UNITED STATES CHEMICAL SAFETY
AND HAZARD INVESTIGATION BOARD

PUBLIC MEETING

WEDNESDAY,
NOVEMBER 20, 2002

The meeting came was held in Suite 400,
2175 K Street, N.W. Washington, D.C., at 9:30 a.m.,
Carolyn Merritt, Chairperson, presiding.

PRESENT:

CAROLYN MERRITT, Chairperson
IRV ROSENTHAL, Ph.D., Member
JOHN BRESLAND, Member
GERALD POJE, Ph.D., Member
ANDREA K. TAYLOR, Ph.D., Member
CHRIS WARNER, ESQ., General Counsel
CHARLES JEFFRESS, Chief Operating Officer
LISA LONG, Chemical Incident Investigator
MIKE MORRIS, Chemical Incident Investigator
STEPHEN WALLACE, Chemical Incident Investigator
C-O-N-T-E-N-T-S

PAGE
Introduction, Chairperson Carolyn Merritt ..........3
Introduction of Chemical Incident Investigators,
Charles Jeffress .....................................7
Presentation of Incident Report:
Introduction of Report, Lisa Long ..............8
Incident Scenario, Mike Morris ..........11
Root and Contributing Causes, Lisa Long ....20
Recommendations, Steve Wallace .............24
Public Comment:
Robert Buckler, Esq. .........................57
Lawrence Halprin, Esq. .....................66
Chair's Update, Chairperson Carolyn Merritt .....83
Round Table on Metrics Update, John Bresland .....84
P-R-O-C-E-E-D-I-N-G-S

(10:00 a.m.)

CHAIRPERSON MERRITT: Good morning, and welcome, everyone.

On behalf of the U.S. Chemical Safety and Hazard Investigation Board, I welcome you here today to our Board meeting, which is being held in Washington, D.C., and we are Web casting live, and we welcome all of those who are joining us on the Internet at www.csb.gov.

And with that I'd like to officially open the meeting, and as you may know or may not know, I'm Carolyn Merritt, and I'm the CEO and Chair of the Chemical Safety Board.

The other Board members here today are Dr. Andrea Kidd Taylor, Dr. Gerry Poje, John Bresland, and Dr. Irv Rosenthal.

Also with us this morning is Chris Warner, our General Counsel, and Charles Jeffress, who's our Chief Operating Officer.

In my short time here at the agency, I've been pleased to find that everyone here at CSB, Board and staff alike, share a common purpose: to conduct high quality incident investigations and hazards investigations, and to identify root and
contributing causes for incidents or potential hazards.

We develop recommendations to various entities who have the authority, responsibility, and resources to prevent recurrence or occurrence of chemical releases and accidents in the chemical industry.

The agency staff and Board alike worked with those entities in a timely and effective implementation of recommendations, believing that they ultimately will prevent chemical releases and incidents and save lives of the workers and public, and to protect the environment and public interest.

This has been a very busy time for us in the last several months. We have several investigations that are currently underway and several that are nearing completion.

We're particularly focused on the Board recommendations following the chemical reactive hazard investigation report, which was presented in Houston in September. We're pleased with the spirit of cooperation and support that we found with those that we talked to in various industries and organizations about these recommendations.

Today's report from the staff further
identifies the impact that inadvertent and uncontrolled chemical reactions can have in the industrial chemical work place.

We're here today to consider the CSB staff report on a tragic accident last January 16th. Two workers contracted to do maintenance in the Georgia Pacific Naheola Mill in Alabama were killed when they were exposed to a cloud of hydrogen sulfide gas that had escaped from a process sewer during a sodium hydrosulfide unloading operation. Eight others were injured either directly or during rescue attempts.

Some of those who were injured were paramedics, who responded to the call from the mill. We asked the Agency for Toxic Substance and Disease Control Registry to partner with us in this investigation to determine if the information that was published for emergency responders in incidents involving hydrogen sulfide was adequate to protect the responders from exposure, and we thanked them for their assistance and their contribution to this investigation and to this report.

This accident provides another example of the consequences of an uncontrolled, unanticipated chemical reaction, this time in a
sewer system connected to waste treatment facilities.

The Naheola paper mill where this accident occurred had been purchased by Georgia Pacific only two years ago. Companies inherit certain problems when they purchase facilities operated by others who might not have the same standards as they do. This incident brings focus to the considerable attention that purchasing companies need to take to evaluate past practices and recognize potential hazards that might exist.

This incident also raises awareness that process chemicals that are considered low hazard, such as sodium hydrosulfide, does not mean no hazard chemical. Accidents like this happen when people become complacent and forget that any chemical mishandled can create a hazard with terrible consequences.

Frequent hazard evaluation of processes is the best defense against such consequences. This is good business, and it's good engineering practice, whether it's voluntary or required by law.

Corporate management mirrors the questions that the Chemical Safety Board asks in its investigations as they investigate a tragedy that
has occurred on their watch, and that's how could
this have been prevented.

   My message today is don't wait for a
tragedy to occur and for the investigation from the
Chemical Safety Board or its formal recommendations
to take action. Be proactive, predictive, and
preventive.

   With that, let me say again welcome.

Following the staff presentation, we'll open the
floor to the Board for questions and then to the
public for comment. We'll ask that those comments
be limited to three minutes, please.

   With that, I'd like to ask Charles
Jeffress to introduce the staff investigators and
recommendation specialists who present their work to
us this morning.

   Charles.

   MR. JEFFRESS: Thank you, Madame
Chairman.

   In the course of making an incident
investigation, the agency dispatches a team of
investigators to the field where the incident occurs
to do the on-site work in the field, looking at what
happened, interviewing witnesses, collecting
evidence.
That team then returns to further research, sometimes further interviews, sometimes has to return back to the field, and develops their report.

In the course of that analysis and research, a recommendation specialist joins the team to look at what recommendations might be made to prevent the occurrence of such an incident in the future.

Two members of the team who did the field work will be reporting today. Lisa Long is the lead on the team. Mike Morris will be assisting her, and Steve Wallace, who joined the team as a recommendation specialist, will also be participating in the report.

And now I'll turn it over to Lisa to begin the report.

MS. LONG: Good morning.

PARTICIPANTS: Good morning.

MS. LONG: On January 16th, 2002, an incident occurred at the Georgia Pacific Naheola Mill in Pennington, Alabama. As Charles said, the Chemical Safety Board sent a field to the team to investigate this incident. The team consisted of Mike Morris, myself, and John Murphy. We were
assisted in the field by the Agency for Toxic Substances and Disease Registry, or ATSDR.

ATSDR provided assistance in examining medical and emergency response issues. Steve Wallace later assisted the team with recommendations.

Today Mike, Steve, and I will present the results of this investigation, including recommendations, to the Board.

On January 16th, 2002, hydrogen sulfide gas generated in a sewer leaked from a gap in the seal of a manway or a covered opening in the sewer at the Georgia Pacific Naheola Mill in Pennington, Alabama. Several people working near the manway were exposed to the gas.

Two contractors from Burkes Construction, Incorporated were killed. Seven employees of Burkes Construction and one employee of Davison Transport, Incorporated were injured. Six Choctaw County paramedics who transported the victims to the hospitals reported symptoms consistent with hydrogen sulfide exposure.

The hydrogen sulfide released was evolved from a reaction of sodium hydrosulfide and sulfuric acid in a process sewer.
This incident is a reactive chemical incident as defined in the CSB's reactive chemical hazard investigation.

To give you a little bit of background on the mill, the mill began operating in 1958 as the Marathon Southern Division of the American Can Company. It was acquired in 1982 by the James River Corporation, and in 1997, James River merged with Fort Howard Corporation to form Fort James Corporation.

Georgia Pacific acquired Fort James in November 2000, and the mill now operates as Fort James Operating Company, a fully owned subsidiary of Georgia Pacific.

This incident took place in January 2002. However, some of the events that led up to the incident took place throughout the 1990s, and when we describe this history, we will not necessarily differentiate between the different owners of the Naheola Mill.

The Naheola Mill uses the Kraft process to produce pulp. Pulp is a material derived from wood chips. It is the main raw material in making paper.

In this process, a mixture of chemicals
called the pulping liquor is used to treat wood
chips that will be processed into pulp. The pulping
liquor is made of sodium hydroxide and sodium
sulfide.

This pulping liquor is recycled through
the process and occasionally fresh chemicals are
added to the liquor in order to maintain a proper
liquor chemistry.

Sodium hydrosulfide, or NaSH, which was
involved in this incident, was one of these make-up
chemicals.

I'm going to turn it over to Mike now,
and he's going to go through the incident scenario.

MR. MORRIS: Thank you, Lisa.

Good morning, Board members.

PARTICIPANTS: Good morning.

MR. MORRIS: Before I present the
incident description, I want to give you some detail
on the critical elements that are involved to help
you understand all of the factors contributing to
this incident.

First, I'd like to show you a photograph
of the area where the incident occurred and also
direct your attention to the drawing.

This is an overall drawing of the area
of the incident. This is the truck unloading area.

This is the NaSH truck, as you can see on the
drawing. This area is a concrete containment pad
that has sloped towards this collection drain. This
is a collection drain on the photograph.

The NaSH pump. Also this area here is
referred to as the oil pit or where the pump sits.
It's in this area. Also you can see for reference
the railroad tracks running in this direction.

Now a little bit about the sewer system
in the Naheola Mill. The mill contains a network of
sewers that collect waste. The acid sewer is one of
these process sewers. All of the sewers empty into
what is referred to as a mixing basin. As you can
see on the drawing, all of the various mill streams
come and mix together in the mixing basin.

PH of the mill effluent is monitored at
the lift station and is maintained within a certain
range. Six to nine pH is the range that maximizes
the biological treatment to process the waste.

