

1 CAUSE NO. 05CV0337
2 MIGUEL ARENAZA, ELIZABETH) IN THE DISTRICT COURT
RAMON, DAVID G. CROW and)
3 JUANITA G. CROW, et al.)
))
4 VS.) 212TH JUDICIAL DISTRICT
))
5 BP PRODUCTS NORTH AMERICA)
INC., B.P. CORPORATION)
6 NORTH AMERICA INC., DON)
PARUS, AND JE MERIT)
7 CONSTRUCTORS, INC.) GALVESTON COUNTY, TEXAS

8
9 CAUSE NO. 05CV0337-A
10 IN RE: BP AMOCO EXPLOSION) IN THE DISTRICT COURT
MARCH 23, 2005)
11 COORDINATED DISCOVERY) 212TH JUDICIAL DISTRICT
PROCEEDINGS)
12) GALVESTON COUNTY, TEXAS

13
14
15 *****

16 ORAL VIDEOTAPED DEPOSITION OF
17 WILLIAM RALPH
18 VOLUME 2
19 JULY 28, 2006

20 *****
21
22
23
24
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1
2 ORAL VIDEOTAPED DEPOSITION OF WILLIAM RALPH,
3 Volume 2, produced as a witness at the instance of
4 the Plaintiffs and duly sworn, was taken in the
5 above-styled and numbered cause on July 28, 2006,
6 from 9:02 a.m. to 12:32 p.m., before Stephanie
7 Barringer, Certified Shorthand Reporter in and for
8 the State of Texas, reported by stenographic means at
9 the offices of Fulbright & Jaworski, 1301 McKinney,
10 Suite 5100, Houston, Texas, pursuant to the Texas
11 Rules of Civil Procedure and the provisions stated on
12 the record or attached hereto.
13 Since this deposition has been realtimed and you
14 may be in possession of a rough draft form, please be
15 aware that there may be a discrepancy regarding page
16 and line numbers when comparing the realtime draft
17 and the final transcript. Also, please be aware that
18 the realtime screen and the unedited, uncertified
19 rough draft transcript may contain untranslated
20 steno, a misspelled proper name and/or nonsensical
21 English word combinations. All such entries are
22 corrected in the final certified transcript.
23
24
25

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11 (Continued)
12
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14 710 Plaintiffs' Fourth Amended Notice 352
15 of Intention To Take the Oral
16 and Videotaped Deposition of
17 Bill Ralph with Subpoena Duces
18 Tecum
19 711 Email from William Clary dated 424
20 7/18/05, Subject: RE: Update:
21 Trailer siting MOC line of
22 inquiry, BPISOME01218773
23 through BPISOME01218782
24 712 Email from Dana Ryman dated 443
25 1/12/05, Subject: FW: Flare
Guidelines, BPISOME00489797
and BPISOME00489798

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EXHIBIT	DESCRIPTION	PAGE
713	Email from Joe Barnes dated 9/20/04, Subject: RE: Process Safety Discussion at GRL meeting on 14th September, BPISOME01051919 and BPISOME01051920	450
714	Introduction to PSM by W.H. Ralph, PSM Manager BP South Houston, BPISOME02787189 through BPISOME02787193	451
715	TC-PSC Chair Selection, Experience v Development Opportunity, W.H. Ralph, dated 8/1/04, BPISOME00438287 through BPISOME00438300	452

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1 THE VIDEOGRAPHER: On the record
 2 at 9:02.
 3 WILLIAM RALPH,
 4 having been first duly sworn, testified as follows:
 5
 6 EXAMINATION
 7 Q. (BY MR. BOND) We met last time,
 8 Mr. Ralph.
 9 A. Yes.
 10 Q. My name is Trent Bond. I represent the
 11 estate of Ryan Rodriguez and the mother of Ryan
 12 Rodriguez.
 13 You understand that, correct, sir?
 14 A. Yes.
 15 Q. You understand we are still on opposite
 16 sides?
 17 A. Yes.
 18 Q. Okay. I am going to try -- I reread your
 19 deposition. I am going to try not to rehash
 20 anything we have already talked about.
 21 I read the deposition. So if I
 22 do, it will be really just kind to jump off and get
 23 a little background and go from there. Okay?
 24 A. Okay.
 25 Q. Just for clarity sake, could you tell the

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1 jury how long you have worked for British Petroleum
 2 and Amoco all together?
 3 MR. PATTERSON: Objection, form.
 4 A. Collectively, 23 years, a little over
 5 23 years.
 6 Q. (BY MR. BOND) Was that all at the Texas
 7 City site?
 8 A. Yes, it's all been at Texas City.
 9 Q. And how did you start out there?
 10 A. I was just a junior process engineer.
 11 Q. You just kind of worked your way up?
 12 A. Yes, sir.
 13 Q. And the last job you had was as process
 14 safety manager?
 15 A. Yes.
 16 Q. And that's the job you currently hold,
 17 correct, sir?
 18 A. Actually, we had a change in April. I am
 19 currently the senior process safety consultant for
 20 the Texas City site.
 21 Q. Is that a lateral move, upgrade or what?
 22 A. I would say it's a lateral move.
 23 Q. What are your -- how are your
 24 responsibilities different than they were before?
 25 A. Basically the same ones in terms of my

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1 focus on process safety management at the site. I
 2 just don't have to be burdened with the managerial
 3 responsibilities, budgets and supervising people.
 4 Q. So now you are more focused on actually
 5 process safety as opposed to having to do budgets,
 6 having to kind of manage your personnel, as well as
 7 manage process safety.
 8 Is that fair? Am I reading that
 9 right?
 10 A. Well, you know, I was focused on process
 11 safety as the manager. I am equally focused on it
 12 now as the senior consultant.
 13 But yes, the time that I had to
 14 spend on budgets and personnel, those things, can
 15 now be spent on process safety.
 16 Q. I kind of always think of a pie, and your
 17 time is a pie here.
 18 A. Right.
 19 Q. Prior to that, prior to your -- I guess
 20 April this past year, you were the process safety
 21 manager for Texas City, right?
 22 A. Yes.
 23 Q. Okay. Some of your time, because you
 24 only had so many hours in a week, correct?
 25 A. Yes.

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1 Q. About on average, how often would you
 2 work? 40 hour? 80 hour? What?
 3 A. I would probably say on average about 60
 4 to 65 hours a week.
 5 Q. So you work a good, healthy week and a
 6 half compared to a 40-hour week?
 7 A. Yes, sir.
 8 Q. But your job duties -- do you still work
 9 those same hours?
 10 A. Yes.
 11 Q. Okay. So your hours haven't been cut
 12 back, right?
 13 A. No.
 14 Q. Okay. So prior to the past April, you
 15 were the process safety manager. And your job
 16 duties included not only process safety at the
 17 plant but also managing your employees, correct?
 18 A. Yes.
 19 Q. And budgets, all that stuff, correct?
 20 A. Yes.
 21 Q. You had a managerial task force as well
 22 as your job duties in process safety, correct?
 23 A. That's correct.
 24 Q. All right. Could you kind of explain to
 25 me, and I know you are not going to do it to exact

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1 figures, what were your -- how long did you spend,
 2 I guess, doing your managerial duties versus just
 3 your process safety duties?
 4 A. A lot of the managerial duties were, you
 5 know, point in time activities. You know, the
 6 budget activities are for a short period of time
 7 during the year on a monthly basis.
 8 Monitoring the budget is a very
 9 small portion of my time. You know, supervising
 10 people. Obviously, during the annual performance
 11 review period, that takes a larger percentage,
 12 attending meetings that you might say is part of
 13 the managerial focus and not the strict process
 14 safety focus.
 15 Over all, I would say that that
 16 took up no more than 10 percent of my time.
 17 Q. Who does your job now, your old job?
 18 A. A gentleman by the name of Rob DiValerio.
 19 Q. Rob? Spell it.
 20 A. DiValerio, D-i-V-a-l-e-r-i-o.
 21 Q. That's why I asked you to spell it.
 22 What are his duties now, job
 23 duties?
 24 MR. PATTERSON: Objection, form.
 25 A. Basically he took over my role as process

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1 safety manager. So they would be the same.
 2 Q. (BY MR. BOND) So he basically -- he is
 3 the manager now?
 4 A. Yes.
 5 Q. Okay. He concentrates on -- basically
 6 now you have two people doing what used to be your
 7 one job. Fair statement?
 8 A. Yes.
 9 Q. Okay. He concentrates on budgets. He
 10 concentrates on hiring, you know, and getting
 11 people there. He does all the managerial aspects
 12 of it, and you do the process safety aspects of it,
 13 right?
 14 A. Yes. He also does process safety aspects
 15 of --
 16 Q. Okay. But not near like you do, correct?
 17 MR. PATTERSON: Objection, form.
 18 A. I am not sure I understand.
 19 Q. (BY MR. BOND) Sure. I mean his
 20 concentration is -- he is going to be focused on
 21 the managerial aspects when you are focusing on the
 22 safety, process safety management aspects, correct,
 23 sir?
 24 A. No. He has -- he has a focus on process
 25 safety as well. So he will -- he is also involved

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1 with the plant in discussions on process safety
 2 matters.
 3 Q. Okay. But essentially you now have two
 4 people doing what used to be your old job?
 5 A. That's reasonable.
 6 Q. Okay. How many other people have they
 7 added for process safety management at Texas City?
 8 A. Since what time frame?
 9 Q. Since -- how many had you had working in
 10 that area on March 22nd, 2005?
 11 A. March 22nd, I had six direct reports plus
 12 myself and one Kelly temporary filling an open
 13 position.
 14 Q. So seven -- or six and a half, I guess,
 15 or seven and a half, something like that.
 16 Okay. Now how many do you have
 17 working in that area?
 18 A. I have those same numbers. We have added
 19 two different people.
 20 Q. So you have eight direct reports now?
 21 A. Well, the process safety manager. So
 22 that's Rob now --
 23 Q. Okay.
 24 A. -- would have eight direct reports, yes.
 25 Q. Okay.

<p style="text-align: right;">Page 306</p> <p>1 A. Now, but there is -- you know, if you are 2 looking at the department in total, it's a little 3 bit confusing with all the activities. 4 Since March 23rd, I have another 5 administrative person that is working with me with 6 all the agency investigations and document requests 7 and things of that nature. So -- but -- so when 8 I -- let me give you the numbers as if it was just 9 focused on process safety management and not all of 10 the -- 11 Q. I want to focus -- 12 A. -- extra work associated from the 13 March 23rd incident. 14 Q. No. I want to know everybody in that 15 department now. 16 A. Okay. Rob DiValerio as manager, myself 17 as the senior consultant. There is a senior risk 18 specialist. There are five senior process 19 coordinators, two full-time administrative people 20 and one Kelly temporary administrative person. 21 Q. How many people is that total? 22 A. You weren't counting? 23 Q. No, I wasn't. I should have been, but I 24 wasn't. 25 A. One, two, three, four -- two, four,</p>	<p style="text-align: right;">Page 308</p> <p>1 additional people? 2 A. I had raised the subject at least twice 3 that I recall, but probably three or four different 4 times, more in conversation that we could make use 5 of additional people. 6 Q. And each time those requests were 7 rebuffed, correct, sir? 8 A. Well, there was not action taken on them. 9 I mean... 10 Q. Well, they didn't sit there, you know, 11 and tell you to go jump in a lake. But they didn't 12 do anything to help you out to get those additional 13 people, correct? 14 A. Correct. 15 Q. Okay. So the action essentially rebuffed 16 your request, correct, sir? 17 A. I guess I wouldn't use that term but... 18 Q. What term would you use? 19 A. Just that there was no action taken on my 20 request. So there wasn't -- there wasn't a "yes" 21 and there wasn't a "no." There was no action. 22 Q. When no action is taken, is that -- I 23 mean, you don't have -- you know, if I ask a girl 24 out on a date and she just turns around and walks 25 away from me, what's that answer?</p>
<p style="text-align: right;">Page 307</p> <p>1 eight -- 11. 2 Q. Okay. 3 A. 11 people. 4 Q. Does that include Rob? 5 A. Yes. 6 Q. Does that include you? 7 A. Yes. 8 Q. And that includes the administrative 9 assistant? 10 A. Yes. 11 Q. Okay. And that's essentially almost 12 double the department since March 22nd? 13 A. Yes. 14 Q. Okay. Now, prior to March 22nd, you had 15 asked for additional people to assist you in 16 process safety management; isn't that correct, sir? 17 A. Yes. 18 Q. Okay. But those requests were denied, 19 correct, sir? 20 A. I had not been given authority to add the 21 additional staff. 22 Q. So is it safe to say those requests were 23 denied? 24 A. Yes. 25 Q. How many times did you make requests for</p>	<p style="text-align: right;">Page 309</p> <p>1 MR. PATTERSON: That never 2 happened to you. 3 MR. BOND: It happened all the 4 time. 5 Q. (BY MR. BOND) What's the answer, sir? 6 A. In that situation, I would take that as a 7 "no." 8 Q. Okay. And essentially what happened here 9 was you asked for more help; and they didn't do 10 anything for you, no action? 11 A. Correct. 12 Q. All right. Did you ever ask them for 13 like, say, like you have now, you want your own -- 14 like administrative assistants, did you ever ask 15 them for something like that? 16 A. Not so much to be an administrative 17 person to me in a manager's role. But in terms of 18 managing the department, there were a lot of 19 administrative tasks. 20 One of the specific things that I 21 had asked, and it kind of fits more within the 22 administrative side of things than a technical 23 person, you call that a scribe or technical scribe 24 for PHA meetings. So I would ask for additional 25 resource to do that. That way the people that I</p>

