

## U.S. CHEMICAL SAFETY AND HAZARD INVESTIGATION BOARD

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## PUBLIC MEETING

+ + + + +

Wednesday,

November 8, 2000

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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

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

9:32 a.m.

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

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1 will discuss and introduce our new members. The Board  
2 and staff members have also participated in several  
3 key conferences and given presentations, including  
4 presentations on our investigation reports and  
5 upcoming hazard investigation.

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

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

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

19 DOCTOR ROSENTHAL: No, opening statement.

20 DOCTOR POJE: I can't let that go  
21 unresponded to. I'm just very happy to be here. It's  
22 been ten months since the Board has organized itself  
23 to conduct business in the way that we've been doing  
24 it since January of this year, and I think the  
25 accomplishments of the Agency are very significant and

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1 quite salutary from my vantage point. I'm happy to be  
2 here today and happy to be part of the ongoing process  
3 of public meetings to disclose the Board's business  
4 and to charter our future directions.

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

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

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

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

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

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1 projections for FY 2002.

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

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

20 We've had our Strategic Plan published.  
21 We've developed our incident selection procedures. We  
22 have a deployment team, we are ready to go. We've had  
23 various exercises ongoing in the past couple of months  
24 to prepare for an incident if it occurs. We also have  
25 undertaken an internal review of our expenditures,

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1 what was done in 1999 and 1998, and where we could  
2 better spend and focus our attention and funds. So,  
3 that is an ongoing work that we're pursuing at the  
4 moment.

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

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

16 We participated in GAO investigations.  
17 One was recently completely that looked at all the  
18 various responders on worker protection, going to  
19 better coordination. We have also, within two or  
20 three days of receiving it, we have gotten off letters  
21 to the various other parties that had recommendations  
22 asking for meetings. I am undertaking a review of our  
23 MOUs at the moment to see how we can better  
24 coordinate, but I would tell you that as far as our  
25 investigations have been in the past, there has been

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1 no issue of coordination problems on any of those  
2 investigations that has been raised so far, but we are  
3 taking this seriously and looking at it, and we'll be  
4 moving ahead with the EPA and OSHA on looking on that  
5 coordination problem.

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

23 DOCTOR TAYLOR: Thank you, Chris.

24 I'd like to hear from Bill Hoyle,  
25 Investigations and Safety Programs Update.

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1 MR. HOYLE: We're going to exercise your  
2 necks to the back of the room here, to show the Power  
3 Point.

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

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

16 MR. CONLON: Thank you, Bill.

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

20 This is an aerial view of Sonat's Temple  
21 22-1 Common Point Separation Facility. The facility  
22 was built to separate well fluid into crude oil,  
23 natural gas and water. The incident occurred on March  
24 4, 1998. Sonat was starting up new equipment for the  
25 oil and gas separation process, which involved the

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1 purging of vessels and a pipeline with natural gas.

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

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

16           This is a basic schematic diagram of one  
17 of the two separation processes at the facility, the  
18 bulk train, which was to begin production for the  
19 first time on the day of the incident. Basically, in  
20 production the fluid would flow from the well through  
21 the different separators, and the oil would be stored  
22 in storage tanks. The purge process for that day was  
23 basically the flow of the fluid from the well and the  
24 natural gas would flow through a bypass line there at  
25 the bottom and out through the storage tanks.

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1           The facility was designed and built  
2 without effective engineering design reviews or hazard  
3 analyses. Sonat constructed the facility without  
4 producing engineering drawings of the process  
5 equipment. The equipment drawings used in our  
6 investigation were developed after the incident.  
7 These findings are reflected in the recommendations  
8 which I will discuss later in the presentation.

9           This schematic provides a detailed view of  
10 the third stage separator, the vessel that failed. It  
11 was a two-phase separator designed to produce crude  
12 oil and natural gas. Basically, the oil/gas mixture  
13 would come from the second stage separator there in  
14 the lower left corner, flow up through the oil inlet  
15 line into the separator, cascade down through the  
16 vessel, and then flow out the oil outlet line to the  
17 storage tanks. The gas would flow out the top of the  
18 vessel to a gas compressor. The three valves there at  
19 the bottom were the bypass valves. Two were manual  
20 block valves that were normally in the open position.

