U.S. CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD

PUBLIC MEETING

Wednesday,

November 8, 2000

The meeting was held at 9:30 a.m., in Suite 200, 2175 K Street, N.W., Washington, D.C. 20037, Doctor Andrea Kidd Taylor, presiding.

PRESENT:

ANDREA KIDD TAYLOR, Dr. P.H., Board Member

GERALD V. POJE, Ph.D., Board Member

ISADORE (IRV) ROSENTHAL, Ph.D., Board Member

CHRISTOPHER W. WARNER, General Counsel
<table>
<thead>
<tr>
<th>Topic</th>
<th>Page No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Welcome and Introductions</td>
<td>3</td>
</tr>
<tr>
<td>Opening Statements by Board Members</td>
<td>4</td>
</tr>
<tr>
<td>Opening Statement COO</td>
<td>5</td>
</tr>
<tr>
<td>Investigations and Safety Programs Update</td>
<td>9</td>
</tr>
<tr>
<td>A. Investigation Reports</td>
<td></td>
</tr>
<tr>
<td>1. Sonat Exploration Co. - Presentation of Recommendations</td>
<td>9</td>
</tr>
<tr>
<td>2. Morton International, Inc. - Update on Recommendations</td>
<td>19</td>
</tr>
<tr>
<td>3. Tosco Avon Refinery - Update</td>
<td>28</td>
</tr>
<tr>
<td>B. Update on Review of Open Investigation Files</td>
<td>29</td>
</tr>
<tr>
<td>C. Update on CSB Hiring Plan Initiative</td>
<td>30</td>
</tr>
<tr>
<td>Discussion of Board Documents</td>
<td>37</td>
</tr>
<tr>
<td>A. Sonat Investigation Report</td>
<td>38</td>
</tr>
<tr>
<td>B. CSB Five-Year Strategic Plan</td>
<td>38</td>
</tr>
<tr>
<td>C. Memoranda of Understanding with the Agency for Toxic Substances and Disease Registry</td>
<td>38</td>
</tr>
<tr>
<td>D. GAO Report Coordination Between Various Federal Agencies</td>
<td>38</td>
</tr>
<tr>
<td>CSB Budget for FY 2001</td>
<td>39</td>
</tr>
<tr>
<td>CSB Legal and Regulations Update</td>
<td>39</td>
</tr>
<tr>
<td>A. CSB Directives and Voting Record</td>
<td>39</td>
</tr>
<tr>
<td>B. Legal Initiatives</td>
<td>39</td>
</tr>
<tr>
<td>Board Member Update</td>
<td>45</td>
</tr>
<tr>
<td>Next Meeting</td>
<td>48</td>
</tr>
<tr>
<td>Public Comment</td>
<td>48</td>
</tr>
</tbody>
</table>
DOCTOR TAYLOR: Good morning. I'd like to call this meeting to order and welcome everyone here. Glad to see so many, actually, not too bad, faces this early in the morning after last night.

First, I'd like for us to go around and introduce ourselves.

I'm Andrea Taylor, a Board Member.

DOCTOR ROSENTHAL: Irv Rosenthal, Board member.

DOCTOR POJE: Gerry Poje, Board Member.

MR. WARNER: Chris Warner, General Counsel and the Chief Operating Officer.

DOCTOR TAYLOR: I'd like to start by giving you just a few accounts of what we've been doing. Again, welcome to everyone that's here, and we appreciate your interest and participation in the Board, and we've been very busy with activities since our last public meeting.

The Sonat Investigation Report is complete and available on our web site. Our Strategic Plan is also complete and was delivered to Congress on time. We've hired several new staff members and Bill Hoyle from our Investigation and Safety Programs Department...
will discuss and introduce our new members. The Board and staff members have also participated in several key conferences and given presentations, including presentations on our investigation reports and upcoming hazard investigation.

Our budget for FY 2001 has been approved for $7.5 million by Congress, and we've begun some work on a budget proposal for FY 2002.

The Board is functioning well. Our roles and responsibilities have not changed. I'm the principal spokesperson for the Agency, and I chair all of the Board's business meetings. Doctor Poje is responsible for employee and personnel issues, and Doctor Rosenthal is responsible for reviewing and approving all contracts below $10,000.00.

And, with that, I'd like each one of the Board members to give opening statements, if you have any. Irv?

DOCTOR ROSENTHAL: No, opening statement.

DOCTOR POJE: I can't let that go unresponded to. I'm just very happy to be here. It's been ten months since the Board has organized itself to conduct business in the way that we've been doing it since January of this year, and I think the accomplishments of the Agency are very significant and
quite salutary from my vantage point. I'm happy to be here today and happy to be part of the ongoing process of public meetings to disclose the Board's business and to charter our future directions.

So, happy to be here, and happy that all of you showed up today.

DOCTOR TAYLOR: I'd like to have an opening statement from Chris.

MR. WARNER: Just a quick note. We've had several significant actions occur since our last public meeting. We had the resignation of Doctor Hill effective October 13th this year, and, therefore, that will also bring to close various actions that the Board had regarding certain issues with the White House.

We also had the nomination of Lois Epstein. Her name has been sent up to the Senate, and we have various issues that we do to assist on that nomination.

We also have closed our FY 2000 books, and we didn't overspend. I'm happy to tell the Board that we made it under budget. We also have prepared, as you know, a very detailed budget plan for FY 2001, and as Andrea says we do have our appropriation for 2001, and we are in the process of developing our budget.
projections for FY 2002.

Again, just to reiterate what we have started out here to do, in February the Board sort of gave the senior management a two-part task. One, to look at where we were and how we could reorganize, where we are spending money, where we are spending and initiating various reports and studies from our investigative side, and to give a full accounting to the Board. That process is still ongoing.

But, at the same time, to be very forward looking, to get about our business and be prepared to carry out the mandated responsibilities that Congress has given us. And, as you can see, over these months we’ve done a fair amount. We’ve gotten out the Morton and Sonat Reports. We’re moving ahead very smoothly and correctly on resolving the issues on the Tosco Report. We developed a protocol, we revised it. We’ve had various revisions, actually, in this last two-month period.

We’ve had our Strategic Plan published. We’ve developed our incident selection procedures. We have a deployment team, we are ready to go. We’ve had various exercises ongoing in the past couple of months to prepare for an incident if it occurs. We also have undertaken an internal review of our expenditures,
what was done in 99 and 98, and where we could better spend and focus our attention and funds. So, that is an ongoing work that we're pursuing at the moment.

We revised our budget priorities. We're moving ahead on our Recommendations Program, as you'll hear later on in the program. We've developed a fair number of internal policies and procedures on personnel that are required for any new organization.

