- I
7 mean we wouldn't have any -- any -- anyway to
8 know of those specifics to the company itself,
9 to DuPont, unless you have information?

10 MR. BANKS: We don't have any
11 direct knowledge.

12 MR. CARIDI: You don't have
13 anything like that. Okay, thank you.

14 MR. MOURE-ERASO: All right. Any
15 other comments? Board Member Griffon has some
16 comments to make on the -- go ahead.

17 MR. GRIFFON: Yes, I just wanted
18 to follow-up on Mr. Valenti's comment and
19 request I guess to the Board and several
20 commenters brought up this -- the question of
21 safety culture and I just -- I just thought
22 it's worth while pointing out that this --

1 this question of safety culture is not a new
2 one. I mean, it's come up from investigations
3 back to Three Mile Island and Chernobyl and in
4 our own investigation of PB Texas City in
5 2005, it certainly was a finding there.

6 And I just wanted to point out,
7 sort of to reinforce what Chairman Moure-Eraso
8 said, that -- that we, in our Strategic Plan
9 that we're going to discuss after a little
10 break here, we are, in our draft anyway, we
11 are making a proposal to further study this
12 question of safety culture. I think we want
13 to study what it means. How people define it.
14 How do you measure it. How do you know if you
15 have a good safety culture or not and how do
16 you, to sort of bench mark it, how do you
17 compare yourself across the industry.

18 I think there's a lot of important
19 issues to discuss under that and, you know,
20 it's not just something that comes from this
21 investigation, it's -- it's certainly been
22 brought up in several of our investigations

1 and across industry sectors, so we think it's
2 an important issue and it's in one of our
3 goals and our Strategic Plan is to look into
4 that further. So I just wanted to make that
5 point. Thank you for the comments.

6 MR. MOURE-ERASO: Okay. Is there
7 any more discussions from the public? All
8 right, before proceeding to -- to the process
9 of the vote, I would like to thank very much
10 the institutions and the persons that have
11 participated in the public session and I know
12 it takes a lot of effort to prepare and to
13 stand up and to give us input of your ideas on
14 this issue and I would like to thank everybody
15 that make any statement today. I would like
16 to make that clear. We will follow down the
17 process of voting on the report, so.

18 MR. GRIFFON: Well, I can offer a
19 motion.

20 MR. MOURE-ERASO: Yes, yes, the
21 first thing is -- the first part of the
22 process is that one of the Board Members offer

1 a motion of our report.

2 MR. GRIFFON: Yes, I'd like to
3 offer a motion, Mr. Chairman, a motion to
4 approve the CSB Case Study and Recommendations
5 Report Number 2011-01-5-NY regarding the
6 Agency's investigation into a hot work
7 incident that occurred at the DuPont Yerkes
8 plant in Tonawanda, New York on November 9th,
9 2010.

10 MR. MOURE-ERASO: A motion has
11 been made and we need somebody from the Board
12 to second it.

13 MR. BRESLAND: Mr. Chairman, Mr.
14 Chairman, I will second it. I also would like
15 the opportunity before the final vote to make
16 a statement.

17 MR. MOURE-ERASO: Please proceed.

18 MR. BRESLAND: This is the second
19 DuPont incident that we have investigated and
20 had a public hearing on within the last year.
21 And by way of full disclosure, I used to work
22 for DuPont, it was 50 years ago. I was a lab

1 technician at a DuPont facility in Northern
2 Ireland. And I left that two year experience
3 with DuPont having a very --- having a -- as
4 a 20 year old, having a very strong sense of
5 DuPont's attitude, very positive attitude
6 towards safety, so.

7 And I have always, when I have
8 done presentations around the country, I have
9 always used DuPont as an example of a company
10 that has a strong safety culture and strong
11 safety programs. However, that -- that
12 confidence has been somewhat disturbed by what
13 I have seen in the -- in our investigation of
14 -- of the Belle plant and of the Yerkes plant.
15 I'd just like to quote from a statement that
16 I made at the Belle public meeting quoting,
17 this is me speaking, "these findings, the
18 findings that we found at Belle, would cause
19 us great concern in any chemical plant, but
20 particularly in DuPont with its historically
21 strong work and safety culture. I hope that
22 DuPont officials are examining their safety

1 culture throughout the company and throughout
2 the company worldwide".