21       The center valve was an automatic valve that was  
22 controlled by the liquid level sensor. If there was a  
23 high level of oil in the vessel it would open this  
24 valve and allow the oil to flow directly to the  
25 storage tanks.

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1           This vessel lacked a block valve on the  
2 oil inlet line and could not be isolated from the  
3 bypass line, which at the time of the incident  
4 contained high-pressure purge gases. An effective  
5 engineering design review would have provided the  
6 opportunity for Sonat to identify this design  
7 deficiency prior to the start-up of the facility.

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

17           There were also, there were two block  
18 valves, valves 14 and 15, that were closed. The  
19 vessels, the third-stage separator had been purged  
20 earlier in the day and these were closed to prevent  
21 air from getting into the vessel, and the bypass  
22 valves were to be in the open position. Here is the  
23 scenario for the incident, these are the positions of  
24 the valves found after the accident. Valves 11 and 13  
25 were in the closed position, which created □ which

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1 basically isolated the purge system into the third-  
2 stage separator.

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

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

17           Root cause number one, Sonat management  
18 did not use a formal engineering design review process  
19 or require effective hazard analyses in the course of  
20 designing and building the facility. In the incident,  
21 the third-stage separator was exposed to a pressure  
22 significantly in excess of its maximum allowable  
23 working pressure, resulting in catastrophic failure of  
24 the vessel. A formal engineering design review  
25 process should have been in place during the design of

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1 the facility. Sonat constructed the facility without  
2 producing engineering drawings of the process  
3 equipment. Neither design review, nor hazard analyses,  
4 can be effectively conducted in the absence of  
5 accurate engineering drawings.

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

14 Root cause number two, Sonat engineering  
15 specifications did not ensure that equipment that  
16 could potentially be exposed to high-pressure hazards  
17 was adequately protected by pressure relief devices.  
18 The vessel that failed met the definition of a two-  
19 phase gas/oil separator and should have been designed  
20 to meet relevant industry consensus standards for  
21 pressure relief. For example, ANSI/API Specification  
22 12-J, a specification for oil and gas separators,  
23 requires separators be equipped with pressure relief  
24 valves.

25 A contributing cause was identified.

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1 Sonat management did not provide workers with written  
2 operating procedures for the start-up and operation of  
3 the facility. Written operating procedures governing  
4 each phase of the facility operations, including  
5 purging operations, would have reduced the likelihood  
6 of a manual valve misalignment of the kind that  
7 triggered this incident. Procedures should have  
8 included written checklists and diagrams to verify  
9 proper valve positions for purging.

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

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

25 The second recommendation to El Paso

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1 Production is to implement a program to ensure that  
2 all oil and gas production equipment that is  
3 potentially subject to over-pressurization is equipped  
4 with adequate pressure relief systems and audit  
5 compliance with the program.

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

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

21 Recommendation 4 is for API to develop and  
22 issue recommended practice guidelines governing the  
23 safe start-up and operation of oil and gas production  
24 facilities, and to ensure that the guidelines address,  
25 at a minimum, the following:

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- 1 . . Project design review, including hazard  
2 analyses;  
3 . . Written operating procedures;  
4 . . Employee and contractor training; and  
5 . . Pressure relief requirements for all equipment  
6 exposed to pressure hazards.

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

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

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

22 DOCTOR TAYLOR: Are there questions?

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

25 MR. CONLON: Informally, I'm aware that API

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1 is working on the recommended practice, and I believe  
2 there is a meeting set up, tentatively set up, for  
3 next week between the CSB and API representatives to  
4 further discuss the recommendation.