Our FOIA reg was published last month. We've attended any number of conferences last couple of months, CCPS, the API, Mary Kay, where we've given presentations, so we are going out and presenting our message and the reports, which is getting a very positive reaction from our stakeholders.

We participated in GAO investigations. One was recently completely that looked at all the various responders on worker protection, going to better coordination. We have also, within two or three days of receiving it, we have gotten off letters to the various other parties that had recommendations asking for meetings. I am undertaking a review of our MOUs at the moment to see how we can better coordinate, but I would tell you that as far as our investigations have been in the past, there has been
no issue of coordination problems on any of those investigations that has been raised so far, but we are taking this seriously and looking at it, and we will be moving ahead with the EPA and OSHA on looking on that coordination problem.

We also have a hazard investigation, which came out of the Morton Recommendations, which you'll hear more about, and one of the issues that occurred in February that led to Chairman Hill stepping down, was that in '99 and '98 we actually took on far more tasks than we had the personnel capability of carrying out. We are trying, very systematically, to write this, to put ourselves on the right course. Part of that is, as you know, finishing up the three investigations that we've talked about, Morton, Sonat and Tosco. We are also undertaking a review of the five other open investigations, and should be reporting to the Board very shortly on our recommendations and how to proceed. But, this is really more of a legacy of the past that we are trying to resolve, and we'll be getting our best recommendations to you shortly on it.

DOCTOR TAYLOR: Thank you, Chris.

I'd like to hear from Bill Hoyle, Investigations and Safety Programs Update.
MR. HOYLE: We're going to exercise your
necks to the back of the room here, to show the Power
Point.

Good morning. I want to introduce some
various presentations from my staff that are on the
agenda today. The first presentation is on the Sonat
Exploration Company Report. We are going to present
the recommendations.

At our last meeting, we presented the
findings, at this meeting we are going to update that
with the recommendations that are also available on
our web site, and that report will be published in
hard copy shortly. It has been approved by the Board,
and to present on the Sonat Recommendations I'll have
Pat Conlon, Lead Investigator, for that report.

MR. CONLON: Thank you, Bill.

Today, I'll be reviewing the root causes
and recommendations that came out of the Sonat
investigation.

This is an aerial view of Sonat's Temple
22-1 Common Point Separation Facility. The facility
was built to separate well fluid into crude oil,
natural gas and water. The incident occurred on March
4, 1998. Sonat was starting up new equipment for the
oil and gas separation process, which involved the
purging of vessels and a pipeline with natural gas.

During the pipeline purge, an oil and gas separator over-pressurized leading to the catastrophic failure of the vessel. Four operators were killed in this incident.

This is a block flow diagram illustrating the separation process at the facility. Basically, gas is recovered from the top of the separators, the orange blocks at the top, and flows through a gas distribution system. Water comes out of the bottom of the first two separators and is injected back into the ground through an injection well, and then the oil flows on through the separators to storage tanks and is transported off site by a truck. The third stage separator is the vessel involved in this incident.

This is a basic schematic diagram of one of the two separation processes at the facility, the bulk train, which was to begin production for the first time on the day of the incident. Basically, in production the fluid would flow from the well through the different separators, and the oil would be stored in storage tanks. The purge process for that day was basically the flow of the fluid from the well and the natural gas would flow through a bypass line there at the bottom and out through the storage tanks.
The facility was designed and built without effective engineering design reviews or hazard analyses. Sonat constructed the facility without producing engineering drawings of the process equipment. The equipment drawings used in our investigation were developed after the incident. These findings are reflected in the recommendations which I will discuss later in the presentation.

This schematic provides a detailed view of the third stage separator, the vessel that failed. It was a two-phase separator designed to produce crude oil and natural gas. Basically, the oil/gas mixture would come from the second stage separator there in the lower left corner, flow up through the oil inlet line into the separator, cascade down through the vessel, and then flow out the oil outlet line to the storage tanks. The gas would flow out the top of the vessel to a gas compressor. The three valves there at the bottom were the bypass valves. Two were manual block valves that were normally in the open position. The center valve was an automatic valve that was controlled by the liquid level sensor. If there was a high level of oil in the vessel it would open this valve and allow the oil to flow directly to the storage tanks.
This vessel lacked a block valve on the oil inlet line and could not be isolated from the bypass line, which at the time of the incident contained high-pressure purge gases. An effective engineering design review would have provided the opportunity for Sonat to identify this design deficiency prior to the start-up of the facility.

This diagram represents the equipment directly involved in the incident at the facility. It shows the intended valve positions needed to purge the pipeline through the bypass line, through the storage tanks, and out a hatch to the atmosphere. Basically, the purge was to come through the bottom line, through the bypass valves, up to the top of the storage tanks, into the first storage tank, to the second storage tank, and then out an open tank hatch.

There were also, there were two block valves, valves 14 and 15, that were closed. The vessels, the third-stage separator had been purged earlier in the day and these were closed to prevent air from getting into the vessel, and the bypass valves were to be in the open position. Here is the scenario for the incident, these are the positions of the valves found after the accident. Valves 11 and 13 were in the closed position, which created which
basically isolated the purge system into the third-stage separator.

The third-stage separator was only rated for atmospheric pressure service 0 psig. The purge gas stream, to which the separator was exposed, had a pressure potentially as high as 800 psig. The separator was not equipped with any pressure relief devices and over-pressurization caused the separator to fail catastrophically. All of the other types of production vessels at the facility had pressure relief capability.

The American Petroleum Institute publishes recommended practices for the installation of pressure relief devices for oil and gas separators, which could have been utilized during the design of this third-stage separator.

Root cause number one, Sonat management did not use a formal engineering design review process or require effective hazard analyses in the course of designing and building the facility. In the incident, the third-stage separator was exposed to a pressure significantly in excess of its maximum allowable working pressure, resulting in catastrophic failure of the vessel. A formal engineering design review process should have been in place during the design of
the facility. Sonat constructed the facility without producing engineering drawings of the process equipment. Neither design review, nor hazard analyses, can be effectively conducted in the absence of accurate engineering drawings.

A formal design review and hazard analysis process would have provided a better opportunity to analyze the consequences of foreseeable deviations from normal operating procedures, such as valve misalignments. This process would likely have identified the danger of catastrophic overpressurization of the third-stage separator and indicated the need for a pressure relief system.

Root cause number two, Sonat engineering specifications did not ensure that equipment that could potentially be exposed to high-pressure hazards was adequately protected by pressure relief devices. The vessel that failed met the definition of a two-phase gas/oil separator and should have been designed to meet relevant industry consensus standards for pressure relief. For example, ANSI/API Specification 12-J, a specification for oil and gas separators, requires separators be equipped with pressure relief valves.

