U.S. CHEMICAL SAFETY AND

HAZARD INVESTIGATION BOARD

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PUBLIC MEETING

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FRIDAY

SEPTEMBER 15, 2000

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The meeting was held in the Conference Room, Suite 200, 2175 K Street, N.W., Washington, D.C., at 9:30 a.m

PRESENT:

ANDREA KIDD TAYLOR, Acting Chairperson

GERALD V. POJE, Board Member

ISIDORE ROSENTHAL, Board Member

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2 (9:32 a.m.)

3 CHAIRPERSON TAYLOR: Good morning. This is
4 the meeting of U.S. Chemical Safety Board, public
5 meeting, September 15th, 2000.

6 I'm Andrea Taylor. I will be chairing the
7 meeting.

8 I'd like to let the other board members
9 introduce themselves.

10 DR. POJE: Good morning. I'm Gerry Poje,
11 Board member responsible for personnel matters for the
12 Chemical Safety Board.

13 DR. ROSENTHAL: Irv Rosenthal. I'm the
14 Board member responsible for reviewing expenditures.

15 CHAIRPERSON TAYLOR: And to our immediate
16 right, your left.

17 MR. WARNER: Chris Warner. I'm General
18 Counsel and the Chief Operating Officer.

19 CHAIRPERSON TAYLOR: Okay. Are there any
20 additional opening statements the board would like to
21 make?

22 DR. POJE: I just want to say that it's
23 been since April that we've had a public review of
24 board matters. We've had two public meetings that have
25 occurred in the intervening time, but this is the first

1 time we're returning to matters of a larger overview of
2 board and board activities.
3 There's been a tremendous amount of work
4 that's gone on since April in the reorganization and
5 development of our board. You're going to hear much of
6 those matters today, and I'm delighted to be here to
7 help give some context to that as well.
8 CHAIRPERSON TAYLOR: Irv.
9 DR. ROSENTHAL: I'm glad to see many old
10 friends here and am looking forward to getting your
11 inputs on some of the investigatory matters we're going
12 to be discussing and the other issues. Your inputs and
13 help as we've been trying to put our affairs in order
14 have been very, very helpful.
15 Thank you.
16 CHAIRPERSON TAYLOR: I'd like to personally
17 thank the staff, our staff. We've really worked very
18 hard, and since our last meeting you will see that
19 there is a lot of progression that has been made here
20 at the board.
21 So for all of the staff in the room and
22 those that are still upstairs, I'd just like to say
23 thank you for all of your hard work, your diligence,
24 and hopefully it will continue.
25 And we are continuing to grow, and you will

1 see more products produced, more work being done, and
2 more accomplishments being made.
3 With saying that, I'd like to also now have
4 Chris say a few words, if you would. Comments?
5 MR. WARNER: I also would like to welcome
6 you here. If you can't hear us in the back, just wave.
7 We're trying to do this without microphones at the
8 moment. We do have a mic over here for the longer
9 presentations.
10 And just a couple of administrative issues
11 here. The air conditioning, we do have the fans going.
12 The air conditioning is being fixed. It's being fixed
13 this whole week, but it should be on very shortly
14 before it really gets hot, but if anybody would like
15 just to take off their coats right now, this is --
16 please feel free to do it if it gets a little hot.
17 This is a Sunshine Act meeting. It is open
18 to the public. We welcome your participation and
19 comments. At the end we have a public comment period,
20 and I'm glad to see we do have sunshine for you. I was
21 a little worried about the rain today.
22 I would like to just take a few minutes to
23 bring you up to speed. The change in the
24 administration took place in February. In the last six
25 or seven months, we have undergone a fair amount of

1 change, and just to give you sort of a very brief
2 overview, we have really looked at this organization
3 from its very core, fundamental mission.
4 We have come out and talked with you all on
5 the strategic plan. We have defined a mission and our
6 vision. We'll be sending that strategic plan up to
7 Congress on the 29th of September. We'll be talking a
8 little more about it today at this meeting.
9 We've undertaken a review of the staff.
10 We've reorganized various positions, but we go back to
11 the very fundamentals. We are developing position
12 descriptions and performance standards and all of the
13 other policies and procedures that people from the
14 larger, more established agencies that have lived for
15 hundreds of years have and really don't think about,
16 but we are really new.
17 I think I was talking to somebody earlier
18 today, and things we take for granted for just meeting
19 rooms. We have gone out and we have rented space.
20 We're renovating space, and we're moving ahead. GSA for
21 some people just has the space rented. GSA looked at
22 us and said, "Well, go ahead and rent it yourself."
23 So there are a variety of things that we
24 face that other agencies don't that take a lot of time
25 and effort. So we are turning things around. We are

1 moving ahead.

2 Just to touch on, we have committed in
3 February to some very key, critical issues. Perhaps
4 foremost of that is a hiring plan, a nonreliance on
5 contractors using them on very selected issues, but
6 getting the expertise within the house, that takes
7 time.

8 We have a very good plan. It is being
9 implemented. We have reviewed over 600 to 700 resumes
10 thus far. We have new people coming on board. Bill
11 Hoyle will talk more about that process in a little
12 bit.

13 The major investigations, we had a
14 presentation of findings in New Jersey in July on the
15 Morton. The Morton report is out. It has been well
16 received, and we'll talk a little bit more there.

17 The Tosco report is moving ahead and we'll
18 have a short presentation on that, as well as the Sonat
19 investigation. So we're moving ahead.

20 We also have a further refinement of our
21 selection criteria, and we'll be developing further
22 refinements to the protocol. All of these are works in
23 progress. Over years you will be developing and
24 refining selection and protocol and things like that,
25 but we are making great strides and moving ahead on

1 those issues.

2 We also are building and training a team to
3 go out on a new investigation, and that takes time and
4 a lot of planning and energy. When you hire people,
5 they have a great amount of expertise, but then you
6 have to put them into a cohesive group, and that is
7 what we're doing at this moment to be ready to go out
8 for a new investigation.

9 We have new hires. We have Mark Asfaw who
10 is taking over our Internet and computer needs, who has
11 incredible background in that, and several
12 investigators that Bill Hoyle will be talking about
13 shortly.

14 So we're very excited about the caliber of
15 personnel we're attracting and our ability to move
16 forward and meet our deadlines.

17 We also have had great success in using and
18 having details from other agencies. Beverly Brock
19 assisted us from Department of Interior. She is a
20 Deputy Field Director. She assisted us on this
21 strategic planning mission. She has now gone back and
22 is working, again, for another agency in Interior.

23 Dave Parks was also from the Solicitor's
24 Office at the Department of the Interior. He has been
25 assisting the investigators in resolving a host of

1 legal issues that confront any investigative team.
2 Some of you have been to the NTSB meeting
3 last April. You have a sense of the myriad of legal
4 issues that are unresolved after many, many years, and
5 Dave is helping us do those and has gone out with the
6 investigative team out to California to work with them.
7 And we also have an ongoing detail from the
8 Agency for Toxic Substances and Disease Registry.
9 Shira Flax, I don't know if Shira's -- Shira's back
10 there, and we welcome here, and she is a great addition
11 to our staff here.
12 We have also take a very close look at our
13 budget and how we spend money. We've redirected an
14 awful lot of money out of certain categories, out of
15 the information technology area into our core mission
16 of investigations. We are interacting with agencies
17 from EPA, OSHA, ATSDR and TSP, which we'll talk about
18 a little bit more.
19 The board has met with Jim Hall at the
20 NTSB. We have another major meetings with EPA coming
21 up this fall. So we are going about our business in a
22 very efficient manner, I believe, and getting set for
23 the types of issues we might face on the new
24 investigations.
25 We also have a couple of personnel issues

1 that we're dealing with. We have some departures and
2 some new additions.

3 In small agencies, departures are always a
4 cause of concern because other people take up that
5 business, but we look at them as a part of the normal
6 turnover that any agency experiences, and we look at
7 them as opportunities not only for new people to move
8 in or move up, but to strengthen our outreach to other
9 agencies where these people go.

10 Armando Santiago, who is here today, was
11 one of our investigators. He is working with EPA now.
12 That just strengthens our assistance with EPA.

13 We have Maureen Wood, who was part of our
14 external relations staff, and she is now over with the
15 European Community doing the same type of --

16 DR. POJE: She's working in the ISP
17 (phonetic) Program, a major research center for the
18 European Community in an area that works explicitly on
19 chemical accident prevention activities. So Maureen is
20 one of the skilled individuals who is fluent in
21 Italian. She held dual citizenship with Ireland and
22 the United States and was a prime candidate because of
23 her skill sets to assume a major role in the European
24 Community.

25 So we miss her dearly, but the links across

1 the water are now stronger than they've ever been
2 between our institutions.
3 MR. WARNER: And just to bring you up to
4 speed on a couple of the key changes in the staff, my
5 Deputy, Paul-Noel Chretien, has moved on to his former
6 employer which offered him a job that he couldn't
7 refuse. We wish him well. He was a great asset to us.
8 I wish I could tell you who his employer is, but I'm
9 prohibited from telling you who the employer is, not
10 because of Paul-Noel, but just because of the business
11 he's in.
12 I also have -- but stepping up into the
13 Deputy Solicitor's spot is Ray Porfiri, who is in the
14 back. He has -- just raise your hand there, Ray. He
15 has done just an incredible job for us and is really
16 one of the cornerstones of our legal advice here, and
17 he will do an excellent job in that position.
18 Anna Johnson will be my assistant. Anna
19 unfortunately had to go to a funeral this morning. She
20 was here earlier.
21 Bea Robinson is taking over the budget
22 issues, and Faye Gibbins, who has done just an
23 incredible job here from the rental space
24 administration and everything else, has really saved my
25 job here in keeping things moving.

1 But it's part of the process we're going
2 through. After the public comment period I'd welcome
3 you all to talk individually, come up, visit our
4 offices up on the fourth floor where we can talk in a
5 more formal congenial manner if you would like after
6 that point.
7 And then I'd like to, if I could, just take
8 one minute. We do have, just for the board and for the
9 audience to understand some of the pressures and the
10 jobs and the roles that we fulfill, I'd like to at each
11 board meeting perhaps highlight an individual, and I
12 could take any one of ten or 12 individuals to
13 highlight here. So I do not mean any disrespect to
14 anybody I haven't picked. I'm just going to pick one
15 person here.
16 Don Holmstrom. Don, if I could just read
17 you his bio for a second, he's a program analyst in the
18 Investigation Safety Programs, and prior to CSB, he
19 worked for Diamond Shamrock and a variety of other
20 corporations. He has 18 years as a chief operator in
21 Commerce City, Colorado oil refinery. He has extensive
22 experience in oil refining operations, process safety
23 management, occupational health and safety and incident
24 investigations in the oil refining, gas pipeline, and
25 waste water industries.

1 He graduated from Stanford in '74 and has a
2 law degree from the University of Colorado School of
3 law.
4 Don is part of the investigation safety
5 programs group. He is the lead investigator now on the
6 Tosco incident. He also plays a dual role in helping
7 with the investigation, with the recommendations.
8 He serves as Bill Hoyle's deputy. He is
9 also the EEO Director. He's been on the hiring
10 committee reviewing, as you can imagine, a number of
11 resumes and phone interviews and actual interviews. He
12 is intimately involved in the protocol in development
13 of strategic planning, the training of the new
14 investigators, as well as a host of administrative
15 contractual issues.
16 So you can imagine the variety of days that
17 he has and nights. He works incredibly hard. So for
18 Don I don't know.
19 CHAIRPERSON TAYLOR: He is in the back.
20 MR. WARNER: He's in the way back. Don, we
21 are very glad you're here and give you great praise for
22 the work you've done.
23 DR. POJE: And with all of that, he's also
24 a very good father to his two daughters.
25 (Laughter.)