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

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

13 DOCTOR TAYLOR: Any other questions?

14 Thank you, Pat.

15 Bill?

16 MR. HOYLE: The next item on the agenda  
17 this morning is on our recently issued report on the  
18 incident at Morton International. We want an update  
19 on the recommendations, and for today's meeting we  
20 want to focus on one of the most significant  
21 recommendations of that report, and that is the action  
22 taken by the Board to launch a hazard investigation  
23 study into reactive chemical safety practices in the  
24 country, and we're fortunate to have a very leading  
25 figure in the process safety world on our staff who is

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1 going to lead this very important project. That's  
2 John Murphy, and I'd like to share with you a little  
3 bit about John before he comes to the podium and  
4 presents.

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

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

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

25 MR. MURPHY: I don't have a Power Point

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1 presentation, but I think the notes from which I'm  
2 going to be talking from were available at the front  
3 desk as you came in.

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

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

20 This is a relatively new activity for the  
21 Chemical Safety Board. Our main activity is to  
22 investigate major chemical accidents, but we also have  
23 a goal long term to conduct one hazard study per year,  
24 and so this year we are going to institute the  
25 reactive chemical hazards study.

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1           Unlike the investigation of a particular  
2 incident, the CSB hazard study may examine a series of  
3 related incidents to identify common causes and make  
4 recommendations for prevention.

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

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

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

22           The second major activity is to survey  
23 companies within the chemical industry, and we want to  
24 make sure we are looking at small, medium and large  
25 companies, to understand how reactive chemical hazards

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1 are commonly managed. We intend to do this through  
2 developing of a survey questionnaire that we'll send  
3 out to small, medium and large companies, to try to  
4 get some understanding of how they successfully manage  
5 reactive chemical hazards.

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

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

23 Part of the process of conducting the  
24 study is to make sure that we get an understanding  
25 from the community that's interested in what we are

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1 doing, so we'll be reviewing plans for this study with  
2 key stakeholders. We started with OSHA, EPA. We plan  
3 to involve industry groups, public interest groups and  
4 organized labor, and we've begun the process of  
5 conducting and setting up these meetings.

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

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

23 The preliminary plan is being shared with  
24 several stakeholders. Like I said, we've talked to  
25 OSHA, EPA, several stakeholders, and we have plans to

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1 involve other people at this very day.

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

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

17           One of our key stakeholders we feel is the  
18 Center for Chemical Process Safety, which is  
19 associated with the American Institute of Chemical  
20 Engineers, and they've agreed to let me give a  
21 presentation in January to update their Technical  
22 Steering Committee on our updated plan and to get some  
23 input from them probably on our survey questionnaires,  
24 and also on how we can obtain any other relevant  
25 information that may help us conduct the study.

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1           At the moment, the project is on a fast  
2 track. We'd like to get it done this fiscal year. We  
3 have a public hearing that we have planned for August  
4 2001, to discuss the findings and conclusions of the  
5 hazard study, and we are targeting to have final CSB  
6 approval of the report in September 2001. So, the  
7 study, we are trying to get off to a quick start here,  
8 because we have a pretty tight time line.

9           So, any questions from the Board on this?

10          DOCTOR TAYLOR: Any questions? Irv?

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

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

16          DOCTOR TAYLOR: They're here right now.

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

20          DOCTOR TAYLOR: Okay.

21          DOCTOR ROSENTHAL: He's not compelled to  
22 answer.

23          MR. MURPHY: We're satisfied. We're  
24 certain satisfied with their participation so far.

25          DOCTOR TAYLOR: Gerry?

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

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

23 MR. MURPHY: I think that all of us, as  
24 Board Members, are interested in getting inputs from  
25 various groups. I've been making use of contacts with

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1 various insurance companies who have good databases  
2 and strong feelings on the subject, and we'll see if  
3 we can't arrange for interaction between the staff and  
4 such companies, so that those databases are available  
5 also.

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

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

20 DOCTOR TAYLOR: Okay.

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

23 MR. HOYLE: Yes.

24 DOCTOR TAYLOR: Okay, yes, I just wanted to  
25 clarify that.

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1 DOCTOR ROSENTHAL: It'll be a two-phase  
2 process, in which we try to, first of all, get  
3 agreement with all of our stakeholders on conclusions  
4 and findings, and then go on to consider the  
5 recommendations that the staff makes.