The overall pH of the effluent is
affected by operations in various areas of the mill.
If the pH is low, caustic is added at the lift
station. Now, if the pH is high, sulfuric acid is
added. The acid is added manually in a process
sewer line commonly referred to as the acid sewer, and this acid sewer originates in the area where the acid tank is located.

This is referred to as the acid sewer, the acid addition. I'd also note that truck unloading tie-in to the acid sewer.

Following treatment in the waste water treatment plan, the waste streams are discharged into the Tombigbee River.

This is a photo of the sulfuric acid addition. This addition was a simple operation. The waste water treatment operators would radio the chemical area operators and tell them they need acid to bring the pH into an acceptable range at the waste water treatment plant.

The valve here would be opened and acid would flow into the sewer and run down the acid sewer into the waste water treatment plant and have an effect on the pH there.

A little bit about the NaSH unloading area. As Lisa described earlier, sodium hydrosulfide, or NaSH, is used in the mill's pulping process. When the NaSH supply is depleted, a campaign is initiated and NaSH is brought in by tank truck. The mill may go several months without

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bringing in NaSH and then bring several tank trucks in a short amount of time to replenish the supply.

NaSH is delivered to an unloading station located between the chemical area and the waste water treatment area. Fuel oil and caustic are unloaded at the same station.

The unloading station is located, again, on a large concrete pad which slopes to the collection drain, and the oil pit contains the NaSH pump and other pumps that are used in the area.

The process piping of various unloading pumps are located in the shallow, curved containment area directly beside the pad and collection drain, again referred to as the oil pit. At its deepest point, the oil pit is 20 inches deep.

And I refer you to the drawing again. Here you can see the NaSH truck, the collection drain. This is the NaSH unloading pump which is sitting down in the oil pit on a concrete pad.

Again, the oil pit. This is from a different angle in the collection drain. This was where the truck was sitting, in this area.

Now, the oil pit collects rainwater, condensate, and chemicals from the various unloading
stations. The drain valve, drain valve one, and also on the drawing there's drain valve one. On the pit it was kept closed and chain locked due to concerns about sending oil to the effluent system, the waste water treatment plant.

Operators inspected the oil pit periodically, and if no oil was present, they would unlock valve one and drain the oil pit to the acid sewer, which made its way to the waste water treatment plant.

Now, at the time of the incident the mill was replenishing the NaSH inventory. Fifteen tank trucks had been unloaded in the previous 24 hours, and the 16th was being prepared for unloading.

Witnesses stated that it was typical for a small amount of NaSH, and it would progressively get worse as the campaign went on, but witnesses stated that five gallons per truck may spill or leak to the oil pit during normal tank truck unloading of the sodium hydrosulfide from the unloading pump and through the flushing of the lines.

Just a note. The lock on valve number three was placed there after the incident, and again, valve three and valve two were usually open,
which allowed the collection drain to flow to the acid sewer.

The fiberglass manway, again, this is the area where the incident occurred from a different angle. This area of the mill was usually unoccupied by workers.

Here is the fiberglass manway that is referred to.

Persons interviewed described prior leaks of a greenish-yellowish gas, most likely chlorine dioxide from this manway. No leaks of hydrogen sulfide had been reported from this area, though keep in mind hydrogen sulfide is an invisible gas.

Usually after these reported leaks a work order would be written, and maintenance at the mill would reapply sealant on the manway cover.

Burkes Construction, Incorporated was the routine contractor with the Naheola Mill and had been. The project that was underway during the incident was replacement of the support structures for the overhead pipe rack. This is the overhead pipe rack.

You can see in the picture the support structures that support the overhead pipe rack.
needed to be reinforced stronger because of piping that had been added.

Now, the incident description. On January 16th, 2002, at the national unloading station inside the Naheola Mill, the pH in the waste water was running high. So acid was being added continuously to try and reach the desired pH in the lift station.

Meantime, for the pulp operation, Davison Trucking had delivered 15 trucks of NaSH over the last 24 hours. Also in the area was the Burkes construction crew, which was working on the support structures for the overhead pipe rack project.

Now, at approximately 3:15 p.m., the Burkes workers were gathering around after break in the work area. Now, their work required them to work in and around the oil pit. The pit at this time was full of liquid consisting mainly of rainwater, condensate, and an undeterminable amount of NaSH.

A mill operator was asked if he could drain the liquid to allow them access to their work. The operator, after checking for oil and found none, opened the valve number one, which allowed the
oil pit to drain to the acid sewer.

NaSH that had collected in the oil contacted the sulfuric acid already present in the acid sewer, and as a result, a chemical reaction occurred creating deadly hydrogen sulfide gas, which leaked through the seal on the fiberglass manway.

Two Burkes employees in the immediate area of the manway were killed almost instantly as they breathed the gas. Seven other Burkes employees suffered serious injuries from their exposure, as well as a Davison truck driver who suffered a laceration on his head after collapsing from exposure to the $\text{H}_2\text{S}$ cloud.

Three of the works' employees compounded their injuries -- their exposures as they assisted their co-workers and dragged them to safety.

In minutes, the plant ambulance arrived and took the three most critical victims to the mill first aid station. The other injured were taken to the mill first aid station in pickup trucks. None of the victims were decontaminated either at the scene or at the first aid station.

Soon after the victims were transported, the incident commander and the Georgia Pacific emergency response team arrived at the scene. They
set up zones and initiated a search and rescue, as well as setting up air monitoring in the area.

Four Choctaw County ambulances were called to the scene. Three of the four transported the most critical patients to two hospitals, each located in Meridian, Mississippi, over 45 minutes away, and the four stayed at the scene.

All three ambulance crews reported a strong odor in the ambulance base. One crew removed their patient's clothes and double bagged them, and the other two crews continued life support treatment on their patients, though performed no decontamination.

From this confined exposure, the paramedics reported experiencing headaches and nausea, and were checked out and released by the hospital personnel.

The Agency for Toxic Substances and Disease Registry, ATSDR, publishes medical management guidelines. These MMGs were designed for emergency personnel. However, the responders were not aware of these at the time of the incident.

The MMGs on hydrogen sulfide exposure state that responders are not a risk when they assist a victim of H₂S gas exposure. Through
ATSDR's assistance in this investigation, they have concluded that exposure to high levels of $H_2S$, typically greater than 500 parts per million, may result in the responder being adversely affected in confined spaces.

Now, Lisa will explain the root and contributing causes.

MS. LONG: Just a little more background. The sewer line from the oil pit and tank truck unloading area to the acid sewer was installed as part of a project to direct water from various storage tank pits to a process sewer, in this case the acid sewer. This work was completed in 1995 when the mill was owned by James River.

As root cause number one, the staff found that good engineering and safety practices were not followed when joining the drain from the truck unloading area and the oil pit to the acid sewer.

The CSB did not find any procedures which described the engineering process used during capital projects. Through employee interviews and document reviews, we determined that neither the chemicals that could be introduced into the acid sewer nor the hazards of their interactions were
identified.

Additionally, no formal hazard review or management of change analysis was conducted. As a result, scenarios leading to the possible release of hydrogen sulfide were not identified.

If the Naheola Mill had identified that NaSH could be introduced into the acid sewer and reviewed the hazards associated with allowing NaSH to mix with acid, it is likely that they would have either routed this drainage to a safer location or taken precautions to mitigate the hazard of hydrogen sulfide evolution, including installing warning devices.

The staff also concluded at the second root cause that there was no management system to incorporate hazard warnings about mixing NaSH with acid into process safety information. The MSDS provided by the manufacturer included warnings that NaSH will react with acids to form toxic hydrogen sulfide gas.

However, information specifying the hazard of mixing NaSH with acid was not incorporated into the design of projects involving NaSH. In other words, there was no system in place to insure that engineers working on projects, such as the
connection of the oil pit drain to the acid sewer, understood the hazards of the chemicals present in that area.

Additionally, operating procedures did not warn of the hazards of mixing NaSH with acids or the hazards of allowing NaSH to enter sewers as they were often acidic. Mill personnel were not trained on the specific hazards of NaSH, such as handling spilled material or keeping it separate from acid.

If the hazards of NaSH were incorporated into the mill system, such as design procedures, operating procedures, and training, it is likely that the hazard of mixing NaSH with acid would have been better understood and avoided or mitigated.

A contributing cause of this incident was that the fiberglass manway was not adequately designed or sealed to insure that the sewer remained closed.

The manway was originally an open grate, and eventual modifications resulted in the fiberglass manway that you saw in earlier pictures. The mill had had difficulty in the past in insuring that this manway remained sealed. If it had been adequately sealed, then the hydrogen sulfide generated in the acid sewer would not have reached
the personnel working in that area on the day of the incident.

Those interviewed recalled prior occasions when chlorine dioxide, a toxic gas noticeable because of its greenish-yellow color, escaped from the fiberglass manway. These incidents were not reported or investigated. If they had been investigated, mill personnel may have discovered that the design of this manway and seal were not adequate to insure that the sewer remained closed, remained sealed to contain toxic gases.

We also found as a contributing cause that the contractors injured during the incident did not have adequate training to understand the hazards of hydrogen sulfide. The Burkes employees injured during this incident had only a basic awareness of hydrogen sulfide. They understood that it was a dangerous gas that had a rotten egg odor. They did not have detailed training on emergency response and rescue when hydrogen sulfide was present.

Hydrogen sulfide training should include specific instructions on the importance of protecting oneself prior to attempting rescue. If the Burkes employees had had this more detailed training, it is likely that they would have
understood the danger that they were putting themselves in by attempting to assist their co-workers. Those are our root and contributing causes. Steve Wallace is going to present the recommendations.

MR. WALLACE: Thank you, Lisa.