<p style="text-align: right;">Page 310</p> <p>1 did have, the technical people that I had that 2 specialized in risk reviews, I could spread them 3 further because the administrative portion of 4 taking the notes and preparing the reports could be 5 assigned to someone else. 6 Q. Do you have that now? 7 A. No. 8 Q. Still don't have it? 9 A. No. 10 Q. Did you ever ask for a manager like you 11 have now, where somebody can concentrate on the 12 management where you could concentrate on process 13 safety? 14 MR. PATTERSON: Objection, form. 15 A. No, I didn't. 16 Q. (BY MR. BOND) Okay. That was kind of 17 a -- I guess they decided to do that after the 18 explosion? 19 A. That's what happened after the explosion, 20 yes, sir. 21 Q. Who made the decision to add additional 22 people there? Who was the one that said, "Hey, we 23 need some more people here"? 24 A. Well, I -- the current HSE manager, Pat 25 King, was the one who had asked me what additional</p>	<p style="text-align: right;">Page 312</p> <p>1 safety review requirements. All the actions from 2 the hazard review and pre-startup safety review 3 requirements would need to be satisfied before the 4 change could then be implemented. 5 So in the case of a trailer 6 siting, that would mean all those things would need 7 to be complete before people could begin occupying 8 that trailer. 9 Q. Okay. Of course, in this case that was 10 not done for the Merit trailer, correct, sir? 11 A. That's my understanding. 12 Q. All right. Now, are you the ones that 13 write the procedure for siting trailers; or is it 14 somebody else in your division? 15 A. In terms of the policy that governs? 16 Q. Uh-huh. 17 A. That would be my department. 18 Q. Okay. Do y'all ever check -- or prior to 19 March 23rd, did y'all ever check and kind of make 20 sure you did everything correctly before a trailer 21 was sited or no? 22 A. Relative to any specific management of 23 change, whether it be for a trailer or some other 24 form of change, the answer would generally be no. 25 In terms of oversight or overall</p>
<p style="text-align: right;">Page 311</p> <p>1 resources are necessary. And I put a plan before 2 him, and we have been acting on that plan. 3 Q. Now, is this the same plan you had 4 presented before the explosion? 5 A. Well, I would say it's far more 6 extensive. 7 Q. So it's, I guess, a more extensive plan 8 than the one you had put forth before the 9 explosion? 10 A. Yes. 11 Q. We talked a little bit about trailer 12 sitings before. Do you recall that, sir? 13 A. Yes. 14 Q. Okay. Tell me the procedure out at BP on 15 March 22nd dealing with trailer sitings. 16 A. Trailer sitings, trailers would be 17 considered occupied portable buildings if people 18 were to house themselves in them. We covered that 19 under our management of change policy. 20 And as is typical with all of our 21 management of changes, a hazard review is required. 22 Certain actions may be identified in that hazard 23 review. 24 There may be other actions that 25 are identified that we would consider pre-startup</p>	<p style="text-align: right;">Page 313</p> <p>1 monitoring the program that we've trained people to 2 do the hazard reviews, that the hazard reviews are 3 being conducted, that the paperwork is being 4 presented to us, that actions are being completed, 5 that sort of general monitoring, we would provide 6 that. 7 Q. Now, if the trailer procedure had been, I 8 guess, completed or been -- or actually, if the 9 trailer were followed, the trailer procedures were 10 followed, they would never have -- never had 11 anybody in that trailer on March 23rd, 2005, 12 correct? 13 MR. PATTERSON: Objection, form. 14 Q. (BY MR. BOND) Because it wasn't 15 completed yet? 16 A. That would be correct. 17 Q. Okay. And the person doing the -- I 18 guess the folks doing the management of change had 19 the responsibility to ensure they look at all the 20 worse case scenarios, correct, sir? 21 A. As I explained, the hazard review is part 22 of the management of change process. So we would 23 pull together a cross-functional team, people who 24 know how to do hazard review techniques, as well as 25 people knowledgeable of the change, knowledgeable</p>

<p style="text-align: right;">Page 314</p> <p>1 of the process. And that team would review the 2 scenarios. 3 Q. Are the contractors ever involved in 4 that, sir? 5 A. Yes, contractors are often involved. 6 Q. All right. Would JE Merit be involved in 7 that, sir? 8 MR. PATTERSON: Objection to form. 9 A. I don't know if they were involved 10 specifically in this MOC review. 11 Q. (BY MR. BOND) Do you know anything 12 specifically about this MOC review? 13 A. I was not involved with it. 14 Q. Okay. So you -- and my question was 15 different. 16 Do you know anything specifically 17 about this MOC review that's not in the 18 investigative report -- 19 MR. PATTERSON: Objection, form. 20 Q. (BY MR. BOND) -- the fatality report? 21 Does that make sense? Sometimes 22 my questions don't make sense. I try hard, but 23 sometimes they don't work. 24 You, of course, read -- you have 25 read the entire report, correct, sir?</p>	<p style="text-align: right;">Page 316</p> <p>1 the March 23rd incident. 2 Q. Okay. 3 A. So I am familiar with a few aspects of 4 it, but I personally did not participate in that 5 management of change at the time it was being 6 conducted. 7 Q. Other than assisting in the investigative 8 report, do you know anything else -- could you add 9 anything else they made mistakes on in doing that 10 MOC? 11 A. I would have to refresh my recollection 12 of what the report had in it about that. 13 Q. Do you recall -- roughly, what was your 14 understanding of what was wrong with that MOC? 15 MR. PATTERSON: Objection to form. 16 A. Relative to how our management of change 17 process works, my understanding is they had not 18 completed all of the actions from the hazard 19 review. And I don't recall whether or not they had 20 completed the pre-startup safety review 21 requirements. 22 But either one of those would, at 23 least in terms of our monitoring system and our 24 electronic database system, would prevent that MOC 25 from progressing to the next level, which would</p>
<p style="text-align: right;">Page 315</p> <p>1 A. Yes. 2 Q. All right. And, of course -- 3 A. I haven't read all the appendices. 4 Q. I understand that from your last 5 deposition. 6 A. Yes. 7 Q. Have you read it since then? 8 A. Reread the investigation report? 9 Q. Right. 10 A. Since my last deposition, no. I have 11 glanced at it again. 12 Q. All right. You know there is a section 13 in there that deals specifically with the trailers, 14 correct, sir? 15 A. Yes. 16 Q. Other than that section that you read 17 dealing with the trailers, do you know anything 18 else specifically about that MOC and that trailer 19 siting? 20 A. I have had reason with other aspects of 21 the investigation and the -- sorry. 22 Q. It's okay. 23 A. The other investigations from the 24 agencies and the Chemical Safety Board, et cetera, 25 I have had an opportunity to look at that MOC since</p>	<p style="text-align: right;">Page 317</p> <p>1 allow the superintendent to authorize that to be 2 occupied. 3 Q. (BY MR. COON) Okay. Do you know how -- 4 you can help me with the nomenclature here. 5 But basically when you have a 6 closed vessel, you know, and it's safe to go 7 inside, they put up a little sticker saying, "Safe 8 entry"? 9 A. Yes. 10 Q. Okay. Could you explain to the jury what 11 exactly that is because I know I didn't say it 12 right? 13 A. I think you are referring to confined 14 space entry. 15 Q. There you go. 16 A. So spaces that would not normally be 17 occupied, you would have a permit structure to make 18 sure that the vessel is properly isolated, that any 19 potential hazards have been isolated, hazardous 20 materials have been cleaned out, and now it's safe 21 for human occupancy. And a permit would be posted 22 authorizing people to then enter that vessel. 23 Q. And nobody is supposed to enter that 24 vessel until that confined space entry tag is on 25 that vessel, correct, sir?</p>

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1 A. That's correct.
 2 Q. All right. And in order to have that tag
 3 put on a vessel, there needs to be a process hazard
 4 analysis, correct, sir?
 5 A. No, not in a confined space entry
 6 situation. Typically, it's a permit.
 7 They are predefined requirements,
 8 like isolating the vessel. So either closing
 9 valves or inserting blinds at connections to the
 10 vessel, making sure that the vessel is drained and
 11 purged, washed of the materials that had been in
 12 there previously, and then atmospheric testing done
 13 to make sure that it's suitable for human
 14 occupancy.
 15 Q. And the same thing can be applied to
 16 scaffolds? I mean, you sit there and you know it's
 17 tagged and you can climb up it. And before it's
 18 tagged, you are not supposed to climb up that
 19 scaffold, correct?
 20 A. Correct.
 21 Q. Before it's tagged, correct?
 22 A. Yes.
 23 Q. Do you have anything like that for the
 24 trailers?
 25 A. No, we do not have in place a system that

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1 would mark the trailer indicating that it was not
 2 approved for occupancy.
 3 Q. Or approved for occupancy?
 4 A. "Or approved for occupancy," yes.
 5 Q. Is there anything stopping y'all from
 6 doing that?
 7 A. No.
 8 Q. Okay. There wasn't anything stopping
 9 y'all on March 22nd, correct, sir?
 10 A. No.
 11 Q. And it would be pretty easy if y'all did
 12 that for everybody to know that whatever had not --
 13 management of change or process hazard analysis or
 14 whatever had not been completed if you put
 15 something like that on the trailer, correct, sir?
 16 A. That would be one method of making it
 17 clear to people that that change was not ready to
 18 be commissioned.
 19 Q. It's probably a pretty good method, don't
 20 you think, sir?
 21 A. It seems like a reasonable method to me,
 22 yes.
 23 Q. Okay. In fact, that's the method done
 24 with other companies in other industries. It's not
 25 something I am making up here, correct, sir?

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1 A. I don't know about other companies and
 2 other industries.
 3 Q. Or other areas of the plant, at least,
 4 confined space, scaffolds, things like that,
 5 correct, sir?
 6 A. Different applications, yes. I thought
 7 it was -- I thought you were asking about what
 8 other companies and other industries do relative to
 9 buildings or trailers, and I don't know that.
 10 Q. I understand that. You made that answer
 11 clear.
 12 I was just going back. It was a
 13 second question, basically.
 14 You said y'all did that in other
 15 areas in the plants with different applications.
 16 A. Yes. When it comes to confined space
 17 entry, there is a tag placed on the vessel
 18 indicating whether it is or is not approved for
 19 entry.
 20 Q. Do y'all do that now with the trailers,
 21 in trailer sitings?
 22 A. We have taken a different approach to
 23 trailers. We have moved them quite a ways from the
 24 site.
 25 We do still allow unoccupied

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1 trailers, tool trailers typically, would be the
 2 application. And there is a plaque that's posted
 3 on there that indicates that it is to be an
 4 unoccupied trailer.
 5 Q. Do you remember how we talked last time
 6 about flares and how we wouldn't put trailers next
 7 to flares?
 8 MR. PATTERSON: Objection to form.
 9 A. Yes.
 10 Q. (BY MR. BOND) Okay. Because there's a
 11 flare yard. You wouldn't put trailers in flare
 12 yards. It just doesn't make sense?
 13 A. Yes. We establish a buffer zone around a
 14 flare yard.
 15 Q. And a flare is basically something that
 16 gets hydrocarbon vented to it to flare off,
 17 correct, sir?
 18 A. Yes.
 19 Q. Okay. And a blowdown stack is
 20 essentially the same thing except it doesn't have a
 21 flare?
 22 A. Yes. Vapor material would be routed to
 23 it. The difference between a blowdown stack and
 24 flares is that the flare burns the material rather
 25 than simply releasing the vapors to the atmosphere.

<p style="text-align: right;">Page 322</p> <p>1 Q. And, of course, BP knew this on 2 March 22nd, 2005, correct, sir? 3 MR. PATTERSON: Objection, form. 4 A. Knew the difference between blowdown 5 stacks and flares? 6 Q. (BY MR. BOND) And its similarities? 7 MR. PATTERSON: Objection, form. 8 A. Yes. 9 Q. (BY MR. BOND) Okay. And when they sited 10 those trailers next to those -- to that blowdown 11 stack, they knew that it was a system that was 12 designed to vent hydrocarbons into the atmosphere, 13 correct, sir? 14 MR. PATTERSON: Objection, form. 15 A. We know that blowdown stacks are designed 16 to vent hydrocarbons. 17 Q. (BY MR. BOND) Into the atmosphere? 18 A. Yes. 19 Q. Okay. And knowing this, British 20 Petroleum put people next to the blowdown stack, 21 correct, sir? 22 MR. PATTERSON: Objection, form. 23 A. The trailers were located within 24 approximately 150 feet of the blowdown stack. 25 Q. (BY MR. BOND) Occupied trailers?</p>	<p style="text-align: right;">Page 324</p> <p>1 that the equipment was not being maintained and 2 that there were failures as a result of not 3 maintaining it. 4 Q. Do you remember what year prior in terms 5 of March 2nd, 1982, or what have you; but do you 6 remember approximately what time period it was that 7 you kind of came to, you personally, say, "You 8 know, they are not really maintaining this like 9 they should"? 10 Do you remember whenever you 11 started thinking that? 12 MR. PATTERSON: Objection, form. 13 A. I would recall that there were signs of 14 that in '98, '99. 15 Q. (BY MR. BOND) And what were the signs 16 that you saw that kind of red flagged it for you? 17 MR. PATTERSON: Objection, form. 18 A. Things -- really just cut back in basic 19 upkeep of the facility. 20 Q. (BY MR. BOND) What do you mean -- I am 21 sorry. Were you finished with your answer? 22 A. No, I wasn't. 23 Q. Okay. Finish your answer, and then I 24 will ask you. 25 A. Just maintenance of the grounds, you</p>
<p style="text-align: right;">Page 323</p> <p>1 A. Yes. 2 Q. Okay. 3 A. Occupied. 4 Q. Okay. I am going to change areas a 5 little bit. Okay? 6 A. Okay. 7 Q. You've noticed that -- you have been 8 there 23 years now? 9 A. Yes, sir. 10 Q. All right. Then you have seen the plant 11 evolve over the years, correct? 12 A. Yes. 13 Q. All right. There has been testimony in 14 prior depositions, even from Don Parus, that the 15 plant -- the plant had not been -- the 16 infrastructure had not been properly funded for 17 several years prior to BP taking over. 18 Is that true or untrue -- 19 MR. PATTERSON: Objection, form. 20 Q. (BY MR. BOND) -- that you are aware of? 21 A. Maybe you could define what you mean by 22 "infrastructure." 23 Q. Well, basically the plant had been 24 allowed to kind of deteriorate. 25 A. I would agree. There was an occasion</p>	<p style="text-align: right;">Page 325</p> <p>1 know, indicative, cutting -- something as simple as 2 cutting the grass. 3 Q. Uh-huh. 4 A. It was allowed to grow tall and certainly 5 unkept, that there was not as much activity in 6 terms of routine painting of equipment. We know 7 from an external corrosion perspective that is, you 8 know, one of the issues that we have. 9 Since I was not in the operating 10 department at the time, you know, those were the 11 sorts of things that I would see. 12 Q. Okay. And, of course, you actually 13 pointed out you were not even in the operating 14 department at the time? 15 A. Right. 16 Q. Okay. And it's the operating department 17 that kind of is supposed to maintain the plant, 18 correct, sir? 19 MR. PATTERSON: Objection, form. 20 A. No. It's a combination of the operations 21 department and the maintenance department. 22 Q. (BY MR. BOND) But as a process safety 23 manager, which you were at that time period, 24 correct, sir? 25 A. Correct.</p>