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

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

12 MR. MURPHY: Yes.

13 DOCTOR TAYLOR: Thank you, John.

14 MR. MURPHY: Okay, thank you.

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

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

25 Concurrently with these activities, the

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

8 Any questions on that piece?

9 DOCTOR TAYLOR: Any questions? No, okay.

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

20 The five cases, for those of you that may  
21 not be familiar, are the following: first, a Sonat  
22 Exploration Production case involving a snubbing  
23 operation in Louisiana; a case involving Condea Vista  
24 in the Baltimore area; a case involving Concept  
25 Sciences in Allentown, Pennsylvania; a case involving

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1 Equilon, an oil refinery in Anacortes, Washington; and  
2 lastly, Independence Fireworks in Michigan. These  
3 cases were undertaken, in many cases, approximately  
4 two years ago, and as Chris has already mentioned at  
5 that time we did not have the appropriate staff and  
6 resources to act fully, to fully investigate as we  
7 have on the other cases that have been issued by the  
8 Board.

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

13 Any questions on that piece of the agenda?

14 DOCTOR TAYLOR: No, thank you.

15 MR. HOYLE: Okay.

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

20 Just last week, we successfully have hired  
21 a very senior technical writer and editor with 30  
22 years experience in the business, who was the star  
23 candidate out of more than 100 candidates we had for  
24 that position, who will be joining us very shortly on  
25 November 20<sup>th</sup>.

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1           We have several openings that are still  
2 available that we are still advertising and reviewing  
3 applications and candidates. Those positions are an  
4 Executive Assistant for the Safety Group, a Technical  
5 Information Specialist, and a Training Program  
6 Coordinator, so we are still actively pursuing those  
7 positions.

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

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

19           You've already heard me talk about John  
20 Murphy, who is heading our reactive study, and his  
21 experience history. Next I have four other new staff  
22 members in my group who are with us today and I'd like  
23 to introduce them one at a time. And, after I  
24 describe their credentials I'll have them stand and be  
25 acknowledged.

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1           First, we have Giby Joseph. Giby has a  
2 Bachelor of Science in Chemical Engineering from the  
3 University of Houston. He has a Master's of Science  
4 in Safety Engineering, specializing in process safety,  
5 from Texas A&M University. He's worked as a technical  
6 writer at Texas A&M, and he's also worked for URS  
7 Radion Consulting Group in risk management activities,  
8 specializing in process safety management and EPA risk  
9 management program development. Giby, I'd like you to  
10 stand and be recognized.

11           (Applause.)

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

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

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1 stand and be recognized.

2 (Applause.)

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

5 MR. MORRIS: Yes.

6 DOCTOR TAYLOR: Is it Weirton?

7 MR. HOYLE: Weirton.

8 DOCTOR TAYLOR: Weirton, okay.

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

10 DOCTOR TAYLOR: Okay, great.

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

23 (Applause.)

24 MR. HOYLE: Kevin comes to us from  
25 Columbus, Ohio, and is a new resident of Maryland.

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1                   Lastly of the group, I'd like to introduce  
2 Steve Wallace. Steve comes to the Board with over 12  
3 years of experience in the chemical industry. He's  
4 worked as a Production Manager, Process Engineer and a  
5 Process Safety Consultant. Most recently, he was  
6 employed with Westlake Group in Lake Charles,  
7 Louisiana, where he was Safety Superintendent for two  
8 facilities producing ethylene, styrene, polyethylene,  
9 plastic, et cetera. He's written numerous articles on  
10 process safety that have been published in journals  
11 such as Chemical Engineering Progress, Hydrocarbon  
12 Processing, and Professional Safety magazine, in which  
13 he has an article in the November issue for your  
14 information. He's also been a project or word product  
15 reviewer for the Center for Chemical Process Safety.  
16 Steve has a Bachelor of Science in Chemical  
17 Engineering from the University of Kentucky in  
18 Lexington. He's a Registered Professional Engineer in  
19 the State of Tennessee, and he's also a Certified  
20 Safety Professional. Steve, I'd like you to stand and  
21 be recognized.