Good morning. Consistent with the mission of the CSB to investigate incidents and make recommendations to prevent occurrence of similar incidents in the future, CSB has developed a package of recommendations based on the findings from the Georgia Pacific investigation.

We would like to note that these recommendations go to a variety of recipients that address deficiencies found in programs, procedures, and response guidance.

In developing these recommendations, we researched these issues, which included speaking with people who were familiar with the pulp and paper industry.

Based on the findings of the Georgia Pacific investigation, we would like to recommend to Georgia Pacific Corporation that they conduct periodic safety audits of Georgia Pacific pulp and
paper mills in light of the findings of this report.

At a minimum, insure that management systems are in place at the mills to do the following, and we have three bullet points associated with this recommendation.

Insure that management systems are in place to evaluate process sewers where chemicals may collect and interact, and identify potential hazardous reaction scenarios to determine if safeguards are in place to decrease the likelihood or consequences of such interactions.

Take into account sewer system connections and the ability to prevent inadvertent mixing of materials that could react to create a hazardous condition.

Also, insure that management systems are in place to identify areas of the mill where hydrogen sulfide could be present or generated, as it was in this case, and institute safeguards, including warning devices, to limit personnel exposure.

Require that personnel working in the area are trained to recognize the presence of H₂S and to respond appropriately.

Also, update emergency response plans.
for such areas, to include procedures for decontaminating personnel exposed to toxic gas.

And finally, insure that systems are in place to apply good engineering and process safety principles to process sewer systems. For instance, insure that hazard reviews and management of change analyses are conducted when additions or changes are made where chemicals could collect and react in process sewers.

And we would like to note that such principles may be found in publications from the Center for Chemical Process Safety.

As Madame Chair noted in the beginning, hazards may be inherited, but we feel that it would be prudent for the Georgia Pacific Corporation to survey the mills that they do have in their control to insure there are management systems to address these issues.

Our final recommendation to the corporation, in the spirit of broadly communicating the potential for this kind of event, we would like to recommend the Georgia Pacific Corporation communicate the findings and recommendations of this report to the work force and contractors at all Georgia Pacific pulp and paper mills.
Our next set of recommendations goes specifically to the Georgia Pacific Naheola Mill where the incident occurred.

We would like to recommend that the Georgia Pacific Naheola Mill evaluate mill process sewer systems where chemicals may collect and react to identify potential hazardous reaction scenarios to determine if safeguards are in place to decrease the likelihood or consequences of such interactions.

Evaluate sewer connections and insure that materials that could react to create a hazardous condition are not inadvertently mixed, and that adequate mitigation measures are in place if such inadvertent mixing does occur.

Also, we would like to recommend that the Naheola Mill establish programs to comply with recommendations from manufacturers of hydrogen sulfide, or NaSH, regarding its handling, such as preventing it from entering sewers because of the potential for acidic conditions which can then lead to the evolution of hydrogen sulfide gas, as we heard was the case in this incident.

To address the cause of the design of the manway, we would like to recommend that the Georgia Pacific Naheola Mill establish programs to
require the proper design and maintenance of manway
seals on closed sewers where hazardous materials are
present.

We would also like to recommend that the
Naheola Mill identify areas of the plant where
hydrogen sulfide could be present or generated and
institute safeguards, including warning devices to
limit personnel exposure.

Institute a plan and procedures for
dealing with potential H₂S releases in these areas
and require that anyone who may be present is
adequately trained on appropriate emergency response
practices, including attempting rescue.

And I'd like to note that some of our
recommendations address deficiencies in H₂S
training. There are a number of different aspects
to this training, including frequency,
qualifications of the instructors, identification of
the material, rescue techniques, et cetera.

We didn't delineate all of the specifics
in our recommendation, but I would like to point out
that there are two references that show up in the
reference section of our report both from NIOSH and
from ANSI on the specifics of a good training
program.
But we did want to specifically call out the issue of attempting rescue.

We would also like to recommend that the Naheola Mill require contractors working in these areas, those areas that have been identified where \( \text{H}_2\text{S} \) could be present or generated, to train their employees on the specific hazards of \( \text{H}_2\text{S} \), including appropriate emergency response practices.

We'd also like to recommend that the Naheola Mill update the Naheola Mill emergency response plan to include procedures for decontaminating personnel who are brought to the first aid station. Include specific instructions for decontaminating personnel exposed to \( \text{H}_2\text{S} \) so that they do not pose a secondary exposure threat to medical personnel, realizing that individuals who are exposed to toxic gas may not have any visible signs of contamination on their clothing.

To address the issue of guidelines in decontamination, we would like to recommend to the Agency for Toxic Substances and Disease Registry, the ATSDR, that they evaluate and amend, as necessary, the ATSDR medical management guidelines to consider the risk to responders posed by exposure to victims of high levels of hydrogen sulfide gas.
Specify procedures for adequate
decontamination and communicate the results of this
activity to relevant organizations, such as the
American Association of Occupational Health Nurses.

I would like to note that the American
Association of Occupational Health Nurses represents
a number of nurses who work in the chemical
industry. That's why we felt it was prudent to
communicate the results of this activity to that
organization in particular.

In conjunction with our recommendation
to the mill and to Georgia Pacific that they require
contractors to do training, we would like to
specifically recommend to Burkes Construction,
Incorporated that they train their employees on the
specific hazards of hydrogen sulfide, including
appropriate emergency response practices in areas
where Georgia Pacific has identified this material
as a hazard.

And to educate truck drivers on the
potential for this incident, we would like to make a
recommendation to Davison Transport, Incorporated,
to communicate the findings and recommendations of
this report to those employees who haul or handle
sodium hydrosulfide, recognizing that they must work
in conjunction with people at the host site when
releases do occur. We think it would be prudent to
communicate the findings of this report to those
individuals.

And along those same lines, as is our
custom to facilitate broad communication of our
incidents, we would like to recommend to the
following organizations: the American Forest and
Paper Association, the International Brotherhood of
Electrical Workers who were represented at the mill,
the Paper Allied Industrial, Chemical and Energy
Workers International Unit who also had employees at
the mill, and the Pulp and Paper Safety Association;
that they communicate the findings and
recommendations of this report to their membership.

Board members, this completes the
package of recommendations that we are proposing at
this time, as well as the presentation. The team
and myself will be glad to entertain any questions
that you may have.

CHAIRPERSON MERRITT: Okay. At this
time I'd like to open the floor to board members for
any questions that you may have.

Dr. Taylor.

DR. TAYLOR: Yes, I have a couple that I
will start off with.

You mentioned that one of the drivers had to be transported, one of the truck drivers carrying the NaSH had to be transported to the hospital. The question that I have for you is: is there any training of the truck drivers on the hazards of NaSH and potential problems associated with loading and unloading such a chemical at the facility?

MR. MORRIS: The Davison truck drivers were certified hazardous material transporters. They were trained in the MSDSes of the chemicals that they carry. Other than that, we don't have any information for the specifics.

DR. TAYLOR: Okay. And then my second question is also related to the NaSH unloading. Since NaSH and other chemicals have been unloaded in huge quantities at this facility in the past, do you have any information on whether there is a record of a similar incident perhaps with the hazardous release of the hydrogen sulfide gas, but no deaths or injuries occurring previously to the one that we had this time with two deaths?

MR. MORRIS: I'll take that one, too.

There have been reports of previous
leaks of chlorine dioxide from this manway. There
were no written reports of those releases. Hydrogen
sulfide, there were no written records of anybody
ever being exposed to hydrogen sulfide at the plant,
and there were no anecdotal --

DR. TAYLOR: Like hazardous and toxic
releases?

MR. MORRIS: -- evidence of that either.

DR. TAYLOR: Okay. That's all for now.

I'll come back.

CHAIRPERSON MERRITT: Okay. Thank you.

Dr. Poje?

DR. POJE: Yes. Let me just say I'm
thankful for all of you for the presentation today,
but I also was the Board member in the field at the
Pennington incident and want to salute, in
particular, Lisa and Mike and also John Murphy for
the work there and also thank those who worked with
us to provide the information that allowed us to put
this scenario together.

I think this is an extremely important
incident and one that hopefully can provide valuable
lessons to a large community on how to prevent such
tragedies from occurring in the future.

I'd like to ask a couple of questions
about the sodium hydrosulfide because I think this is also a concern not just in the paper industry, but the larger community of those handling this material.

CHAIRPERSON MERRITT: Excuse me, Jerry. Could you speak into your microphone? We're being told that it is not transmitting.

DR. POJE: Okay. Can you give me some idea of what kind of steps should NaSH users take in avoiding spills of this material, given its propensity to react under acidic conditions to release hydrogen sulfide gas?

MS. LONG: Well, certainly they should take precautions to avoid spilling NaSH, but if there is some material spilled, which is likely in the truck unloading process, they should avoid storing it around other acids and avoid getting into sewers where they may not know what's present because sewers are often acidic, and even a weak acid can react with sodium hydrosulfide to form H₂S.

DR. POJE: I know you've obviously focused very tightly on this particular incident. Did you have any opportunity to look at other paper mills and how they treat NaSH unloading areas as high risk for hydrogen sulfide releases?
MR. WALLACE: We did speak to some people in the paper industry as far as their handling practices, as well as manufacturers, and what we found is that some manufacturers actually do send their NaSH to sewers. However, those are dedicated sewers in which they know exactly what is present.

DR. POJE: So, in other words, there's a greater degree of forethought had in the way of approaching a sewer situation than perhaps was exhibited here?

MR. WALLACE: Yes.

DR. POJE: Let me ask another question. I think this is also a very important incident from our partnering with an agency like the Agency for Toxic Substances and Disease Registry. You mentioned the ATSDR medical management guidelines and their role in this incident, but also perhaps after this incident. Can you elaborate upon that a little bit further?