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1 Q. That had to be kind of alarming to you,
 2 correct, sir?
 3 MR. PATTERSON: Objection, form.
 4 A. Yes, I had a concern.
 5 Q. (BY MR. BOND) Compared to process -- of
 6 course, process safety is basically keeping the
 7 hydrocarbons contained, right?
 8 A. Yeah, that's the intent is to keep the
 9 hazardous material contained.
 10 Q. And when you have -- I know the grass
 11 cutting is not a big deal; but it's indicative of
 12 what care the plant is getting at that period of
 13 time, correct, sir?
 14 MR. PATTERSON: Objection, form.
 15 A. I would agree.
 16 Q. (BY MR. BOND) Okay. And you said that
 17 regular painting wasn't done; and that's important
 18 because hydrocarbons can be very corrosive,
 19 correct, sir?
 20 A. Yes. Now, painting, obviously, is on the
 21 outside of the pipe. And so it's relative to
 22 corrosive environments that may be on the outside.
 23 Obviously, we are along the Gulf
 24 Coast and, you know, the humidity, any salt in the
 25 air from the ocean, any overspray from the cooling

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1 towers, the water that comes off the cooling towers
 2 can be a corrosive environment on the outside of
 3 the pipes. And so it is important on a routine
 4 basis just to make sure that it's painted because
 5 that is the protective coating for corrosion from
 6 the outside in.
 7 Q. All right. In this case it wasn't done
 8 properly, correct, sir, at least in '98, '99?
 9 MR. PATTERSON: Objection, form.
 10 A. Well, the pace at which the painting was
 11 done was slow.
 12 Q. (BY MR. BOND) Who made that decision?
 13 Who was in charge at that time?
 14 MR. PATTERSON: Objection, form.
 15 A. If I remember correctly, Tim Scruggs was
 16 the plant manager at the time.
 17 Q. (BY MR. BOND) Was George -- Mr. Carter
 18 around at that time, too?
 19 A. Yes, Mr. Carter was still at the site.
 20 Q. What was his position, if you recall?
 21 A. Yeah. I believe he was the operations
 22 manager at that time.
 23 Q. Okay. You've got a plant and you see at
 24 least in '98 and '99 it's jumping out to your
 25 attention that you've got some issues with regard

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1 to corrosion at least on pipes.
 2 "Thinning pipe" is what they call
 3 it, correct?
 4 MR. PATTERSON: Objection, form.
 5 Q. (BY MR. BOND) Or is that different?
 6 A. There are different corrosion mechanisms.
 7 Some might involve pitting, which would be very
 8 localized to a single spot. There could be
 9 generalized corrosion, which would be overall
 10 thinning, wearing of the pipe. So...
 11 Q. What did you notice out there at the
 12 Texas City refinery in '98 and '99, sir?
 13 A. I don't know. Notice relative to
 14 corrosion?
 15 Q. Thinning pipe? Was it pitting? What
 16 kind of corrosion were you noticing, or did you
 17 just notice corrosion in general?
 18 A. My personal observation, obviously, was
 19 just the overall visual appearance at the site and
 20 I think it is indicative of general care and
 21 concern for the facility relative to, you know,
 22 specific inspection information about thinning of
 23 pipe or corrosion that may have been going on in
 24 any particular area. I don't have those details.
 25 Q. As the process safety manager, whose

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1 attention did you bring this to with regard to the
 2 condition of the plant?
 3 A. I would have general discussions within
 4 our local process safety committee or conversations
 5 with the various managers. Obviously my concern is
 6 that over time if you continue to undermaintain
 7 that that could eventually result in a failure of
 8 some sort.
 9 Q. I think Don Parus and this is -- I am
 10 paraphrasing, but the Telos Report indicated that
 11 the plant was being kept together by Band-Aids and
 12 Super Glue. What does that mean to you?
 13 MR. PATTERSON: Objection, form.
 14 Q. (BY MR. BOND) When he says something
 15 like that?
 16 A. It's probably best to ask Don what he
 17 means by that.
 18 Q. I did. I am just asking: What's your
 19 opinion of it? What does that mean to you
 20 personally?
 21 MR. PATTERSON: Objection, form.
 22 Q. (BY MR. BOND) When somebody says that,
 23 this place is being run by -- the boss, the manager
 24 out there, says this place is being run by, you
 25 know, kind of put together -- you know, held

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1 together with Super Glue and Band-Aids, what does
 2 that mean to you?
 3 MR. PATTERSON: Objection, form.
 4 A. If somebody made that statement to me, I
 5 would interpret that to mean that they felt like it
 6 was just being patched together.
 7 Q. (BY MR. BOND) All right. You said you
 8 talked to various managers. Who are these managers
 9 that you talked to and let them know that you felt
 10 the plant -- the plant was not being maintained
 11 properly?
 12 A. I would have had conversations with the
 13 various operating managers, the maintenance
 14 manager.
 15 Q. I would like names.
 16 A. Oh.
 17 Q. As best you can. I know you are not
 18 going to remember everybody but...
 19 Did you ever talk to Tim Scruggs
 20 about it?
 21 A. I don't recall any conversations
 22 specifically with Tim.
 23 Q. Did you ever talk with George Carter
 24 about it?
 25 MR. PATTERSON: Objection, form.

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1 A. I can't remember if George was still the
 2 chairman of the process safety committee at that
 3 time. So I don't recall having conversations with
 4 George.
 5 Q. (BY MR. BOND) Okay. But you had
 6 conversations with management, correct, sir?
 7 A. Yes.
 8 MR. PATTERSON: Objection, form.
 9 Q. (BY MR. BOND) And you had, of course,
 10 more than one conversation with management as part
 11 of this, correct, sir?
 12 MR. PATTERSON: Objection, form.
 13 A. Yes. Now, I would characterize the
 14 conversations as kind of an overall concern that if
 15 we don't maintain the facility, that could
 16 eventually result in problems.
 17 Q. (BY MR. BOND) Okay. And how long did
 18 you keep having these conversations? Did you ever
 19 stop?
 20 MR. PATTERSON: Objection, form.
 21 A. No. I mean, my role as the process
 22 safety manager was to do all I could for process
 23 safety. So whether it came in the form of concerns
 24 for budget or simply were we conducting the right
 25 maintenance or inspection or testing or timely

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1 resolution of action items, you know, anywhere that
 2 I thought we could -- we were either falling behind
 3 on our performance or whether we could improve our
 4 performance, you know, I saw that as a big part of
 5 my job. So...
 6 Q. (BY MR. BOND) The fact is, sir, as a
 7 process safety manager, you, up until the time of
 8 the explosion, tried to tell management out there
 9 and kept telling management out there about the
 10 problems with maintaining that plant, correct, sir?
 11 MR. PATTERSON: Objection, form.
 12 A. I was trying to do my job in terms of
 13 raising concerns.
 14 Q. (BY MR. BOND) Okay. And that includes
 15 the corrosion, the deterioration of the
 16 infrastructure of the plant, correct, sir?
 17 MR. PATTERSON: Objection, form.
 18 A. That would be part of it, yes.
 19 Q. (BY MR. BOND) Okay. And you made them
 20 aware and you made them aware again and over and
 21 over and over and over again, correct, sir?
 22 MR. PATTERSON: Objection, form.
 23 A. I tried to make them aware of, you know,
 24 within the context of PSM and the various elements
 25 of that where I didn't think we were.

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1 Q. (BY MR. BOND) Just like I tried to make
 2 them aware over and over again of the fact that you
 3 needed more people there to do y'all's job
 4 correctly, correct, sir?
 5 MR. PATTERSON: Objection to form.
 6 A. I felt we could do more with more people,
 7 yes.
 8 Q. (BY MR. BOND) But both those requests
 9 went essentially ignored?
 10 A. No, I don't agree with that. There had
 11 been changes and there had been changes that were
 12 in effect.
 13 Specifically in the area of
 14 mechanical integrity and inspections, concerns that
 15 I had raised as well as others, the inspection
 16 manager and people within the abatement department,
 17 there were changes that were being made. And there
 18 were quite a few successes in there.
 19 There was additional funding that
 20 was allocated to that. There were additional
 21 inspections. There were special focus or emphasis
 22 areas that, you know, identified issues and were
 23 able to rectify problems before they manifested
 24 themselves in a -- in a problem.
 25 Q. Are you aware that the budget was cut

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1 25 percent in 1999 for maintaining and operating
 2 the Texas City site?
 3 MR. PATTERSON: Objection, form.
 4 A. That's what I recall.
 5 Q. (BY MR. BOND) Okay. That's not exactly
 6 making a big push toward improving the facility, is
 7 it, sir?
 8 A. Well, I was not last -- the testimony was
 9 regarding, you know, in terms of raising the
 10 concern and voicing concerns that there were
 11 problems that were materializing and was there
 12 action taken by management, yes, there was. There
 13 was additional funding that was being put forward,
 14 additional manpower.
 15 But there were additional
 16 inspections and tests and maintenance activities
 17 taking place.
 18 Q. Again, I am going to go back to my
 19 question that I originally asked, sir, and ask that
 20 you answer my question. Okay?
 21 You know the 25 percent budget
 22 cut, correct, sir, in 1999?
 23 A. I recall that was a target that was put
 24 forward, yes.
 25 Q. All right. And you are also aware that

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1 that's not exactly pushing to getting that
 2 infrastructure properly maintained, correct, sir?
 3 A. I don't think it's accurate to say that a
 4 25 percent cut would negatively impact the
 5 infrastructure.
 6 Q. All right. Let's take -- say it's your
 7 house. Okay?
 8 A. Uh-huh.
 9 Q. And your house had termites. All right.
 10 100 percent of your house had termites and you only
 11 decided to treat 75 percent of the house. Okay?
 12 Is that really fixing the termite
 13 problem?
 14 A. In your example about termites, no.
 15 Q. Okay. If your house was -- and the fact
 16 is, you know, if you've got 100 percent of a
 17 problem and you are only making 75 percent effort
 18 to fix that problem, you are never going to be able
 19 to solve that problem, are you, sir?
 20 MR. PATTERSON: Objection, form.
 21 A. If you continue to only address
 22 75 percent of it.
 23 Q. (BY MR. BOND) Okay.
 24 A. But if at some point in the future you
 25 recognize that you have fallen behind and aren't

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1 addressing the 100 percent and put additional
 2 effort into it, then it is possible to catch up.
 3 Q. When did they recognize, in your opinion,
 4 that they did -- they were only putting 75 percent
 5 effort in fixing the problems at Texas City?
 6 MR. PATTERSON: Objection, form.
 7 A. I would say that probably began in about
 8 2001.
 9 Q. (BY MR. BOND) And they fixed it all
 10 then, right?
 11 A. No.
 12 Q. Okay.
 13 A. It's a process over time.
 14 Q. But the problems that could be caused by
 15 not putting enough money, not maintaining the
 16 plant, is something that can kill people any time,
 17 correct, sir?
 18 MR. PATTERSON: Objection, form.
 19 A. There are -- there are always potential
 20 hazards given the nature of refining.
 21 Q. (BY MR. BOND) I know there are potential
 22 hazards but they way --
 23 MR. PATTERSON: Let him finish his
 24 answer, please.
 25 Are you finished with your answer?