A contributing cause was identified.
Sonat management did not provide workers with written operating procedures for the start-up and operation of the facility. Written operating procedures governing each phase of the facility operations, including purging operations, would have reduced the likelihood of a manual valve misalignment of the kind that triggered this incident. Procedures should have included written checklists and diagrams to verify proper valve positions for purging.

Three recommendations addressing Sonat’s management of its oil and gas production facilities are included in the report. On October 25, 1999, Sonat, Incorporated merged with El Paso Energy Corporation. The merged company, also known as El Paso Energy, is the largest gas transmission company in the country. Sonat Exploration Company, the unit that operated the facility involved in the incident, became El Paso Production Company, a wholly-owned subsidiary of El Paso Energy.

Recommendation No. 1 is for El Paso Production Company to institute a formal engineering design review process for all oil and gas production facilities, following good engineering practices, and including analyses of process hazards.

The second recommendation to El Paso
Production is to implement a program to ensure that all oil and gas production equipment that is potentially subject to over-pressurization is equipped with adequate pressure relief systems and audit compliance with the program.

Recommendation 3 to El Paso Production Company, develop written operating procedures for oil and gas production facilities and implement programs to ensure that all workers, including contract employees, are trained in the use of the procedures. And also, to ensure that the procedures address at a minimum purging and start-up operations and provide information on process-related hazards.

The final two recommendations included in the report are addressed to the American Petroleum Institute, concerning the safe operation of oil and gas production facilities and sharing the lessons learned from this incident. API is a major national trade association representing the entire petroleum industry, including the oil and gas production sector.

Recommendation 4 is for API to develop and issue recommended practice guidelines governing the safe start-up and operation of oil and gas production facilities, and to ensure that the guidelines address, at a minimum, the following:
. Project design review, including hazard analyses;
. Written operating procedures;
. Employee and contractor training; and
. Pressure relief requirements for all equipment exposed to pressure hazards.

API has developed some 500 equipment and operating standards used around the world. Increasingly, they are also being adopted by the International Organization for Standardization, a global federation of more than 100 national standards groups.

Recommendation 5 to API, communicate the findings of this report to your membership. API's membership includes over 400 companies from the petroleum business sector, providing an excellent opportunity for sharing lessons learned from this incident.

That concludes my report to the Board on the Sonat investigation. If there are any questions from the Board Members?

DOCTOR TAYLOR: Are there questions?

DOCTOR ROSENTHAL: Have you had any response on these recommendations?

MR. CONLON: Informally, I'm aware that API
is working on the recommended practice, and I believe there is a meeting set up, tentatively set up, for next week between the CSB and API representatives to further discuss the recommendation.

I also know informally that they have distributed the information, I believe the web site information to see the report, to their membership, again, have not responded formally, that's through a telephone conversation.

I have not received any feedback from Sonat to date, but I believe at the last meeting they said that they would provide written comments.

DOCTOR TAYLOR: Any other questions?

Thank you, Pat.

Bill?

MR. HOYLE: The next item on the agenda this morning is on our recently issued report on the incident at Morton International. We want an update on the recommendations, and for today's meeting we want to focus on one of the most significant recommendations of that report, and that is the action taken by the Board to launch a hazard investigation study into reactive chemical safety practices in the country, and we're fortunate to have a very leading figure in the process safety world on our staff who is
going to lead this very important project. That is John Murphy, and I’d like to share with you a little bit about John before he comes to the podium and presents.

John joined the Chemical Safety Board in July of this year. He has over 20 years of experience in process safety and loss prevention, including 16 years with Dow Chemical Company. He’s been involved in developing and implementing process safety management programs and technology. He has a degree in Chemical Engineering, and a Master’s in Business Administration, and he’s a professional engineer in the State of Texas.

John is also the first Vice Chair of the Executive Committee of the American Institute of Chemical Engineers, Safety and Health Division, and he’s also a member of the Process Safety and Loss Prevention Programming Committee of that group. He’s also been active in the National Fire Protection Association and the Center for Chemical Process Safety, and I think you get the picture.

John has a lot of knowledge in reactive chemical safety, and I’m going to have John come back and present on the hazard investigation study.

MR. MURPHY: I don’t have a Power Point
presentation, but I think the notes from which I'm going to be talking from were available at the front desk as you came in.

As Bill stated, the hazard investigation of reactive chemicals is one of the recommendations that stems from the Morton Report, which was thoroughly aired at the CCPS conference and I think at the last public meeting, and one of the root causes of the Morton incident was the lack of a reactive chemical assessment process in the company, and because of that a recommendation was made for OSHA and EPA to work with the Chemical Safety Board to do a hazard investigation on reactive chemicals.

I might clarify that the Chemical Safety Board will be the author of this study, and OSHA and EPA, though, will be full partners in developing a plan and having input into the study. The study recommendations themselves will be a product of the Chemical Safety Board.

This is a relatively new activity for the Chemical Safety Board. Our main activity is to investigate major chemical accidents, but we also have a goal long term to conduct one hazard study per year, and so this year we are going to institute the reactive chemical hazards study.
Unlike the investigation of a particular incident, the CSB hazard study may examine a series of related incidents to identify common causes and make recommendations for prevention.

Like incident investigations, though, the Chemical Safety Board will issue a report, and where appropriate make recommendations that are voted on by the Board members.

We are conducting this study because we have a hypothesis that there’s been too many severe reactive chemical incidents, and so we are in the process of developing a plan to conduct the study, and it’s still in the state of being developed but here’s our thoughts at the moment.

One of the first activities is to find out what the extent of the reactive chemical problem is, and we are going to do that by surveying available databases to determine the frequency and severity of reactive chemical incidents. So, we are going to look at databases in the public domain and whatever databases might be available.

The second major activity is to survey companies within the chemical industry, and we want to make sure we are looking at small, medium and large companies, to understand how reactive chemical hazards
are commonly managed. We intend to do this through developing of a survey questionnaire that we’ll send out to small, medium and large companies, to try to get some understanding of how they successfully manage reactive chemical hazards.

After we do the survey and get the survey results analyzed, we are going to go further. We are going to study reactive chemical hazard management systems of select chemical companies within the industry, and by this we mean less than a handful of companies, probably at least one small one, medium one, large company, actually visit the company to get some idea of how their reactive chemical management system works.

Part of our plan is also to discuss with OSHA and EPA how reactive chemical hazards are commonly regulated. We’ve started this process already. We had our first meeting with OSHA and EPA not too many days ago, and we are going to have continuing meetings with OSHA and EPA so we get their viewpoints on how this study is to be conducted and to get their input into maybe what solutions may be.