22                   (Applause.)

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

25                   So, that concludes my items for the agenda

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1 today, and so if there's any questions I'll entertain  
2 those.

3 DOCTOR TAYLOR: Thank you, Bill.

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

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

22 You heard about our backlog of work that  
23 needed to be completed. We selected three very  
24 important investigations to complete. We've gotten two  
25 of them done and the progress is manifest on the

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1 third, but behind the scenes we are very conscious  
2 that the most important job for the institution is to  
3 build expert staff. I think that the caliber of  
4 individuals that have come through a very rigorous  
5 advertising process, but also very vigorous selection  
6 criteria process, is instilling the Board right now  
7 with a critical mass of expertise to tackle the future  
8 work of the institution. I think the numbers of  
9 individuals and their skill level working on a hazard  
10 investigation just leaves me tickled pink compared to  
11 where we were ten months ago, trying to search for  
12 which talent would be able to be applied to the  
13 particular task.

14 We've made effective use of a specialized  
15 Schedule A hiring process. That will come to closure  
16 on December 31<sup>st</sup>, and we're still running great guns  
17 to bring in that talent on an expedited basis. We  
18 would urge you all to see them as resources to the  
19 larger community on chemical safety. They are  
20 interested in knowing the Washington community and the  
21 other associations and union communities, and will be  
22 making a substantive contribution to the system of  
23 chemical safety. We hope you treat them, as we do  
24 internally, as the nucleus of what will be a very  
25 vigorous and accomplished technical agency on safety

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1 matters. I'm proud to have all of those announcements  
2 made today.

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

7 DOCTOR TAYLOR: And, we're actually running  
8 out of space upstairs.

9 DOCTOR ROSENTHAL: We can always build more  
10 space.

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

22 DOCTOR TAYLOR: Anything else? Okay.

23 Again, thank you.

24 Next, discussion of Board documents.

25 Chris?

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

10 If you'd like to move ahead just on □

11 DOCTOR TAYLOR: Yes.

12 MR. WARNER: □ again □

13 DOCTOR ROSENTHAL: Just one comment □

14 MR. WARNER: Sure.

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

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1 practitioners.

2 DOCTOR TAYLOR: Good point.

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

14 DOCTOR TAYLOR: Great.

15 The CSB legal and regulations update?

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

23 We also have various initiatives with them  
24 regarding certain investigation initiatives, as well  
25 as incident notification that we'll be taking up with

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1 their technical staff.

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

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

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

19 DOCTOR TAYLOR: Anything else, Chris?

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

24 We have, we are very proud of this, we  
25 have completed our first Strategic Plan. It was

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1 developed with input from the stakeholders and staff.  
2 We had a roundtable with over 60 participants in it.  
3 It describes our mission to promote the prevention of  
4 major chemical accidents at fixed facilities, and the  
5 goals and our objectives for the next five years.

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

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

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1 physical infrastructure.

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

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

15 DOCTOR TAYLOR: Great.

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

18 MR. WARNER: I would like to just go  
19 through for the record, if I could, certain Board  
20 initiatives. As we've done, and again this is a  
21 working session for the Board, what I've tried to do  
22 in the past is to outline that the Board acts, not  
23 only here in this public setting, but through notation  
24 memorandums. They produce them themselves, or the  
25 staff produces them. It is a written memo in which

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1 they give directions back to the staff and the Board  
2 on various issues.

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

8 Fifty-nine was the approval of the Sonat  
9 Exploration Report, that was on September 21<sup>st</sup>, and  
10 that was adopted with full Board approval. Doctor  
11 Hill did not participate in that one.

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

14 Sixty-one is the Strategic Plan, that was  
15 approved on September 21<sup>st</sup>, and that was sent to  
16 Congress.

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

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

24 Sixty-four concerns our contracting issues  
25 at the end of the year, computer security,

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1 assessments, et cetera.