3 That's what I said at the Belle,
4 West Virginia public meeting and I'd like to
5 reiterate that -- that statement this evening.
6 I am not going to repeat it again but
7 certainly I feel that we need to -- DuPont
8 does need to take a hard look at their safety
9 programs based on what we have seen in the
10 these two incidents.

11 MR. MOURE-ERASO: Thank you, John.
12 Are there any more comments for the Board
13 members in the discussion of the motion?

14 MR. GRIFFON: No.

15 MR. MOURE-ERASO: I don't have any
16 comments either. Okay, we have a motion on the
17 floor, the motion say to approve the CSB Case
18 Study and Recommendations, and recommendations
19 in the report 2010 011 New York regarding the
20 Agency's investigations into a hot work
21 incident that occurred at the AEI DuPont and
22 Company Yerkes plant in Tonawanda, New York

1 November 9, 2010. That's the motion. So I
2 would like to ask for the votes. Board Member
3 Bresland, what is your vote?

4 MR. BRESLAND: I approve.

5 MR. MOURE-ERASO: Board Member
6 Mark Griffon?

7 MR. GRIFFON: I approve.

8 MR. MOURE-ERASO: And my vote also
9 is that I approve. So we have unanimously
10 approved the report. Thank you very much for
11 all the presence here, for all the people that
12 participated. We are going to proceed now to
13 additional Board business in reference to our
14 Strategic Plan and we are going to take a five
15 minute break to make the transition, so thank
16 you very much.

17 (Whereupon, the above-entitled
18 matter briefly went off the record.)

19 MR. MOURE-ERASO: Okay, we are
20 proceeding with additional CSB Board business.
21 At this time we will be presenting the CSB
22 Draft Strategic Plan for the years from 2012

1 for, to 2016. We are required by statute to
2 prepare a Strategic Plan every five years and
3 this is for this period of the next five
4 years.

5 We have a policy draft of the
6 Strategic Plan in our website. It has been
7 there for about a month, a couple weeks. For
8 two weeks. We have received a number of
9 public comments in our -- in our website, the
10 Strategic Plan and we wanted to have this
11 opportunity to have a public meeting here to
12 get additional public comments on it.

13 So I would like to invite the
14 Deputy Manager Director of the Chemical Safety
15 Board, John Lowe, to provide a brief overview
16 of the Strategic Plan. Mr. Lowe has been one
17 of the persons that have worked the hardest on
18 this for -- has been an effort of almost a
19 half a year and I -- I thank Mr. Lowe for the
20 efforts and the preparation of the draft of
21 this Strategic Plan. So Mr. Lowe, please
22 proceed with the presentation.

1 MR. LOWE: Thank you, Chairman. I
2 want to thank you for giving me this time
3 slot, right before dinner, so I know what I am
4 standing between, so I will try to keep it
5 succinct as possible.

6 First of all, this has been an
7 extended process that we have gone through,
8 that we started last spring. We have -- we
9 have decided to do a lot of research on how
10 other agencies were approaching Strategic
11 Planning. In particular, we looked at NTSB,
12 which people may know, that CSB was modeled
13 after the NTSB's model, how they were -- how
14 they were developed.

15 As a matter of fact, we identified
16 a person over at NTSB that came over and
17 worked with us for about eight months to help
18 us develop a structure of how to do this plan.
19 And part of that structure was, we took the
20 time to interview a number of our internal
21 employees and we also went out and met
22 face-to-face with a number of stakeholders.

1 As a matter of fact, I think we met with about
2 15 to 20 stakeholders one-on-one to get their
3 input before we even started writing or
4 thinking about where we should head. That
5 also included a survey of the employees.

6 And then after the survey was
7 done, we went into drafting the plan. And the
8 plan was drafted and completed last month and
9 then put onto our public -- onto our website
10 for public comment and that's where we are
11 today and now we're at the public meeting
12 section.

13 So some of the findings, I just
14 wanted to share with -- with the Board from
15 our interviews with our stakeholders, in
16 particular was that universally, across the
17 board, whether it was they represented
18 industry workers, environmental groups, we
19 heard loud and clear what the CSB does,
20 matters and is valued. They appreciate what
21 we do. They understand the value that we
22 bring to the table.