Part of the process of conducting the study is to make sure that we get an understanding from the community that’s interested in what we are
doing, so we’ll be reviewing plans for this study with key stakeholders. We started with OSHA, EPA. We plan to involve industry groups, public interest groups and organized labor, and we’ve begun the process of conducting and setting up these meetings.

Also, we want to make sure that our process is totally open to the public, and we will review results and conclusions from the study with key stakeholders. And, at the conclusion of the study we could develop possible recommendations to reduce the frequency and severity of reactive chemical incidents. Probably there will be recommendations.

So, where are we to date on the study? We’ve put together a tentative timeline, I’m just highlighting some of the major things that have been accomplished to date. First of all, we have a team organized with the Chemical Safety Board to conduct the study, I’ll be acting as the lead investigator, and Kevin Mitchell and Giby Joseph will be assisting me. I think Bill intends to introduce them a little bit later on and get some idea of what their experience has been.

The preliminary plan is being shared with several stakeholders. Like I said, we’ve talked to OSHA, EPA, several stakeholders, and we have plans to
involve other people at this very day.

The Reactive Chemical Management Survey, which is going to be used to gain information on how chemical companies successfully manage their reactive chemical programs is being drafted. The Chemical Safety Board personnel have put together a preliminary draft. This month, we hope to select a contractor that will help us flesh out the survey questionnaire, help us conduct and analyze the survey. So, we're working in that activity.

Kevin Mitchell and Giby Joseph are part of the team. One of the main activities that they are starting to get involved with is just trying to get a list of the relevant databases that we can obtain information on reactive chemical incidents that have occurred in the past.

One of our key stakeholders we feel is the Center for Chemical Process Safety, which is associated with the American Institute of Chemical Engineers, and they've agreed to let me give a presentation in January to update their Technical Steering Committee on our updated plan and to get some input from them probably on our survey questionnaires, and also on how we can obtain any other relevant information that may help us conduct the study.
At the moment, the project is on a fast track. We’d like to get it done this fiscal year. We have a public hearing that we have planned for August 2001, to discuss the findings and conclusions of the hazard study, and we are targeting to have final CSB approval of the report in September 2001. So, the study, we are trying to get off to a quick start here, because we have a pretty tight time line.

So, any questions from the Board on this?

DOCTOR TAYLOR: Any questions? Irv?

DOCTOR ROSENTHAL: No. It’s a good plan in terms of the execution. I presume you are getting good inputs from EPA and OSHA?

MR. MURPHY: We’re getting good input, and we’re going to continue to get input.

DOCTOR TAYLOR: They’re here right now.

MR. MURPHY: You can ask Greg when you have the opportunity. I believe they feel satisfied, but you have to ask them.

DOCTOR TAYLOR: Okay.

DOCTOR ROSENTHAL: He’s not compelled to answer.

MR. MURPHY: We’re satisfied. We’re certain satisfied with their participation so far.

DOCTOR TAYLOR: Gerry?
DOCTOR POJE: One of the other things I just want to mention, I also am very pleased with the conduct of the study and the organization of it, but I also wanted to say, John is correct, there are many meetings engaged in other stakeholder groups. We've had one presentation with the American Chemistry Council's Technical Committee. There is a meeting slated with the Synthetic Organic Chemical Manufacturers Association, and additional outreach efforts to the public interest stakeholder groups and organized labor.

The hallmark of the study is the transparency by which I think it's being conducted, and for those of you who haven't thought about this, this is a major work product for the Chemical Safety Board. Hazard investigation will be part of a two-phase investigative approach at the Board, and with today's announcement and description by John we are officially making public the process by which we will conduct hazard investigations for reactive hazards, but also will become symptomatic of the way we'll approach such issues in the future.

MR. MURPHY: I think that all of us, as Board Members, are interested in getting inputs from various groups. I've been making use of contacts with
various insurance companies who have good databases and strong feelings on the subject, and we'll see if we can arrange for interaction between the staff and such companies, so that those databases are available also.

DOCTOR TAYLOR: I have a point of clarification. I wanted to go back to you, John. After you present the findings and the conclusions of the hazard study to the Board, will your team then make proposals to the Board of the recommendations and then we get a chance to review and adopt it?

MR. MURPHY: Yes, I think we are trying to go through the step of producing findings and conclusions, reviewing that with the Board, also reviewing that at a public meeting, getting input, and then the CSB Hazard Study Team will be making recommendations to the Board and the Board will approve and modify the recommendations as they see fit.

DOCTOR TAYLOR: Okay.

MR. MURPHY: I think that would be our procedure, wouldn't you say, Bill?

MR. HOYLE: Yes.

DOCTOR TAYLOR: Okay, yes, I just wanted to clarify that.
DOCTOR ROSENTHAL: It'll be a two-phase process, in which we try to, first of all, get agreement with all of our stakeholders on conclusions and findings, and then go on to consider the recommendations that the staff makes.

MR. MURPHY: Right, it's going to be a two-step process.

DOCTOR TAYLOR: Okay, thank you, and we invite those of you in the audience who have attended our stakeholder meetings in the past to please provide input on this study. We do want your participation.

MR. MURPHY: Yes.

DOCTOR TAYLOR: Thank you, John.

MR. MURPHY: Okay, thank you.

MR. HOYLE: Next on the agenda, I want to speak very briefly about our progress on the Tosco investigation, which is another top priority of the CSB.

The team, staff team that is working on the Tosco report is drafting a report for my review, which is due to me by the 20th of this month. We also have retained an expert consultant who is assisting on the case, and the report from the consultant is due and expected this Friday, the 10th of November.

Concurrently with these activities, the
staff is also conducting recommendations research associated with the Tosco report, and that is targeted for completion in the next two weeks. So, you know, work is continuing at a fast pace on the case, and we will update the Board at the next public meeting on our progress. We should be closing in on the endpoint at that time for the Tosco investigation and report.

Any questions on that piece?

DOCTOR TAYLOR: Any questions? No, okay.

MR. HOYLE: Next on the agenda, I want to speak about the major investigation case backlog. As Chris Warner indicated in his opening remarks, this is one of the tasks that my staff is working on, with the assistance of a contractor, General Physics of Columbia, Maryland. The contractor has submitted to us their independent review of the case files and the status of those cases, of the five backlog cases, and my staff is currently reviewing the contractor's analysis.