2 Sixty-five is personnel issues for the  
3 Board.

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

7 Sixty-seven deals with contracts for over  
8 \$10,000.00 that go the full Board. Again, to  
9 reiterate for the audience here, the Board in January,  
10 when Doctor Hill resigned the chairmanship, separated  
11 and delegated to itself various functions of the Chief  
12 Executive Officer, the Chairman, they all share it.  
13 Doctor Rosenthal is working on contracting. Doctor  
14 Taylor is on the public communications side, public  
15 meetings and our dealing with stakeholders. Doctor  
16 Poje with personnel. Our order that goes through the  
17 voting and quorum procedures is not affected by the  
18 resignation of Doctor Hill and they can proceed as  
19 they have done in the past, so there are no changes  
20 that need to be done for that order.

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

24 Sixty-nine concerns personnel procedures  
25 on office hours and work schedules.

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1           Seventy involves an amendment to our  
2 investigation protocol that the Board has approved,  
3 and the investigative protocol is an internal process  
4 that we have for helping investigators do the  
5 investigations. We will be publishing in the future  
6 regulations for the public that outline various  
7 aspects of that, but it is an internal working  
8 document of the staff, and is not available to the  
9 public because it's an internal product.

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

13           DOCTOR TAYLOR: Okay, thank you, Chris.

14           Any questions or comments for Chris?

15           DOCTOR POJE: No, thank you.

16           DOCTOR TAYLOR: Board Member Update?

17           DOCTOR ROSENTHAL: Yes. I've been kind of  
18 concentrating my own personal efforts in outreach with  
19 regard to our second and third strategic objectives.  
20 That's dealing with partnering with our stakeholders  
21 in the prevention effort, trying to get the results of  
22 our investigations acted on, and known and  
23 disseminated, and trying to stimulate people to  
24 recognize the financial, as well as the moral,  
25 benefits of accident prevention, and to that end have

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1 been having discussions with, among other people,  
2 insurance companies and the National Safety  
3 Association. I'm glad to see Lee is here.

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

15 DOCTOR TAYLOR: Okay.

16 Gerry?

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

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

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1 the American Chemistry Council next month.

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

8 DOCTOR TAYLOR: Okay.

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

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

23 Any other comments or questions?

24 Then, rather than take a break, we are  
25 going to move right into our public comment session.

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1 Oh, the next meeting. The next meeting is Friday,  
2 January 19, 2001, and it will be here on the second  
3 floor in this room.

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

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

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

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

25 The Chemical Worker Center is a training

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1 program that's a consortium of nine unions. It's  
2 funded through NIEHS, which is one of 18 grantees  
3 under the HAZWOPER standard, that includes the  
4 firefighters who I believe are represented here today,  
5 and our particular training program is on collateral  
6 duty of chemical and risk response. We have members  
7 from the Steelworkers, the Machinists, former Rubber  
8 Workers, Aluminum, Brick and Glass Workers, Flint  
9 Glass, Coalition of Black Trade Unions, United Food  
10 and Commercial Workers Union, and the American  
11 Federation of Teachers.

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

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

25 The areas of future work, one is to

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1 develop educational materials; two, support the CSB  
2 and their efforts to increase the database for  
3 reactive chemical incidents; and, three, to evaluate  
4 community exposure levels, which I'll get to further  
5 on a committee of the EPA that I serve on in  
6 cooperation with the National Resource Council.

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

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

18 I think that, perhaps, potential areas of  
19 further work are, one, mass communication materials,  
20 simple fact sheets that can be handed out or  
21 reproduced massly. Booklets are more in-depth, but  
22 something that's more easier to distribute than the  
23 full report, and, three, little cards. The Center for  
24 Workers Rights has little cards, basically, the size  
25 of a business card, a little bit larger than this,

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1 which would be very easy to disseminate to all  
2 employees at these facilities.