1 MR. WARNER: So with that I'll turn it back
2 to Gerry.
3 DR. POJE: To Andrea.
4 CHAIRPERSON TAYLOR: Okay. Andrea. Sorry
5 about that.
6 MR. WARNER: Oh, sorry.
7 CHAIRPERSON TAYLOR: That's okay.
8 DR. ROSENTHAL: You look the same.
9 CHAIRPERSON TAYLOR: Right.
10 (Laughter.)
11 CHAIRPERSON TAYLOR: Thanks, Irv.
12 On that note, again, you see why I said
13 thank you staff for all of your hard work and
14 diligence, and we will continue in that vein.
15 Having said that, I'd like to call Bill
16 Hoyle who is Director of Investigations and Safety
17 Programs.
18 MR. HOYLE: Good morning. Is this working?
19 PARTICIPANT: Yes.
20 MR. HOYLE: Well, you can hear me, but I
21 don't know if you can see me back there.
22 Thank you.
23 We're going to have a variety of
24 presentations from the investigation and safety program
25 group this morning, and so we'll have a number of the

1 staff members presenting their piece. So we're going
2 to start off with Pat Conlon, who's our lead
3 investigator on our Sonat investigation.
4 This investigation is coming to a close
5 soon, and we wanted to share the key findings of that
6 investigation at this time. I understand handouts may
7 be available.
8 CHAIRPERSON TAYLOR: Oh, yes. I'm sorry.
9 They're on the table here.
10 MR. HOYLE: Yeah, there's a variety of
11 handouts on the table to the far side of the room if
12 you don't have one.
13 DR. ROSENTHAL: Yeah, I think it's
14 important because some of you will not be able to see
15 the overheads, and you can either refer to those or get
16 up and move over here and take a look.
17 MR. HOYLE: Right, but the overheads that
18 will be shown on the wall on this end of the room are
19 available in hard copy on the side table so that you
20 can follow along.
21 So we'll start the investigation series of
22 presentations with Pat Conlon.
23 CHAIRPERSON TAYLOR: Pat, before you start,
24 can you say who you are after you get that done?
25 MR. CONLON: Good morning. My name is Pat

1 Conlon, and I'm the lead investigator on the Sonat
2 accident. I've been with the board staff for a little
3 over two years.
4 Today I'll be presenting a summary report
5 with our findings on the Sonat investigation. The
6 report is nearing completion, and we expect to get it
7 to the board very soon.
8 The incident occurred -- those who have the
9 handouts, we did move the first two slide around. So
10 this is actually slide three or four in the handout.
11 The incident occurred on March 4th, 1998,
12 in a rural area of west central Louisiana near the town
13 of Pitkin. Sonat was starting up new oil and gas
14 separation equipment which involved the purging of
15 vessels in a pipeline with natural gas.
16 Purging was performed to remove the air in
17 the vessels or pipelines to reduce the explosion
18 hazards associated with flammable gas and air mixtures.
19 During the pipeline purge an oil and gas separator
20 over pressurized, leading to the catastrophic failure
21 of the vessel. Four operators were killed, and the
22 facility sustained significant damage.
23 This is an aerial photograph of the Sonat
24 Temple 22-1 common point separation facility. The
25 facility was built to separate well fluid into its

1 components, crude oil, natural gas, and water.
2 Now, the term "common point" refers to the
3 fact that this facility was capable of handling product
4 from multiple wells through a single separation train.
5 The separation train involved in the
6 incident was referred to as the bulk train. The first
7 separator, the first stage separator is located here, a
8 vertical vessel. The flow from here would be through
9 these pipes, pipe rack, pipes in the pipe racks here.
10 These are oil coolers. This is a second
11 stage separator that continues the separation process.
12 These are gas compressors. The pipe rack continues up
13 here. These are more gas compressors.
14 The third stage separator, which was
15 actually involved in the vessel failure, was similar to
16 this vessel. This was for their test train third stage
17 separator. The bulk train separator, third stage
18 separator, was located in this area here.
19 This is a closer view of the incidence
20 scene. The vessel, again, was located right in this
21 area. Storage tanks, the first four tanks here were
22 designated for water, the remaining 12 for crude oil.
23 The valves that we'll be talking about that
24 were critical to the incident were located in this area
25 right here.

1 The workers were found after the incident,
2 two within the berm and two out here near this backhoe.
3 This is a block flow diagram of the
4 separation process. Basically the well fluid flows
5 into the first stage separator. The first separation
6 occurs here. Gas flows out the top of the separator
7 into a gas cooler, gas scrubber, gas meter, and on
8 through a gas sales pipeline to a gas processing plant.
9 The water comes out the bottom of the
10 separator, is filtered and is reinjected into the
11 ground to a disposal well. The oil which still has
12 water and gas associated with it flows to a cooler to
13 lower the temperature, and then into the second stage
14 separator.
15 The second stage separator functions
16 similar to the first, only a lower pressure. The first
17 stage separator operates around 900 psig, the second
18 stage at approximately 225 psig. Again, gas goes out
19 the top. It is compressed up to the pressure of the
20 first stage gas and into the gas sales system.
21 Water at a lower pressure has to be stored
22 in tanks and then is disposed of, trucked off site for
23 disposal.
24 Then the oil still with gas content flows
25 into the third stage separator. This was the one

1 involved in the incident. Gas flows from the top of
2 the separator to a compressor, then into the second
3 stage separator gas compressor and into the sales
4 system, and the crude oil flows into storage tanks and
5 then is trucked off site by tank trucks to refineries
6 for sale.
7 This is a schematic of the third stage
8 separator. Basically the oil-gas mixture comes in from
9 the second stage separator and flows through the oil
10 inlet line into the separator. The oil cascades down
11 to the bottom. Gas collects at the top, flows through
12 the gas outlet line to the compressor. This line has a
13 manual block valve.
14 Oil flows through the oil outlet line to
15 the storage tanks. This line also has a manual block
16 valve, and the bypass line here, basically there is an
17 automatic control valve located here that is operated.
18 If the oil level in the tank gets too high, this
19 liquid level control sensor will activate this valve,
20 open it, and allow the flow from the second stage
21 separator to go directly into the storage tanks.
22 On each side of it is a manual block valve
23 that's in place for maintenance to the valve or, as was
24 performed earlier on this day of the incident, can be
25 closed to allow a purge of this vessel to remove the

1 oxygen.

2 Just to clarify some terminology, Sonat
3 referred to the failed vessel as a vapor recovery tower
4 or storage tank. During our investigation, the CSB
5 staff determined that the vessel actually fit the
6 definition of an oil and gas separator for the
7 following reasons.

8 The separator had a single inlet line for
9 the oil-gas mixture from the second stage separator,
10 but two separate outlet lines, one for gas and one for
11 oil.

12 The separator was not designed for
13 permanent oil storage. There were 12 oil storage tanks
14 at the facility, each much larger in capacity. The
15 separator was positioned upstream of the storage tanks
16 in series with the first and second stage separators.

17 As a result of this determination, CSB
18 refers to the vessel as a third stage separator.

19 I've provided an incident time line here in
20 a summary form. Early in the afternoon of March 4th,
21 the personnel purged the separation vessels using well
22 fluid. Later that afternoon they realigned the valves
23 to purge the pipeline between the facility and the
24 well. The pipeline was eight inches in diameter and
25 approximately two miles long.

1 The valves were aligned to allow the purged
2 air to flow through the bypass line into the two water
3 storage tanks and out a tank roof hatch to the
4 atmosphere. This process bypassed the separation
5 vessels which were already purged.
6 This diagram highlights the equipment
7 directly involved in the incident, the third stage
8 separator, the bypass valves, 11, 12, and 13, the oil
9 and gas outlet valves, 14 and 15, and the water storage
10 tanks. Valves 11, 12, and 13 located in this red box
11 needed to be open to prevent the purged gas from
12 pressurizing the third stage separator up through the
13 oil inlet line. The third stage separator's gas and
14 oil outlet valves, 14 and 15, needed to be closed
15 because there was no blocked valves on the inlet line.
16 The inlet line had no blocked valve to isolate the
17 separator from the pipeline purge.
18 Valves 16, 17 and roof hatch 21, these
19 valves here into the tank, they then flowed into a
20 second water tank and then out this hatch was the plan
21 to allow the purged gases to vent to atmosphere.
22 Valve 12 was a pneumatic valve as I
23 described earlier. The gas supplied to this valve was
24 disconnected early in the morning, placing it in the
25 open position.

1 Valves 11 and 13 had been closed, these two
2 on each side of the automatic valve, and valve 15 had
3 been opened to purge the third stage separator earlier
4 in the afternoon. These three valves here needed to be
5 closed for this final purge for the pipeline.
6 The next few slides provides an incident
7 time line. These are approximate times. The pipeline
8 purge was initiated at 5:10 p.m. using well fluids from
9 the 24-1 well.
10 The supervisor initiated monitoring of the
11 oxygen content in the pipeline at 5:15 p.m. This was
12 performed at a valve near the pipeline header
13 connection.
14 At 5:35 p.m., the flow control valve at the
15 well was adjusted, increasing the pressure into the
16 pipeline for the third and final time.
17 The pressure reading downstream of the well
18 and the flow control valve was reported as 800 psig at
19 6:00 p.m. At 6:10 p.m., the final oxygen reading was
20 taken by the supervisor indicating that the purge was
21 nearly completed. This reading was approximately three
22 percent oxygen.
23 At 6:15 p.m., the bulk train third stage
24 separator failed. Natural gas was released and
25 ignited, producing a large fireball. Four operators

1 were in the vicinity of the vessel when it failed, died
2 instantly due to massive trauma. The tanks and piping
3 that sustained damage leaked oil and gas which ignited.
4 Fire continued to burn for approximately three hours
5 until it was extinguished by local emergency
6 responders.
7 This photo taken a few days after the
8 incident shows three of the workers' vehicles in the
9 foreground, in this here, and the crude oil storage
10 tanks in the background. Actually these were the water
11 storage tanks. Several of the crude oil tanks also
12 were involved in the fire.
13 At approximately 10:05 p.m., Sonat
14 supervisors and Louisiana State Police investigated the
15 incident site and discovered two bypass valves for the
16 failed third stage separator in the closed position
17 which should have been in the open position.
18 This diagram compares the planned valve
19 alignment with the as found valve alignment after the
20 incident. This drawing here was the plan. Basically
21 these two valves needed to be open. After the incident
22 these two valves were found in the closed position.
23 As you can see, all of the outlets from the
24 third stage separator were in the closed position, and
25 the purged gases over pressurized the vessel.

1 Our findings. Finding number one, the
2 third stage separator that failed could not be isolated
3 from an adjacent bypass line because there was no inlet
4 valve. Two valves on the bypass line and all other
5 outlet valves were closed, allowing high pressure purge
6 gases to over pressurize and rupture the separator.
7 Finding number two, the third stage
8 separator was only rated for atmospheric pressure
9 service, zero psig. The purged gas stream to which the
10 separator was exposed to had a pressure potentially as
11 high as 800 psig.
12 The third stage separator was not equipped
13 with any pressure relief devices, as specified by API
14 Specification 12(j) for oil and gas separators, which
15 states all separators regardless of size or pressure
16 shall be provided with pressure protective devices, a
17 vessel that falls within the scope of this
18 specification.
19 Finding number four, why the bypass valves
20 were closed or when they were closed could not be
21 conclusively established.
22 Number five, management did not perform
23 effective engineering design reviews or hazard analysis
24 prior to or during the construction of the facility.
25 Workers at the facility were not provided

1 with any operating procedures addressing the proper
2 alignment of valves for purging operations.
3 Finding number seven, Sonat operated
4 similar third stage separators that lacked pressure
5 relief systems at other oil and gas production
6 facilities for over a year prior to the incident.
7 This concludes my presentation on the Sonat
8 investigation, if the board members have any questions.
9 CHAIRPERSON TAYLOR: Thanks. Thank you,
10 Pat.
11 Are there any questions? Irv.
12 DR. ROSENTHAL: What did Sonat do? Have
13 they rebuilt that facility?
14 MR. CONLON: They did rebuild the facility.
15 It's --
16 DR. ROSENTHAL: And how did they rebuild
17 it?
18 MR. CONLON: There's only -- they
19 eliminated one of the production trains. They
20 contracted an engineering firm that basically did
21 hazard analysis of all of their facilities, developed
22 drawings, engineering drawings for their facilities,
23 and they also installed pressure relief devices on all
24 of their third stage separators.
25 DR. ROSENTHAL: Oh, you mean they didn't --

1 did they have drawings beforehand?

2 MR. CONLON: No, they did not.

3 DR. ROSENTHAL: So the third stage

4 separator, what they did now -- did they call it a

5 third stage separator?

6 MR. CONLON: I don't believe that they

7 agree with that determination.

8 DR. ROSENTHAL: But it's a unit that is in

9 there in place of what we call the third stage

10 separator, is now equipped with an isolation valve?

11 MR. CONLON: I believe an isolation valve.

12 They've taken out the outlet valve and installed

13 pressure relief device.

14 DR. ROSENTHAL: Okay. Thank you.

15 MR. CONLON: They also did sell the

16 property to another oil and gas production company.

17 CHAIRPERSON TAYLOR: Gerry.

18 DR. POJE: Pat, I'd like to get back to

19 your key findings number four. I can understand why

20 the bypass valves were closed is impossible to gather

21 because of the loss of life in the incident, but the

22 question of when they were closed is something that

23 perhaps could have a little bit more engineering

24 analysis around it.

25 How did the team seek to understand the

1 possibilities associated with the wind question, given
2 some ability to analyze the size of the vessel, the
3 potential pressures that were associated with the well
4 field pressure itself, and the failure likelihood of
5 the vessel itself?

6 MR. CONLON: We did attempt to determine as
7 exactly as possible the time of the valve closure. We
8 conducted two studies through the services of Oak Ridge
9 National Laboratory. The first study was to determine
10 the failure pressure of the vessel. This study was
11 basically performed to enable us to complete the second
12 study, which was a time to failure analysis.