What's the nature of the guidelines and who do they seek to speak to in dealing with toxic hazards?

MR. WALLACE: The ATSDR guidelines are basically for medical personnel responding to an
incident such as this. They speak to how to handle the patients and what kind of treatment is necessary. There's a lot of good information in there on possible antidotes if there are any antidotes, with information like that and initial treatment and decontamination.

DR. POJE: But in this instance you're saying that that did not penetrate into the Choctaw County emergency medical personnel. They didn't have knowledge of this?

MR. WALLACE: No, sire, they didn't reference the ATSDR guidelines.

DR. POJE: And has anything subsequently occurred with the Choctaw County medical personnel?

MR. WALLACE: During the visit that ATSDR went back to the area, we visited with the paramedics. We visited with all of the hospitals involved, and they transferred the information and did a little bit of promoting of ATSDR and the sources of information that they could supply to those medical personnel.

DR. POJE: And was there any reaction for the medical personnel about that?

MR. WALLACE: They were very accepting of it and thought it was a great tool that they
stated they would use in the future.

DR. POJE: Okay. Thank you.

I'll reserve for next round.

CHAIRPERSON MERRITT: John, do you have some comments?

MR. BRESLAND: Yeah, I've got a couple of questions.

What other industrial gases that are commonly used in the chemical or in the pulp and paper industry would be comparable in toxicity to hydrogen sulfide?

MR. MORRIS: Methylmercaptan, the IVLH levels for hydrogen sulfide are 100 parts per million, is the immediately dangerous to live and health level associated with hydrogen sulfide. Methylmercaptan is 150.

Ammonia is 300. Hydrogen cyanide is 50 parts per million. Chlorine dioxide is five parts per million and another chemical that I'm familiar with, Phosgene, is a low as two parts per million.

MR. BRESLAND: That's the IDLH?

MR. MORRIS: Yes.

MR. BRESLAND: Do we have any knowledge of what the concentration of hydrogen sulfide was that the workers were exposed to?
MR. WALLACE: The ATSDR estimated the quickness of the exposures, the severity of the exposures would have had to have been above 500 parts per million for the injuries and the fatalities that were suffered.

MR. BRESLAND: The reason for that question was I was curious if there are other gases that could be generated in sewer systems not necessarily in the pulp and paper industry, but in the chemical industry in general, accidentally generated that could cause problems.

This question may overlap a little bit with some of the previous questions, but what do material safety data sheets say about the safe handling of sodium hydrosulfide? And is there a variation in what they say?

MS. LONG: Different manufacturers say different things. The more conservative advise if there are spills, avoid getting them into sewers, the reason being that sewers are often acidic.

Some of the others just caution about avoid mixing with acids. For large spills they ask that you dike them up and remove absorbent material as opposed to allowing it to flow to a sewer.

MR. BRESLAND: Material safety data
sheets, when they talk about environmental issues, they typically say things like, you know, "Don't lie to get into the sewer." That would be almost like a boilerplate.

But is there anything specific in the handling of a chemical like this which could interact with acid? Is there anything specific in the material safety data sheets that would caution against avoiding that contingency?

MS. LONG: There's an emphasis on the possible reaction with acidic materials, even weak acids. So there's a caution against allowing it to get into sewers because it could react with acid. So it's more specific there relating to acids.

MR. BRESLAND: But does it vary much from company to company in terms of the instructions that they give on MSDS?

MS. LONG: The basic premise is the same. It may be how strongly you interpret the language in the MSDS that's different.

MR. BRESLAND: Okay. Thank you.

CHAIRPERSON MERRITT: Dr. Rosenthal, do you have some?

DR. ROSENTHAL: Yes.

CHAIRPERSON MERRITT: Use your
microphone, please.

DR. ROSENTHAL: Yes. I think many of the issues I was concerned about have been addressed, but one of the things that strikes me, first let me start with a question.

I believe the Burkes contract employees were supposed to evacuate. Was that their instructions in case of not enter into emergency response; is that correct?

MS. LONG: In case of an emergency, employees like the Burkes contractors, like the Burkes employees, would have been instructed to evacuate the area.

DR. ROSENTHAL: Okay. So in a sense, if they have followed their instructions, they would have just taken off.

MS. LONG: Had they followed their instructions --

DR. ROSENTHAL: Because they're to take off.

MS. LONG: -- they would have left the area. Now, they would have still sustained injuries, but they prolonged their exposure by --

DR. ROSENTHAL: Yeah, but they would have taken off. So that in a sense, we say to
people, "Your buddies get knocked down. Take off
and leave them there."

MS. LONG: That's the training.

DR. ROSENTHAL: That is kind of like
putting people in an impossible situation, I mean,
morally and emotionally.

Under situations such as that, are those
instructions kind of like covering a certain part of
your body protection?

(Laughter.)

DR. ROSENTHAL: In other words, it
avoids the necessity of the -- I'm asking this --
does it avoid the necessity of the contractor or
whoever is responsible to insure that if there is
exposure to a hazard that can knock someone down,
that there are adequate measures that the employees
can take to follow their instincts, or can they be
trained like dogs to run?

I find that these employees were in an
impossible situation and were not prepared to deal
with that situation physically or emotionally, and
I'd like your thoughts on that.

MS. LONG: Well, I think you hit on the
key issue. This was, as we said in the root causes,
this was not an anticipated hazard in this area.
There were no monitors or warning systems. There was no plan in place for how you would deal with a hydrogen sulfide release in this area.

So the only thing they had to rely on was their sense of smell, and they certainly weren't prepared to deal with an issue like this.

DR. ROSENTHAL: Now, let me ask you a hypothetical question. Those are the worse kind. If you are, you know, a practiced chemical engineer, if you were given the waste collection, waste treatment, and waste disposal as a process to manage, and you were producing a product of some value at the end that you were dumping into the river, would you have taken into account the possible interactions, as rare as they may have been between sulfide feeding streams, acid feeding streams, and the possibility of exposures?

MS. LONG: Yes, I would. As stated in our root cause, it's important in sewers to consider the interactions of different materials that may be put into the collection system and brought to the waste treatment area.

DR. ROSENTHAL: As you went through the plant, and you came through this firmly, did you have the feeling that the engineers at this facility
-- and this is just feeling and you could be wrong -- but did you have the feeling that they looked at this as a process system or as a series of interrelated, isolated operations?

MS. LONG: Well, I can tell you that I don't know how their thinking went along the lines of whether they said this is a process or not, but the practice at this mill was not to apply the principles of process safety management outside of the OSHA covered area.

DR. ROSENTHAL: Okay.

MS. LONG: Covered by OSHA's process safety management. So they wouldn't have applied those principles in this area, which I think are good practices.

DR. ROSENTHAL: Thank you.

CHAIRPERSON MERRITT: Gerry, do you have another question?

DR. POJE: No, I don't have another question. I'm think that in August we were up in Delaware dealing with the terrible tragedy of the collapse of a concentrated sulfuric acid in a refinery situation, and in that situation one of our recommendations accrued to the American Petroleum Institute to enhance the development of their
guidelines on how they would deal with such tank
situations.

In this instance one of the things we're
seeking to have, and I think it's a very important
one, is to communicate to the American Forestry and
Paper Association and to the Pulp and Paper Safety
Association the results of this finding.

Are there any guidelines or best
practices that have been developed by these two
entities in dealing with the handling of sodium
hydrosulfide or hydrogen sulfide, given that as a
very prevalent portion of the processing and paper
mills?

MR. WALLACE: Dr. Poje, in our
conversations with these organizations, we do not
believe that they have specific guidelines on
dealing with hydrogen sulfide. I would anticipate
that if individual facilities called these
particular organizations, that they would tell them
to go according to manufacturer guidelines and what
good practices are according to MSDSes.

But we did not find that. Kind of in
contrast with API, who has an infrastructure who has
developed guidelines for some time, we did not find
a similar structure here, which is why we felt it
was prudent to make a recommendation that they communicate the findings, because that appears to be one of the areas that they do quite effectively, is communicating of incidents with their members.

DR. POJE: I know in my review of safety systems, clearly there is a great value that I see and I think the institution has recognized in the Center for Chemical Process safety on principles that would deal with process safety management, and you are recommending the recommendation that would even put that knowledge into this audience. Is there broad knowledge or do you have a feel for the knowledge had in the paper industry about a different industry's process safety management principles?

MR. WALLACE: When we had meetings with the organization, with people who were involved with safety, I mean, at Georgia Pacific, the people who were involved in safety were familiar with publications from the Centers for Chemical Process safety.

There are some paper mills that are members of either ACC or SOGMA. Sometimes it's more incidental because they may be part of an umbrella group that has other processes that are more
traditionally members of those organizations.

I hope that answers your question.

DR. POJE: Yeah, and then one derivative of that is the development of regulations in our sister agency, OSHA, process safety management regulations. Were any aspects of this paper mill that were covered by the PSM regulations?

MS. LONG: I just wanted to add one more thing to what Steve said. In addition to Georgia Pacific, some other paper mills that we talked to also were aware of good process safety practices and CCPS. So it was known in the industry.

On the question of the specifics about OSHA's process safety management, there was a covered process in the Naheola Mill, but this area and this process was not a part of that.

DR. TAYLOR: I'm Dr. Taylor.

I want to go back again to the hydrogen sulfide exposure itself as well. This was an open area, right? And so apparently the H₂S, hydrogen sulfide, was moving in some direction, and you mentioned that -- in your report you mentioned that the area was evaluated; that they began to monitor for airborne levels of hydrogen sulfide.

We know that the 500 ppm was what caused
-- above that was what caused the death of the two
employees that were killed, but what about
afterwards? How much was left in the area following
air monitoring levels?