The five cases, for those of you that may not be familiar, are the following: first, a Sonat Exploration Production case involving a snubbing operation in Louisiana; a case involving Condea Vista in the Baltimore area; a case involving Concept Sciences in Allentown, Pennsylvania; a case involving...
Equilon, an oil refinery in Anacortes, Washington; and
lastly, Independence Fireworks in Michigan. These
cases were undertaken, in many cases, approximately
two years ago, and as Chris has already mentioned at
that time we did not have the appropriate staff and
resources to act fully, to fully investigate as we
have on the other cases that have been issued by the
Board.

So, we are analyzing how to proceed, and
we’ll be preparing recommendations for the Board very
shortly from my staff for Board consideration about
how to proceed on those cases.

Any questions on that piece of the agenda?

DOCTOR TAYLOR: No, thank you.

MR. HOYLE: Okay.

Lastly, I want to talk about something
that we’re continuing to be very excited about, and
that’s our hiring plan and the success that we’ve had
in our hiring plan.

Just last week, we successfully have hired
a very senior technical writer and editor with 30
years experience in the business, who was the star
candidate out of more than 100 candidates we had for
that position, who will be joining us very shortly on
November 20th.
We have several openings that are still available that we are still advertising and reviewing applications and candidates. Those positions are an Executive Assistant for the Safety Group, a Technical Information Specialist, and a Training Program Coordinator, so we are still actively pursuing those positions.

On the investigator front, we have one newly issued job offer outstanding that we expect to hear back on within the next few days. So, we are continuing to receive resumes for the investigator positions and the others that I’ve already mentioned.

Now I’d like to do something that I am happy to do, and that is to introduce to those attending today some of the new staff that have joined the Chemical Safety Board, and to give just briefly a short description of what they bring to the Chemical Safety Board.

You’ve already heard me talk about John Murphy, who is heading our reactive study, and his experience history. Next I have four other new staff members in my group who are with us today and I’d like to introduce them one at a time. And, after I describe their credentials I’ll have them stand and be acknowledged.
First, we have Giby Joseph. Giby has a Bachelor of Science in Chemical Engineering from the University of Houston. He has a Master's of Science in Safety Engineering, specializing in process safety, from Texas A&M University. He's worked as a technical writer at Texas A&M, and he's also worked for URS Radion Consulting Group in risk management activities, specializing in process safety management and EPA risk management program development. Giby, I'd like you to stand and be recognized.

(Applause.)

MR. HOYLE: Giby just recently moved from Texas to Washington, D.C., but we don’t hold that against him. No, we are very proud and very glad to have him here.

Next, I want to describe another person who has just recently joined the staff, and that's Michael Morris. Michael most recently was working with Bayer Corporation as a Contract Engineer in their Corporate Process Safety Department, and during that time he worked in a wide variety of sites in the Bayer system, working on process safety analysis and working on incident investigations. Mike is a graduate of West Virginia University with a Master's in Safety and Industrial Management, and I'd like, Mike, for you to
stand and be recognized.

(Applause.)

MR. HOYLE: Mike comes to us from Weirton, West Virginia, is that right?

MR. MORRIS: Yes.

DOCTOR TAYLOR: Is it Weirdon?

MR. HOYLE: Weirton.

DOCTOR TAYLOR: Weirton, okay.

MR. HOYLE: Weirton, it's a steel town.

DOCTOR TAYLOR: Okay, great.

MR. HOYLE: Next, I want to introduce Kevin Mitchell. Kevin has worked in the risk management and process safety fields for over eight years. This has included over 100 projects covering oil and gas production, refining, petrochemicals, specialty chemical, plastic resin and general manufacturing. He specializes in state-of-the-art assessment of risk of toxic flammable and explosive materials, and he's very experienced in the implementation of OSHA process safety management and EPA risk management program initiatives. I'd like to have Kevin stand and be recognized.

(Applause.)

MR. HOYLE: Kevin comes to us from Columbus, Ohio, and is a new resident of Maryland.
Lastly of the group, I'd like to introduce Steve Wallace. Steve comes to the Board with over 12 years of experience in the chemical industry. He's worked as a Production Manager, Process Engineer and a Process Safety Consultant. Most recently, he was employed with Westlake Group in Lake Charles, Louisiana, where he was Safety Superintendent for two facilities producing ethylene, styrene, polyethylene, plastic, et cetera. He's written numerous articles on process safety that have been published in journals such as Chemical Engineering Progress, Hydrocarbon Processing, and Professional Safety magazine, in which he has an article in the November issue for your information. He's also been a project or word product reviewer for the Center for Chemical Process Safety. Steve has a Bachelor of Science in Chemical Engineering from the University of Kentucky in Lexington. He's a Registered Professional Engineer in the State of Tennessee, and he's also a Certified Safety Professional. Steve, I'd like you to stand and be recognized.

(Applause.)

MR. HOYLE: And, as was stated, he joins us from Lake Charles, Louisiana.

So, that concludes my items for the agenda.
today, and so if there's any questions I'll entertain those.

DOCTOR TAYLOR: Thank you, Bill.

First, I'd like to say that I'm very happy and pleased to welcome the new staff members to the Board. This week has kind of been interesting, because there have been a lot of new faces and I didn't know their names, you know, they are just kind of like coming in and out, not out, but in, and I'm glad to have you aboard and I've very excited about the progress that we've made and we will continue to make, and, again, welcome and we're glad to see you here with us.

DOCTOR POJE: If I could just say, I've been responsible for personnel management at the Board, and it's with great pleasure that I congratulate both Chris and Bill on doing what was our highest priority, perhaps, not our most visible priority starting in January, but our highest priority was to hire people who would bring a wealth of experience to the Board at the staff level.

You heard about our backlog of work that needed to be completed. We selected three very important investigations to complete. We've gotten two of them done and the progress is manifest on the
third, but behind the scenes we are very conscious that the most important job for the institution is to build expert staff. I think that the caliber of individuals that have come through a very rigorous advertising process, but also very vigorous selection criteria process, is instilling the Board right now with a critical mass of expertise to tackle the future work of the institution. I think the numbers of individuals and their skill level working on a hazard investigation just leaves me tickled pink compared to where we were ten months ago, trying to search for which talent would be able to be applied to the particular task.

We’ve made effective use of a specialized Schedule A hiring process. That will come to closure on December 31st, and we’re still running great guns to bring in that talent on an expedited basis. We would urge you all to see them as resources to the larger community on chemical safety. They are interested in knowing the Washington community and the other associations and union communities, and will be making a substantive contribution to the system of chemical safety. We hope you treat them, as we do internally, as the nucleus of what will be a very vigorous and accomplished technical agency on safety.
matters. I’m proud to have all of those announcements made today.

We don’t think we are going to continue that pace at every future meeting, we are reaching our peak, but this is a critical core mass that’s just a delight to be part of the team making that happen.