13 We did get a number from the vessel failure
14 study. One of the problems we had, there were two or
15 three or even four different estimates from external
16 groups and our second engineer that the failure
17 pressure ranged anywhere from 135 to up to 400 pounds
18 per square inch. So that created one problem.

19 In the time to failure analysis, the
20 problem there we knew the time the purge started and
21 the time of the incident, and we thought if we could
22 calculate how long it would take to pressurize the
23 vessel to failure we could make some determination of
24 when the valve was closed.

25 Unfortunately there was not very much

1 pressure data particularly from the facility. The only
2 gauge was at the wellhead and did not reflect
3 accurately the pressures at the facility. Without this
4 information the study basically had to make too many
5 assumptions, and we felt that the determination really
6 could not stand up to scrutiny, and so we decided that
7 we could not confirm the time of the valve closure.

8 DR. POJE: Okay. Thank you for that.

9 I would like to then look at the fifth
10 finding that management did not perform effective
11 engineering design reviews or hazard analyses prior to
12 or during the construction of the facilities. How did
13 you evaluate those, and what did you determine was
14 lacking?

15 MR. CONLON: Sonat did contract an
16 engineering firm to assist in the design and
17 construction of the facility in conjunction with their
18 engineering staff. However, we felt that an effective
19 engineering review required some basic information,
20 primarily engineering drawings. They did not have any
21 PNIDs for this process prior to the incident, and we
22 felt that that was a significant component necessary to
23 do an effective design review.

24 Those drawings were developed after the
25 fact.

1 They also could not provide any meeting
2 minutes or documentation associated with a hazard
3 analysis from these pre-incident design review
4 discussions or efforts, and so we felt that an
5 improvement in their process to a more effective
6 program would be necessary.
7 CHAIRPERSON TAYLOR: Pat, was there any
8 environmental or community impact from this incident?
9 MR. CONLON: The facility was basically
10 located in a woodland area. It was owned by a wood
11 products company surrounding the entire facility.
12 There were no residential areas nearby.
13 There was oil spillage and also fire
14 fighting water and foam that was used on fire that were
15 in the immediate area of the incident. The majority of
16 that was contained within the spill containment berm,
17 and Sonat had that removed after the incident.
18 DR. POJE: Okay, and could you emphasize
19 once again the facility as designed, was it to have
20 permanent staff associated with it?
21 MR. CONLON: Basically once the facility is
22 up and running, which may take up to a month or six
23 weeks to get it on line or at least to a point where
24 they do not need daily coverage, the operators
25 basically rotate from facility to facility, take

1 measurements, gauge the tanks, check on the equipment.
2 So --
3 CHAIRPERSON TAYLOR: About how many?
4 MR. CONLON: At the time of this incident,
5 because it was a new process, there were two operators
6 assigned to the facility, and the incident occurred
7 near shift change. Two of the victims were actually
8 coming on for the night shift. So there were four
9 victims at the facility at that time, plus two
10 survivors, a supervisor and another contract operator.
11 DR. POJE: And production supervisor
12 operating at the wellhead?
13 MR. CONLON: Yes, there was a production
14 supervisor who was at the wellhead in radio contact
15 with the construction supervisor, who was at the
16 facility supervising the purge.
17 DR. ROSENTHAL: Did the OSHA process safety
18 standard apply to this facility?
19 MR. CONLON: OSHA originally cited Sonat
20 for several PSM violations. However, these were -- in
21 the settlement agreement, these were general duty
22 violations. OSHA has issued several interpretative
23 letters on the subject of PSM applicability to the oil
24 and gas industry. They rescinded several of those
25 interpretive letters in the past year, and in April, I

1 believe, they stated that they are conducting a
2 feasibility analysis before going forward with
3 enforcing PSM at oil and gas facilities.
4 CHAIRPERSON TAYLOR: Pat, did you work with
5 any other consultants in investigating this incident?
6 MR. CONLON: Yes, the team worked with --
7 one was through Oak Ridge National Laboratory, a Ph.D.
8 in engineering or petroleum engineering who was the
9 prime contractor on the time to failure analysis. We
10 had a local engineer retired from a major oil company
11 who worked on the initial process analysis, and then we
12 also had engineers from Berwanger, Incorporated to look
13 at the pressure relief issues, and they also reviewed
14 the findings of the investigation.
15 DR. POJE: Who else has been on the team
16 from CSB?
17 MR. CONLON: Basically John Murphy, one of
18 the new investigators, has been helping particularly in
19 the process safety management issues for the past two
20 months. Dan Horowitz has been involved in the process,
21 also a new employee, and the safety programs group,
22 Bill Hoyle, Don Holstrom have been involved for quite
23 some time.
24 CHAIRPERSON TAYLOR: One last question?
25 DR. ROSENTHAL: Yeah, one last question.

1 Was this a unique installation with Sonat?

2 MR. CONLON: Yes. Basically that term

3 "common point separation facility," this was the first

4 facility of that type that was constructed. Prior to

5 that each well would have its own separation train.

6 This facility was designed -- the bulk train had larger

7 vessels, which allowed them to flow to wells

8 simultaneously in the same vessels, and they had

9 discontinued that process.

10 DR. ROSENTHAL: Were there other what we

11 call third stage separators employed in other

12 installations by Sonat?

13 MR. CONLON: Yes. I believe they purchased

14 maybe eight or ten of the vessels, third stage

15 separators. I believe they had five or six of those in

16 operation at the time of this incident at wells nearby

17 in the same geographical area.

18 DR. ROSENTHAL: Have we determined that

19 these had all been subsequently retrofitted with

20 pressure relief?

21 MR. CONLON: Based on the letter that they

22 had sent us well over a year ago, that is the case.

23 CHAIRPERSON TAYLOR: Any other questions?

24 DR. POJE: No. Thank you, Pat.

25 CHAIRPERSON TAYLOR: Thank you, Pat.

1 MR. CONLON: Thank you.

2 CHAIRPERSON TAYLOR: You are going to
3 introduce yourself?

4 MR. HELLER: I am.

5 Hi. My name is Dave Heller. I'm an
6 investigator here. I was the lead investigator on the
7 Morton case, and what I would like to do is give you a
8 little summary of where we are with Morton and our
9 status and what our next steps are.

10 Basically the Morton report is complete.
11 It has been placed on our Web site on August 24th.

12 Really the first thing that came out of
13 that was the public review of findings on July 18th up
14 in Patterson, New Jersey, in the City Hall complex, and
15 that was a long day for us, but it was a very
16 productive day for us.

17 For folks that aren't really that familiar
18 with Morton, let me give you just a quick summary of
19 the Morton case. It was an incident that happened on
20 April 18th in 1998. It was an explosion and a fire in
21 a batch manufacturing facility where Morton was making
22 a dye called Automate Yellow Dye 96, and it was a
23 runaway reaction in a 2,000 gallon vessel.

24 It released flammable material that
25 ignited. Nine employees were injured. Two were

1 injured very seriously. Everyone has since recovered.
2 Material was released to the surrounding community,
3 and there was quite a bit of damage to the plant.
4 So, again, the report is done. It's on our
5 Web site, and our next steps on the report are to
6 produce an HTML version, which right now we're on the
7 PDF version, and the hard copy has gone to the
8 Government Printing Office, and that should be within a
9 few weeks we should have hard copies available also.
10 Let me just give you, again, a little
11 summary of where we were with Morton for folks who
12 aren't too familiar with it.
13 Again, the root causes out of the Morton
14 case were that there was neither a preliminary hazards
15 assessment done during the design phase in 1990 or a
16 process hazards analysis in 1995 that addressed the
17 reactive hazards of the process, and because of that,
18 there were a lot of shortcomings in the Morton process.
19 The kettle cooling system couldn't control
20 the exothermic reaction. The kettle was not equipped
21 with safety equipment, such as a quench system or a
22 reactor dump system to stop the process and avoid this
23 runaway situation.
24 The rupture disks were too small to safely
25 vent the reaction. They weren't sized for a potential

1 foreseeable runaway reaction.
2 Morton converted its production from a
3 semi-batch process which is inherently a safer process
4 in that you have one material in the kettle. You're
5 added the second material to it over time, and by being
6 able to control the flow of that second kettle you can
7 turn off that flow and basically interrupt that
8 reaction.
9 Morton switched from this safer process,
10 the semi-batch, to a batch process where they put all
11 of the chemicals in the reactor in the beginning and
12 proceeded to let the reaction take its course, with the
13 larger amounts of material in the kettle and a much
14 greater potential for things going wrong.
15 Morton had operating procedures, but they
16 did not cover the safety consequences of deviations
17 from normal limits. They did not give the operators
18 any information on steps they could take to void or
19 recover from such an accident, and the cause of the
20 problems with knowing what was going on and the
21 problems with the operating procedures, the operators
22 did not have the proper training really to respond
23 properly to the incident or even to know when they
24 should leave the area and evacuate.
25 Another root cause was that the process

1 safety information provided to the plant operations
2 personnel and to the hazard analysis teams did not warn
3 them of the potential for this runaway reaction, and
4 Morton had documented internally that they knew this
5 reaction could reach a runaway point. This information
6 was available on their system, and they had done some
7 of the chemical testing that companies typically do to
8 identify these types of reactions.
9 However, this information was not
10 communicated to the folks in New Jersey who were
11 running the process, and as a result, they were unaware
12 of its potential. The operators were unaware of it.
13 The supervisors were unaware of it, and when they got
14 into the situation, they really were not equipped to
15 see what could possibly happen.
16 Contributing causes. Hazards of previous
17 operational deviations were not evaluated, and it had a
18 number of events over the years. Again, they started
19 making material in 1990. This incident happened in
20 1998, and they had had maybe more than half a dozen
21 cases where the temperature started to go up at to
22 beyond their upper operating limit, and fortunately
23 operators got the cooling water on quick enough or they
24 got the steam off quick enough, and the temperature --
25 they were able to grab the temperature, as we say on

1 the plant, and pull it back down and bring that
2 reaction back under control.
3 But they never investigated these
4 incidents, these high temperature incidents. It would
5 have given them an opportunity to see there was
6 something wrong in their process and maybe taken some
7 steps to correct it.
8 Secondly, Morton did not follow what we
9 call management of change procedures, which is an OSHA
10 term for when you make a change in a process. You need
11 to evaluate the consequences of that change. Could it
12 have safety effects? Could it have health effects?
13 And what are the consequences of doing that?
14 Morton increased their production from
15 1,000 gallon reactors to 2,000 gallon reactors, and
16 they increased the batch size. What that essentially
17 did was reduce the effective amount of heat transfer
18 area that was available for them to really cool this
19 reaction.
20 Again, they didn't do any review of this
21 change to see if there were any possible consequences.
22 So basically that was really the story of Morton, and
23 we really are now -- again, the report is out, and our
24 next effort is really to start the recommendation, an
25 advocacy effort and see that we can get things improved

1 now.

2 So a quick summary of the recommendations.
3 There are some recommendations to Morton, and again,
4 Morton is now a wholly owned subsidiary of Rohm & Haas.
5 So Morton, Rohm & Haas.

6 Those recommendations are in two areas.
7 One was to upgrade process safety management elements,
8 process safety information, again the lack of
9 communication about this reaction; the process hazards
10 analysis, management of change, operating procedures
11 training.

12 Two other areas for Morton and Rohm & Haas
13 to consider was upgrades, engineering upgrades, and
14 that was in the area of pressure relief requirements
15 and in the controls and safety instrumentation on these
16 reaction kettles.

17 We've also made some recommendations to a
18 number of organizations to communicate this incident to
19 their membership, and that was SOCMA, the Synthetic
20 Organic Chemical Manufacturers Association; the
21 American Chemistry Council, ACC, previously the CMA;
22 CCPS, the Center for Chemical Process Safety of the
23 American Institute of Chemical Engineers; and the PACE
24 Union, which represented the folks here at Morton.

25 And we really would like them to get out

1 and get our word out and communicate the information to
2 their membership. We started doing that. We've been
3 meeting with folks, and that effort is starting to
4 happen.
5 Finally, we had two recommendations to OSHA
6 and EPA. The first one was for OSHA and EPA to issue
7 joint guidelines on good practices for handling
8 reactive chemical process hazards. Morton was using
9 the OSHA PSM standard even though this process didn't
10 really apply, wasn't really covered. They had extended
11 coverage to their process, but the PSM is really
12 minimum guidelines. There's nothing really specific on
13 reactive hazards.
14 So what we'd like to see coming out of OSHA
15 and EPA is guidelines to give companies information on
16 evaluating reactive hazards and the consequences of
17 deviations, reporting and investigating deviations from
18 normal operations in near miss situations, for example;
19 determination of proper design for items such as
20 pressure relief, emergency cooling, process alarms,
21 process controls, safety interlocks; and then an
22 appropriate use of chemical screening techniques. And
23 there's a variety of techniques. Some are
24 computerized. Some are desktop calculation techniques,
25 and then there's quite a number of laboratory

1 techniques.