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

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

20 I want to spend most of my time on the  
21 reactive chemical databases. I think it's a complex  
22 issue. CSB, I think, has a good plan for proceeding  
23 further. I would mention that the on actual  
24 incidents, and this could be difficult to develop a  
25 database, but I think we should look at near misses,

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1 things where an event did not occur but it could have  
2 occurred. Three, concerns and investigations, where  
3 it wasn't a near miss but there's a clear problem that  
4 was identified, and three, other areas where solutions  
5 were implemented. I think those are areas where we  
6 can learn a lot also.

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

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

24 To move ahead, some questions could be:  
25 one, what is the level of concern, AEGL-1 or -2, mild

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1 symptoms, serious injury, there's a wide range in  
2 between that. What is the appropriate time period?  
3 Currently, RMP has a scenario of the worst case where  
4 everything is released from a vessel in ten minutes.  
5 That may or may not be the appropriate scenario,  
6 whether this can go for longer. When a release  
7 occurs, you'll get a peak exposure, but you'll get  
8 some exposure after that peak exposure, which can be  
9 in a short time period.

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

15 It's not clear how that can be applied.

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

20 And, I think to conclusion, it's just a  
21 summary of the three areas, and I think that's the  
22 presentation.

23 Thank you very much for your time.

24 DOCTOR TAYLOR: Thank you, John, for five  
25 minutes.

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1           Now, the question I have for you is,  
2 what's your proposal to the Board of what, in giving  
3 your presentation, how do you see the Board  
4 interacting or what are some of the concerns you have,  
5 or suggestions?

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

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

16           DOCTOR TAYLOR: Okay.

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

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

23           DOCTOR TAYLOR: Okay.

24           DOCTOR ROSENTHAL: The Board has considered  
25 the outreach of that type, in conjunction with other

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1 organizations. In trying to do what, for want of a  
2 better word, I refer to the National Seatbelt  
3 Campaign, that is, make people aware that we know what  
4 causes them, but to get it into their consciousness  
5 that they don't do the things they know they shouldn't  
6 do. Very few of these things are, as we say, rocket  
7 science, people know that they are not doing something  
8 they should do in most instances. And so, your  
9 suggestion is a good one, and we've been considering  
10 it for some time and we welcome your inputs and any  
11 specific suggestions you might have would be very  
12 valuable.

13 DOCTOR TAYLOR: Yes, thank you.

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

25 I think we are just slowly unfurling for

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1 ourselves, how does a core work product, such as an  
2 investigation, meet the needs of many communities?

3 DOCTOR TAYLOR: Right.

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

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

15 DOCTOR ROSENTHAL: I think, you know, there  
16 are other areas, the National Safety Council has done  
17 a very effective job. We are not the only ones who  
18 are producing things. I think what we can do as a  
19 group is to try to get together with the industry  
20 associations, with the other agencies. EPA puts out a  
21 whole series of very useful bulletins of the mass kind  
22 that you've been talking about, and collectively ask  
23 ourselves how can we most effectively do the job of  
24 reaching out to the workers, engineers, and  
25 maintenance people in our industry to understand that

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1 if they keep playing the lottery they are going to  
2 win. So, we are looking forward to a cooperative  
3 effort, and your inputs are particularly important,  
4 because the workers are the ones who see this  
5 happening over and over again and can be a very  
6 important influence in trying to change the climate in  
7 which such things continue to reoccur.

8 DOCTOR TAYLOR: Right.

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

14 DOCTOR TAYLOR: Thank you, John.

15 Are there any other public comments?

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

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

23 I would just like to say the Board, remind  
24 the Board, that since you started having these open  
25 hearings I have attended, I think, the majority of

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1 them. Doctor Taylor reminded me, as I walked in, that  
2 I wasn't at the last one, so I think she is keeping  
3 count of some kind of sorts.

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

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

18 DOCTOR TAYLOR: Thank you, Bob.

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

21 DOCTOR ROSENTHAL: Any expressions of  
22 hostility?

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

25 DOCTOR POJE: That can be delivered to

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1 Doctor Rosenthal.

2 DOCTOR TAYLOR: Talk to him personally  
3 afterwards.

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

7 (Whereupon, the meeting was concluded at  
8 10:50 a.m.)

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