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1 THE WITNESS: No, I wasn't.
 2 MR. PATTERSON: Go ahead.
 3 MR. BOND: Please don't raise your
 4 voice, Mr. Patterson. I am not raising it to you.
 5 Q. (BY MR. BOND) Go ahead.
 6 A. Given the nature of the refining
 7 business, there are always potential hazards
 8 present and when you -- that is what process safety
 9 management is about, this protection program. So
 10 to keep those potential hazards in check.
 11 So if you don't remain vigilant
 12 across all of the 14 of those elements, then it's
 13 possible that one of those potential hazards could
 14 manifest itself in a catastrophic event.
 15 MR. BOND: I will object as
 16 nonresponsive.
 17 Q. (BY MR. BOND) When you say you thought
 18 that it went from 75 percent to 100 percent in
 19 2001, do you know if they increased their budget by
 20 25 percent or 50 percent or do you know about that?
 21 A. No, I don't know. No, I'm not a -- in
 22 terms of answering if they went from 75 percent to
 23 100 percent. I was simply stating that there was a
 24 recognition that there had been underfunding and
 25 that there was a need to once again increase

<p style="text-align: right;">Page 338</p> <p>1 funding, again, to address these concerns relative 2 to mechanical integrity. 3 Q. But, sir, you are -- again, if you say 4 you are only doing 75 percent and we have a 5 100 percent problem and so you increase the funds 6 to 80 percent, you are still not fixing the 7 problem, are you, sir? 8 MR. PATTERSON: Objection, form. 9 A. What I know is that there was a piping 10 integrity task force that was commissioned. It 11 identified a number of issues relative to the 12 maintenance of piping and vessels at the site and 13 that there was additional funding, approximately 14 \$10 million per year, to fix problems that were 15 identified by these inspection efforts. 16 Q. (BY MR. BOND) My question was, sir -- 17 MR. BOND: I will object to that 18 as nonresponsive. 19 Q. (BY MR. BOND) My question was, sir: If 20 you had a 100 percent problem and you only started, 21 I guess, putting 80 percent effort into trying to 22 fix that problem, that problem is never going to be 23 fixed, is it, sir? 24 MR. PATTERSON: Objection, form. 25 A. I guess I am going to disagree because</p>	<p style="text-align: right;">Page 340</p> <p>1 time, a million and a half budget on process safety 2 management? 3 A. Roughly, yes. 4 Q. What is it now? 5 A. I did not get involved with the budget 6 process for this year. So I am not sure what it 7 is. 8 But roughly, with the additional 9 personnel, it's probably in the order of 2 and a 10 half million. Again, the PSM budget primarily is 11 made up of salaries and benefits. 12 Q. So you increased about 75 percent, 13 roughly? 14 I am not good at math. 15 A. Roughly. 16 Q. Are you responsible at all for operator 17 training or anything like that, sir? 18 A. Not directly responsible for the operator 19 training, no. 20 Q. How does process -- tell me if it does. 21 Process safety management, how 22 does it fit with the workers working overtime or 23 being overworked? Is there any kind of interplay 24 between those two? 25 A. There is no direct interplay. Certainly,</p>
<p style="text-align: right;">Page 339</p> <p>1 there is the possibility for efficiencies, improved 2 techniques, just generally better ways of 3 addressing problems that may not require as much 4 funding. So it's possible to resolve the problem 5 without spending 100 percent of the money, so to 6 speak. 7 Q. (BY MR. BOND) Okay. Did they ever solve 8 100 percent of the problem, in your opinion, prior 9 to March 23rd of 2005? 10 MR. PATTERSON: Objection to form. 11 A. We were still addressing problems. 12 Q. (BY MR. BOND) So the answer is, no, they 13 did not address 100 percent of the problems on 14 March 23 -- up to March 23rd, 2005, correct, sir? 15 MR. PATTERSON: Objection, form. 16 A. There were still areas of concern. So, 17 no, we had not solved every known problem. 18 Q. (BY MR. BOND) And, of course, that's 19 under BP management's control, correct, whether 20 there will be enough funds to fix the problem, 21 correct, sir -- and enough people and enough 22 effort, correct? 23 A. That's a business function, yes. 24 Q. Okay. Did you ever work with that? I 25 know you had -- you had, I think you told us last</p>	<p style="text-align: right;">Page 341</p> <p>1 you know, fatigue is a potential hazard. And so 2 that might be a concern of the various hazard 3 review teams. 4 Q. Has your group ever looked at that? 5 A. I have looked into that issue a little 6 bit, yes. 7 Q. Okay. And tell me what y'all have 8 discovered about that issue. 9 A. Most of my inquiry so far, just generally 10 the subject of fatigue and a recognition that when 11 people are tired they are more susceptible to 12 errors is something that we at the Texas City site 13 should be concerned with. 14 I have done a little bit of 15 research on the Internet in looking at a couple of 16 other industries countries, primarily with the 17 United Kingdom. They have a specific regulation. 18 I believe it's called the Working Time Directive. 19 That deals with the issue of working hours, number 20 of overtime hours in a day or in a week, mandatory 21 rest periods, that sort of thing. 22 And I have made an initial 23 proposal that we consider adopting something that 24 would make sense for the Texas City site. 25 Q. Did you do that before or after</p>

<p style="text-align: right;">Page 342</p> <p>1 March 23rd, 2005? 2 A. Before. 3 Q. When before? 4 A. I probably first broached the subject in, 5 I would say, about 2000. 6 Q. Okay. Did management decide to implement 7 your request? 8 A. It never went as far as a formal proposal 9 or formal policy. It was more of a topic that I 10 thought we should take up, and it did not get 11 advanced. 12 Q. Kind of like my date analogy again, where 13 they just kind of walked away; or did they actually 14 tell you no on this one? 15 A. No, it just didn't -- and I, in terms of 16 my role as process safety manager, it didn't rise 17 to the top of my list either. 18 Q. That's not my question. 19 My question was: Did they 20 actually say, "No, we are not discussing it. We 21 are not doing it," or did they basically just not 22 do anything, just kind of ignored it? 23 A. I would say, again, there was just no 24 action. There was not a definitive, no. 25 Q. Turned around and walked away?</p>	<p style="text-align: right;">Page 344</p> <p>1 embedded within other forms of training. 2 Q. All right. Did you -- like you did with 3 the fatigue, did you ever bring it up as a topic to 4 management? 5 A. Training on PSM? 6 Q. No, not training on PSM but the training 7 on operator training, anything like that? 8 MR. PATTERSON: Objection, form. 9 A. One of the concerns that I had raised was 10 relative to completion of training. You know, 11 what -- the training that had been defined, was it 12 being completed at the designated schedule or not. 13 Q. (BY MR. BOND) All right. Did anybody do 14 that? Did you make any recommendations to 15 management with regard to training? 16 MR. PATTERSON: Objection, form. 17 A. Effectively, you know, I would be hard 18 pressed to find some document that was real 19 explicit on this. But in terms of a performance 20 measure that was monitoring was the training being 21 completed per the defined schedule or not, that 22 information I made available to management with 23 somewhat the implicit recommendation that we follow 24 the rules that we had set out regarding training. 25 Q. (BY MR. BOND) How about computer based</p>
<p style="text-align: right;">Page 343</p> <p>1 A. Did not say yes, did not take any action. 2 Q. All right. I guess hope springs eternal, 3 right? All right. So, no action was taken. 4 And, of course, it's not -- it's 5 pretty common sense what fatigue will have on an 6 individual person, correct, sir? 7 A. I am aware of just generally how I react 8 when I get tired. And I am also aware from what 9 research I have been able to do that, yeah, when 10 people get tired, their reactions are slower, the 11 possibility to make poor decisions. 12 Q. And, of course, that's a known recognized 13 hazard in process safety management, correct, sir? 14 A. I don't recall in PSM, you know, 15 specifically the topic of fatigue. But I think, 16 yes, general awareness that, you know, operator 17 attention, being vigilant to your duties, is 18 important in terms of operating the facility. 19 Q. How about training and interplay with 20 process safety management? Do you have any 21 involvement in that, sir? 22 A. Yes, in terms of either conducting the 23 training or providing general resources on the 24 general subject of process safety management or 25 having process safety management principles be</p>	<p style="text-align: right;">Page 345</p> <p>1 training versus, I guess, live interactive 2 training? Did you make any recommendations with 3 that to management, with regard to that? 4 A. I have had conversations with our 5 learning and development manager, training manager, 6 as to whether or not we had an appropriate balance 7 between computer based training, classroom based 8 training, laboratory exercise, hands-on type 9 exercise training and that possibly we were skewed 10 towards computer based training. 11 Q. Well, "skewed" is kind of putting it 12 kindly. 13 Y'all had -- almost 100 percent of 14 your training was computer based, wasn't it, sir? 15 A. I think there was at least one year where 16 that was pretty true. 17 Q. Okay. So that's more than just a little 18 skewed, right? 19 A. Right. 20 Q. And you made that concern known to 21 management, correct, sir? 22 A. The most explicit conversations I had was 23 with the training manager. 24 Q. The fact is computer based training, for 25 one reason or another, just doesn't seem to work as</p>

<p style="text-align: right;">Page 346</p> <p>1 well as live interactive training, correct, sir? 2 MR. PATTERSON: Objection, form. 3 A. I personally believe it has its place for 4 certain types of training for certain individuals. 5 But then there are other individuals, based on 6 their learning styles or the nature of the 7 material, that are better presented in a classroom 8 forum or in a hands-on type forum. 9 Q. (BY MR. BOND) When did you make your 10 observations known to management? 11 A. I probably don't recall exactly when we 12 went to the computer based training. But in terms 13 of general concerns that were being presented to me 14 from the hourly workers or my involvement with the 15 joint health and safety committee, quite awhile. 16 Q. All right. And did they make any changes 17 based on your recommendations, or did they just 18 turn and walk away? 19 A. We have made changes. 20 Q. I know you have now. 21 But I am talking about prior to 22 March 23rd, 2005, did they make any changes based 23 on your recommendations? 24 MR. PATTERSON: Objection, form. 25 A. I think in the years 2003, 2004 and into</p>	<p style="text-align: right;">Page 348</p> <p>1 to just computer based training, correct, sir, more 2 of a balance? 3 A. Yes, a balance. 4 Q. Okay. But it's fair to say that your 5 request essentially had no impact because 6 basically, prior to March 23rd, 2005, at the Texas 7 City refinery site, computer based training was 8 still heavily skewed, correct, sir? 9 MR. PATTERSON: Objection, form. 10 A. There was still a lot of it in terms of 11 more precise numbers about how much training was 12 conducted in the classroom versus computer based 13 training, the training manager would better be able 14 to answer that. 15 Q. (BY MR. BOND) Do you know of any 16 interactive training in 2004, 2005? 17 MR. PATTERSON: Objection, form. 18 A. Again, I don't know which cycle we were 19 on. But in 2003 or 2004 -- 2005, obviously, was a 20 very bad year for us -- one of those days should 21 have had a couple of days' worth of classroom based 22 training for general safety training. 23 Q. (BY MR. BOND) My question to you, sir, 24 was: Do you know of any interactive training in 25 2003, 2004 or 2005?</p>
<p style="text-align: right;">Page 347</p> <p>1 2005, I think we were still predominantly computer 2 based trained. 3 Q. (BY MR. BOND) So the answer to my 4 question is basically they turned and walked away? 5 MR. PATTERSON: Objection, form. 6 A. We had not achieved a different balance 7 of training. 8 Q. (BY MR. BOND) It wasn't any explicit no. 9 They just kind of ignored your request? 10 MR. PATTERSON: Objection, form. 11 A. Well, I recall that there were 12 conversations and in terms of the budgeting 13 process, discussions about allocating funds that 14 would allow the classroom based training to take 15 place. So there were planning efforts that were 16 being made. 17 There had been an adoption 18 relative to general safety training that in every 19 other year cycle that there would be a two-day 20 classroom based training. 21 Q. (BY MR. BOND) Let me kind of focus on 22 it. 23 Prior to March 23, 2005, your 24 request -- because your basic request was that 25 there be more live interactive training as opposed</p>	<p style="text-align: right;">Page 349</p> <p>1 MR. PATTERSON: Objection, form. 2 A. I don't recall the details, but I believe 3 there was some classroom based training -- 4 Q. (BY MR. BOND) When? 5 A. -- one of those years. 6 Q. When? 7 MR. PATTERSON: Objection, form. 8 A. Again, my recollection may be faulty. 9 But I believe in 2003. 10 Q. (BY MR. BOND) So 2004 was completely 11 computer based training? 12 MR. PATTERSON: Objection, form. 13 A. Again, the L&D manager would be better to 14 answer that but... 15 Q. (BY MR. BOND) I know, but I am talking 16 to the process safety manager. 17 MR. PATTERSON: Objection, form. 18 Q. (BY MR. BOND) And I just want to know 19 how that interfaced because training is important. 20 And improper training or a lack of 21 training can also lead to hazards with process 22 safety management, correct, sir? 23 MR. PATTERSON: Object to sidebar 24 and object to form. 25 A. Training is an important element of</p>

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1 process safety management.
 2 Q. (BY MR. BOND) Are there any
 3 recommendations that stick out in your mind that
 4 you made to management prior to March 23rd, 2005,
 5 that they didn't implement prior to March 23rd,
 6 2005, that they have implemented afterwards?
 7 A. I can't think of a specific or explicit
 8 one, but I would say in general across the full
 9 range of recommendations there's been a lot more
 10 activity on all of those.
 11 Q. Tell me generally what you are talking
 12 about.
 13 A. One of the things I pointed out in my
 14 last deposition was the timely resolution of action
 15 items. And those action items could come from
 16 multiple sources, from HAZOP reviews or incident
 17 investigations or PSM audits, that sort of thing.
 18 There has been greater focus and emphasis and
 19 resources allocated to resolve open action items.
 20 In the area of management of
 21 change, there has been focus and attention to
 22 making sure those MOCs are completed properly prior
 23 to commissioning the change.
 24 Within the area of mechanical
 25 integrity and the various subparts of that, in

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1 terms of inspection and testing, there has been
 2 additional improvement in that area.
 3 Within the area of training, there
 4 is renewed focus. Additional training is being
 5 conducted. Some of it's general three-year cycle
 6 of refresher training. There may be -- there has
 7 been some additional special topics that people
 8 have been trained on.
 9 Certainly there has been additions
 10 to our emergency response to our approach to
 11 personnel on site. We call them gun drills or
 12 emergency drills or training exercises. There's
 13 been renewed emphasis on doing those at each one of
 14 the process units.
 15 Q. How about simulators?
 16 A. There has been no increased use of
 17 simulators. There is a project that is progressing
 18 that is intended to make in-depth use of simulators
 19 for board operator training.
 20 MR. BOND: All right. Well, I am
 21 going to go ahead and pass the witness now, since
 22 we are almost near the end of the tape, and let
 23 Mr. Coon take over.
 24 THE VIDEOGRAPHER: Off the record
 25 at 9:59.