2 The second recommendation is for OSHA and
3 EPA to participate in a hazard investigation of
4 reactive chemical process incidents to be conducted by
5 the Chemical Safety Board.

6 And what we'd like to do here is to really
7 evaluate the frequency and the severity of reactive
8 chemical incidents. We know there's been a history of
9 others. There was a NAPP case in New Jersey in 1995;
10 Georgia Pacific several years ago. There's evidence
11 that Philips down in Pasadena, Texas of this year had
12 some relation to reactive chemicals.

13 So we want to really get an understanding
14 of what is going on in the industry in this regard.

15 Secondly, how are OSHA and EPA currently
16 addressing reactive hazards and industry also? What
17 are the differences between large companies and medium
18 companies and small companies in how they address these
19 hazards?

20 OSHA and industry use National Fire
21 Protection Association rankings or reactivity ratings
22 as a means to assess the risks from various chemicals,
23 and these rankings are used on material safety data
24 sheets, and they're also used by people in the plant.
25 Really these rankings are designed for emergency

1 responders.

2 So the question we have is: is that being
3 used in the plant? How effective is that use in the
4 plant? And how is that information getting transmitted
5 back and forth?

6 And we hope that out of this study we'll be
7 able to develop some further recommendations for
8 reducing the number and severity of reactive chemical
9 incidents.

10 Really that's our summary of Morton. Any
11 questions?

12 CHAIRPERSON TAYLOR: Dave, one question.
13 The status of the last two recommendations that you
14 made to OSHA and EPA, what are the next steps? And can
15 you give us an update on where we are?

16 MR. HELLER: Well, our process is to issue
17 a formal letter of recommendation, but the requirements
18 in our enabling legislation is that OSHA and EPA have
19 180 days in which to respond to that letter. So really
20 those letters just went out in the past two weeks.

21 CHAIRPERSON TAYLOR: Any other questions on
22 Morton?

23 DR. POJE: I just had a comment. I think
24 Dave has lowered the enthusiasm that I perceived around
25 this particular investigation. We had over 100 people

1 attend the meeting in Patterson with a very high degree
2 of interest in following a much more detailed technical
3 presentation, and then coming to a public comment
4 period with input of an interest in the major
5 recommendations arena on how to improve the system.
6 There was a high degree of activity from
7 the Rohm & Haas already in implementing a whole host of
8 safety enhancing procedures in that facility as well as
9 other Morton facilities.
10 There is a high degree of interest in
11 engaging us in discussions on this matter. Dave and I
12 had an opportunity to go brief the new, the revitalized
13 Process Safety Committee in the SOCMA community and a
14 high degree of discussion with people about where does
15 this issue of reactive chemicals meet the needs that
16 are emergent within their domain?
17 The American Chemistry Council's Plant
18 Operation Safety Committee has asked us to present next
19 month to their technical committee about this matter.
20 There will be presentations at a major international
21 symposium in Orlando at the beginning of next month
22 sponsored by the American Institute of Chemical
23 Engineers on this matter, and we've been asked by a
24 number of other parties to share that information with
25 them, including the National Association of Chemical

1 Distributors.

2 So I'm quite gratified by the impact that

3 this report has had in trying to coalesce a broader

4 coalition of people around safety related functions and

5 reactive hazards. A lot of work to be done in the

6 guidelines, as well as in the investigation that will

7 be part of this coming year's projects for the board,

8 but quite clearly, this is a quite exciting arena of

9 investigative work leading to larger safety

10 ramifications.

11 DR. ROSENTHAL: Dave, do you have any idea

12 how many people have downloaded that report?

13 MR. HELLER: Phil, the last number I heard

14 was over 8,000, unless Phil has a more recent number

15 than that. That's over 8,000 downloads since it's been

16 on the Web site.

17 DR. POJE: Which doesn't hit our record,

18 which is over 100,000 downloads for the Herrig report,

19 but it's only been up there for a few weeks.

20 CHAIRPERSON TAYLOR: Okay. Thank you,

21 Dave.

22 The Tosco Avon refinery update, Don.

23 And, again, when our investigators come up

24 to the podium, can you introduce yourself and what

25 you've been doing? We already know what Don has been

1 doing.

2 Thank you.

3 MR. HOLMSTROM: My name is Don Holmstrom.
4 I'm the lead investigator in the Tosco incident that
5 occurred on February 23rd, 1999, and I'm going to give
6 a status report on the Tosco Avon refinery incident
7 investigation.

8 In the Tosco incident, the U.S. Chemical
9 Safety Board has formed a team, investigation team,
10 with considerably oil refinery experience. I have 18
11 years of oil refinery experience.

12 Also on the team is Investigator Barry
13 Downs. Barry joined the team in June and has 11 years
14 of oil refinery experience with an emphasis in incident
15 investigation.

16 And also recently joining the team is Steve
17 Selk, who has worked in the oil and chemical industry
18 for 25 years with an extensive background in safety
19 standards, regulations, and incident investigation.

20 Also leading the investigation and safety
21 programs area of the Chemical Safety Board is Bill
22 Hoyle, who has 16-plus years in oil refinery experience
23 and has provided significant leadership to the Tosco
24 investigation team.

25 I'd also like to thank Shannon McCleary,

1 who has aided the Tosco investigation team, and in
2 addition, I'd like to thank Faye Gibbins and Bea
3 Robinson for their assistance in administrative and
4 financial matters.

5 The CSB team over the last five months has
6 performed over 25 additional witness interviews. The
7 CSB team recently was required to subpoena three
8 witnesses. This was the first use of the CSB subpoena
9 authority.

10 The depositions were successfully completed
11 with the witnesses responding to all questions posed.

12 The team has submitted an extensive follow-
13 up information request to the Tosco Refining Company.
14 The CSB request seeks 33 documents and nine
15 interrogatories. Much of the information has been
16 previously requested by the Chemical Safety Board, but
17 was not forthcoming or denied by Tosco as redacted or
18 as attorney-client privilege.

19 This information was due to the CSB by
20 August 24th, 2000. The CSB to date has not received a
21 written response. The CSB team has followed up and
22 will seek appropriate measures to obtain the
23 information.

24 New Tosco incident case files have been
25 reviewed and summarized by the team. The Chemical

1 Safety Board has worked with the American Petroleum
2 Institute and the National Petrochemical Refiners
3 Association concerning industry good practice.
4 The CSB recently received a document from
5 these organizations entitled "Work Authorization in
6 Refineries." The CSB team thanks them for their input.
7 The incident investigation analysis has
8 been completed by the Chemical Safety Board team. The
9 Tosco investigation time line tracking the events
10 leading to the incident has been developed.
11 A logic tree diagram, a tool for
12 graphically depicting and organizing investigation
13 information has been charted for the Tosco incident.
14 The CSB has obtained new software to perform this
15 important investigation task more easily.
16 The services of a corrosion consultant, the
17 Hendricks Group, Incorporated, out of Houston, Texas,
18 has been obtained by the Chemical Safety Board. David
19 Hendricks and Dr. Russell Kane are recognized experts
20 in corrosion control, mechanical integrity, failure
21 analysis, and materials technology having performed
22 more than 1,000 root cause failure analysis and
23 corrosion investigations.
24 Both have been published extensively,
25 lectured, and held positions in technical societies,

1 such as NACE, the National Association of Corrosion
2 Engineers.
3 The work of the CSB team is now
4 concentrated in the report writing phase. The team has
5 completed a draft of the executive summary of the
6 report. The team is now working on the full report
7 draft and outline.
8 The CSB team can report that the sale of
9 the Avon refinery has been completed. Ultramar Diamond
10 Shamrock has purchased the plant from Tosco Refining
11 Company. The CSB team believes that the sale will not
12 have any effect on our investigation. The team is
13 analyzing the effect of the sale in relationship to the
14 recommendations component of our report.
15 That completes my presentation.
16 CHAIRPERSON TAYLOR: Okay. Are there any
17 questions of the board members?
18 DR. POJE: I just want to give a comment.
19 I think as Chris made us amply aware this morning, we
20 do owe a tribute to Don for building the team and for
21 effectively dealing with a handoff from Armando
22 Santiago into the next phase of completion of this
23 report, and I think it's well on its way towards
24 completion.
25 So thank you and the team for that work.

1 I do want to recognize once again in this
2 context the able assistance we've received from Dave
3 Peck. As Chris has mentioned, he's on detail from the
4 Department of Interior and played a major role in
5 helping us pursue what for us was the first time use of
6 subpoena processes and the deposition of witnesses, and
7 that's a very important legal procedure for us to
8 employ and to employ in a way that insures fairness, as
9 well as the obtaining of the relevant information.
10 So, again, to you and to the team, thanks
11 an awful lot for bringing us this.
12 CHAIRPERSON TAYLOR: Any other comments?
13 (No response.)
14 MR. HOLMSTROM: Thank you.
15 CHAIRPERSON TAYLOR: Thanks, Don.
16 We'd like to take, let's see, a five-minute
17 break.
18 DR. ROSENTHAL: Which means you'd better be
19 back in 15.
20 (Laughter.)
21 CHAIRPERSON TAYLOR: No later than 10:40.
22 Okay. Ten, forty.
23 (Whereupon, the foregoing matter went off
24 the record at 10:33 a.m. and went back on
25 the record at 10:45 a.m.)

1 CHAIRPERSON TAYLOR: We're going to start
2 back with or without you.
3 DR. ROSENTHAL: Let the record show I was
4 in my seat before Gerry.
5 (Laughter.)
6 CHAIRPERSON TAYLOR: We're going to
7 continue now with our agenda and discuss our incident
8 selection criteria and investigation protocol. Shannon
9 McCleary from our staff, the ISP staff, is going to
10 give a presentation regarding that information. So
11 I'll let Shannon take over.
12 Shannon, please introduce yourself and tell
13 a little bit about who you are, please.
14 MS. McCLEARY: My name is Shannon McCleary.
15 I'm a program analyst in the Office of Investigations
16 and Safety Programs, and I've been working for quite
17 some time on revising the accident selection process to
18 come to where we are today, and that is our final draft
19 of the accident selection process being presented for
20 the board's review and consideration at this time.
21 There are handouts of this final report.
22 This should be available on the table to follow along.
23 Just to give you some background, when the
24 board was first created under the Clean Air Act
25 Amendments, it was given the legal responsibility to

1 investigate serious chemical accidents at fixed
2 facilities and, more specifically, the law emphasizes
3 accidents that affect or have the potential to affect
4 the public, stating that in no event shall the board
5 forego an investigation where an accidental release
6 causes a fatality or serious injury among the general
7 public or had potential to cause substantial property
8 damage or number of deaths or injuries among the
9 general public.
10 So, in essence, there's a distinction made
11 that CSB must investigate accidents where members of
12 the public are killed or serious injured, but we have
13 some discretion if the general public is not affected.
14 We estimate that at least 100 serious
15 chemical accidents occur each year at fixed facilities
16 that could potentially be investigated by the CSB.
17 However, we've also determined that we can only
18 initiate investigations of approximately three to five
19 of these cases each year due to our budgetary
20 constraints.
21 To address this issue, we have developed a
22 set of criteria to aid in the board's internal decision
23 making process to select accidents at fixed facilities
24 for investigation. The selection criteria was
25 developed with input and feedback from our stakeholders

1 through two round table sessions, and it's designed for
2 three primary purposes:
3 To insure the effective use of our
4 resources;
5 To maximize the benefits of the board's
6 investigation reports in preventing future accidents;
7 And to enable the timely dispatch of
8 investigation teams.
9 The selection process accomplishes this
10 through a two phase evaluation. In the initial
11 evaluation, primary weight is given to the actual and
12 potential consequences of an accident, and those
13 consequences are given a specific rating which serves
14 to flag serious accidents for consideration.
15 In the second phase of evaluation, the
16 decision to launch an investigation will be made based
17 on a broader assessment of a number of other factors.
18 These are the factors in the initial
19 evaluation that will be considered. There are seven
20 categories. Six relate to the actual consequences of
21 the accident, and an additional factor considers
22 potential consequences.
23 The six criteria dealing with actual
24 consequences are listed here. The first is injuries or
25 health effects to members of the public outside the

1 fence line; deaths, injuries, or health effects to
2 personnel inside the fence line, be that facility
3 employees, contractors, outside responders, or members
4 of the public.
5 We will also consider public evacuations or
6 shelters in place; property losses, both outside the
7 fence line and inside the fence line; and ecosystem
8 damages.
9 And in addition to looking at these actual
10 consequence factors, the should speak gives a
11 substantial weight to the seriousness of potential
12 consequences to the public. Therefore, all accidents
13 will be screened further to evaluate this potential
14 using the seventh factor.
15 This factor is necessary to take into
16 account the fact that some accidents which have low
17 direct consequences within the work place are perhaps
18 near misses with high potential impact on the
19 community.
20 CSB will utilize available information on
21 the chemicals involved, the site location and proximity
22 to the public and various other factors to evaluate the
23 seriousness of potential consequences to the public.
24 In each of the categories, the accident is given a
25 rating based on the severity of those consequences