DOCTOR TAYLOR: And, we’re actually running out of space upstairs.

DOCTOR ROSENTHAL: We can always build more space.

I think that we are getting, as Gerry said, the critical mass we need. I hope that the staff will make the Board a center of intellectual activity in regard to process safety, use their experience and their interaction among themselves and with the community to generate new ideas, new publications, because our investigations are just a means to an end. An investigation is an activity, it creates no value unless the staff is able to translate that into an effective communication in regard to preventing similar future incidents.

DOCTOR TAYLOR: Anything else? Okay.

Again, thank you.

Next, discussion of Board documents.

Chris?
MR. WARNER: This is relatively short, it is just an announcement to the public that since our last meeting we have put up on our web the Sonat Investigation Report. The Strategic Plan has been given to Congress, and is available, I believe, outside. We also have an MOU with ATSDR and the GAO Report, which deals with a variety of federal agencies, we are mentioned in there, that is also available if you’d like to look at it.

If you’d like to move ahead just on

DOCTOR TAYLOR: Yes.

MR. WARNER: again

DOCTOR ROSENTHAL: Just one comment

MR. WARNER: Sure.

DOCTOR ROSENTHAL: on that before we move ahead. I think that also there have been important documents added to back up the Morton investigation. There have been requests from the technical community and a number of the college staff to add the technical reports, around which the Morton investigation used, and I think that’s important because it’s an indication that people are interested in our reports as teaching tools, and we are happy to provide the back-up documents that they need to give their lectures and train the future chemical engineer.
practitioners.

DOCTOR TAYLOR: Good point.

MR. WARNER: Again, under the Sunshine Act, the Board conducts its business in public. Some of it is high drama, as you go through the investigative reports, some of it is just merely administrative. We do have, as I've told the Board in the beginning, we did wrap up our FY 2000 budget. We have presented to the Board, and the Board did vote last week, on a detailed budget plan for 2001. We have an appropriation this year of $7.5 million, and we will implement that based on the approval of the Board on the notation you did last week.

DOCTOR TAYLOR: Great.

The CSB legal and regulations update?

MR. WARNER: We have a variety of initiatives out there. We are continuing our discussions, we are setting up a meeting with the NTSB. As you know, MOU is required in our statute with the NTSB. We have sent them a draft proposal that they are now reviewing, and should be getting comments back to us shortly.

We also have various initiatives with them regarding certain investigation initiatives, as well as incident notification that we'll be taking up with
their technical staff.

Along those same lines, we'll be meeting with the ATF. We have given them a draft MOU as well, and should be meeting with them shortly, probably some time this month or early December.

We have also set up a meeting with EPA, which will involve the NTSB, EPA, both CEPPO and EPA Criminal, to talk about various investigative techniques, and that's set for the first week of December.

DOCTOR POJE: For those of you who don't understand acronyms, ATF is the Bureau of Alcohol, Tobacco and Firearms, a very important branch of the government that does investigate a number of explosive incidents, primarily looking at potential for criminality issues. And, the Chemical Emergency and Preparedness and Prevention Office, CEPPO, is the most related office to the Chemical Safety Board.

DOCTOR TAYLOR: Anything else, Chris?

MR. WARNER: I'd also like to, one of the documents that we did, of course, was the Strategic Plan, and if I could just sort of run through it for the audience here.

We have, we are very proud of this, we have completed our first Strategic Plan. It was
developed with input from the stakeholders and staff. We had a roundtable with over 60 participants in it. It describes our mission to promote the prevention of major chemical accidents at fixed facilities, and the goals and our objectives for the next five years.

As you can tell from this, our mission is the prevention of chemical accidents to promote the prevention. Our performance goals are to produce timely and high-quality investigation reports, recommendations and other technical products, develop effective outreach and partnerships with stakeholders, and develop and implement a system for chemical accident data collection and analysis that can be used to measure prevention effectiveness.

We have two goals, an enabling goal. One is to enhance the management of CSB and establish a diverse, highly-skilled, productive work force, and as you can tell from the presentation today we are moving ahead very quickly on that goal. We also have performance goals. The first one is to clearly delineate roles and responsibilities and accountabilities for Board members and staff. Two, to develop and implement administrative and personnel policies, including family-friendly policies, and to complete organizational informational technology and
physical infrastructure.

For the Board, we are moving ahead very quickly on our physical infrastructure. At the moment, our physical space is about the size of the NTSB conference room. We do have extra space. We are building it out.

If you have any questions on the Strategic Plan, you can go to our web site and download the Strategic Plan, as you can see up here. You can also e-mail me with any comments, Chris.Warner@csb.gov. On almost any of the issues that we discuss here, please feel free to contact me or any of the Board members with comments, suggestions, anything else you’d like to discuss.

DOCTOR TAYLOR: Great.

Next on the agenda is our Board Member Update. Is there anything else, Chris?

MR. WARNER: I would like to just go through for the record, if I could, certain Board initiatives. As we’ve done, and again this is a working session for the Board, what I’ve tried to do in the past is to outline that the Board acts, not only here in this public setting, but through notation memorandums. They produce them themselves, or the staff produces them. It is a written memo in which
they give directions back to the staff and the Board on various issues.

Since we last met, we went through notation item number 57, and since that date we have gone from 58 through 71, and just to briefly outline for the Board, 58 concerned the physical plant of the CSB and the space building that we are doing.

Fifty-nine was the approval of the Sonat Exploration Report, that was on September 21st, and that was adopted with full Board approval. Doctor Hill did not participate in that one.

Number 60 was a draft notation item that was never completed or pursued by the Board.

Sixty-one is the Strategic Plan, that was approved on September 21st, and that was sent to Congress.

Sixty-two concerns our regulation on the Freedom of Information Act, and that was sent to the Federal Register and was published there. The comment session on that should be ending fairly shortly.

Sixty-three concerns our Memorandum of Understanding with the Agency for Toxic Substances and Disease Registry.

Sixty-four concerns our contracting issues at the end of the year, computer security,
assessments, et cetera.

Sixty-five is personnel issues for the Board.

Sixty-six, again, is the part of issues dealing with the construction of our space on the 6th and the lower floor here in this building.

Sixty-seven deals with contracts for over $10,000.00 that go the full Board. Again, to reiterate for the audience here, the Board in January, when Doctor Hill resigned the chairmanship, separated and delegated to itself various functions of the Chief Executive Officer, the Chairman, they all share it. Doctor Rosenthal is working on contracting. Doctor Taylor is on the public communications side, public meetings and our dealing with stakeholders. Doctor Poje with personnel. Our order that goes through the voting and quorum procedures is not affected by the resignation of Doctor Hill and they can proceed as they have done in the past, so there are no changes that need to be done for that order.