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1 (Recess taken.)
 2 THE VIDEOGRAPHER: Back on the
 3 record at 10:11.
 4 (Exhibit Number 710 marked for
 5 identification.)
 6 * * *
 7 EXAMINATION
 8 Q. (BY MR. COON) Are you ready to proceed,
 9 Mr. Ralph?
 10 A. I am.
 11 Q. My name is Brent Coon. I had the
 12 opportunity to meet you informally before the
 13 deposition. And I am the court appointed liaison
 14 counsel for the steering committee on this
 15 March 23rd explosion. And I also represent a
 16 number of individual plaintiffs, including the
 17 Rowes, the husband and wife that were killed.
 18 Did you know any of the
 19 individuals that were killed in the trailer
 20 explosion?
 21 A. No, I did not.
 22 Q. Mr. Ralph, I have in front of you there
 23 what is marked as Exhibit 710. That is the
 24 deposition notice for your appearance today and the
 25 subpoena duces tecum for the production of certain

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1 documents.
 2 Have you had an opportunity to
 3 review that before your testimony today?
 4 A. This is the first time I have seen this
 5 document.
 6 Q. Okay. Well, you are here. So I assume
 7 that at least somebody told you to be here. So we
 8 appreciate that.
 9 But if you look at the second and
 10 third pages, there was a request to bring certain
 11 documents or have them produced to your counsel.
 12 When I say "your counsel," I am talking about BP's
 13 counsel. Okay?
 14 So after you look at that, let me
 15 ask you a few questions. One, have you made an
 16 effort before testifying here today, even going
 17 back to your earlier deposition, to procure
 18 documents at the request of BP, management or
 19 counsel?
 20 A. I have had the opportunity to produce a
 21 number of documents related to this incident. I
 22 would need a moment to look at this list.
 23 Q. Okay.
 24 A. Because, again, I haven't -- this is the
 25 first time I am seeing this list.

<p style="text-align: right;">Page 354</p> <p>1 Q. Fair enough. And I don't know why it was 2 you weren't provided with that before; but it's 3 important for us to know that all the documents 4 that you are aware of have been produced in this 5 litigation, unless there is some privilege 6 attached. 7 So please look at that, and let me 8 ask you some follow-up questions. 9 A. To the best of my knowledge, all of these 10 documents have been collected; but I'd have to 11 defer to counsel as to whether or not they have 12 been produced. 13 Q. Okay. Fair enough. 14 Then, based on your review of the 15 subpoena there, to the best of your knowledge, all 16 the documents that you are aware of have been at 17 least provided to counsel for BP? 18 A. Yes, sir. 19 Q. And, sir, what documents have you 20 reviewed -- and by "documents," I am talking about 21 statements, studies, reports, e-mails, et cetera. 22 What have you reviewed before 23 testifying today? 24 A. For -- in preparation for this -- 25 Q. Yes, sir.</p>	<p style="text-align: right;">Page 356</p> <p>1 A. I have. 2 Q. Have you elected not to do so? 3 A. I have not chosen that option. 4 Q. Any other documents that you have 5 reviewed before your testimony today? 6 A. I reviewed our Texas City policy on 7 action item resolution; and I reviewed the -- in 8 other words, the December, 2002, ISOM runaway 9 reaction -- runaway reaction or thermal excursion 10 incident investigation report. And I -- and I 11 thumbed through my prior testimony the last time in 12 this incident. 13 Q. Being your deposition given a couple of 14 months back here? 15 A. Yes. 16 Q. At Fulbright Tower? 17 A. Yes. 18 Q. Anything else you recall? 19 A. That's it. 20 Q. What was it that was germane to your 21 testimony that caused you to go back and review 22 this 2002 thermal runaway incident? 23 A. I believe answering that would reveal an 24 attorney/client discussion. 25 Q. Was this something that you were asked to</p>
<p style="text-align: right;">Page 355</p> <p>1 A. -- deposition? 2 I reviewed my deposition to OSHA 3 relative to this incident. I very briefly looked 4 at the BP internal investigation report. 5 Q. That being the final fatal report of 6 December, 2005? 7 A. Yes, sir. 8 Q. And you said the OSHA statement. Was 9 that the one that was given in July of 2005? 10 A. Yes. 11 Q. And at that deposition given to OSHA, you 12 had counsel present, didn't you, personal counsel? 13 A. I think, technically, he represented the 14 company. But yes, I was represented by counsel. 15 Q. Okay. I remember there was a Mr. Wilson 16 there. 17 A. Yes, Tom Wilson of Vinson & Elkins. 18 Q. Was that someone that was there at your 19 request? 20 A. I think it's probably better 21 characterized that he was there at the request of 22 BP. 23 Q. Okay. Have you been advised that you 24 have the right to retain personal counsel in this 25 matter?</p>	<p style="text-align: right;">Page 357</p> <p>1 review? 2 A. No. 3 Q. Was this something that you were aware 4 had existed prior to the explosion of March 23, 5 2005? 6 A. Yes. 7 Q. Can you tell me about it, please, sir? 8 MR. PATTERSON: Objection, form. 9 A. Again, if I am remembering the dates 10 correctly, in the fourth quarter of 2002, there was 11 an event at the ISOM in which the operators 12 improperly bypassed the reactors. And there was a 13 localized thermal excursion. 14 There was an incident 15 investigation as a result of that. I was provided 16 a copy of that incident investigation at the time. 17 In my role as process safety 18 manager, I, then, reviewed that incident at the 19 process safety committee, the next process safety 20 committee meeting. 21 Q. Who conducted the investigation into that 22 thermal excursion? 23 A. Matt Kern. 24 Q. Was there a concern for a potential 25 explosion as a result of that thermal excursion?</p>

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1 MR. PATTERSON: Objection, form.
 2 A. The concern with the thermal excursion is
 3 possibly the vessel could be compromised, which
 4 could potentially lead to a release which could
 5 potentially result in a fire or an explosion.
 6 Q. (BY MR. COON) Which vessel are we
 7 talking about?
 8 A. I believe it was the D-301 reactor.
 9 Q. What, if anything, was done to reduce the
 10 likelihood of recurrence?
 11 A. There were a number of items identified
 12 by the investigation team. There was some specific
 13 inspections that were done on that vessel, as well
 14 as its similar vessel, to make sure that the
 15 integrity from the event was still sound.
 16 As I recall, there were action
 17 items regarding some additional training for the
 18 operators. There were some actions regarding the
 19 laboratory and analysis they do on the feed stream
 20 to the ISOM unit.
 21 Q. I take it all of these at issue -- these
 22 issues would have been memorialized and documented
 23 in some manner?
 24 A. Yes.
 25 Q. Is there a specific title to the file

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1 that would be relevant to this particular incident?
 2 A. Well, the incident investigation report
 3 itself.
 4 Q. And if we were to ask for it, what would
 5 we ask for?
 6 A. I would ask for the D-301 thermal
 7 excursion incident investigation report, roughly,
 8 fourth quarter of 2002.
 9 Q. Mr. Ralph, with respect to the ISOM unit,
 10 what do you know with respect to its prior history
 11 of upsets?
 12 A. I have no personal knowledge.
 13 Q. Okay. You saw the interim CSB findings
 14 that were announced in October of 2005, have you
 15 not?
 16 A. Yes.
 17 Q. And you have also seen the fatal report?
 18 A. Yes.
 19 Q. Both of those reflect a history of upsets
 20 at the ISOM unit. Are you familiar with that?
 21 MR. PATTERSON: Objection to form.
 22 A. I believe both indicated that there had
 23 been prior upsets.
 24 Q. (BY MR. COON) And within those upsets
 25 included a prior history where there had been vapor

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1 releases through the blowdown drum and vent stack
 2 that had resulted in ground level measurements of
 3 vapor, correct? I think there were at least four
 4 of them, four vapor clouds at ground level emitting
 5 from the blowdown drum.
 6 A. I don't recall the number that may have
 7 resulted in ground level. I recall the number of
 8 19 prior incidents that had resulted in a vapor
 9 release to the blowdown drum.
 10 Q. Do you recall a fire on the ISOM unit at
 11 the blowdown drum around 2000 where vapors ignited,
 12 having emitted from a vent stack?
 13 A. I don't recall that.
 14 Q. Do you recall any history of prior fires
 15 on the ISOM unit?
 16 A. I believe there was one fire from a
 17 bleeder that had been left open that was quickly
 18 extinguished by the operators on duty.
 19 Q. Would it be fair to say it would be a
 20 task of your memory to sit here today and recall
 21 all of the fires that have occurred out at the BP
 22 Texas City facility over the last 20 years,
 23 wouldn't it?
 24 A. It would.
 25 MR. PATTERSON: Objection, form.

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1 Q. (BY MR. COON) And the reason for that is
 2 because there's been hundreds of fires out at that
 3 plant over the last 20 years. Fair statement?
 4 A. I don't know the number. But yes, there
 5 has been a number of fires.
 6 Q. Do you know Mr. McLemore?
 7 A. I do. Mr. McLemore is the fire chief.
 8 Q. Do you know he testified to a history of
 9 50 to 100 fires a year out at that plant for a
 10 number of years?
 11 A. I don't know what he testified to.
 12 Q. And if he testified to that number, would
 13 that be shocking to you?
 14 A. That seems to me to be the reasonable
 15 number.
 16 Q. Okay. And I think you and I would agree
 17 with this.
 18 You are not supposed to have fires
 19 out at the refinery, are you, sir?
 20 MR. PATTERSON: Objection, form.
 21 A. Fires are not the desired result.
 22 Q. (BY MR. COON) And one fire at a refinery
 23 where you have combustible hydrocarbons is one fire
 24 too many, is it not?
 25 A. I would agree.

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1 Q. Do you know anything at the ISOM unit
 2 with respect to the fire that occurred there in
 3 1986?
 4 A. I don't recall that incident.
 5 Q. Do you know about the one that happened
 6 in 1987?
 7 A. I don't recall that.
 8 Q. Do you know about the one that happened
 9 in 1988?
 10 A. No, no recollection.
 11 Q. Do you know about the one that happened
 12 in 1999 that resulted in a venting out of the F-20?
 13 A. No, I don't recall that.
 14 Q. Do you know anything about the long
 15 history of problems associated with the startups of
 16 the ISOM unit?
 17 A. I am not sure what you mean by "problems"
 18 or "long history," but I don't have any personal
 19 knowledge of prior startups at the ISOM unit.
 20 Q. Okay. Do you recall in the fatal report
 21 and the CSB report a reflection that in the last
 22 five years that there had been about 16 startups
 23 and the majority of those had problems associated
 24 with them?
 25 MR. PATTERSON: Objection, form.

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1 Q. (BY MR. COON) Abnormalities?
 2 A. My recollection of both the CSB and the
 3 BP internal investigation report, that they had
 4 noted on prior startups that there had been
 5 deviations of one form or another from the startup
 6 procedure.
 7 Q. Do you recall that the -- that the
 8 majority of those prior startups resulted in some
 9 excess pressure levels?
 10 A. I recall that they had mentioned that
 11 there had been other times when the pressure had
 12 risen above the desired pressure.
 13 Q. And excess pressure poses the potential
 14 risk of causing the relief valves to open and emit
 15 vapors and/or liquids into the blowdown drum,
 16 correct?
 17 A. The relief valves are designed to relieve
 18 excess pressure and, specifically, related to the
 19 ISOM unit, would then release those vapors to the
 20 blowdown drum.
 21 Q. And you are aware that that had occurred
 22 on a number of prior occasions?
 23 A. What I am aware of is that the
 24 investigation report indicated that had occurred
 25 previously.

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1 Q. Is there a master repository where
 2 information of that nature is tracked and run to
 3 the head of PSM, where you can go back and look to
 4 see where, if anywhere, at the plant you are having
 5 problems of that nature so that you can implement
 6 necessary safeguards to reduce the likelihood of a
 7 recurrence?
 8 A. There are a number of sources that would
 9 provide information to a hazard review team or an
 10 incident investigation team relative to any
 11 releases, certainly investigation file reports
 12 themselves relative to minor releases that may have
 13 violated or may have exceeded environmental
 14 reporting requirements. Those would be documented
 15 in our environmental reporting system.
 16 Q. Okay. And with you being head of PSM at
 17 Texas City, how were you made aware of those type
 18 of problems?
 19 A. The -- I mean, if it is a major event,
 20 being an individual at the refinery, I am aware of
 21 those. Relative to events that may be of a more
 22 minor nature, I wouldn't necessarily be directly
 23 involved or notified of those.
 24 Relative to how we conduct process
 25 safety management, people from the unit

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1 knowledgeable in that process participate in the
 2 HAZOP studies or the PHA studies; and they would
 3 bring that information to the attention of the PSM
 4 department in the context of doing those hazard
 5 reviews.
 6 Q. Well, Mr. Ralph, in your role as head of
 7 process safety at Texas City, you would agree that
 8 Rule Number 1 with respect to process safety
 9 management is to keep the hydrocarbons contained
 10 within the system?
 11 A. I agree.
 12 Q. And that's because, if it gets out of the
 13 system, it poses a risk of fire?
 14 A. Yes.
 15 Q. And it creates environmental headaches;
 16 and it can pollute the atmosphere, pollute the
 17 water and pose a risk to the neighborhood as well?
 18 A. Those are all possible consequences.
 19 Q. And so part of your job is to make sure
 20 that the units are maintained well enough and
 21 inspected well enough so that that does not happen?
 22 A. My role as the process safety manager is,
 23 one, to understand how those various aspects fit
 24 into the overall PSM program and to help establish
 25 the programs and processes to address those issues.