1 listed here, and those with higher total ratings are
2 more serious and will advance to the second phase of
3 the evaluation.
4 It is in this second phase of evaluation
5 that the CSB will consider a variety of other factors
6 leading to a final decision on whether to launch an
7 investigation.
8 The first is feasibility. We would ask
9 such questions as does the CSB have the resources to
10 conduct this investigation.
11 The second concern is community impact. Is
12 there an effective civilian response outside the plant
13 gates? Is there significant community concern about
14 public responders or industry's ability to manage this
15 type of accident?
16 The third factor for consideration is
17 public recognition. Such questions to be considered
18 include what is the general awareness and sensitivity
19 of the public regarding the accident. Was there
20 extensive local or national media coverage? What is
21 the general public's reaction to this accident?
22 The fourth factor to be considered is
23 history and number of facilities. Is there a history
24 of significant accidents in the subject industry sector
25 facility? Is there a history of similar accidents from

1 the subject process or operation? How many facilities
2 use the chemical or process involved in the accident?
3 The fifth factor to be considered in the
4 second phase of evaluation is the learning potential
5 from conducting an investigation. We would consider
6 such questions as what is the likelihood that new
7 technical information from an investigation of this
8 accident will impact chemical safety. What is the
9 potential to increase awareness of past lessons that
10 will impact chemical safety? And what is the
11 likelihood of this accident happening again?
12 Through this two phase evaluation the CSB
13 will be able to evaluate an accident and make a launch
14 decision within 24 to 48 hours following an accident.
15 When the CSB receives initial notice of a serious
16 industrial chemical accident at a fixed facility, the
17 accident selection process will begin immediately.
18 Information will be gathered on a continuing basis from
19 the company, from responders, media reports, and
20 through coordination with other federal, state, local
21 agencies to complete the evaluation of the selection
22 factors leading to a final launch decision.
23 And that is the process at this time.
24 Thank you.
25 CHAIRPERSON TAYLOR: Thank you, Shannon,

1 for all of your hard work.

2 Any questions from the Board members?

3 DR. POJE: No. Just to say that I

4 appreciate all of your work. There's been an awful lot

5 more that goes into this than just the presentation

6 you're seeing today, and I also appreciate the work

7 that you and Bill have done and Irv, in particular, to

8 pull together a larger suite of stakeholder interests

9 in this particular topic and some significant feedback.

10 This question will be part of a major

11 discussion at an international symposium on chemical

12 accidents that will occur in Orlando in two weeks, and

13 I think it's a tribute to all of you for having put

14 this question more forcefully before the public and

15 helping guide the institution on how we can best expend

16 our resources in the future.

17 DR. ROSENTHAL: I wanted to just make

18 special recognition of Shannon's work in this area

19 because I think she came into this area relatively new

20 and has done a tremendous job of personal growth and

21 adding on.

22 So excellent job, Shannon.

23 MS. McCLEARY: Thank you.

24 CHAIRPERSON TAYLOR: Thank you.

25 I will now call -- oh, Chris?

1 MR. WARNER: I'd like just to add one point
2 to the incident selection procedure. As you know,
3 we're getting ready to possibly go out on a new
4 investigation. To those of the staff who for over a
5 year have been waking up at two o'clock in the morning
6 or three o'clock in the morning when they get a buzz
7 from the National Response Center to the team that
8 evaluates and gets the information necessary to see
9 about going out on investigation, I appreciate all of
10 your hard work and your late nights, your families
11 being woken up by a pager going off in the bedroom or
12 whatever. It takes an awful lot of time and stress,
13 but I do appreciate it.
14 CHAIRPERSON TAYLOR: Thank you.
15 Bill.
16 MR. HOYLE: The next item on the agenda is
17 a discussion of our revision of our investigation
18 protocol,b ut first I want to depart from the agenda
19 and take a minute to acknowledge the presence of some
20 representatives who are with us today from both Morton,
21 Rohm & Haas, and also representatives from Sonat, El
22 Paso.
23 I want to acknowledge the appreciation or
24 extend the appreciation of the Chemical Safety Board to
25 those representatives for their cooperation with us in

1 our investigations of events at their facilities.
2 From time to time we've certainly
3 disagreed, but through it all, the cooperation and
4 professionalism has been very high, and we greatly
5 appreciate it, and we wanted to take this opportunity
6 to publicly acknowledge that cooperation that we have
7 received from Morton, Rohm & Haas and Sonat, El Paso.
8 So with that, let me bridge to the protocol
9 development revision work. Last year we developed an
10 interim investigation protocol which is currently in
11 place to guide us in the conduct of investigation. We
12 are now revising this interim investigation protocol as
13 needed to even better meet our needs.
14 We are fortunate to have expert assistance
15 in this important project through contract with EQE,
16 formerly JBF, which is a highly regarded provider of
17 process safety and incident investigation related
18 services.
19 The focus of our current protocol revision
20 activity is on topics such as fine tuning our
21 procedures for prompt investigation team deployment.
22 Our goal was to deploy within or was to arrive on the
23 scene of the incident within 24 hours. It's an
24 ambitious goal, but that's what we're aiming for.
25 We're also addressing the conduct of

1 opening conferences with different agencies and
2 accompanied upon arriving at the scene. We're
3 addressing evidence preservation, effective
4 interviewing techniques and policies, coordination with
5 other agencies who respond to these incidents, and
6 gathering needed documents in an investigation.
7 As part of this, we're internally
8 organizing with Dave Heller, the lead on this activity,
9 and organizing an interview training program for both
10 current staff and newly hired staff to fine tune
11 interviewing skills. This is an important aspect of
12 our activity.
13 We've developed a work plan for the
14 protocol revision, and we've prioritized those most
15 important items to be addressed first. As part of this
16 work, we're studying protocols and practices from the
17 National Transportation Safety Board and other
18 government agencies, as well as the Center for Chemical
19 Process Safety and also protocols from private industry
20 model programs in the area of incident investigation.
21 Our goal in that is to benefit from the
22 many years of experience of these other organizations
23 in doing chemical incident investigations.
24 So that's the status. We're continuing to
25 work on the protocol revision. We have a protocol in

1 place. We're continuing to refine it.
2 If there's any questions, I'll take those.
3 CHAIRPERSON TAYLOR: Any questions?
4 (No response.)
5 CHAIRPERSON TAYLOR: Okay. Thanks, Bill.
6 MR. HOYLE: Okay.
7 CHAIRPERSON TAYLOR: Hiring plan.
8 MR. HOYLE: Okay. The next report or item
9 on the agenda is our hiring plan report. I must say
10 that I'm very gratified to report success with our
11 hiring program.
12 Three highly qualified individuals have
13 already begun work at the CSB, and three additional
14 highly qualified individuals will report for work
15 within a few weeks.
16 We are also currently advertising to hire a
17 technical editor-writer and also to hired additional
18 investigations, and I once again would like to extend
19 thanks to Faye Gibbins who's standing on the far wall
20 and her staff for their assistance in doing this both
21 resume screening and gathering and cataloging.
22 In the last three to four months we've
23 reviewed nearly 700 resumes, and this takes a lot of
24 effort, and we appreciate the expert support we're
25 getting in that.

1 I want to take a moment to introduce you to
2 some of the new individuals who have joined our staff.
3 Two of our three new investigators or staff members
4 are with us today, and I'd like to recognize them.
5 First, Steve Selk. Steve, if you would
6 stand up and raise your hand.
7 CHAIRPERSON TAYLOR: Stand up.
8 MR. HOYLE: This is Steve Selk. Steve
9 comes to us from Chicago, Illinois, and brings to the
10 Chemical Safety Board 25 years of experience in
11 chemical industry facility design, process safety
12 management, and incident investigation, and many other
13 important skills.
14 We're very fortunate to have Steve, and
15 he's already working hard. He has been moved forward
16 and is working on the Tosco team and a number of other
17 important assignments.
18 Second, I'd like to introduce Barry Downs.
19 Barry, would you stand and let people see you there?
20 Barry comes to us from Philadelphia,
21 Pennsylvania where he has joined the CSB as a safety
22 recommendation specialist, but he's also assisting on
23 the Tosco investigation report.
24 Barry brings to us more than then years'
25 experience in oil refining operations, instrumentation,

1 and incident investigation and process safety, and
2 we're really enjoying working with Barry who joined us
3 in June.

4 Our third new staff member is John Murphy.
5 John comes to us from San Antonio, Texas, and has more
6 than 20 years of experience in the chemical industry
7 and process safety management activities. John is a
8 leader of health and safety activities for the American
9 Institute of Chemical Engineers.

10 John unfortunately cannot be with us today
11 because he's in a moving van somewhere between San
12 Antonio and D.C., and so he'll be back with us in a
13 couple of days.

14 DR. POJE: He's been with us, but he's
15 making his family whole in this area.

16 MR. HOYLE: Right. John has already been
17 working in the trenches, but he's gone back to bring
18 his furniture and his family here.

19 DR. ROSENTHAL: In that order.

20 (Laughter.)

21 MR. HOYLE: I missed that one. It's
22 probably good.

23 (Laughter.)

24 MR. HOYLE: I also want to report that an
25 additional three individuals who will be joining the

1 CSB shortly have similar stellar credentials and years
2 of experience in the chemical industry. When they
3 arrive, the CSB investigations and safety programs
4 group will have 12 members, which nearly doubles the
5 size of the group since June.
6 This is exceptional success, and we had
7 planned to hire an additional six staff members by the
8 end of the calendar year.
9 I'd like to close on the hiring plan by
10 making an observation, and that is while all of our new
11 staff members have quite varied experiences and
12 careers, there's one thing they have in common.
13 They're all excited and passionate about the mission of
14 the Chemical Safety Board, and it should be noted that
15 each of them likely could earn more money by continuing
16 to work in the private sector, but they choose to work
17 for the Chemical Safety Board because they're very
18 excited about the mission and the future of what we're
19 building here, and I think that's a real testimony to
20 this creation of this agency and the future that we are
21 excited about and that we're going to continue to
22 attract very talented individuals who are looking for
23 things more than, in addition to that which they were
24 gaining in the private sector, and we're very excited.
25 We're glad to have them here.

1 So that concludes my report.

2 CHAIRPERSON TAYLOR: Thank you, Bill.

3 Any questions?

4 DR. ROSENTHAL: No.

5 CHAIRPERSON TAYLOR: I just would like to
6 say again welcome to all of our new staff members,
7 those that are here and those who are not, and we
8 really appreciate the hard work that has gone into the
9 selection of those staff members.

10 They are very highly qualified, and I look
11 forward to working with all of you.

12 Any other comments?

13 (No response.)

14 CHAIRPERSON TAYLOR: Okay. Chris,
15 strategic plan.

16 MR. WARNER: As you know, we've had a round
17 table meeting in July. I'd like to acknowledge the
18 stakeholders who were at that meeting and thank them
19 for their involvement. This has been a fairly intense
20 time, extensive task that we have done. I think we've
21 done a great job.