And, 68, again, deals with personnel issues and the acquisition of contracting at the end of the year.

Sixty-nine concerns personnel procedures on office hours and work schedules.
Seventy involves an amendment to our investigation protocol that the Board has approved, and the investigative protocol is an internal process that we have for helping investigators do the investigations. We will be publishing in the future regulations for the public that outline various aspects of that, but it is an internal working document of the staff, and is not available to the public because it is an internal product.

And, 71 deals with our budget proposal for FY 2001, and details the split between all the divisions.

DOCTOR TAYLOR: Okay, thank you, Chris.

Any questions or comments for Chris?

DOCTOR POJE: No, thank you.

DOCTOR TAYLOR: Board Member Update?

DOCTOR ROSENTHAL: Yes. I've been kind of concentrating my own personal efforts in outreach with regard to our second and third strategic objectives. That's dealing with partnering with our stakeholders in the prevention effort, trying to get the results of our investigations acted on, and known and disseminated, and trying to stimulate people to recognize the financial, as well as the moral, benefits of accident prevention, and to that end have
been having discussions with, among other people, insurance companies and the National Safety Association. I'm glad to see Lee is here.

And, I've also personally been spending my time in meetings with EPA and other agencies, ATSDR, discussions with a variety of people in regard to feelings about our ability to be able to measure progress with regard to the reduction in type of accidents that we are concentrating on at fixed facilities, and have had a very good response from EPA and OSHA in regard to trying to understand what do we presently know and what don't we know, and use that as a basis from which the agencies can proceed to have their staff address the problems that may be defined.

DOCTOR TAYLOR: Okay.

Gerry?

DOCTOR POJE: Most of my work has been concentrated on personnel management issues, as well as on the investigation and safety programs areas that you've heard Bill talk about today.

A couple of outreach functions, speeches to the American Chemistry Council, to the American Petroleum Institute, and we'll be doing similar in the next month or so with the New Jersey Chemical Industry Council, and also with a regulatory affairs group at
the American Chemistry Council next month.

But, again, most of the work is tied to implementing what is our high priority items in our Strategic Plan, namely, assuring that the investigative work is effectively pursued, both in the field investigations, as well as in the hazard investigation.

DOCTOR TAYLOR: Okay.

And, for me, much of the same. In addition to all of the internal work that we’ve been doing, I’ve also been attending several major conferences, the CCPS conference, the Mary Kaye O’Connor Process Safety Conference in Texas as well. Also, I spoke to my Alma Mater, one of my Alma Maters, Johns Hopkins University School of Hygiene and Public Health students just a week ago. I have another presentation scheduled with the UAW Skilled Trades Conference in December. I’ve also had meetings and will be scheduling a meeting with the AFL-CIO Health and Safety Department.

I think that’s about my travels, yes, all over, and back here in Washington.

Any other comments or questions?

Then, rather than take a break, we are going to move right into our public comment session.
Oh, the next meeting. The next meeting is Friday, January 19, 2001, and it will be here on the second floor in this room.

Now moving on to public comment. If you have public comment I’d ask that you move to the microphone, because that’s where we are also recording your comments, and I will limit you to five minutes.

Are there any public comments from the audience? John? Oh, you have a presentation.

MR. MORAWETZ: Yes, and handouts, which I’m not sure if I have enough for everybody. I’ll try to make it in five minutes. Okay.

My name is John Morawetz. I’m the Director of the Chemical Worker Training Center in Cincinnati, the Center for Worker Health and Safety Education. The ICWU, I’m speaking on behalf of the ICWU, has a particular interest in this topic, one, to represent the workers at Conagra that was mentioned earlier, in 1990 the BSF facility in Cincinnati exploded killing two individuals who worked there, and in 1972, I believe, a Morton plant in south Georgia that produced magnesium flares caught fire and exploded and more than 25 people died in that incident.

The Chemical Worker Center is a training
program that is a consortium of nine unions. It is funded through NIEHS, which is one of 18 grantees under the HAZWOPER standard, that includes the firefighters who I believe are represented here today, and our particular training program is on collateral duty of chemical and risk response. We have members from the Steelworkers, the Machinists, former Rubber Workers, Aluminum, Brick and Glass Workers, Flint Glass, Coalition of Black Trade Unions, United Food and Commercial Workers Union, and the American Federation of Teachers.

The particular course is a four-day, hands-on emergency response class. Our program mainly aims to motivate participants to be active in changing the workplace, and we have done independent surveys of that and shown that it actually does work. Two reasons it works is, one, adult education methods, where we don't believe in a lot of lecturing, but interactive techniques, two, our staff comes from the rank and file almost exclusively, we use worker trainers and some of them are hired full time as staff.

The basic this is, basically, how we teach, but let's just go on to the next one.

The areas of future work, one is to
develop educational materials; two, support the CSB and their efforts to increase the database for reactive chemical incidents; and, three, to evaluate community exposure levels, which I’ll get to further on a committee of the EPA that I serve on in cooperation with the National Resource Council.

The next one, this one is, I think, what we are describing here today, the Chemical Workers is consistent with three main performance goals of the CSB that were delineated earlier.

The meat of this, education materials. The CSB, I think, has come a long from its initial reports and making reports that are very user friendly, that mainly get to the root cause, root causes that not only identify what happened, but how to prevent those things in the future across the industry.

I think that, perhaps, potential areas of further work are, one, mass communication materials, simple fact sheets that can be handed out or reproduced massly. Booklets are more in-depth, but something that’s more easier to distribute than the full report, and, three, little cards. The Center for Workers Rights has little cards, basically, the size of a business card, a little bit larger than this,
which would be very easy to disseminate to all
employees at these facilities.

Two is course materials for training
programs, exercises. The reports can be used by, as
we said earlier, various organizations. I believe
that in cooperation with other organizations, like
NIEHS or the training programs, that we can develop
exercises to help lead people in these courses to the
key root causes, and that includes both small group
activities and also for technical presentations.
Lastly, conferences with training and other
organizations, NIEHS puts on two workshops a year,
technical workshops. One of them, potentially, could
be one in this area. It's something that I think we
are open to discussing with the CSB further.

We had a nationally recognized, very well
attended conference of 700 individuals a year ago in
St. Louis on training and health and safety. I think
there's fertile ground here to do a lot more work.