   MR. MORRIS: The response team monitored
for the rest of that day, the next day, and into the
third day. They recorded on readings of hydrogen
sulfide during their monitoring.

   One instance, the evening of the
incident they had a spike for a split second of a
high reading, but other than that there was nothing,
no records of any hydrogen sulfide in the area after
the incident.

   DR. TAYLOR: And, see, normally there
are no employees in this area conducting work, and
in this case they were above the area where the
incident occurred near a manway. So my second
question goes to -- I mean, Irv's question was right
on point. You know, they went back to rescue their
friends and were exposed even more.

   But if they had had confined space
training, perhaps if this was a confined space and
it wasn't -- you're in an open area. So this is
totally different from the concept.

   So when you mentioned the employees and
their lack of training, they received some sort of awareness level training. What did that entail? Was that regarding H₂S or just generally the procedure had been to just get out of the area if something happened? Because I'm sure they go to other sites similar to this.

MS. LONG: They had what I would call a basic awareness of H₂S. They knew that it smelled like rotten eggs, and they understood that it was dangerous.

There were other areas of the mill where they had hydrogen sulfide monitors set up, and they knew that if a monitor went off, they would --

DR. TAYLOR: Move.

MS. LONG: -- they should evacuate the area. They didn't have more detailed training about the dangers of rescuing someone in a situation like this.

DR. TAYLOR: Okay. My last question goes back to the manway. In your executive summary, you mentioned that the repairs of the manway were sometimes documented in work orders, and then I guess they eventually went to the type of manway that they used for a ceiling.

And you also mentioned that chlorine
dioxide was leaked. They were several times where they noticed leaks of chlorine dioxide.

Now, what kind of repairs were done on the manway?

And you sometimes documented work orders. Exactly what that mean and whether had this field been better, would there have been the same problem.

MS. LONG: Well, as we mentioned in the presentation, there were reports of witnesses recalled seeing chlorine dioxide there in the past, and you --

DR. TAYLOR: This was after the work orders or after --

MS. LONG: This was --

DR. TAYLOR: -- repairs or --

MS. LONG: -- throughout the 1990s probably.

DR. TAYLOR: Okay.

MS. LONG: It's just an area that was known to have some leaks. Now, hydrogen sulfide is invisible.

DR. TAYLOR: Right.

MS. LONG: And since it's not a normally occupied area, there wouldn't likely have been
anyone there to discover that, but when they saw chlorine
dioxide, the greenish-yellowish gas, most witnesses that talked about these incidents said, "Well, we would write a work order and repair it."

So it's not that they didn't do anything, but they never --

DR. TAYLOR: Checked or --

MS. LONG: -- reported these as incidents and did a formal investigation.

The seal that they were using, this manway kind of grew up over the years, and when they sealed it, there was really no way to insure that this would remain sealed, and I think that if they had done some incident investigation around these chlorine dioxide leaks, they may have discovered that there was a better way to seal this manway and prevent the toxic gas from getting out of the closed sewer.

DR. POJE: And is it correct that in other areas of the plant there were monitoring systems for \( \text{H}_2\text{S} \) that would have provided a non-human way of recording whether an incident has occurred or not?

MS. LONG: There are areas from our research with different paper mills where hydrogen
sulfide is a higher hazard and more expected. Different mills do hazard evaluations to decide where they need to put these monitors, but typically in the pulping area you would have monitors, and they did have them in that area.

DR. TAYLOR: But outside in this area?

MS. LONG: But in this area they did not anticipate this, and they didn't have any monitors or warning devices.


MR. BRESLAND: You answered a previous question about previous examples or incidents involving injury or death at the mill where we had the incident. Do you know of any examples of incidents involving injury or death from hydrogen sulfide exposure in the rest of the pulp and paper industry?

MS. LONG: We did a search for different incidents involving H₂S, and we found about 39 incidents, and as you recall from the reactive study, the data out there is not great, and in some cases it's very difficult to determine exactly what happened.

Most of those 39 incidents were in oil and gas processing or refining or in municipal waste
collection. There were three that were in the pulp and paper mill. One was in a paper recycling, which would be slightly different, and two that we found in pulp mills, but I can't give you enough detail to tell you what happened because they're mostly anecdotal.

MR. BRESLAND: Okay. Thank you.

DR. POJE: Just a sidebar comment. Even at a meeting we had last week relating our coming meeting today to a few people, one person piped up and said, "Oh, I remember an incident that occurred in New York City where release of sodium hydrosulfide into a sewer caused the generation of $H_2S$ and serious injury and fatality to other people."

So I think this is the difficulty of the available data systems to provide us with an all seeing eye about the frequency of this chemical and this kind of an arrangement as a pandemic problem in the community.

CHAIRPERSON MERRITT: A question I have is concerning emergency response. What is the general training that is given with regard to rescuing fallen co-workers in industry? Can you tell me what that is?
MR. MORRIS: The guidance is not to attempt rescue without first protecting yourself from the hazard.

CHAIRPERSON MERRITT: And that's general training that's given on a regular basis?

MR. MORRIS: It would be specific to emergency responders would get that level of detailed training. If there was a specific training program on hydrogen sulfide, I think that would be included in that.

DR. TAYLOR: But they would be using -- by protecting themselves you mean they would have training on using the proper protective equipment.

MR. MORRIS: Proper protective equipment. In this case, self-contained breathing apparatus, SCOT air pacs are commonly referred to as that type.

DR. TAYLOR: Okay.

DR. POJE: Were there other equipment in the area that provided some temporary relief from hydrogen sulfide?

MR. MORRIS: There were no SCOT air pacs in this area. The workers did carry what is referred to as a speedy vac respirator. It's a respirator you wear on your belt. It's a cartridge
type respirator. You stick it in your mouth, and you put a nosepiece on.

Now, those are only intended for escape purposes, and they're not effective in IDLH atmospheres of hydrogen sulfide.

DR. POJE: That's another issue then. There might be some false belief in those possessing such about their ability to be protected and provide them with another false indication of responding in emergencies when they really definitely should not.

MR. MORRIS: Right. When they're issued these evac respirators, they're instructed that they're only for escape. They're not for IDLH atmospheres, but it may give you a sense of safety when it wouldn't provide that level of protection.

MR. WALLACE: Just to add to what Mike said, the guidelines that we reference from NIOSH says that above 50 parts per million you should not attempt rescue without donning the appropriate PPE.

CHAIRPERSON MERRITT: Bill, do you have any additional comments? Bill Hoyle is our Director of Investigations.

MR. HOYLE: Just thank you very much.

Good morning. I want to take a moment to maybe add a little something that I think is
important on the issue of hydrogen sulfide exposure
and rescue, that earlier conversation may have given
a misimpression.

The choice in a hydrogen sulfide release
is not to attempt rescue and risk death versus do
nothing. That's not the choice. Really as
practiced throughout industry, hydrogen sulfide is
the first hazard you learn about in many chemical
facilities, oil refineries, and other similar
facilities in the country, and you're refreshed on
that training and you're drilled on it because it's
such a deadly material, and it's treated in the most
serious fashion.

So really it's not a question of running
from and allowing people to die, but rather there's
very important and very specific steps that are
taken in an H₂S release, and those include the very
first thing, most important thing is to sound the
alarm.

You need to sound the alarm so that
highly trained emergency HAZMAT team and emergency
medical personnel are summoned at the earliest
possible moment.

This is the best way to save lives and
to prevent others from also being hurt. That's a
very important action to take, and in fact one of
the most important.

And then second is that you keep others
out of the area, and in the training -- because
others may not know of the hazard. They may stumble
into the area or otherwise put themselves at risk.
So keeping others away from the area is an urgently
needed, very important safety action.

And then finally, if you're trained to
do so, and consistent with a facility emergency
response plan, you can don self-contained breathing
apparatus, typically in a team of people, not as an
individual, and can attempt to remove people from
the hazard area, but only if you have training to do
so, have been drilled, and consistent with the
emergency response plan.

In this particular case at Georgia
Pacific, there were plant employees who were more
highly trained in hydrogen sulfide hazards and
response who observed this incident, but who did not
enter the hazard zone without protection. Instead,
they're the ones that actually sounded the alarm,
which was the training of Georgia Pacific in this
case.

So they did the right thing, sounded the
alarm. That got the right people coming. That's
the best way to save lives, and so it's really not a
question of risking yours versus doing nothing. So
I just wanted to help maybe add a few thoughts to
that question.

CHAIRPERSON MERRITT: Thank you.

Any other questions or comments?

I'd like to at this point thank your
presenters and open the floor. I have two names
that have been given to me as people who would like
to make public comment. Robert Buckler, if you
would use this microphone right here, please.

Yes, and these are comments, please.

We're not taking questions at this point for staff.

MR. BUCKLER: And I'm assuming that you
won't be taking any questions of me.

(Laughter.)

MR. BUCKLER: My name is Robert Buckler.

I'm an attorney with the law firm of Troutman,
Sanders in Atlanta, Georgia, and have represented
them for 26 years in the area of safety and health.

My background is I started out as an
attorney with the Department of Labor in 1973, which
was when the OSHA Act was first getting enforce, and
I spent three years there and have spent a lot of my
time in private practice doing this kind of work and have represented the company since then.

What we wanted to do was we have four specific differences with the draft report's factual findings, and we thought that it was important at least that we mention those to the Board today. I'm going to try and be brief, and I'm going to try and be specific.

We are concerned at least that at this point in time unless certain changes are made to the report, that the report will not satisfy the Office of Management and Budget's data quality guidelines which have come out recently dealing with the accuracy of factual reports such as the one in hand.

So with that said, let me mention I think there are five specific factual questions or factual incidents that I wanted to bring up, and then there's one disagreement which we have principally with the focus of one of the recommendations.