22 We welcome all of the comments that we have
23 from all the stakeholders. We have a final report that
24 we're putting together for the board to review, and the
25 next steps would be after board review and possible

1 approval hopefully, we'd be getting that up to Congress
2 at the end of September.
3 And just to go through the major parts of
4 the strategic plan, in order to provide a clear road
5 map for the future, the CSB has developed this
6 strategic plan in accordance with the Government's
7 Performance and Results Act of 1993. The plan
8 describes expected accomplishments over the next five
9 years, 2001 through 2005.
10 The CSB will use this strategic plan as a
11 guide in setting priorities, allocating resources and
12 making decisions that produce the specific outcomes
13 identified in the strategic plan.
14 The mission of the CSB as laid out in this
15 plan is to promote the prevention of major chemical
16 accidents at fixed facility. The plan is organized
17 around two over arching goals, one mission goal, and
18 one enabling goal.
19 the mission goal focuses on the principal
20 role of the CSB to promote prevention of chemical
21 accidents at fixed facilities. The CSB accomplishes
22 this goal by producing timely, high quality
23 investigation reports, recommendations and other
24 technical products, developing effective outreach and
25 partnerships with stakeholders, and developing and

1 implementing a system for chemical accident data
2 collection that can be used to measure prevention
3 effectiveness.
4 By 2005, the CSB expects to initiate five
5 major accident investigations and one hazard
6 investigation per year that benefit from effective
7 coordination and partnering with industry, unions,
8 federal, state, and local entities.
9 From these investigations will come reports
10 that contain well reasoned and precisely targeted
11 recommendations that promote prevention of chemical
12 accidents and worker and public safety.
13 The enabling goal focuses on enhancing the
14 management of the CSB and improving the organization
15 effectiveness through work place planning, hiring, and
16 training, cooperative working relationships, and
17 information resource security and management.
18 The CSB accomplishes this goal by clearly
19 delineating roles, responsibilities, and
20 accountabilities for board members and staff;
21 developing and implementing administrative and
22 personnel policies, including family friendly policies;
23 and completing organizational information technology
24 and physical infrastructure.
25 The CSB has already taken significant steps

1 in this area in FY 2000 and is committed to steady
2 improvement in the management of its human and physical
3 resources, and the CSB employees remain highly
4 motivated and committed to the agency's mission.
5 CHAIRPERSON TAYLOR: Thank you, Chris.
6 DR. ROSENTHAL: That was a good summary,
7 Chris, and I think I and the other board members would
8 appreciate any comments on that strategic plan because,
9 while it is fairly shortly going to be put down in a
10 hardened form after we approve it and send it to the
11 Congress, it's a living document, and it can evolve
12 around those objectives so that when you get it, any
13 comments that you have, suggestions would be
14 appreciated.
15 CHAIRPERSON TAYLOR: Yes.
16 DR. POJE: And if I can just echo what
17 Chris said earlier, we want to thank Anna Johnson for
18 playing a lead role as Chris' assistant in bringing
19 this project to fruition, and one person who had been
20 with us for a while as a delight and hard working
21 individual in our office, but has since gone on to
22 other things, Beverly Brock has been a great aid to
23 the institution and bringing this project to its
24 current state of fruition.
25 CHAIRPERSON TAYLOR: And we also have to

1 again thank the staff because they also had initial
2 involvement in the entire strategic plan. We met as a
3 team, the strategic plan team. We went away from our
4 offices here to another facility and really -- yeah,
5 that was good. No, we didn't -- but we got together as
6 a group and talked over what this would actually be.
7 And I think this is a huge accomplishment
8 for us, and again, thank you to the staff and all of
9 our hard work to getting this where it is now.
10 Thanks, Chris.
11 And since you're up there, don't move. CSB
12 legal and regulations update.
13 MR. WARNER: In the past, we have gone over
14 various board directives, notation memos that the board
15 has issued between public meetings.
16 As you know, under Government in the
17 Sunshine Act, a multi-member board such as this
18 conducts its business in the public. We have these
19 meetings every month or every two months. In between
20 the board members are permitted legally to conduct
21 business through a memo notation system where they pass
22 various policies around and vote on them, and then we
23 report them at the public meeting.
24 Since the last public meeting, we have
25 issued approximately 24 various notation items, some of

1 great length, for example, the subpoena order,
2 personnel orders, policies, things like that. Time
3 really doesn't permit reading every single one of them.
4 So what I'd like to do if that's possible is just sort
5 of highlight the ones that we've gone through for you,
6 and if there are issues you can ask me about them.
7 Notation item 33 was concerning the lease
8 of the property, which took a substantial amount of
9 time, over three or four months.
10 Thirty-four and 35 are personnel issues
11 that we are putting in place and policies that you have
12 approved.
13 Thirty-six regarded the Office of Legal
14 Counsel and contracting issues.
15 Thirty-seven is personnel.
16 Notation item 38 was where the board
17 adopted the decision to make Andrea Taylor the
18 spokesperson for the board, for Congress, the press and
19 the public.
20 Thirty-nine concerned budget issues, and
21 just to explain that to the people here, this is more
22 than a presentation of investigations. This is where
23 we actually do business, too, and so some of this might
24 seem routine.
25 As you can tell, since January we are

1 without a chairperson, and so the three sitting board
2 members, four board members have split the
3 responsibilities of the chairman, and as they outlined
4 to you in the beginning. So it adds another layer to
5 what we do, and that's why some of these might seem
6 sort of simple or basic, but because of our structure,
7 they're necessarily legally to do.
8 Number 40 concerned the presence of board
9 members in Washington regarding their presence at board
10 briefings and board meetings.
11 Forty-one and 42 are, again, personnel
12 issues.
13 Forty-three, 44 regard delegations to
14 various persons here at the staff level.
15 Notation item 45 is where the board
16 delegated all EEO responsibilities to Dr. Taylor, and
17 she is working with Don Holmstrom, who is our EEO
18 Director.
19 Notation 46 is a personnel policy on leave
20 which required a fair amount of research.
21 Notation item 47 regards the assignments
22 that were initially assigned to Dr. Hill in January
23 when the board split its responsibilities for the
24 Chairman's spot. Those responsibilities have not been
25 carried out and, therefore, were transferred from Dr.

1 Hill back to the staff to complete.

2 Number 48 involves the implementation of a

3 performance appraisal program.

4 Forty-nine, the issuance of administrative

5 subpoenas were being ordered. Number 11, that went

6 along with that.

7 Number 50 was the approval of the Morton

8 investigation report.

9 Fifty-one regards the authority and

10 procedures for depositions and other testimony under

11 oath, and that's Board Order No. 12.

12 Fifty-two was an authorization to General

13 Counsel to work on the recommendations of EPA and OSHA

14 for the board.

15 Fifty-three is a contracting matter.

16 And 54 involves a policy for personnel, and

17 that brings us up to date.

18 CHAIRPERSON TAYLOR: Okay. Any questions?

19 DR. POJE: If I could just make a comment,

20 it's clear that we have sat ourselves on the course of

21 action of building investigation and safety program

22 emphasis for the Safety Board, but I think as Chris is

23 pointing to here, it's to be enabled to do that

24 requires us to have a fair amount of legal

25 infrastructure developed for administering an agency.

1 And I want to give special recognition to
2 Chris in his major hat of the General Counsel, as well
3 as to Ray Porfiri for a very high degree of legal
4 research and legal scholarship to help build
5 particularly the directive materials for the agency in
6 order to get us policies and board input into the
7 policies that then become the guiding principles of our
8 agency's operations.
9 So thank you, Chris.
10 CHAIRPERSON TAYLOR: Thanks.
11 Irv? No.
12 Okay, Chris. Continue.
13 MR. WARNER: Next on the agenda, I believe,
14 is the GAO report. It's report number RCED00-192,
15 issued July 11, 2000.
16 The GAO report made the following two
17 recommendations, which will help to strengthen the CSB
18 operations.
19 The GAO recommended that the CSB develop
20 and implement clear policies and procedures in the
21 investigation protocol to further insure the
22 impartiality and thoroughness of the investigations.
23 As CSB informed Congress in December 1999,
24 and as part of the ongoing endeavor to improve our
25 investigation policies, we will continue to refine and

1 improve our investigation protocol for this fiscal
2 year. As part of this effort, we will consider
3 implementing the additional policies and procedures
4 that the GAO identified for insuring impartiality and
5 thoroughness in our investigations.
6 We note that although we have not had
7 written policies and procedures on the items that GAO
8 identified, all four of the CSB investigation reports
9 have been highly praised for their objectivity and
10 thoroughness.
11 And again, to just emphasize this point, we
12 are a new organization, and we are starting up. We
13 will develop a myriad of legal policies and personnel
14 and administrative policies over the next year or year
15 and a half, and those will all be laid out in front of
16 the board in the ensuing months.
17 So the fact that GAO identified it, they
18 identified it that we should put it in our protocol.
19 We did have draft procedures that we were following,
20 and therefore, if there was an issue that was raised in
21 the staff and was not resolved by the staff, in the
22 transmittal memo that went to the board, I as General
23 Counsel and the Chief Operating Officer would
24 specifically raise that issue to the board on the
25 report when they consider the report. There has been

1 no such issues raised in any of the reports we've done
2 so far.
3 The second, GAO also recommended that the
4 CSB develop an agreement with an existing Office of
5 Inspector General to provide institutional oversight of
6 the CSB. We agree with the recommendation. In fact,
7 as GAO reported, we have sought assistance from the
8 Offices of Inspector General for the Departments of
9 Energy and Treasury, and although these attempts were
10 unsuccessful, we will continue to seek assistance from
11 an existing Office of Inspector General.
12 We note that as an interim step, we have
13 posted information on the GAO's fraud net in the common
14 areas at the CSB so that employees can easily report
15 allegations of fraud, waste, abuse, or mismanagement of
16 federal funds to an independent entity.
17 Those are the two recommendations.
18 CHAIRPERSON TAYLOR: Okay. The memoranda?
19 MR. WARNER: The last issue that the board
20 would like me to address, as part of our ongoing
21 attempt to establish relationships with agencies, as
22 you know, we had developed memoranda of understanding
23 with OSHA and EPA. We are also in negotiations with
24 the NTSB regarding our relationship with them in
25 investigations.

1 The board members met in, I believe,
2 August, beginning of August, with Chairman Hall and had
3 a very productive meeting with him. The staff will be
4 following up with the senior staff from the NTSB on a
5 variety of subjects regarding jurisdictional issues,
6 details, training, et cetera, and hopefully we should
7 have a completed MOU shortly for you.
8 In addition, as I mentioned earlier at the
9 beginning of the meeting, we had Shira Flax from the
10 Agency for Disease Registry -- Toxic Substances and
11 Disease Registry --
12 MS. FLAX: ATSDR.
13 MR. WARNER: -- and she is here and will be
14 completing an MOU with that agency -- sorry, Shira --
15 shortly as well.
16 We also have a second GAO investigation
17 that was sort of looking at the interplay,
18 interconnection between all federal agencies on
19 accident investigations, and we should be getting a
20 preliminary draft report from them next week.
21 And I'll have more to report next meeting.
22 CHAIRPERSON TAYLOR: Okay. Thank you.
23 Board comments? Update?
24 DR. ROSENTHAL: Update? What have I been
25 doing? Well, I guess I think I'll mention first, and

1 I'm glad Dennis is here because he can tell me what
2 SASH (phonetic) stands for.
3 MR. HENDERSHOT: Safety and Chemical
4 Engineering Education.
5 DR. ROSENTHAL: There you go.
6 We have had a project to evaluate the use
7 of our reports as teaching tools, and so I've been
8 working with CCPS, AICHE, and participating at a
9 program that's going to be taking place this next
10 Monday, Tuesday, Wednesday in Detroit, in which they're
11 getting a collection of university professors together,
12 training basically to BASFY and dot (phonetic)
13 facility, but as an adjunct.
14 We're going to discuss the possible use of
15 the Morton case as a teaching tool when these
16 professors go in and evolve from that, and involving
17 the questions at Morton on near misses and their third
18 party program.
19 Been selected as a reviewer of the ISPRA
20 papers for a symposium they've had that's going to be
21 published shortly.
22 I have the distinction, if you want to call
23 it that, of sitting on the board of the Loss Prevention
24 Journal so that I continue to review oodles of papers
25 each month, sending off comments, such as they may.

1 Finally, have had the pleasure of meeting
2 with colleagues at EPA, Jim Makris, David Speights,
3 Kathy Jones, and with Joe DuBois in discussions with
4 Mike Marshall, Bill Webber at BLS, kind of talking
5 around the issue of possible general things that might
6 be done in the area of getting a set of numbers that
7 will let all of us know whether the number of chemical
8 accident releases are going up and down, frequency by
9 SIC code and by chemical. I don't want to know
10 anything more personally.
11 That's taken up my time.
12 CHAIRPERSON TAYLOR: Gerry.
13 DR. POJE: Yeah, I think I've said enough
14 today about the involvement that we've had as board
15 members collectively and individually in all the
16 activities that you've been hearing about today from
17 the staff. As board member responsible for personnel
18 matters, I obviously have a little bit more intimacy on
19 a day-to-day basis with Chris on a number of these
20 activities.
21 But I did want to take this time since we
22 also have been introducing individuals to also alert
23 you that in May of this year the board added a special
24 assistant for board members to help us on investigation
25 and safety issues, and I'd like to recognize Daniel

1 Horowitz who is here today.

2 Daniel has been quite involved to date in
3 the strategic planning effort, in a degree of
4 engagement on the Sonat team and its completion of the
5 investigation work. He also has served us ably in the
6 national assessment project representation at Texas A&M
7 University.

8 He is a quite skilled individual. He is a
9 chemist with experience in environmental research,
10 technology, and policy.

11 Prior to joining the CSB, he was a program
12 manager with Metabolics, Incorporated. This is a
13 biotechnology company that was researching and going
14 through early product in a pilot phase of
15 environmentally friendly polymers.

16 So they were developing a biologically
17 derived latex material useful in industrial coding and
18 electronics manufacturing arena, and he had some on
19 point experience in that capacity dealing with health
20 and safety concerns.