<p style="text-align: right;">Page 366</p> <p>1 Now, specifically, when it comes 2 to maintaining the equipment or operating the 3 equipment or training the people that operate the 4 equipment, those roles and responsibilities belong 5 to others at the site. 6 Q. Well, and that's part of my job in this 7 case, sir, is to go out and understand who was 8 responsible for what out there. I mean, we know 9 that we had a horrible accident on March 23rd, and 10 we know from the investigation that we have done 11 and that has been done by BP and that has been done 12 by OSHA and CSB and others indicate that there were 13 a lot of problems out there. And it's our 14 responsibility to understand who was responsible 15 for allowing those problems to exist. 16 Do you understand that? 17 A. Yes. 18 MR. PATTERSON: Object to sidebar, 19 and object to form. 20 Q. (BY MR. COON) And in that regard, I need 21 to understand what you knew about all these 22 problems that existed out there and what you did in 23 response to it and which ones you accepted 24 responsibility for and which ones you would blame 25 others for that you had your hands tied, so that's</p>	<p style="text-align: right;">Page 368</p> <p>1 Q. (BY MR. COON) And having fires all over 2 the plant is an indicator of process safety 3 management deficiencies, is it not? 4 MR. PATTERSON: Objection to form. 5 A. In the broadest context that process 6 safety management is intended to maintain the 7 hydrocarbons inside the pipes and vessels and that 8 a fire is indicative that material has been 9 released and ignited them, yes. 10 Q. (BY MR. COON) And to reduce the 11 likelihood of bad events at Texas City, you want to 12 have competent staff and competent supervision, do 13 you not? 14 A. That would be a portion of a sound 15 process safety management program. 16 Q. And that includes good training and 17 retraining of people, both at the staffing level 18 and supervisor level, does it not? 19 A. That is one of the elements of PSM is to 20 conduct initial training and refresher training of 21 personnel that operate the plant. 22 Q. And it also includes the responsibility 23 for keeping the units in good operating condition, 24 doesn't it? 25 A. There is an element surrounding the</p>
<p style="text-align: right;">Page 367</p> <p>1 the kind of questions that I am going to ask you 2 today, so that you understand where I am coming 3 from. Okay? 4 MR. PATTERSON: Object to sidebar. 5 Object to form. 6 Q. (BY MR. COON) Fair enough? 7 A. Okay. 8 Q. All right. Now, we do know there were a 9 lot of problems at that plant. We do know that 10 there was deferred maintenance. 11 Those compromise process safety 12 management principles, do they not? 13 A. You made a very general observation about 14 deferred maintenance. You know, we can talk 15 specifics relative to the ISOM; or we can talk in 16 general. 17 Q. Let's talk general first, and then we 18 will narrow it down. 19 You would agree with the principle 20 that deferring maintenance compromises process 21 safety management principles? 22 MR. PATTERSON: Objection, form. 23 A. I would agree that deferring maintenance 24 over a long period of time would compromise process 25 safety.</p>	<p style="text-align: right;">Page 369</p> <p>1 mechanical integrity of the facility, which goes to 2 inspection and testing, of maintenance, 3 construction standards, those sorts of things, yes. 4 Q. And it also includes the responsibility 5 for making sure that all the personnel at that 6 facility closely adhere to the policies and 7 procedures that are set in place? 8 A. The point of having policies and 9 procedures is that you have the opportunity to 10 think through scenarios. And those policies and 11 procedures are one of the preventive measures. 12 And so compliance with those is, 13 again, following through and would be part of the 14 overall process safety management program. 15 Q. Sure. And deviations from established 16 policies and procedures can increase the risk of an 17 event, a bad event? 18 MR. PATTERSON: Objection, form. 19 A. If those deviations are not properly 20 reviewed for potential consequences and anything 21 that may have been identified by a review of that 22 deviation addressed, then I would agree that could 23 increase the potential for an incident. 24 Q. (BY MR. COON) And you would agree that, 25 with respect to process safety management, it's</p>

<p style="text-align: right;">Page 370</p> <p>1 important for a refinery to stay up with technology 2 and changes in technology? 3 MR. PATTERSON: Objection, form. 4 A. I am not sure I would agree with that in 5 its entirety. Certainly improvements in technology 6 could help you execute the fundamentals of process 7 safety management better or more efficiently. 8 If we look specifically at 9 inspection of piping and vessels, you know, there 10 have been improvements in technology that allow the 11 inspectors to do a better job of inspecting lines 12 in vessels. 13 Q. (BY MR. COON) Well, there has been 14 improvement in technology in refining generally as 15 well, with respect to design? 16 A. I would agree. 17 Q. And that's one of the things that you 18 have in the March 23rd event, is that you have 19 antiquated equipment that was still being utilized 20 there, specifically a blowdown drum that relieves 21 to atmosphere in lieu of a flare, which is a 22 commonly accepted method of disposing of upsets or 23 vapor releases? 24 MR. PATTERSON: Objection, form. 25 A. My recollection of the API document, it</p>	<p style="text-align: right;">Page 372</p> <p>1 lighter than air, they dissipate up into the 2 atmosphere, right? 3 A. Okay. I missed your question. I am 4 sorry. 5 Q. Okay. Well, basically it's the laws of 6 physics. 7 If you have vapor emissions that 8 are lighter than air, they continue to rise up into 9 the atmosphere and dissipate? 10 A. That's correct. 11 Q. If you are operating a blowdown drum 12 that's connected to processes that utilize heavier 13 than air hydrocarbons, if they come out the top of 14 the vent stack, there is a tendency for them to 15 come down back to the ground and form a vapor 16 cloud, correct? 17 MR. PATTERSON: Objection, form. 18 A. Heavier than air vapors will settle back 19 down. But again, part of the design basis of 20 blowdown stacks or relief valves that discharge to 21 atmosphere is the height and velocity at which they 22 are discharged such that even the heavier than air 23 materials could be diffused and disbursed such that 24 they didn't pose a hazard once they returned to 25 ground level.</p>
<p style="text-align: right;">Page 371</p> <p>1 still references blowdown stacks as an acceptable 2 means of disposing of vapor materials. 3 Q. (BY MR. COON) Well, there is an inherent 4 problem with the blowdown drum for disposing 5 materials, though, isn't there, sir? 6 MR. PATTERSON: Objection, form. 7 A. The fact that hydrocarbons are released 8 to the atmosphere, you know, the blowdown drum, its 9 design intent is for those vapors to be released 10 harmlessly to the atmosphere from a safety 11 perspective, recognize that that may have 12 environmental consequences that might be governed 13 by other rules and regulations. 14 Q. (BY MR. COON) Well, there are a number 15 of factors associated with blowdown drums. For 16 starters, it depends on what kind of hydrocarbons 17 are being emitted out of the blowdown drum; that 18 is, those that are heavier than air versus those 19 that are lighter than air? 20 A. Yeah, there is a design basis for a 21 blowdown drum as there -- as there is a design 22 basis for other pieces of process equipment. 23 Q. Sure. So if you have upsets that result 24 in vapors releasing out of the vent stack, if they 25 are the type of vapors from hydrocarbons that are</p>	<p style="text-align: right;">Page 373</p> <p>1 Q. (BY MR. COON) And you also had the 2 recognition if you have an open containment system, 3 like a blowdown drum to the vent stack, that if 4 there are liquids that come out, as well as vapors, 5 that they will end up back on the ground where the 6 blowdown drum and vent stack are located? 7 A. It would depend on the volume of liquid 8 material. Typically blowdown stacks are designed 9 for small amounts of entrained liquid to be knocked 10 out and collected in the blowdown stack itself and 11 not be emitted from the stack. 12 Q. All right. And you know the history of 13 the blowdown drum and the stack that were utilized 14 at the ISOM unit? 15 A. Only what I am aware of from the 16 investigation report. 17 Q. Are you aware that the blowdown drum was 18 attached to equipment that was designed back in the 19 1940s or 1950s? 20 A. I believe it was the '50s, yes. 21 Q. Do you know why they would have built a 22 new unit in 1984 and attached it to a blowdown drum 23 that was designed 30 or 40 years prior and for 24 other uses? 25 MR. PATTERSON: Objection, form.</p>

<p style="text-align: right;">Page 374</p> <p>1 A. In the mid '80s, the original unit, the 2 reforming unit, was converted to the ISOM process. 3 And there was a reuse of existing equipment, is my 4 understanding. 5 Q. (BY MR. COON) When did you first learn 6 about Process Safety Standard Number 6? 7 A. I would definitely have known about it 8 when I assumed the role as process safety manager 9 in 1994. I am trying to recall if I knew of it 10 prior to that based on my operating roles. 11 Q. And Mr. Ralph, what, if anything, was 12 done consistent with process safety management -- 13 Process Safety Standard Number 6 and your knowledge 14 of it to apply its requirements to the phasing out 15 of blowdown drums at the Texas City facility over 16 the next decade? 17 MR. PATTERSON: Objection, form. 18 A. My understanding of Process Safety 19 Standard Number 6, there is no mandate within that 20 to phase out blowdown drums. 21 Q. (BY MR. COON) Have you read that 22 statement lately? 23 A. Yes. 24 Q. You don't recall it saying anything about 25 getting rid of blowdown drums?</p>	<p style="text-align: right;">Page 376</p> <p>1 A. Only by title. I was not involved with 2 that project. 3 Q. Are you aware that there was design 4 considerations to run the ISOM unit to a flare at 5 that time? 6 MR. PATTERSON: Objection, form. 7 A. I am not aware of that. 8 Q. (BY MR. COON) You don't know anything 9 about the history of that project being killed by 10 Mr. Hale? 11 MR. PATTERSON: Objection, form. 12 A. No, I don't. 13 Q. (BY MR. COON) Do you know anything about 14 outside consultants recommending that the ISOM be 15 run to a flare for safety considerations at that 16 time? 17 MR. PATTERSON: Objection, form. 18 A. I am not aware of that. 19 Q. (BY MR. COON) Are you aware of the OSHA 20 citation in 1992 that was associated to a vapor 21 cloud at ground level from another vent stack 22 blowdown drum out at the Texas City facility? 23 A. I am aware of a citation in that time 24 frame. I don't recall it being linked to a release 25 from a blowdown stack.</p>
<p style="text-align: right;">Page 375</p> <p>1 A. There is a statement in there that there 2 should be no new blowdown drums. There is a 3 statement in there, you know -- and this will be a 4 little bit of a paraphrase -- but basically that if 5 there are new or modified facilities and I don't 6 recall if the term "significantly" is included in 7 that statement or not, but that consideration 8 should be given to eliminating existing blowdown 9 stacks. 10 Q. Okay. Well, you knew that the entire 11 blowdown drum and vent stack was replaced in 1997 12 with an identical system? 13 A. My understanding was it was replaced in 14 kind, yes. 15 Q. Did you have anything to do with that? 16 A. No, I did not. 17 Q. Have you come to learn that there was a 18 budgetary reason why they replaced that blowdown 19 drum with another one instead of running it down to 20 a flare then? 21 MR. PATTERSON: Objection to form. 22 A. I am not aware of what the reason was for 23 replacement in kind. 24 Q. (BY MR. COON) Are you aware of the Clean 25 Streams project in 2002?</p>	<p style="text-align: right;">Page 377</p> <p>1 Q. Prior to this explosion in March of 2005, 2 Mr. Ralph, what did you know with respect to the 3 possibility of vapor clouds forming at ground level 4 or from liquid overfills from any of the systems 5 out there posing a fire hazard at Texas City? 6 A. I was aware of the general potential. 7 When you have relief systems, so relief valves that 8 discharge to atmosphere, there is a process safety 9 standard regarding that and what discharge 10 velocities should be so that the material would be 11 disbursed and if it was heavier than air and it was 12 to return to grade, that it would not pose a 13 hazard. 14 That same principle would apply to 15 atmospheric relief discharges, blowdown stacks, 16 generally, where principles regarding flare systems 17 and the need for knockout drums for liquid because, 18 again, flares are designed to burn vapors, not to 19 receive large quantities of liquid release. 20 Q. But it does happen, doesn't it? 21 MR. PATTERSON: Objection, form. 22 A. What happens? 23 Q. (BY MR. COON) You do get liquids coming 24 through the system and emitting from blowdown drums 25 or flares? It happens, doesn't it?</p>