1 All our stakeholders told us that
2 they use our reports and recommendations,
3 videos, to help prevent future accidents. And
4 so I think we have to remember that and what
5 our focus should be in terms of developing the
6 plan.

7 Now, when looking at the mission
8 of the CSB, we -- we stated the mission this
9 way for the coming year, for the coming five
10 years, to independently investigate
11 significant chemical accidents and hazards and
12 effectively advocate the implementation of the
13 resulting recommendations to protect the
14 workers and the public and the environment.

15 I think this is pretty much
16 similar to what we had before, but there -- we
17 did try to focus more on the implementation of
18 the recommendations, part of the statement.
19 We, this year we have gone to three goals. In
20 our previous Strategic Plan we had five and we
21 have combined some of five that were are still
22 doing the same amount of things, but we have

1 combined some of them to be more effective in
2 the way we measure and look at things.

3 Goal one really focuses on the
4 conducting of incident investigations and
5 safety studies that involve accident releases
6 or potential releases of hazardous chemical
7 substances. So goal one really is focusing on
8 all the work we do on the investigations, from
9 start to finish, from the -- from the time we
10 deploy to the time we develop recommendations
11 during -- during the investigation to the
12 final public meeting that we come here, like
13 we did here today.

14 Goal two focuses on improved
15 safety environment protection by ensuring that
16 the CSB's recommendations are implemented and
17 broadly disseminated, the CSB findings,
18 through advocacy and outreach. And this
19 really focuses on making sure that the
20 recommendations like we -- like we had today
21 are not just words on a paper, but we go and
22 make sure that they're truly implemented by

1 companies, organizations, federal agencies and
2 so forth, whoever we make it to, through
3 advocacy and outreach.

4 And one of the newer sections of
5 this will be focusing on a most wanted
6 program, which will be something that is an
7 important goal for us that is similar to what
8 NTSB does, if you're familiar with them, they
9 have a most wanted program of open
10 recommendations that they focus on and help
11 them determine what incidents to go to and so
12 forth. So that is something that is going to
13 be accomplished underneath this goal.

14 The final goal is to preserve the
15 public trust by maintaining and improving
16 organizational excellence. This is an
17 infrastructure goal to make sure that we do
18 all the things that we need to do to keeping
19 the agency running.

20 When you look at the stakeholder
21 feedback that we received from the public
22 comments that have been up on the website, I'd

1 like to talk about the themes they have seen
2 so far. One of the things that they have
3 asked is to define the potential releases and
4 what we meant by that. So we're going to look
5 at the wording and give some wording changes
6 to that so it's more specific in terms of
7 potential catastrophic releases. We're
8 looking at some of that, some of those, some
9 of those kind of -- some of that kind of
10 language.

11 We're also looking at the
12 timeliness of the investigations and
13 recommendation responses. And with this, we
14 have heard from the stakeholders that, you
15 know, they want the investigations to get done
16 in a timely way, because they want to learn
17 from what the accidents that occurred. And we
18 will, in the new Strategic Plan, have a metric
19 that will follow this to make sure that the
20 investigations, you know, stay on track.

21 In addition, also recommendations
22 response, looking at ways to measure how

1 quickly people respond to that and how quickly
2 we respond to the folks that send in their
3 response to the investigation, which is also
4 important.

5 Next, there was some talk about
6 investigations versus studies, the
7 stakeholders told us that it was important
8 that the investigations are still done and
9 done in a timely way, but they also see the
10 value in our studies. The dust study is an
11 example. The study that we have done that has
12 had a lot of impact. It's created a lot of
13 awareness, and so they have asked us to look
14 at the resources we have and try to figure out
15 which -- where to spend our money and time.
16 Safety culture was one I think that Mark
17 brought up previously.

18 Also, some of it got cut off, here
19 but communication with the stakeholders. We
20 heard consistently across the board that we
21 need to improve our communication with
22 stakeholders and make sure that they're not

1 just in the loop at the beginning but they're
2 in the loop through the whole process. And
3 they know where we are in the process and so
4 forth, and so that's something else that we're
5 going to work on through this -- through these
6 next four years.