First of all, as the Chairman acknowledged, this is a mill that Georgia Pacific very recently purchased 14 months before the incident. At the time that they purchased this particular mill from Fort James, they purchased 43
other facilities.

In the last four years prior to the incident, they had purchased over 100 new facilities. Most of these facilities were not up to Georgia Pacific's safety and health guidelines, much less the government's guidelines, and this was one of the mills where we had specific problems, particularly in the area of process safety, where we were trying to get a mill that we had acquired that was not even up to the standards of process safety where that particular standard applied.

So the mill was behind the time, and the report does not acknowledge in that respect those particular facts and does not acknowledge Georgia Pacific's safety record in this particular industry. For seven straight years the company was ranked as the safest company in the forest products industry. During the last three years, when we've been in the process of acquiring all of these other mills, we've never dropped below the top three.

We think that the report should at least acknowledge the corporation's efforts in this area. There were certain things that we had implemented at the corporate level which I'm going to mention, which had not been instituted at the mill due to the
fact that we were trying to catch up on other things
and get as much as we could get done at that point
in time there, but which I don't believe your
investigators would disagree. We had implemented at
least at the corporate area and which had been
instituted at other mills that we've had for a
longer period of time.

With regard to the specific facts of the
incident in question, we have four things that we
think need to be changed, which we had requested
after a review of the draft report, that at least at
this point in time my understanding is had not been
either added or deleted from the draft report.

These four things are:

First, the draft report focuses on the
need for a reactive hazard management system. This
company does not disagree with that, and in fact, in
September of 2000, Georgia Pacific at the corporate
level had implemented a system for identifying and
managing reactive chemicals. So this company has
been on the forefront of doing something that OSHA
has not yet addressed and which this particular
agency has been trying to get people to focus on for
some period of time.

We believe that the fact that we had
implemented that process prior to this incident and that we had not been able to get it instituted in this mill yet should be mentioned in the report.

The second thing that we disagreed with in the report was if you go under the draft report, it was at Section ES.3, key finding nine, and that is the key finding that deals with the chlorine dioxide leaks that were reported, anecdotal reports of chlorine dioxide leaks from the manhole cover in question.

We had requested that certain facts that are unrefuted be added to that particular portion of the report because the report as it reads right now, from our perspective, reads as if we were somewhat or as if the mill was somewhat indifferent to the reports of chlorine dioxide leaks at this manhole cover.

And the three facts which we had asked to be added to the report, which I understand have not been added at this point in time, are as follows:

That in May of 2001, which was less than a year prior to the incident which occurred in January of 2002, we had the last written report of chlorine dioxide leaks in the chemical area.
Now, the chemical area is a broader area
than where this specific incident occurred, but
where the incident occurred is included within the
chemical area.

In response to those reports, we went
out in June, took tests, and tested specifically at
this manhole cover for leaks and found none.

Following that, in October of 2001, less
than three months before the incident, the manhole
cover in question was removed for the purpose of
entering the sewer at that point and taking
photographs of the sewer, which are done
periodically during maintenance at the mill.

Following the entering of the sewer in
October of 2001, that manhole cover was resealed,
and there were no reports of any incidents of leaks
between the time that it was resealed in October of
2001 and the incident in January of 2002, and we
believe it is important that those particular facts
be included in the report.

I think it adds to the concerns that the
investigators found with the adequacy of the
particular type of manhole cover in question, but I
also think that it does show that the company was
not completely indifferent to reports of leaks that
it had with regard to that cover.

The third thing that we ask to be

included is with respect to key findings ten, 11, and 12. This is one of the areas where we have the strongest disagreement with the focus of the report.

Key findings ten, 11, and 12 deal with the threat to responders and the decontamination issue that the report addresses.

Key finding 12 acknowledges that the ATSDR guidelines did not indicate that there was any necessity of decontamination. We believe that that particular key finding should be mentioned before you make any of the key findings with regards to the facts regarding responders having potentially been exposed to secondary H₂S.

So we're asking that 12 be moved in front of ten and 11 from an orderly standpoint.

Secondly, with regards to the facts surrounding the responders and their exposure, all of the testimony and all of the evidence that was found was anecdotal from the respondents. It's inconclusive, at best, at this point in time.

We had six paramedics who did report not immediately, but after the fact and after having consulted with counsel symptoms of H₂S exposure. We
had other people who were involved in the initial response, including plant personnel, who responded and removed the victims from the area to other areas of the plant, who said they did not have H₂S exposure.

So we believe that this issue with regards to decontamination and the need for decontamination when you have H₂S exposure is at least inconclusive at best, and we think that at this point in time there needs to be further study, and that rather than make recommendations to us regarding immediate changes, that really it needs to be directed towards the ATSDR and ask that they conduct the proper scientific analysis to determine whether there really is such a threat.

Finally, in the second paragraph of Section 4.1 of the report, which is way deep in the report on the page 33, is acknowledged that the area where the incident occurred is not covered by the OSHA PSM standard. We believe that this acknowledgement should be moved more to the front of the report and have requested that that particular acknowledgement that the area in question was outside of the boundaries of the current OSHA PSM standard should be mentioned much earlier in the
report and had suggested that it be mentioned either in key finding seven or that it be footnoted at that point in time.

The last thing I wanted to mention to the Board is the area of recommendations, and in the area of recommendations we feel very strongly that with regard to the recommendation on decontamination, that that recommendation should not at this point in time be focused on the company, but should rather be focused in ATSDR because we believe that the facts as they are here do cry out for further study and further analysis, but to make a change at this point in time, given the inconclusive nature of the testimony and the statements from the people who were there, is premature.

So we believe that that particular recommendation, as it is, being directed to ATSDR as I understand the recommendations here, should be limited to that and not focused on the company.

I'll take questions if you have them, even though I said I didn't want them. I do appreciate your time.

The agency has been cooperative. I want to compliment them for the cooperation that they exhibited during the course of this investigation.
There are just certain facts at this point in time that we feel are necessarily if this report is going to be complete and accurate with regards to certain of the facts that occurred at this very tragic incident at the mill.

CHAIRPERSON MERRITT: Thank you.

Do you have a question?

DR. ROSENTHAL: Yeah, I just was curious about -- no, no questions.

(Laughter.)

MR. BUCKLER: Lawyers are cutting the Board members off?

(Laughter.)

MR. BUCKLER: Unheard of.

CHAIRPERSON MERRITT: No, that was the Chair.

MR. BUCKLER: Oh, the Chair. Okay.

CHAIRPERSON MERRITT: I would also like to call Lawrence Halprin. Would you also tell us your affiliation and interest here so that it can be recorded?

MR. HALPRIN: Good morning. My name is Lawrence Halprin. I'm an attorney with the law firm of Keller and Heckman. We represent the American Forest and Paper Association, and I'm here today to
speak on their behalf.

We appreciate the opportunity. This was clearly a tragic incident. I listened to the conversations among members this morning, and I see there's clearly a concern about work place safety and improvement.

We'd like to work with you in that regard. We are, frankly, disappointed. There was very limited contact, in our view, between the staff investigating this incident and members of the Paper Association.

In an ideal scenario, we think a report would be prepared in draft. It would have been distributed to American Forest and Paper Association. They would have distributed it to the members, and then there would have been a cooperative discussion about whether the report actually made recommendations that made sense.

We're talking about an area that's still controversial about how it should be addressed. We all know there's a process safety management standard. Virtually every paper mill, probably all of them within the industry are covered by PSM to some extent.

The question is: what do you do about
the reactives?

I think everybody agrees some sort of hazard assessment is necessary. You certainly need to take into account what's going to happen when things are piped into different places, but to echo one of the comments that was this morning, the manufacturer who puts out a material safety and data sheet, frankly, is not the organization you can necessary rely on to tell you what good practices are with respect to a chemical. They've got a totally different orientation. They are thinking about product liability.

As you mentioned, with the public sewer, that's not what we're talking about. We're talking about a closed process vessel going to a process waste system, going to an on-site treatment facility. That's totally different than dumping something in a New York public sewer where there's no anticipation of that being there. Nobody is trained in that, and you should expect it to be there.

Now, obviously something went wrong here. There's no question about that, and it needs to be addressed, but the question is, how should it be addressed.
There's been a recommendation on September 17th to the Board, by the Board to OSHA, to look at the reactive chemicals issue. Certainly Charles is familiar with that issue. When he was at OSHA, it was debated back and forth.

Process safety management standard is a very burdensome standard. You can look at what's involved. Some aspects of it may be applicable to reactives, but certainly not all of them. That's a decision that I think is properly in the hands of the Occupational Safety and Health Administration.

To the extent that this Board issues reports that basically suggest applying PSM to every reactive chemical, you're jumping the gun, creating a scenario or potentially some OSHA compliance officer is going to think, "Ah, we'll use the general duty clause. We'll take the information from the Board's report, and we'll basically impose process safety management for the general duty clause."

To the extent that the Board would actually put out a report and then get responses back on abatement measures from the company that was affected and then rate the abatement measures, you're basically becoming an enforcement agency. I
don't think that's your role either.

With respect to, for example, material
safety data sheets, I pulled a couple off the
Internet last night. I apologize because I didn't
know exactly what everybody was going to be talking
about today.

Here's an example. "Large releases.
Wear proper protective equipment." And then it says
dikes are ready to prevent runoff into sewers,
drains, and surface waterways, and then it talks
about aquatic toxicity and lots of other issues.

So I would say there's lots of
boilerplate in material safety data sheets primarily
for environmental concerns. To take a material
safety data sheet and say this practice ought to be
implemented without regard to what the impact might
be, no you're talking about creating hazardous
waste, which then has to be transported and disposed
of in substantial quantities.