I want to spend most of my time on the
reactive chemical databases. I think it's a complex
issue. CSB, I think, has a good plan for proceeding
further. I would mention that the on actual
incidents, and this could be difficult to develop a
database, but I think we should look at near misses,
things where an event did not occur but it could have
occurred. Three, concerns and investigations, where
it wasn’t a near miss but there’s a clear problem that
was identified, and three, other areas where solutions
were implemented. I think those are areas where we
can learn a lot also.

Next, just the root causes that have come
up from some of the I think these are things we can
get from these incidents.

The last area, we’ll move ahead then, is
to bring to the attention of the Board that there is a
committee beyond the risk management plan, a mandate
through the Clean Air Act. I serve on the committee
with the EPA, it’s called the AEGL Committee, Acute
Exposure Guidelines. We set levels for three
different health effects, mild symptoms, serious
injury and death, and we set them for five different
time periods. It’s a complex matrix of numbers we’ve
come up, but a few questions arise, and these numbers
are going to be used by EPA in the risk management
plan, and probably adopted, that was in the Federal
Register about five years ago when the RMPs were first
announced.

To move ahead, some questions could be:
one, what is the level of concern, AEGL-1 or -2, mild
symptoms, serious injury, there’s a wide range in between that. What is the appropriate time period? Currently, RMP has a scenario of the worst case where everything is released from a vessel in ten minutes. That may or may not be the appropriate scenario, whether this can go for longer. When a release occurs, you’ll get a peak exposure, but you’ll get some exposure after that peak exposure, which can be in a short time period.

The AEGLs are meant as a one-time exposure. So, if a release goes on for ten minutes mainly, but there’s exposure afterwards, and we use the AEGL numbers, the problem is they are set for a discreet ten-minute exposure, with nothing after that.

It’s not clear how that can be applied.

Lastly, human studies, have they been used appropriately? Even as a member of the committee, I would say that there are some questions whether it’s appropriate.

And, I think to conclusion, it’s just a summary of the three areas, and I think that’s the presentation.

Thank you very much for your time.

DOCTOR TAYLOR: Thank you, John, for five minutes.
Now, the question I have for you is, what’s your proposal to the Board of what, in giving your presentation, how do you see the Board interacting or what are some of the concerns you have, or suggestions?

MR. MORAWETZ: I think, one, we need to sit down. You are going to hire a training program coordinator, I’m not sure what exactly that job is, but the question is, how do you make the decisions as to what materials do you produce?

I’d say my main area, given that I’ve done training for 13 years, is what material could be most usefully produced to be used for mass distribution in the facilities that have these hazards. And, that’s, I think, the main area.

DOCTOR TAYLOR: Okay.

So then, you will propose that the Board consider producing materials that can be used.

MR. MORAWETZ: Or producing a template that obviously is not copyrighted, government material, it could be used in mass ways, similar exercises that could be used in training programs.

DOCTOR TAYLOR: Okay.

DOCTOR ROSENTHAL: The Board has considered the outreach of that type, in conjunction with other
organizations. In trying to do what, for want of a better word, I refer to the National Seatbelt Campaign, that is, make people aware that we know what causes them, but to get it into their consciousness that they don’t do the things they know they shouldn’t do. Very few of these things are, as we say, rocket science, people know that they are not doing something they should do in most instances. And so, you are suggestion is a good one, and we’ve been considering it for some time and we welcome your inputs and any specific suggestions you might have would be very valuable.

DOCTOR TAYLOR: Yes, thank you.

DOCTOR POJE: If I can just comment, last month I had the opportunity to attend a meeting of the training groups at the National Institute of Environmental Health Sciences, and I think there was a very good appreciation of the Board’s work products. But, again, Irv, as you experienced with the SACHE group at the American Institute of Chemical Engineers, professors teaching chemical engineering safety need to have a more specialized and tailored set of work products to most effectively apply their trade on the matters that the Board has investigated.

I think we are just slowly unfurling for
ourselves, how does a core work product, such as an
investigation, meet the needs of many communities?

DOCTOR TAYLOR: Right.

DOCTOR POJE: I think we'll review your materials and discuss that amongst ourselves. I think you raise some very important points, and others in that training group have raised similar issues to us, so I think it's an area ripe for interaction.

The National Institute of Environmental Health Sciences has been partners with us in a number of expert roundtable discussions in the past, and continue to want to work with the Board as we see joint endeavors most likely to be had by both agencies.

DOCTOR ROSENFAL: I think, you know, there are other areas, the National Safety Council has done a very effective job. We are not the only ones who are producing things. I think what we can do as a group is to try to get together with the industry associations, with the other agencies. EPA puts out a whole series of very useful bulletins of the mass kind that you've been talking about, and collectively ask ourselves how can we most effectively do the job of reaching out to the workers, engineers, and maintenance people in our industry to understand that
if they keep playing the lottery they are going to win. So, we are looking forward to a cooperative effort, and your inputs are particularly important, because the workers are the ones who see this happening over and over again and can be a very important influence in trying to change the climate in which such things continue to reoccur.

DOCTOR TAYLOR: Right.

DOCTOR POJE: Can I just say in regards to the reactive chemical incidence issue, Bill and John Murphy are here today and would be happy to talk to you about what kind of contribution we might draw from your community helping us do that work.

DOCTOR TAYLOR: Thank you, John.

Are there any other public comments?

Yes, Bob? Bob, can you get to the mic, and can you please introduce yourself and who you represent?

MR. SMERKO: Good morning. I'm Bob Smerko, President of the Chlorine Institute, located here in Washington, and we are primarily a safety-oriented organization.

I would just like to say the Board, remind the Board, that since you started having these open hearings I have attended, I think, the majority of
them. Doctor Taylor reminded me, as I walked in, that I wasn't at the last one, so I think she is keeping count of some kind of sorts.

The point that I would like to make is, during these meetings when they first started, and the ones that I was at, I stood up, along with others from chemical associations, and continued to give the Board our support and to encourage the Board to move forward with whatever it was that they had to do to get them to the point where they are today. And, I congratulate the Board on what you have achieved to date.

I wanted to basically use this time to congratulate you, and also to take the opportunity to suck up to you a little bit, now that you've reached where you are, and continued good luck, and you have our continued support at the Chlorine Institute.

DOCTOR TAYLOR: Thank you, Bob.

Are there any other public comments? No other public comments. Great way to end.

DOCTOR ROSENTHAL: Any expressions of hostility?

DOCTOR TAYLOR: Any expressions of hostility? We don't want those, that's okay.

DOCTOR POJE: That can be delivered to
Doctor Rosenthal.

    DOCTOR TAYLOR: Talk to him personally afterwards.

    If there are no other comments, this meeting is adjourned. Thank you for coming. Thank you for your support.

    (Whereupon, the meeting was concluded at 10:50 a.m.)