7 And then the final one was just
8 tightening up the wording and making the
9 document more -- more concise. So just kind
10 of the timeline of where we're at, we have the
11 public meeting about the plan today. Between
12 now and the 30th we'll be still reviewing the
13 comments and happy to sit down individually
14 with anybody as we get back to the office and
15 so forth, to go through any comments that you
16 want to. And then our plan is by April 30th
17 to present a revised plan to the Board for
18 consideration and adoption. That's it. Any
19 questions?

20 MR. MOURE-ERASO: Thank you very
21 much, Mr. Lowe. And the objective of this --
22 of this session is to get input from the

1 public, from the list of people that signed,
2 we have Mr. Scardella from the United Steel
3 Workers first, so if you will please proceed
4 to the microphone.

5 MR. SCARDELLA: Thank you, Mr.
6 Chairman. John Scardella, S-C-A-R-D-E-L-L-A,
7 Program Administrator for the Steel Workers
8 Charitable and Educational Organization. The
9 United Steel Workers would like to comment on
10 the upcoming Strategic Plan for 2012 to 2016.
11 The USW is very supportive of the CSB
12 continuing to conduct in depth investigation
13 and focusing on identifying root causes and
14 making recommendations for prevention of
15 industrial incidents in the future.

16 The USW is concerned that while
17 taking on such an important mission, the CSB
18 remains to have very limited funding. We urge
19 congress to increasing funding in the future.

20 USW believes that it is vitally
21 important to have an independent federal
22 agency non regulatory focusing on identifying

1 root causes for the purpose of improving
2 safety, the CSB provides a great service for
3 all stakeholders.

4 The USW is in support of more CSB
5 studies, safety studies. This will allow the
6 CSB to investigate reoccurring issues that
7 they have identified in other investigations
8 but do not necessarily have the time to
9 investigate in depth and each individual
10 investigation.

11 A safety study allows the CSB to
12 better leverage with their limited resources.
13 Several of those issue are very important to
14 the USW and cut across several different
15 industrial sectors and therefore can be very
16 valuable in effecting safety change on a
17 broader level.

18 The USW strongly supports further
19 study of the impact of HF, of echolocation
20 units in the refinery sector and possible
21 alternatives. The USW has studied the impact
22 of HF in our refineries, representative

1 refinery locations and have a number of
2 concerns not only on the workers of these
3 locations, but the communities in which these
4 refineries are located.

5 The USW strongly supports further
6 work on performance indicators. The PB Texas
7 City incident resulted in preliminary changes
8 in this area but we believe more discussion
9 and analysis would be useful in identifying
10 most appropriate leading legging indicators,
11 reporting of data collected from these
12 performance measures, use of data at the
13 local, corporate, national level to improve
14 safety and reduce the potential for high
15 consequence low probability accidents.

16 USW also supports the further
17 study of -- or a public hearing on safety
18 culture. We believe this is a term that has
19 come to have many different interpretations,
20 including some which we feel are not
21 appropriate and not helpful in approving the
22 safety. We believe that the CSB is uniquely

1 positioned to study this issue and to conduct
2 public meetings on this issue.

3 USW strongly supports the CSB
4 looking further at the future of PSM,
5 including an assessment of other possible
6 regulatory models. The PSM rule has been in
7 place for 20 years. And over the last 12
8 years, the CSB has pointed out many of the
9 shortcomings of the CSB PSM rule. While we
10 believe it has been a ground breaking
11 regulation at the time, we feel that it is
12 certainly time for reconsideration, what
13 worked, what needs to be updated, et cetera.
14 Thank you.

15 MR. MOURE-ERASO: Thank you very
16 much, Mr. Scardella. Is there other public
17 comment? Yes.

18 MR. COOK: Yes, I think just --

19 MR. MOURE-ERASO: Wait.

20 MR. COOK: R-O-G-E-R, C-O-O-K.

21 MR. MOURE-ERASO: Okay, give us
22 your name again on the record and your

1 organization.

2 MR. COOK: Former Director of the
3 Western New York Council on Occupational
4 Safety and Health and still a consultant and
5 serve on the Advisory Board of the New York
6 State Pollution Prevention Institute.