21 From '94 to '95, he served as a
22 congressional fellow of the American Chemical Society
23 and worked on federal technology policy issues with the
24 United States Congress House Committee on Science. So
25 he has another degree of linkage for us as board

1 members to that important institution on the Hill.
2 In earlier positions he researched
3 environmental science and policy issues for the
4 National Wildlife Federation, the consulting firm
5 Hirschorn & Associates. He holds an A.B. degree from
6 Harvard University, a Master of Science from Stanford
7 University, and a Ph.D. from the University of
8 Cambridge in England, so certainly quite an
9 accomplishment.
10 So we also welcome him to the board. He
11 has been a person who has really worked well
12 coordinating between board members and the staff on a
13 number of important technical issues, and we will
14 continue to rely upon him for such matters.
15 So welcome, Dan. Thanks for joining us.
16 CHAIRPERSON TAYLOR: Thanks.
17 Just to give you an update, as Chris has
18 already mentioned, I am now since our last meeting the
19 official spokesperson for the board. That could be
20 good or bad.
21 I'm also responsible for EEO, as overseeing
22 what happens in that arena of EEO complaints, and
23 overseeing the completion of the annual reports.
24 Hopefully we can get those, the back ones, completed as
25 well as the end of this calendar year another report

1 will be due.

2 In addition, I've worked as the board
3 member with the Sonat team, and that's been a fun
4 experience, as well as a learning experience for me
5 because my background is actually industrial hygiene
6 and not the oil refinery industry, largely working with
7 the auto companies in the past.

8 In addition to that, I'd just like to say I
9 joined the board about a year and a half ago and moved
10 my family from Michigan. I am pleased to announce that
11 I am happy that I'm a member of the board and we have
12 been working very hard, as you can tell, with a lot of
13 our efforts and moving forward to what I came to
14 Washington for, to prevent chemical accidents from
15 occurring on a broader scale, developing policies,
16 developing recommendations, assistant to those
17 recommendations, and advocating for prevention and the
18 health of workers and the public.

19 So in saying that, I'd like to just say
20 again, thank you to all of my fellow board members, as
21 well as to the staff.

22 And with that I'd like to also mention that
23 I thank all of you stakeholders in the audience for
24 supporting us and being with us through everything that
25 we've done and our future, and hopefully you'll

1 continue to grow with us as we continue to make changes
2 and develop our policies here at the agency.
3 Any other comments?
4 (No response.)
5 CHAIRPERSON TAYLOR: Next, our board
6 meeting, our next meeting. The board had determined
7 initially that the next board meeting would be on
8 November 9th. The room is not available for that date.
9 So we're moving it to November 8th.
10 We wanted to try and establish a pattern of
11 meeting on the second Thursday of every other month,
12 but we're not having any success yet. So this is
13 Friday, and it's not the third. It's not the second.
14 DR. POJE: We're subject to too many
15 controls held by other people and not our own.
16 CHAIRPERSON TAYLOR: That's right. So our
17 next board public meeting will be held on Wednesday,
18 November the 8th, here in this room.
19 With that I'd also like to now open the
20 floor for public comment, and to start I'll find out
21 first if there are company officials who would like to
22 give a statement. I know that Sonat is represented and
23 Rohm & Haas.
24 MR. CALLAHAN: Yes. Thank you, Madame
25 Chairman.

1 CHAIRPERSON TAYLOR: Can we have you come
2 to the podium?
3 MR. CALLAHAN: Sure, I'd be happy to.
4 CHAIRPERSON TAYLOR: For the record. Thank
5 you.
6 MR. CALLAHAN: Thank you very much.
7 My name is Glenn Callahan. I'm an attorney
8 with the firm McCarter & English, and I represent Rohm
9 & Haas and Morton.
10 And, first of all, I'd like to acknowledge
11 that with me is Dennis Hendershot, who's the senior
12 technical fellow, process hazard analyst for Rohm &
13 Haas, who has worked with me and others from the Rohm &
14 Haas group to look into the issues relating to the
15 Morton incident.
16 And following the board's presentation, the
17 staff's presentation in Patterson, we took that
18 information back, continued our investigation, and are
19 here today to do a couple of things.
20 First of all is to thank the board and the
21 staff for a really excellent job, excellent
22 presentation, and to let you know that Rohm & Haas, who
23 could be considered to be a leader in the industry for
24 recognizing and dealing with issues of product and
25 process hazard and safety, appreciate the opportunity

1 to have been involved, unfortunately to have been
2 involved, in a way that they would prefer not to be,
3 namely, in the investigation of an incident. We'd like
4 to be involved more in the prevention of incidents.
5 The second thing that you should know is
6 that the recommendations that are contained in the
7 Morton report, of which you've heard a fair amount
8 today and perhaps have had an opportunity to read
9 either from the Web site or otherwise, for the most
10 part they have been implemented or they are in the
11 process of being implemented, and it is the goal to
12 avoid and to learn from the incident that occurred at
13 the Morton facility in Patterson and to see to it that
14 that type of incident is prevented.
15 The comments that I was going to make,
16 actually I'm going to have to shift them a little bit
17 because I think that what's really at issue from the
18 standpoint -- from our perspective and our reason for
19 being here is really very much highlighted by both Bill
20 Hoyle's comments and Chris Warner's comments both on
21 the strategic plan and on the interim investigation
22 protocol.
23 I think that that is really why we're here
24 and what we'd like to comment on because at the end of
25 the day, you don't get it better. You don't get it

1 right unless you have the facts that are critical and
2 that are substantive.
3 Since the presentation in Patterson in
4 July, we've had an opportunity to go back with the
5 benefit of the work that the board has done, the
6 benefit of OSHA investigations, the benefit of internal
7 investigations, and have had the luxury, if you will,
8 of having all of that information available and then
9 going back and doing it all over again.
10 And as many of you know, there's no teacher
11 like doing it over and over and over until you
12 ultimately get it right.
13 And what we found was that there were a
14 number of factual issues that we believe to be
15 inaccurate in the final report, but it doesn't change
16 our commitment to the recommendations.
17 So what we're really talking about is the
18 process and the information that has been gathered and
19 the information gathering process, and we are committed
20 to working through this process with the board and with
21 the staff members to give you the benefit of what we
22 found out, how we found it out, and what you can do on
23 a going forward basis to make the investigative process
24 better.
25 Because at the end of the day, as I say,

1 the recommendations are really what's important, but
2 how you get to the recommendations, the information
3 upon which those recommendations are based are equally
4 important, especially if one of the goals, one of the
5 strategic goals is to gather data to avoid future
6 incidents.
7 That's all preface. Sorry for the long
8 preface, but let me tell you where we have found that
9 there are a couple of issues that -- and we'll be
10 submitting this to the board and to the staff in
11 writing so that you can incorporate it to the extent
12 that you feel it appropriate, you know, as an add-on,
13 addendum, or whatever to the report.
14 The two areas that the report, we feel, did
15 not have an accurate picture of what went on, and this
16 is not critical so much of the report because it really
17 took a fair amount of time, even with all of the
18 information that was out on the table, for us to
19 ultimately knit together how the process was ultimately
20 put together.
21 The two areas, one is the suggestion in the
22 report that the Morton process that was in use in
23 Patterson in 1998 had somehow been switched from a
24 semi-batch process, in which the ingredients are
25 introduced in stages, and I'm probably talking to

1 chemists who really know what this means as opposed to
2 a lawyer who has to fumble through some of this, but
3 from a semi-batch process the process was converted
4 into a full batch process in which all of the
5 ingredients were combined at the same time.
6 That's not correct, and the reason for the
7 confusion is this. The investigation reviewed the
8 process or a process that had been developed on a
9 totally independent basis in a Morton facility in
10 Hounslow, England. That process was not imported to
11 the Patterson plant. The process that was in use at
12 the Patterson plant was actually a process that had
13 been developed by a bench chemist at the Patterson
14 plant, and his process was different from the Hounslow
15 process in that all of the materials for the O-NCB and
16 the 2-EHA were introduced at the same time.
17 The significant difference between the two
18 processes was the semi-batch or the staged introduction
19 of these O-NCB, which as you may know is a very highly
20 toxic substance -- two minutes and I'll be done -- was
21 that semi-batch -- his process eliminated the multiple
22 handling of the O-NCB and brought it in at a lower
23 temperature bringing it up, whereas the Hounslow
24 process started at a higher temperature.
25 The second issue relates to the lack of

1 communication of certain information to the Patterson
2 facility, and that's another issue.
3 The Hounslow information was actually
4 submitted to Patterson and was reviewed by the bench
5 chemist who had, in fact, developed a process that was
6 in place, and a determination was made by that
7 individual and reviewed that the process was, indeed,
8 safe from the exothermic problem that had been noticed
9 in England.
10 So with those two primary exceptions and
11 perhaps one other small one, which I'll leave for our
12 written proposal, we'll be submitting those, but again,
13 the most important issue is the recommendations are
14 being implemented, and we do appreciate the fact that
15 we've been given an opportunity to comment.
16 Thank you very much.
17 CHAIRPERSON TAYLOR: Thank you very much.
18 Anyone from Sonat?
19 And I didn't preface this, and I thank you
20 for keeping close to my little hand motions here, but
21 all comments should be limited, please, to five
22 minutes. Sorry. Five minutes.
23 MR. CALLAHAN: Thank you.
24 DR. POJE: Thank you, Glenn.
25 I look forward to reviewing this material

1 when it's available.

2 MR. CALLAHAN: Thank you.

3 DR. POJE: I believe that our report did
4 highlight the issue of toxicity associated with the
5 ortho-nitrochlorobenzene and recognize the special
6 precautions that were in place at that facility for
7 limiting the human exposure of the work force to it.
8 So a very important competing issue sometimes in the
9 development of processes that we will be attentive to.

10 MR. CALLAHAN: Thank you.

11 CHAIRPERSON TAYLOR: Any other comments?

12 (No response.)

13 CHAIRPERSON TAYLOR: Sonat.

14 MR. JARRETT: Madame Chairperson, I'm Keith
15 Jarrett. I'm a lawyer for Sonat.

16 We had prepared to make some comments, but
17 I think it's fair to say we'll leave ours for writing,
18 although I would echo Mr. Callahan and say that our
19 interaction with the board and staff has been very
20 cooperative, both from our perspective in terms of
21 providing access to people and material and documents,
22 and from the board in giving us an opportunity to
23 comment in writing upon certain draft findings, and we
24 have made certain observations.

25 We're in agreement with the vast majority

1 of the findings of the board. We have some
2 disagreements, as well, about factual findings, and
3 we've detailed those in writing and will do it again
4 when the final report comes out, I suppose.
5 But it is important to know that my client,
6 Sonat, has implemented a number of recommendations
7 proactively. In fact, they seem to mimic or parallel
8 that which the staff has indicated might be
9 appropriate, and those have been in place for well over
10 a year, and I think we'd all like to prevent some
11 recurrence of any kind of tragedy like this.
12 One comment I would make. It seems in
13 dealing with the subjects that have been talked about
14 by the staff, things like protocol of the board in
15 investigations and strategic planning, and it's
16 implicit in some of the findings of the staff that have
17 been talked about here, which is that the focus of the
18 background of the staff members and of the board has
19 been traditionally on the chemical refining industry.
20 You know, Sonat Exploration is an oil and
21 gas exploration and production company. We're not in
22 the refining business, and there is a great distinction
23 both in the businesses and in the way they're
24 regulated.
25 The refinery business has a plethora of

1 regulations that are applicable to the business. Oil
2 and gas is traditionally exploration and production;
3 has traditionally been excepted from those regulations;
4 and indeed, the process safety management regulations
5 that have been subject to much discussion in the board
6 presentations contains specific exclusions for oil and
7 gas production operations.

8 There's a reason for those. They were not
9 deemed to be a good fit for the industry. Years ago
10 when they were enacted, OSHA has issued interpretive
11 letters in prior occasions which plainly indicate the
12 type of facilities that my client was operating at the
13 time of the accident were not covered by that
14 regulation, and my client, and I think the board's
15 report confirms that my client was in compliance with
16 all existing regulations at the time.

17 There were errors made, engineering errors
18 that my client made that contributed to the accident,
19 and as I say, we've implemented changes to make sure
20 that doesn't repeat itself, but if for the purposes of
21 the investigations going forward, if it's an objective
22 of the agency to investigate accidents in oil and gas
23 exploration and production facilities, seemingly
24 expertise in that field would be an appropriate
25 addition to the staff members and/or consultants in

1 that field, which the board did in this case. They
2 retained some experts in the field, and we're in
3 general agreement with those engineering findings.
4 Thank you very much.
5 CHAIRPERSON TAYLOR: Thank you.
6 DR. POJE: Thank you. If I could just --
7 DR. ROSENTHAL: I have a question. Was
8 your recitation of exclusion from all of these
9 regulations a complaint?
10 (Laughter.)
11 DR. POJE: You don't have to answer that
12 one.
13 CHAIRPERSON TAYLOR: You don't have to
14 answer that.
15 (Laughter.)
16 DR. POJE: I just wanted to thank you for
17 your remarks. Clearly the board's mission, if you look
18 at this possible range of chemical and other incidents
19 to which we could become involved, is extraordinarily
20 broad. The staff currently, as Bill projected, you
21 know, we're ramping up to a team that will have fewer
22 than 20 people in the investigation and safety program
23 area.
24 We're confronted with the need to build
25 expertise that will be on point, targeted, experienced,

1 but we can't possibly profess as an emergent
2 institution to be able to be expert in every possible
3 domain in chemical engineering that we might face.
4 So we are solicitous of our sister agencies
5 and their knowledge of expertise, where we might be
6 able to find it. We would even be persuaded to say who
7 are the other good exports who the board should keep
8 mind of and a roster of so that we could access them as
9 quickly as we can.
10 We're dependent upon many to help us in
11 that. We think the statements about improving your
12 investigation process and protocol and making sure the
13 investigation is deemed the highest quality is
14 essential for this institution to survive.
15 If people query us and say, "We don't think
16 you investigated well. You used bad experts or people
17 who were inexpert in the area in which you were trying
18 to do your investigation," we think we'll be harmed
19 institutionally.
20 So, therefore, again, I would just make the
21 statement once again as Irv and Andrea said, we welcome
22 input about how to improve. We also welcome input
23 about expertise that we should be cognizant of as we
24 are forced to go forward into such situations.
25 We do not try to assess blame in any

1 instant. We try to extract the best lessons that could
2 be learned and could be projected to a larger sector of
3 the industry for improving on this whole process of
4 chemical safety.