<p style="text-align: right;">Page 378</p> <p>1 A. There are situations where liquids could 2 be discharged to a flare or blowdown stack, which 3 is why they are designed with knockout capabilities 4 for those liquids. 5 Q. There is a name for occurrences when you 6 not only have vapors emitting through the flares or 7 blowdown drums but you have liquids as well, isn't 8 there? 9 A. A name? 10 Q. Isn't there something that you call that? 11 A. Generally, the term that I would use is 12 "two phase flow." 13 Q. Have you heard the term "puking"? 14 A. I have heard that term, yes. 15 Q. Same thing? 16 Well, you used the term "two phase 17 flow." What does that mean? 18 A. Meaning two phases, a gas and a liquid. 19 That's the term that is used in relief system 20 designs. 21 Q. Right. There is an awareness that can 22 happen. 23 If you have an overpressurization 24 or some other problem when you are running a unit, 25 if it overfills and there is so much overfill that</p>	<p style="text-align: right;">Page 380</p> <p>1 located, right? 2 A. That's -- 3 Q. That's where it comes out? 4 A. That's a possibility. And that's what 5 PHA or HAZOP teams do, using the various guide 6 words, make an assessment as to what a potential 7 consequence is and then look at what the initiating 8 cause is and what the safeguards are to prevent 9 that and make a judgment as to whether or not there 10 are sufficient safeguards to prevent it. 11 But on a consequence only basis, 12 which is the starting point, you know, if there is 13 a large liquid release, then that has the potential 14 for a fire and explosion or a large vapor release. 15 Q. And you are aware that there were liquid 16 overfills at the ISOM unit before this explosion on 17 March 23rd, weren't you? 18 MR. PATTERSON: Objection, form. 19 A. I am not personally aware of that. 20 Q. (BY MR. COON) You have heard of that, 21 haven't you? 22 A. My understanding from the investigation 23 reports and from the HAZOP reports that they had 24 considered that possibility. 25 Q. And you are aware that there had been</p>
<p style="text-align: right;">Page 379</p> <p>1 the containment systems can't hold it all, it will 2 go to whatever source it can if there is an open 3 containment, whether it blows through the top of 4 the vent stack and the blowdown drum or if it's 5 routed to a flare and goes out the top of a flare, 6 that that's the relief system that it ends up going 7 to, right? 8 A. Well, there is a design basis. And if an 9 analysis of the process itself indicates that there 10 could be some liquid, there is a determination as 11 to how much liquid that could be that forms the 12 design basis. And then the knockout drum is sized 13 for that. 14 Now, does that necessarily 15 represent an abnormal situation as we had in the 16 ISOM where the system was never designed for the 17 tower to have been completely filled with liquid 18 and have a complete liquid discharge to the 19 blowdown stack? No. 20 Q. But if you have something like that 21 happen, I mean, you know from process safety 22 management principles, you know if there is an 23 overfill, that it's going to emit, whether you call 24 it two phase flowing or puking, that it's going to 25 come out wherever that vent stack or tower are</p>	<p style="text-align: right;">Page 381</p> <p>1 liquid overfills at other units at that same 2 facility in years prior as well? 3 A. By "facility" you are referring to the 4 refinery? 5 Q. Yes, sir. 6 A. Again, I don't recall any personal 7 knowledge. I do -- I am aware that in our HAZOP 8 process, we use that deviation guide word on high 9 level to evaluate potential consequences and 10 safeguards. 11 Q. Okay. Well, you are sitting here today 12 as head of process safety and having been head of 13 process safety on March 23rd, 2005. You had not 14 heard of any prior liquid overfills occurring 15 anywhere at that plant? 16 A. Sitting here today, I don't recall 17 specifically being informed of liquid overfills. 18 Again, in terms of the general principle, you know, 19 could that occur, had that occurred in the past, I 20 won't dispute that. 21 Q. Now, with respect to the design, if you 22 look at the ISOM unit, if you know that you can get 23 a vapor overfill or a liquid overfill at a unit, 24 wouldn't you want that overfill to occur in an area 25 away from the unit and away from personnel?</p>

<p style="text-align: right;">Page 382</p> <p>1 MR. PATTERSON: Objection, form. 2 A. Well, the HAZOP process itself would try 3 and prevent the overflow to begin with. 4 Q. (BY MR. COON) But you know it happens, 5 right? I mean, let's start with the recognition 6 that it can happen. We understand you try to avoid 7 it, but it does happen? 8 MR. PATTERSON: Objection, form. 9 Q. (BY MR. COON) So in light of that, my 10 question is: Since you know it can happen, you 11 would agree that it's not a good idea to have the 12 place where it overflows to be in the middle of a 13 unit or in an area where people can be exposed to 14 the vapors and liquids? 15 MR. PATTERSON: Objection, form. 16 Q. (BY MR. COON) You would agree with that 17 general concept, wouldn't you? 18 A. I would agree that if you knew there 19 would be a release, you would want that release to 20 be away from the process unit and away from 21 occupied areas. 22 Q. And with respect to many of the units at 23 Texas City, there was a recognition of that and 24 there had been a design concept that was utilized 25 where flares were the end of the system, if it was</p>	<p style="text-align: right;">Page 384</p> <p>1 A. That's certainly possible. But again, 2 the design basis of vapor releases is that even 3 with heavier than air hydrocarbons that they would 4 be diffused and disbursed such that they wouldn't 5 pose a problem when they return to grade. 6 Q. (BY MR. COON) But we know at the ISOM 7 unit alone that there had been prior occurrences 8 where vapor allowed -- had formed at ground 9 level -- 10 MR. PATTERSON: Objection, form. 11 Q. (BY MR. COON) -- before the explosion of 12 March 23rd? 13 MR. PATTERSON: Objection, form. 14 A. My understanding from the investigation 15 report is they had determined there had been prior 16 incidents -- 17 Q. (BY MR. COON) Sure. 18 A. -- in the past. 19 Q. And not just one time in the past, but 20 several times in the past vapors had come out of 21 the blowdown drum at the ISOM unit and formed a 22 vapor cloud at ground level. And the only reason 23 they didn't blow up is because they never hit an 24 ignition source? 25 MR. PATTERSON: Objection, form.</p>
<p style="text-align: right;">Page 383</p> <p>1 a vapor or liquid overflow, it went to a flare and 2 that flare was located in a flare yard away from 3 the unit, correct? 4 A. There is a preference to have hydrocarbon 5 vapors destroyed by burning at a flare. 6 Q. Right. And we are talking about two 7 things here now. One is there is recognition that 8 you can use a flare instead of a blowdown drum so 9 that vapors are burned off instead of coming out of 10 the system and even floating away or potentially 11 forming a vapor cloud at ground level. 12 That's one of the benefits of a 13 flare, right? 14 MR. PATTERSON: Objection, form. 15 A. Right. That's the purpose. 16 Q. (BY MR. COON) So we understand if the 17 vapor is coming out the top of a tower that has a 18 flare on it, it burns it off or burns most of it 19 off; whereas, if there is no flare attached to burn 20 it off or a pilot, then those vapors just go 21 wherever. And if they are heavier than air, they 22 tend to come back down to the ground or pose a risk 23 to coming back down to the ground and settling at a 24 density enough to cause an explosion? 25 MR. PATTERSON: Objection, form.</p>	<p style="text-align: right;">Page 385</p> <p>1 Q. (BY MR. COON) Correct? 2 A. Prior releases, again, did not find an 3 ignition source; and there was not a fire. 4 Q. And in this case, unfortunately, when it 5 happened, there was an ignition source? 6 A. Yes. 7 Q. And it's believed that the ignition 8 source was most likely a contractor's truck that 9 was running by the unit, correct? 10 A. I recall that the investigation team said 11 it was likely a truck. I don't recall them 12 attributing it to a contractor. 13 Q. Now, the other thing I want to talk to 14 you about from a process safety management 15 standpoint, with respect to flares versus blowdown 16 drums, is the recognition of location. 17 You have flare yards at your 18 plant, don't you, sir? 19 A. Yes. 20 Q. And flare yards are areas where the flare 21 runs through a pipe and connects back to the unit 22 so that if there is a vapor or liquid overflow, it 23 runs out to an area away from the unit and away 24 from personnel, correct? 25 A. That's correct.</p>

<p style="text-align: right;">Page 386</p> <p>1 Q. And, in fact, you were responsible 2 several years ago of making sure that that flare 3 yard was sealed off so that people didn't locate 4 their trailers and stuff around flares, weren't 5 you? 6 A. Yes. I initiated the practice where 7 there would be a buffer zone around the flare 8 yards. 9 Q. Sure. And the reason you put that buffer 10 zone is because you had a personal recognition that 11 you could get vapors or liquids coming out of those 12 towers and you don't want to have trailers or 13 personnel at the base of those towers where they 14 are at risk, right? 15 A. Correct. If you exceeded the design 16 capacity of that flare, and it was a liquid 17 release, you can have either hydrocarbons 18 themselves that could ignite or you could have 19 burning hydrocarbons coming down to grade, and that 20 would be a hazard or a danger to people if they 21 were located in that immediate vicinity. 22 Q. Right. And you were aware of that. And 23 so what you did, so that we all understand, is you 24 said, "You know, we need to make sure that when 25 vapors or liquids come out of these flares, we need</p>	<p style="text-align: right;">Page 388</p> <p>1 A. There were reasonably extensive compounds 2 of trailers. And again, in my mind, I don't recall 3 the portable toilets. But yeah, they could have 4 been there as well. 5 Q. Yeah. So you had these as laydown yards 6 and you have equipment buildings out there and you 7 have some of these portable rest room facilities. 8 Some people call them Port-O-Johns. And you said, 9 "You know, we don't need these Port-O-Johns and 10 other equipment out here at the base of these 11 flares because if you get a liquid overfill, these 12 Port-O-Johns and all these other facilities at the 13 base of them are going to catch on fire." 14 And that's something you 15 recognized, right? 16 A. Yes. 17 Q. And so you made sure that they put a 18 fence around that whole area so that people 19 wouldn't locate the Port-O-Johns for the 20 contractors for the work being done out there or 21 any other equipment out there where they were at 22 risk of getting exposed to liquid overfills or 23 vapors that, for whatever reason, didn't burn off 24 like they were supposed to? 25 A. Yeah, that we would -- we would establish</p>
<p style="text-align: right;">Page 387</p> <p>1 to make sure that there's nobody around them 2 because if the fire drops down to the ground, from 3 what you call the two phase flows or puking, you 4 end up with a lot of flames where all the liquids 5 are burning after they come out of the top of the 6 tower and back to the ground," right? 7 A. That's correct. 8 Q. And -- 9 A. The other concern is thermal radiation, 10 just the flare itself, emitting heat and being a 11 source of -- an issue for people that might be 12 located immediately in the area. 13 Q. Right. And you were aware that several 14 years ago some people had not appreciated that risk 15 and were locating temporary trailers out in the 16 flare yard, weren't they? 17 A. I was aware that there were trailers. 18 Their predominant use was probably more for what we 19 call laydown yards, so storage of equipment that 20 was being used, typically, in a turnaround 21 situation. 22 Q. And you saw where they were using these 23 temporary buildings. And even -- I think there 24 were even bathroom facilities out there by these 25 flare yards, were there not, by the flares?</p>	<p style="text-align: right;">Page 389</p> <p>1 a buffer zone; and that access would be controlled 2 and only for the purposes of operating or 3 maintaining that flare. 4 Q. Right. And that was done for the 5 expressed purpose of making sure that people 6 wouldn't catch on fire if they were out there 7 standing by one of those things, if they are going 8 in a Port-O-Johns, going to one or from one, or 9 going into one of the equipment buildings and a big 10 liquid fireball emanated from the top of a tower 11 and came down and landed on them? 12 MR. PATTERSON: Objection, form. 13 Q. (BY MR. COON) You didn't want that to 14 happen, did you? 15 A. Yeah, the idea of the buffer zone was to 16 make sure that the potential hazards that exist 17 with a flare would not expose to people. So put 18 them at a distance from where that hazard might be 19 present. 20 Q. Did you -- do you recall if you went back 21 and determined who in management had allowed that 22 process to exist in the first place with that known 23 observation of risk? 24 MR. PATTERSON: Objection, form. 25 A. I did not. I didn't make any assessment</p>