7 I think the only -- well, I think
8 when we look at the DuPont issue, we're really
9 looking at a company that has used what we
10 called behavior based safety and the onus is
11 usually put on the worker and I think that
12 you, I don't know your name, sir, but on the
13 Board here, raised a fundamental issue here
14 that it's about organizational systems and
15 putting, having the right systems in place
16 that really is what leads to prevention of
17 these things.

18 And I guess my only question is
19 that in your, I guess in the investigation,
20 that really doesn't seem to get addressed.
21 Does that go beyond the mandate then, you are
22 just restricted to only speak to the specific

1 incident, you can't broaden that to talk about
2 the failure of the system itself in the report
3 and/or do you have to do that independently as
4 a kind of lessons learned from the industry,
5 I guess?

6 I mean, one of your stakeholders
7 said the what if scenario, it just seems to
8 me, at least in traumatic, in the traumatic
9 areas of injury, we use the near miss thing.
10 This thing could have gone even wider, it
11 seems to me. The community was very, very
12 concerned about that. They have still got all
13 that vinyl fluoride on site and what's -- what
14 do we know, you know, how are we going to
15 prevent this kind of stuff from happening
16 again.

17 So, I was just a little
18 disappointed that the investigation didn't
19 report on that broader, kind of near miss
20 catastrophic kind of scenario.

21 MR. MOURE-ERASO: Thank you very
22 much. I really appreciate your comments.

1 Also the comments of Mr. Scardella is there
2 any other comments? I would like to ask if
3 the Board members would like to make some
4 comments on this. Start with Mr. Bresland.

5 MR. BRESLAND: No comments. I
6 have read, obviously I have read the draft
7 report and I have read the comments that we
8 have received from our stakeholders as well.
9 Are those on -- are the public comments on our
10 website? Will they be on our website?

11 MR. LOWE: Not yet. We're still
12 working through that.

13 MR. BRESLAND: Okay. But apart
14 from that, I would like to commend Mr. Lowe
15 and his colleagues on an excellent job putting
16 all this together. I know it was a six month
17 effort and it looks like it's going to be a
18 very well used effort in the future. So thank
19 you.

20 MR. LOWE: Thank you.

21 MR. MOURE-ERASO: Thank you, Mr.
22 Bresland. Mr. Griffon.

1 MR. GRIFFON: Yes, no, I agree
2 with great efforts on all the members of the
3 team putting this product together. I know it
4 took quite a while to construct. I would ask
5 more, just a process question I guess, I am
6 assuming that we, as a Board, will have in the
7 near future, according to John's timeline, an
8 opportunity to deliberate on some of the
9 public comments we received. I know we
10 received quite a few written comments and
11 some, I mean, I have done some preliminary
12 review on them, but certainly not equipped to
13 discuss tonight and it's just getting a little
14 late, as you pointed out, but I assume we're
15 going to have a future opportunity to
16 deliberate as a Board on this plan.

17 MR. MOURE-ERASO: Thank you, Mr.
18 Griffon. Yes, I would like to say that --
19 that we're going to take very much into
20 account the written comments that we have
21 received in the website and we are going to
22 deliberate on them. And also we especially

1 appreciate the comments of the -- that have
2 been presented here by Mr. Scardella, Roger,
3 I am sorry your name again, I think those are
4 important things that are on the record and
5 that we would like include also in our
6 deliberations. After we get all this input,
7 we are going to have a vote on approving the
8 Strategic Plan and that will happen, according
9 with your timeline, very near, in the very
10 near future. I guess, we, according with what
11 we have promised our Inspector General, I
12 guess it's going to be in a month, a couple
13 months, so, you know, we are going to be
14 moving with due speed on this.

15 So thank you very much to
16 everybody that participated in this meeting.
17 We appreciate your attendance and we
18 appreciate your -- your -- your involvement
19 and concern with the CSB investigation and the
20 fatal hot work accident at the DuPont
21 facility. And thanks again to the Team for
22 their very informative presentation. And

1 thank you all who attended this evening. So
2 I always wanted to do this, you know, with
3 that, these proceedings are adjourned.

4 (Whereupon, the above-entitled
5 matter was concluded.)

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This is to certify that the foregoing transcript

In the matter of: Explosion at DuPont Yerkes Plant

Before: US CSHIB

Date: 04-19-12

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