So to the question about how would you
manage this system, I don't think it's appropriate
for this Board without actually going out and not
talking to one or two companies or one or two
representatives, but basically getting a feeling for
what's going on in the paper industry and other
sectors of the chemical industry.

If OSHA had a C, there would be a public notice. Everybody would get an opportunity to stay, "Here's what we're doing. Here's why we're doing it. This is why it makes sense, and if a hazard assessment has to be done, some more control measures need to be in place," which is certainly the case, "that's appropriate."

But to simply say, "Don't dump something into a sewer system because it creates a hazard," rather than saying, "Well, okay. It does create a hazard. Can you control it?" and say, "Yes, we can control it," that's jumping the gun and coming to the conclusion that doesn't make sense to us.

With respect to the ATSDR, that's a recommendation that's been in place for some period of time. I think it's appropriate for you to ask ATSDR to go back and look at it and see whether that recommendation that the contamination is not necessarily outside the hot zone or somebody who is not saturated with liquid containing hydrogen sulfide -- that's something they should go back and do.

And there's clear, straightforward chemical tests and analysis that can be done to
decide whether it's really possible for somebody to have their clothes dry, but somehow containing some level of hydrogen sulfide that's going to come out in the space of an ambulance. That's a test that can be done rather than jumping to a conclusion that that's what happened based on anecdotal evidence. You ought to run a test. That's the responsible thing to do in our view.

CHAIRPERSON MERRITT: I'd ask you to wrap your comments up please.

MR. HALPRIN: Sure. So that I'm saying is we'd like to work together. We think it's better for you to come to us and say, "Here's a draft,"

which is what we suggest you do with this document, and let us work with you and find out what makes sense rather than finalizing a report and then handing it to us and say, "Please distribute this to your members," when there's a lot of points that are very valid and there are other points which we aren't going to agree with.

And so we ask for your cooperation to think about a more productive way of going forward with this report.

Thank you.

CHAIRPERSON MERRITT: Thank you.
Are there any other comments? At this time we'd open the floor for one other comment.

(No response.)

CHAIRPERSON MERRITT: There being none, then I think I would like to make a brief comment because this is a new agency, and it's not one that's worked with the paper industry before. This is an independent agency, and through Congress it was established to do exactly what we have done in this instance, and that is to investigate industrial chemical accidents, to identify a root cause, not apportion blame, but to find a root cause and contributing causes, and to make recommendations to entities who have the ability to make changes as a result of those recommendations that would prevent this from happening again, or doing a hazard investigation, which is actually proactive, where no incident has occurred, in order to prevent that from happening again by making independent recommendations to entities that have the authority, ability, and resources to control such a hazard.

So this is a little different animal than a regulatory agency, being an independent federal agency authorized by Congress to do exactly the investigation that we did.
So with that, what I'd like to do is proceed. Today the CSHIB staff has presented to the Board its analysis, finding, and recommendations arising from the hydrogen sulfide poisoning incident at the Georgia Pacific Naheola Mill in Pennington, Alabama.

This incident killed two persons and left another eight injured. I thank the team for good investigative work and for thoughtful recommendations. Lisa Long, Mike Morris, Steve Wallace, and John Murphy, who is not with us today.

This incident raises a number of interest safety issues, and it's outside really this investigation, some of which you just mentioned. Several of the Board members, we have been talking also about the possibility of need to discuss the importance of pursuing some of these issues beyond this investigation.

Does this incident represent an isolated case, or is it just the tip of an iceberg? Specifically, how many related incidents have occurred in the paper industry and elsewhere, and how does this industry deal with hazards of NaSH and related materials?

Are the current safety practice
sufficient with regard to handling NaSH materials?

So as not to further delay the issuing
of this report, I would like to propose that the
Board proceed with a vote following a proper motion
to that effect, and after the vote, however, I
intend to ask the Board for support to pursue an ad
hoc safety study in addition to what has already
been done to answer questions that I've just raised
and that some of you have raised also with regard to
this incident, not necessarily the report.

So if there's no further comments, I
would like to ask Board members whether anything
from the comment period or any other factors would
prevent us from moving to a vote on this final
report and its recommendations.

(No response.)

CHAIRPERSON MERRITT: Hearing none, I
will ask that we proceed.

Who has the motion to accept the Georgia
Pacific report and its recommendations?

DR. TAYLOR: Madame Chairman, I do, and
I move that we approve the CSB investigation report
and the recommendations regarding the hydrogen
sulfide poisoning at the Georgia Pacific Naheola
Mill in Pennington, Alabama.
CHAIRPERSON MERRITT: Is there a second?

MR. BRESLAND: I'll second that.

CHAIRPERSON MERRITT: That's seconded by John Bresland.

Is there any other discussion with regard to the motion that's on the floor?

DR. ROSENTHAL: I just believe that substance of the report is correct, but there have been a number of items which would not change the substance of the report, and I think that we ought to reserve the right to review the report in the light of the comments that have been made if, indeed, those comments are properly noted on our records.

In other words, I'm not sure exactly what was said and don't remember in detail the particular comments, but I think we ought to review them in the light of those comments or else why get comments?

CHAIRPERSON MERRITT: Well, then you would need to amend the motion to delay the report.

DR. ROSENTHAL: I would amend the motion to allow for review. I believe nothing that I have heard changed the substance of the recommendations, but would warrant some editorial changes in the
report.

So I would say subject to consideration of the remarks that have been made forward and comments and leave it there.

DR. TAYLOR: Can I ask a question? Just a procedural, as well as from the -- I believe it was my understanding that the comments that we received today had been received prior to the public meeting.

DR. ROSENTHAL: Is that correct?

MR. JEFFRESS: Can I comment on that?

CHAIRPERSON MERRITT: Yes. Charles Jeffress.

MR. JEFFRESS: Thank you, Dr. Taylor. I appreciate the opportunity to comment on that.

As you can tell from Mr. Buckler's presentation, he could cite page, paragraph number deep into the report as to what the report said, and on two occasions the team has gone over in great detail with Georgia Pacific their comments, compared them to their notes, their analysis, their interviews, their research, and did make a number of accommodations.

Based on information provided, the final report reflects their consideration of the GP
comments, and there are obviously some places where
they disagree, but as you can tell, they did have
extensive conversation with GP about that.

Also, with respect to the Pulp and Paper
Association, during the course of the investigation
prior to writing the report, the staff contacted a
representative of the Pulp and Paper Association to
discuss NaSH handling techniques, got advice from
other people in the industry to talk to, to talk to
other people from other companies about that. So
there has been some interaction with the Pulp and
Paper Association also in the preparation of the
report before you today.

DR. ROSENTHAL: So if what you are
saying is correct, that all the comments made on
record today have been received, then I could go
forward, but if not, I would just suggest reviewing
them just --

CHAIRPERSON MERRITT: Then are you
making a motion to withhold approval of the report
until that has been reviewed?

DR. ROSENTHAL: I would move that we
hold the report until we review the comments made
today and verify that, indeed, they have been taken
into account or were known by the staff at the time
that they prepared the report.

    CHAIRPERSON MERRITT: Is there a second to that?

    DR. POJE: Can I make a comment?

    CHAIRPERSON MERRITT: If someone would second it, then we can take it to discussion.

    DR. TAYLOR: Second to the original motion or the amendment?

    CHAIRPERSON MERRITT: No, second to the amendment.

    DR. TAYLOR: There's no second.

    CHAIRPERSON MERRITT: There is no second. So it would be -- so then we would proceed with the original motion.

    Would you read that? And I would like to also call a roll call vote.

    MR. JEFFRESS: The original motion as made by Board Member Taylor reads: approve the CSB investigation report and recommendations regarding the hydrogen sulfide poisoning at the Georgia Pacific Naheola Mill in Pennington, Alabama.

    CHAIRPERSON MERRITT: If you would do the roll call vote.

    MR. JEFFRESS: Roll call vote. Board Member Taylor, how do you vote?
DR. TAYLOR: Yes, approve.

MR. JEFFRESS: Board Member Rosenthal?

DR. ROSENTHAL: Yes.

MR. JEFFRESS: Board Member Poje?

DR. POJE: Approve.

MR. JEFFRESS: Board Member Bresland?

MR. BRESLAND: Yes.

MR. JEFFRESS: Madame Chair.

CHAIRPERSON MERRITT: Yes.

MR. JEFFRESS: The vote is five to oh to approve the report.

CHAIRPERSON MERRITT: The motion to accept the report is agreed to five votes to none, and I would ask the counsel to now -- if you would, do you have the wording of the proposal for an ad hoc study?

And since you don't have that, those of you who are in the audience or who are also on the Worldwide Web, if you would bear with me, I'll read this so that you can understand what we're asking for, and this is not fully formed, and what I'm asking Charles to do is to take this request back to the staff and to on December 11th, if you would meet with us and give us any other suggested changes or new objectives and also on the time and resources
that will be necessary to do this study.

The objectives of this hazard study concerning \( \text{H}_2\text{S} \) chemical sewers and the handling of NaSH would include, one, to determine the number and severity of reported incidents involving hydrogen sulfide gas releases from sewers or other industrial waste processing and disposal systems, and this would exclude as a result of biological decay of organic materials. And we would limit that from 1990 to 2000 and -- or 1980 -- I'm sorry -- to 2002.

Develop a preliminary estimate of fractions of reactive incidents and fatalities that are attributed to gas releases from sulfides and cyanides. There may be others also that we may find are critical, but we're looking at those two specifically.

Examine how the paper industry transports, loads, unloads, handles, and controls spills of sodium hydrosulfide with reference as to comparable practices in other industries that use this material, and I would ask you to get together with the paper industry in order to help to put that material together.

Examine paper industry recommended practices, guidances and published technical
literature related to controlling the hazards of 
hydrogen sulfide, sodium hydrosulfide and sulfide 
containing liquors, including engineering controls, 
training requirements, designation of high hazard 
areas, protective equipment and spill presentation and 
control.