5 DR. ROSENTHAL: I might add that -- in
6 fact, give you preview -- I'm on a panel for how do we
7 improve accident investigation processes. Mike, you're
8 on that same panel.

9 One of the things that at least is my
10 personal goal is how can we do a better job of
11 involving people in the fact finding, forensic stage of
12 the investigation. There are resources in the labor
13 industry, university, institution, even in certain
14 areas in the public interest groups can afford experts,
15 and that stage at the fact finding ought to be possible
16 to do a better job in cooperation.

17 After that, with a given set of facts, it's
18 quite easy to make any case you want, but it would be
19 nice if we could proceed from the same set of factual
20 information, did not have to repeat differential
21 thermal scans four different times that were done on
22 the same equipment, have three different people tell us
23 why a stress failure occurred, and that's a goal.

24 Whether it be done informally, which is
25 going to be difficult, whether through some mechanism

1 as the NTSB does, has formal mechanisms for doing it,
2 that has to be developed by counsel with possible
3 approaches by which it might be done, and by staff, but
4 in response to the representations made by counsel for
5 both companies, we have a common goal in that sense,
6 and where disagreements occur, let them be afterwards.
7 CHAIRPERSON TAYLOR: Yes. Any additional
8 public comments?
9 MR. ORUM: I'll stand right here so you all
10 can see me.
11 I'm Paul Orum, a presumed expert in public
12 interest.
13 CHAIRPERSON TAYLOR: The problem though is
14 the mic.
15 PARTICIPANT: Well, I can move my mic. He
16 can stand there.
17 MR. ORUM: Okay. I'll speak loudly.
18 With the Working Group on Community Right
19 to Know here in Washington, D.C., and have a question
20 for you about your process on moving toward the system
21 for chemical accident data collection.
22 Irv, you mentioned that you're working on
23 getting a set of numbers to tell whether accidents are
24 going up or down by SIC code and by chemical. Is that
25 what you are talking about? Is that something

1 different? And what is the process and the public
2 input that you anticipate over the next few years?
3 DR. ROSENTHAL: Our strategic plan just
4 adopts a goal five years out to have it developed and
5 implemented a system.
6 It also marks specifically that we will be
7 holding a round table to get formal inputs on
8 methodology, and we are going to hire a specific person
9 with expertise in that field to work around that
10 particular thing.
11 My personal thoughts are that somewhere we
12 need a metric that will enable us to know whether the
13 frequency of the types of incidents that this board is
14 concerned with are increasing or decreasing, though
15 clearly we don't control the world. We are part of the
16 world.
17 I mean, EPA, OSHA, a variety of other
18 people are involved, industry, the American Chemistry
19 Council, whew.
20 (Laughter.)
21 DR. ROSENTHAL: API, all have to be players
22 in doing this, but collectively, that number is a
23 critical number. It's the equivalent of an OII number,
24 some index by which we can tell where we're going.
25 And since the knowledge also is supposed to

1 be not only a measure, but a guide to where we should
2 concentrate our energies, you'd like to know what SIC
3 code and you'd also like to know what chemical because
4 these are the areas in which you can attempt to work
5 with prevention.
6 We from our point of view need -- this data
7 could be anonymous as OII data. I don't have to know
8 the name of, from my point of view, of that statistic.
9 You don't have to know the name of the company. I
10 don't care who owns the system, I personally, just to
11 give you a response.
12 We need the outputs from such a system, and
13 we are open to working with anyone collectively in any
14 fashion to get that, but it seems to me that if we're
15 spending this collective energy in this area, we should
16 work collectively to develop such a metric.
17 If you have it in your back pocket, Paul,
18 you can retire.
19 (Laughter.)
20 CHAIRPERSON TAYLOR: And I think just
21 before you continue with this discussion, the first
22 thing that we do plan to do is to hold a stakeholder
23 round table so that this discussion can be brought
24 forth and what is actually needed for measurement,
25 along with a SIC code and things and chemicals that Irv

1 has suggested.

2 We want to get that stakeholder input and
3 also consensus if that's possible, what metrics are
4 needed or what methodology it is. We're not there yet.

5 MR. ORUM: Thanks. I appreciate the brief
6 explanation.

7 I would just follow up that I really don't
8 think that SIC code and chemical really are the only
9 areas that really get you to prevention. I think you
10 do need to know the company. You need to know whether
11 they're a good actor, a bad actor. You need to be able
12 to do that analysis, and you need transparency down to
13 the very specific incident that you're talking about.

14 Otherwise you are giving once again short
15 shrift to the public interest that we've seen again and
16 again and again and again of not giving basic
17 underlying data.

18 I hope just to state it strongly that it's
19 a fundamental interest. I don't think you're going to
20 get agreement on it because I don't think industry is
21 going to agree with you. I think they're looking for
22 you to protect you, to protect themselves from the
23 public knowing that information.

24 CHAIRPERSON TAYLOR: Okay.

25 DR. ROSENTHAL: My only comment is I gave

1 you minimum requirements. If our stakeholders can form
2 a consensus and get us some support in Congress and the
3 money to do it, we are an agency. We are not the
4 principal.
5 CHAIRPERSON TAYLOR: Okay. Any other
6 comments?
7 (No response.)
8 CHAIRPERSON TAYLOR: Okay. Thank you.
9 Yes?
10 MR. NASH: I had --
11 CHAIRPERSON TAYLOR: Can you introduce
12 yourself first?
13 MR. NASH: Yeah. James Nash, Occupational
14 Hazards Magazine.
15 And I had three questions or three comments
16 in the form of questions.
17 (Laughter.)
18 MR. NASH: I noticed that in your selection
19 criteria you had potential for consequences to the
20 public. You did not have potential for consequences to
21 workers, and I wondered what or why that is.
22 I know your legislation forces you to
23 investigate deaths to the public and does not force you
24 to investigate deaths to workers, but Congress did
25 that. But that wouldn't necessarily come into play

1 here I don't believe. So that was one question. Why
2 is that there?
3 Secondly, I want to know a little bit about
4 the voting on the Morton report. Was Dr. Hill involved
5 in that, and if not, why not?
6 And my third question is, oh, given some of
7 the questions about the reports that you all have come
8 out with and also some comments by stakeholders at your
9 previous meeting, are you doing anything about peer
10 review or outside review of your final investigation
11 reports?
12 CHAIRPERSON TAYLOR: Thank you, Jim.
13 The first answer sine Irv has been
14 involved --
15 DR. ROSENTHAL: Yeah. I think the history
16 of the act shows that the intention of adding on the
17 Chemical Safety Board, as, in fact, EPA was to
18 supplement OSHA's primary concern with what takes place
19 in the work place, if you'll look through the
20 legislative history, and we're attempting to be
21 responsive.
22 Secondly, and that comes in the language,
23 which says you shall investigate or cause to
24 investigate accidents, but in no event shall you forego
25 events, accidents with respect to the public.

1 Secondly, generally the potential for
2 workers is realized, unfortunately, or you don't even
3 hear about it. So generally speaking you get the
4 worker deaths and injuries, and in fact, if you looked
5 to try and calculate estimates of probability of worker
6 deaths, you can figure if you have the incident, you're
7 going to get someone unfortunately. They're close to
8 it.
9 So our emphasis on potential was done with
10 stakeholder inputs who almost uniformly pointed out
11 that the potential to the public, the potential, for
12 example, for release of a highly toxic material, which
13 may in itself not have occurred -- could be a small
14 leak -- is the type of thing that Congress had in mind
15 when you look at the history of this following the
16 BOPAL (phonetic) type thing.
17 So that's my response to that one.
18 DR. POJE: I guess I also want to make it
19 clear that this public comment period is designed for
20 comment, and we're more than happy to answer questions,
21 but in a separate session. We're here available for
22 you if you want to act in your reporter capacity.
23 For matters such as raising about voting
24 records and who voted how, you're free to talk to Chris
25 Warner at any time. That's a matter of public record,

1 although as you can see, not every small issue is
2 likely to be put up onto our Web site as a notice to
3 the 3,000 people who we noticed that the board spent
4 1,500 on X kind of an expense.
5 So feel free to talk to Chris.
6 I guess I wasn't sure of the third question
7 that you had.
8 CHAIRPERSON TAYLOR: Peer review.
9 DR. POJE: Peer review. The board, as a
10 board, is constituted by individuals that are
11 explicitly selected and nominated by the President
12 based upon technical criteria and competencies in a way
13 that seeks to have balancing occur.
14 So you look at the statute, and there is a
15 suggestion that the President select somebody with
16 toxicological competency. That's a skill set that I
17 have, and that the Senate in their confirmation process
18 hopefully would be seeking to review the President's
19 nomination to be assured of that balancing equation.
20 We are the reviewers who are charged in a
21 very high policy way by the President and the Senate to
22 be selected as the ultimate peer reviews of the work of
23 the institution.
24 Now, having said that, I think it's also
25 clear from the descriptions that we've had from the

1 staff today about expert consultancies that we're
2 drawing into our investigative work that are doing
3 things like having specific competencies in a pressure
4 relief system design and implementation, who will be
5 enjoined in the process and will review the entire work
6 product at the end of the day before it comes through
7 the staff up to the board for our review and our
8 decision making.
9 In a nutshell, that describes some of the
10 peer reviewage that we have at this moment in time, and
11 I'd be more than happy to talk to you about any --
12 DR. ROSENTHAL: Yeah, I might add I don't
13 personally think that one should rule out peer review
14 as a future tool, but things become appropriate at a
15 certain time to convene a peer review group of ten
16 people in the staff at where it is, and we're in the
17 midst of trying to bail out rowboats, may be a little
18 inappropriate at this stage of our development.
19 DR. POJE: And the other thing I would say
20 is that we are a learning institution. So you've just
21 heard from some comments that we will likely be
22 receiving written comments about. That's an important
23 aspect of learning.
24 Dennis Hendershot who's here will tee up an
25 audience of probably about 400 or so expert chemical

1 engineers at the spring's annual symposium of the
2 American Institute of Chemical Engineers.
3 We as professionals at the staff level
4 working on investigative reports are going to be
5 charged with taking that investigative effort and
6 bringing it into that professional arena and laying
7 bare the nature of how we did it, why we did it, and
8 opening ourselves up to what I think is one heck of an
9 audience to give you peer review.
10 And the best thing from the board's vantage
11 point is that Dennis will have had all those people pay
12 their own way to get to that meeting.
13 (Laughter.)
14 DR. POJE: In order to do that.
15 MR. HENDERSHOT: If you speak, you have to
16 pay your own way.
17 DR. POJE: We'll pay our own way to get
18 there, but we won't have to bring all of those people
19 on our own nickel as a baby institution to do such
20 work.
21 So our intent here in the development of
22 investigation safety programs is that any one of our
23 technical products is not really fully met until it
24 goes before professional societies and engineering
25 groups for a full review, and it's up on the Web site,

1 and Phil can attest that we're getting comments about
2 people's analysis and suggestions.
3 So we're a learning institution and getting
4 reviews in that fashion, and we think that that's very
5 important aspects for the critique of the ongoing
6 investigative matters and for helping us build a
7 stronger process for the future.
8 CHAIRPERSON TAYLOR: Does that answer most
9 of your question? Thank you.
10 Any other comments, public comments?
11 (No response.)
12 CHAIRPERSON TAYLOR: Then hearing none,
13 thank you very much for coming and have a good weekend.
14 DR. POJE: And as was stated earlier, we do
15 welcome you if you want to step up to the fourth floor
16 where our offices are. We'd be more than happy to show
17 you around.
18 CHAIRPERSON TAYLOR: Just to look at
19 Gerry's desk.
20 (Whereupon, at 11:58 a.m., the meeting was
21 concluded.)
22