And I'd like to have you compare those 
prevailing standards and practices in the paper 
industry with relevant and applicable national and 
industry standards.

Also, examine and compare the 
recommendations of sodium hydrosulfide manufacturers 
regarding spill control, disposal of spilled 
materials, loading and unloading procedures, and 
protective equipment, and the actual use practices 
with regard to industries that use NaSH.

And also we'd like to examine the status 
of sodium hydrosulfide and related sulfides, 
cyanides, and other materials under OSHA/EPA 
regulations, including process safety, risk 
management, hazard communication, and waste disposal 
regulations.

Does any member of the Board have any 
comment with regard to this ad hoc study?

MR. BRESLAND: Just one comment, Madame
Chair. I would certainly encourage, based on the comments that we received this morning from the attorneys both for GP and the trade associations, that we work closely with them to research this information.

CHAIRPERSON MERRITT: Yes.

MR. BRESLAND: I'm sure they've got a lot of knowledge in this area that could be of value to us and to the rest of the industry.

CHAIRPERSON MERRITT: Yes, okay.

So this study, I believe, will address many of the issues that have been raised here by the Board members in earlier discussions, and also during today's session, and really are outside the scope of this investigation.

I've set an aggressive schedule for the staff, but consistent with the resources that are available. So I appreciate Board support in starting this, and then in two weeks basically we'll be able to have it formed a little bit better.

So with that, I appreciate that and appreciate the staff's report.

At this time and just briefly, I would like to give an update. We call this a Chair's update, with regard to Board activities that I think
may be of interest to this group.

Now, this fall certainly has been a busy
time here at the CSB, and I'll touch on a few of our
recent items of interest.

First, I'd like to mention that we
recently concluded, well, maybe initiated, a very
successful round table discussion on the subject of
accident data collection, and you've heard a number
of comments made concerning that particular issue.

We held this jointly with EPA and with
OSHA, and I asked John Bresland, who was one of the
coordinators, if he would give a brief update on the
progress that was made at this round table.

MR. BRESLAND: Thank you, Madame Chair.

The round table was called the Round
Table on Metrics, and one of the frustrating issues
that we find in working to improve the safety of the
chemical process industry is the lack of a common
yardstick to tell us if the number of process safety
incidence is going up or going down.

Incidents are reported to various
government agencies in different formats. For
example, the National Response Center, EPA's RNP
Submit database, OSHA, and ATSDR.

The RNP Submit information is required
to be submitted to EPA once every five years, and
that started in 1999. In that 1996 submittal,
approximately 15,200 facilities sent in their data,
including the five year accident history. A total
of about 1,950 accidents were reported over that
five year period.

The Chemical Safety Board's, EPA's CEPO
(phonetic) office, and OSHA sponsored a round table
discussion of the incident reporting issue on
November 14th, which was last Thursday at the
Defense Nuclear Facility Safety Board offices here
in Washington. About 50 representatives from the
chemical industry, government, academia,
environmental organizations, and labor attended the
round table. Ms. Kathleen Rest of NIOSH was the
facilitator for the meeting.

At the round table, Dr. Rosenthal from
the Safety Board presented a proposal entitled
"Improved Metrics for Chemical Process Safety." Dr.
Rosenthal proposed two changes to the EPA RNP rule:
one, annual reporting of accidental releases at
covered facilities instead of the five year
reporting, and, number two, adding a data element to
capture information on the approximate operating
level of the facility during the year.
After Dr. Rosenthal's presentation, we had a very energetic, four hour discussion of this issue of developing a metric for chemical process incidents. The group developed a short term -- "short term" meaning one to three years -- list of key target areas, including -- and this is not the total list -- shortening a reporting interval for reporting accidents, incidents to the RNP database; comparing the other accident databases to see if there's some commonality, and adding a unique facility identification number to the existing databases.

The group also suggested some medium to long term, meaning more than three years, goals. Number one, developing leading indicators for chemical process safety incidents; developing a protocol for sharing lessons learned; considering developing a near miss reporting system similar to the one that the FAA currently has for airplanes; and finally, creating a single instant reporting form.

We feel that the meeting provided an excellent feedback to EPA and OSHA on the commitment from the stakeholders to long-term regulatory changes. In addition, an improved incident
reporting database will assist us at the Chemical Safety Board in assigning our resources to the incidents with the highest consequences.

Thank you, Madame Chair.

CHAIRPERSON MERRITT: Okay. Thank you, John.

Secondly, I'd like to note that the Board has recently received an invitation from the Center for Chemical Process Safety, and you've heard that name mentioned a number of times today, to help support its 18th annual international conference and workshop, which is entitled management of reactive chemistry hazards and hazardous energy release events.

This is a conference, and this will be held in September of 2003. As you may know or may not know, the CCPS is part of the American Institute of Chemical Engineers. CCPS was founded in 1985 to bring together manufacturers, insurers, government, academia, and expert consultants, to help improve manufacturing process safety.

CCPS has published over 70 books and CD-ROMs, ROM tools aimed at developing engineering and management practices to prevent or mitigate catastrophic releases of chemicals, hydrocarbons,
and other hazardous materials.

    CCPS materials have been widely cited by the CSB in many of our incident investigation and recommendations.

    This invitation represents a great opportunity for the Board. As you'll recall just two months ago, in September, the CSB unanimously approved a total of 18 new recommendations to reduce the number of serious industrial accidents caused by uncontrolled chemical reactions.

    This conference will allow the Board to take our reactive study, its recommendations, and our follow-up work and report to our key stakeholders on our concerns about reactive chemistry and the goals being pursued a year after its publication.

    There's no financial obligation here to this request, and it doesn't jeopardize our independent nature.

    It does offer, however, an opportunity to partner with the leading safety organization in promoting greater awareness and concerns concerning reactive chemicals.

    To this end, I would ask the Board if there are any comments or advice concerning the
acceptance of this request to sponsor.

DR. POJE: Madame Chairman.

CHAIRPERSON MERRITT: Gerry.

DR. POJE: I just would like to echo the

comments. This Board had a very salutary experience

a few years ago when they held a major international

meeting on chemical accident investigations, and I

think that was a major move forward in the

industrial community and governmental agencies.

Similarly, I think this issue, certainly

we would want to partner with them, particularly for

the matters you just raised. I think this is an

indication of the significance of the Board's work

on reactive chemicals that now is leading to an

international conference on that subject area.

CHAIRPERSON MERRITT: All right. Anyone

else?

DR. ROSENTHAL: No, but I generally

think it's an excellent move.

CHAIRPERSON MERRITT: Good. Well, I

thank everybody, and then we'll proceed with the co-
sponsorship, and we certainly will be publishing

more about this on our Web site and making other

announcements with regard to this, you know,

upcoming event.
And there will be information at our Web site at CSB.gov concerning this conference.

Next I also want to point out that we're now beginning our third year under the Board's existing five-year strategic plan, which covered 2002 to 2005. Under federal requirements this plan must be updated at a three year mark.

We had begun this process within the past few weeks and will continue over the next several months to do that.

We issued an interim revision in September that was accepted by the Board, and we will be initiating more comprehensive and far-reaching efforts now. I'm really excited that this is happening at the beginning of my administration and my five year term here and chairmanship.

Anna Johnson of our staff has been asked to spearhead this effort, and I expect that some time after the first of the year will be going out to our stakeholders with a new draft plan and asking for their participation and input on our expected work in the near future and long range future. So I'm very excited about that.

A couple of weeks ago we held a retreat for several days to begin articulating our vision
for the next several years of the Board. I'm delighted to report that the Board members and staff continue to have a strong commitment to the core mission of conducting independent investigations and safety studies and getting our recommendations implemented.

We also recognize many areas where future progress can be made. Next year and for the next several years, we'll be making very concerted efforts to see that our recommendations from our reactive hazards investigations are fully and effectively implemented.

This will likely be our last Board meeting for the calendar year 2002. In early 2003, we anticipate completing a number of pending cases, including our third coast investigation in the Houston area, our Cal. Tech. investigation in New York City, and DPC investigation outside St. Louis Missouri.

So the Board will be out again, and in the community extensively during the beginning part of the year, and we'll be continuing to broadcast our activities as widely as possible using the Internet, and there's often bulletins on the Internet, as well, announcing our activities that
you may want to follow.

But in the meantime, we encourage our
stakeholders from industry and industry
associations, from labor community and the
environmental and public interest community to
contact us with comments or input into our ongoing
activities.

With that, if there's no further
comments, I would --

DR. POJE: I have one comment.

MR. JEFFRESS: Yes, sir.

DR. POJE: My comment is more of a
social one. I want to recognize that, Madame
Chairman, you are here for the first time in
Washington.

CHAIRPERSON MERRITT: Yes.

DR. POJE: Although we've been outside
of Washington a number of times. Chairing our
session, this is a very important step forward for
the agency to have you in the seat, and I think the
movement forward that has occurred since you arrived
in August and since John arrived in August is quite
salutary for the system of chemical safety.

I think with Charles Jeffress as our
COO, with our as our Chair, with a full complement
of Board members, I sense a great increase in the pace of work of the Board, and I think we've made some very significant progress on very difficult safety areas in the short tenure that you've been here.

So I salute you for being here. I welcome you to the Washington public arena. As we go forward, I think this is going to be a quite important mark for chemical safety.

CHAIRPERSON MERRITT: Thank you.

We're equally excited about the activities of the Board, the work of the Board, and you ain't seen nothing yet.

(Laughter.)

CHAIRPERSON MERRITT: And with that, I'll conclude our meeting.

(Whereupon, at 11:55 a.m., the meeting in the above-entitled matter was concluded.)