<p style="text-align: right;">Page 390</p> <p>1 as to whether or not the risk had been identified 2 previously, and it really is of no interest or 3 concern to me why the practice had occurred up to 4 that point. What was of interest and importance to 5 me is that we stop the practice, implement a new 6 practice of the buffer zones. 7 Q. (BY MR. COON) Right. And that's one of 8 your main jobs as head of process safety management 9 at Texas City, is to try to make the place as safe 10 as you can from a process safety standpoint? 11 A. Yeah, recognize hazards and then make 12 sure that we have appropriate safeguards in place. 13 Q. Right. And you are well versed with 14 respect to what process safety management is, are 15 you not? 16 A. I have been working at it a long time. 17 Q. And I take it you know all about the OSHA 18 guidelines and the API standards dealing with 19 process safety management? 20 A. I am generally familiar with all those 21 documents. 22 Q. Attended many classes over the years 23 dealing with the subject matter? 24 A. Yes. 25 Q. Have you gone to one of the programs</p>	<p style="text-align: right;">Page 392</p> <p>1 Q. Do you recall in his keynote address that 2 he told that crowd that there was no awareness of 3 the problems that existed out there prior to 4 March 23rd, 2005? 5 A. I recall a statement to the effect that 6 there was a lack of hazard awareness or 7 recognition. 8 Q. And the reality is, though, is that a 9 number of studies and audits and surveys had told 10 you something to the contrary before March 23rd, 11 2005, hadn't they? 12 MR. PATTERSON: Objection, form. 13 A. Could you repeat your question for me, 14 please? 15 Q. (BY MR. COON) Yes, sir. 16 We know that Mr. Mogford told this 17 crowd earlier this year that on March 23rd, before 18 the explosion, that BP Texas City and BP generally 19 did not have an appreciation of the problems with 20 respect to the condition of that plant and the 21 attitudes that permeated that facility? 22 Do you recall him saying that in 23 his keynote address? 24 MR. PATTERSON: Objection, form. 25 A. Something to that effect, yes.</p>
<p style="text-align: right;">Page 391</p> <p>1 conducted by the Center for Chemical Process 2 Safety? They have a big annual convention that BP 3 personnel have been spokespersons at before? 4 A. I don't recall specifically. The 5 American Institute of Chemical Engineers or AICE 6 and the CCPS and NFPA have been combining their 7 conferences, and so I have been to various 8 industrial conferences where process safety 9 management topics have been discussed. 10 Q. Did you know about the one that was in 11 Orlando, Florida about three months ago, April of 12 this year, that Mr. Broadribb spoke about and 13 Mr. Mogford, I think, also spoke at with respect to 14 what happened out at Texas City last year? 15 A. Yeah. I am aware of that conference, 16 yes. 17 Q. Did you attend that one? 18 A. I did not. 19 Q. Did you have an opportunity to read what 20 Mr. Broadribb said at that convention? 21 A. I did not. 22 Q. Have you ever been provided with the 23 materials that Mr. Mogford read? I think they are 24 on the BP website. 25 A. I read his keynote address, yes.</p>	<p style="text-align: right;">Page 393</p> <p>1 Q. (BY MR. COON) And you knew from working 2 out there 20 years and being the head of process 3 safety for the last ten years that that was not 4 really the case, that you were aware of a lot of 5 problems; and you had personally been frustrated at 6 some levels having those problems addressed? 7 MR. PATTERSON: Objection, form. 8 A. I would take exception with Mr. Mogford's 9 statement. You know, we have lots of systems and 10 processes in place at the refinery and had been 11 working a number of years to identify hazards, put 12 preventive maintenance in place when we've 13 uncovered existing hazards to correct those 14 hazards, to generally improve our awareness of risk 15 and to reduce risk at the site. 16 Q. (BY MR. COON) Well, that's just my 17 point. 18 Mr. Mogford told the crowd that 19 there was no awareness of any problems out there 20 prior to March 23rd and yet you, as head of process 21 safety management, were, in fact, aware of a number 22 of problems out there and were doing what you could 23 to address them? 24 MR. PATTERSON: Objection, form. 25 Q. (BY MR. COON) Correct?</p>

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1 A. We'd have to ask Mr. Mogford exactly what
 2 he meant by that statement. It's a fairly broad
 3 and general statement.
 4 But I stand by the fact that we
 5 were aware of potential hazards. We were aware of
 6 particular concerns and issues relative to the
 7 execution of process safety management at the site,
 8 and we were working to address those.
 9 Q. And one of the outside audits that had
 10 made that particular facility directly aware of a
 11 number of problems that existed with the
 12 infrastructure is the Veba report.
 13 Do you recall that in 2002?
 14 MR. PATTERSON: Objection, form.
 15 A. I recall the Veba report. I was never
 16 given the opportunity to read that report.
 17 Q. (BY MR. COON) Did you ask for a copy of
 18 that report?
 19 A. There were a number of external reviews
 20 that were taking place at that time. And the
 21 actions from those, or at least some of the actions
 22 from those as it related to process safety
 23 management, were being done at my direction. But
 24 primarily the reports and the audits that I rely
 25 upon are the three yearly compliant -- PSM

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1 compliance audits that are required by the --
 2 Q. Okay. Well, we have --
 3 A. -- OSHA regulation.
 4 Q. I'm sorry.
 5 We have a copy of the Veba report.
 6 I think it came out August of 2002. It's called
 7 something else. It's called, like, the good
 8 practices assessment.
 9 Do you recall the title?
 10 A. I don't recall the title. Like I said,
 11 there were -- there were a number of different
 12 assessments, you know, within BP. They make use of
 13 various networks or things they call Community of
 14 Practices around topics of maintenance and
 15 reliability.
 16 There's one related to process
 17 safety management. And those various groups will,
 18 you know, initiate efforts for reviews at -- you
 19 know, peer reviews at different sites.
 20 Q. Were you ever told what the Veba report
 21 concluded with respect to how BP Texas City was
 22 faring, from their perspective, with respect to its
 23 risk profile for a major event?
 24 "Major event" being an explosion
 25 or something.

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1 A. I don't recall being told that.
 2 Q. Would you have wanted to know that this
 3 outside audit had concluded that, due to the sheer
 4 number of fires that were occurring out there every
 5 year alone, that BP Texas City was poised for a
 6 major catastrophic event?
 7 A. Within my role as process safety manager,
 8 I would like to be informed of any individual's
 9 assessment or audit information as it would relate
 10 to process safety.
 11 Q. And with respect to trying to keep your
 12 pulse on the condition of the facility, not only
 13 from your personal experience out there, there was
 14 the Telos study that was conducted in 2004, early
 15 2005.
 16 You recall that, do you not?
 17 A. Yes. There was a Telos survey conducted,
 18 yes.
 19 Q. And, in fact, I think you were asked a
 20 few questions about that in the first part of your
 21 deposition that you gave a little while back; and
 22 you actually gave a statement to the survey
 23 company, didn't you?
 24 A. Yes. The survey, in doing their study or
 25 performing their work, their task, they asked for

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1 written surveys to be completed. I completed one
 2 of those.
 3 They also did some number over a
 4 hundred individual interviews, and I was one of
 5 those that was individually interviewed.
 6 Q. And in that interview, you were asked
 7 what you thought about Don Parus at the new BUL at
 8 Texas City.
 9 Do you recall that?
 10 A. I recall that there were a number of
 11 questions about people in senior leadership roles.
 12 Q. And one of those was Mr. Parus?
 13 A. I believe I was asked about Don; and I
 14 made some comments, yes.
 15 Q. You did. You expressed your frustration
 16 over the lack of recognition by the plant manager
 17 of an appreciation of process safety management?
 18 MR. PATTERSON: Objection, form.
 19 Q. (BY MR. COON) Do you recall that?
 20 A. I think my comments, within context, were
 21 not that he didn't have an appreciation for it
 22 because Don had personally expressed to me his
 23 support of process safety management and his
 24 understanding that -- how important it was.
 25 My concern was that was kind of

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1 the balance, was there an appropriate emphasis as
 2 compared to the other initiatives that were taking
 3 place at the site.
 4 Q. And one of the initiatives was to enhance
 5 the performance of the facility, add value to it, I
 6 think, is what Mr. Parus had said. That's what was
 7 going on during his leadership, wasn't it?
 8 MR. PATTERSON: Objection to form.
 9 A. There were -- there were -- Don had
 10 identified five theme areas for improvement at the
 11 site. Safety was one.
 12 I forget exactly how he termed it.
 13 But community relations was another, environmental
 14 performance.
 15 There was one related to basically
 16 the financial performance or the business
 17 efficiency of the site. That was one as well.
 18 Q. (BY MR. COON) Why did Mr. Parus put you
 19 on the leadership team since you were the head of
 20 process safety out there?
 21 MR. PATTERSON: Objection to form.
 22 A. I don't know that.
 23 Q. (BY MR. COON) Did you ever complain to
 24 him that there was a lack of input from you and
 25 people in your department about process safety

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1 management by not being on the leadership team?
 2 MR. PATTERSON: Objection, form.
 3 A. I had raised the concern that, were
 4 process safety management issues being properly
 5 reflected at the leadership level. Was there --
 6 whether it be me or some person that was already a
 7 member of the senior leadership team, was there
 8 somebody that, in their mind, through all of the
 9 leadership discussions, whatever the topic may be,
 10 was somebody listening with the ear of process
 11 safety.
 12 Q. (BY MR. COON) And with respect to the
 13 way it was set up, the person that had a seat at
 14 the leadership team level to speak about process
 15 safety management would have been your boss,
 16 Mr. Barnes?
 17 A. At the end. We had gone through a number
 18 of reorganizations. Norine Stein would have been
 19 another individual that I reported to for a period
 20 of time that would have been on the senior
 21 leadership team.
 22 Q. And your reporting superior at the time
 23 of the explosion was Mr. Barnes, wasn't it?
 24 A. Yes.
 25 Q. And he was the head of health, safety --

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1 A. Security.
 2 Q. -- security and environmental --
 3 A. Correct.
 4 Q. -- correct?
 5 A. Yes.
 6 Q. And that -- within that umbrella is
 7 process safety management. That's part of the
 8 safety component, correct?
 9 A. Yes.
 10 Q. Safety being occupational and personal
 11 safety and integrity safety with the facility
 12 itself?
 13 A. Yeah, the safe -- HSSE, health and safety
 14 are really the two major arms of that.
 15 Occupational or personal safety
 16 and then the process safety.
 17 Q. And you knew when Mr. Barnes was promoted
 18 to that position that he didn't have hardly any
 19 solid experience in process safety, did he?
 20 MR. PATTERSON: Objection, form.
 21 A. He -- I -- again, knowing Joe for a
 22 number of years, I knew he had exposure to process
 23 safety management principles in his operating role.
 24 I knew that he had not had any specific assignments
 25 that would have given him the same level of

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1 knowledge that I would have, given my role as
 2 process safety manager.
 3 Q. (BY MR. COON) Do you know that he did
 4 not know the difference between process safety and
 5 personal safety and couldn't give examples of
 6 either?
 7 MR. PATTERSON: Objection, form.
 8 A. I don't know that.
 9 Q. (BY MR. COON) Assuming that to be true,
 10 wouldn't you agree that, within the fundamentals of
 11 process safety, say, Safety 101 would be an
 12 understanding of the difference between what are
 13 elements of process safety versus what are elements
 14 of personal safety?
 15 MR. PATTERSON: Objection, form.
 16 A. I am not sure I would want to assume that
 17 it's true because I think Joe does know the
 18 different between personal safety and process
 19 safety.
 20 Q. (BY MR. COON) If Mr. Barnes testified
 21 that steel toed shoes and safety glasses were
 22 process safety, would he be wrong?
 23 MR. PATTERSON: Objection, form.
 24 A. If he testified to that, I would
 25 disagree, that those are elements of process

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1 safety.
 2 Q. (BY MR. COON) Because they are not.
 3 Those are personal safety issues, aren't they?
 4 A. I would say those are occupational safety
 5 or personal safety concerns.
 6 Q. And if somebody doesn't understand that
 7 difference, they probably shouldn't be responsible
 8 for communicating process safety management issues
 9 to the management team at Texas City, should they?
 10 MR. PATTERSON: Objection, form.
 11 A. The concern that I was raising relative
 12 to a place at the table for somebody with an
 13 in-depth knowledge of process safety was: Would
 14 they appreciate the differences, would they
 15 appreciate -- and it's really the fundamentals of
 16 management of change.
 17 You do management of change and
 18 hazard reviews associated with that so that you can
 19 identify unintended consequences and manage those
 20 ahead of time. So I felt it important in my role
 21 that somebody at that senior leadership table have
 22 the background and, again, although they may be
 23 there for other reasons, have in their mind and be
 24 participating with an ear towards process safety
 25 concerns.

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1 Q. (BY MR. COON) Well, and that's what I am
 2 trying to find out, sir. I am trying to understand
 3 that assuming we go to trial and all these people
 4 that worked out at BP get on the witness stand and
 5 testify to a jury, I am trying to get a good
 6 understanding as to who's going to point the finger
 7 at whom with respect to how all this could have
 8 happened in the first place.
 9 And if you are put on the stand at
 10 trial and you look at a jury, I am trying to find
 11 out now if you are going to say, "I told them and
 12 they didn't listen" or if they are going to get on
 13 the stand and say, "Nobody told us anything and we
 14 never heard from Mr. Ralph and we would have done
 15 more if Mr. Ralph would have told us more." That's
 16 what I am trying to find out.
 17 So coming from that perspective,
 18 do you feel like you were telling them things they
 19 needed to know and they didn't want to listen or do
 20 you feel like you weren't given an opportunity to
 21 tell them or do you feel like telling them meant
 22 that they had to spend money to fix the problems
 23 and they didn't have the money to spend or didn't
 24 want to spend the money?
 25 What's your general opinion about

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1 that communication issue with respect to you trying
 2 to express concerns as the head of process safety
 3 management at that facility and the recognition
 4 today that that was not addressed like it should
 5 have been before this explosion?
 6 MR. PATTERSON: Objection to
 7 sidebar. Ask that it be stricken from the record
 8 and object to the form of the question.
 9 A. The concerns that I had been raising
 10 prior to March 23rd related to overall performance.
 11 And, you know, we can break it down element by
 12 element within process safety management and
 13 whether or not we had the right organizational
 14 structure, whether we had the right representation
 15 at the leadership level to raise the concerns.
 16 Overall, when I talked to
 17 individual members of management, universally there
 18 is an understanding that process safety is
 19 important. There is an understanding that we need
 20 to put our best efforts forward to comply with the
 21 regulation, to follow good principles of practices.
 22 What I was seeing from my role and
 23 my concern was that they -- just the way things
 24 were structured and with all of the initiatives
 25 that were going on at the site, that there was a

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1 loss of focus on process safety management and that
 2 that loss of focus could eventually result in a
 3 catastrophic event.
 4 Q. (BY MR. COON) A loss of focus put people
 5 at risk?
 6 A. Over time, yes, when we are talking about
 7 process safety management principles.
 8 Q. And time ran out March 23, 2005?
 9 MR. PATTERSON: Objection, form.
 10 A. On March 23rd there was a terrible
 11 tragedy.
 12 MR. COON: We'll break there.
 13 THE VIDEOGRAPHER: Off the record
 14 at 11:12.
 15 (Recess taken.)
 16 THE VIDEOGRAPHER: Back on the
 17 record at 11:26.
 18 Q. (BY MR. COON) Mr. Ralph, what role, if
 19 any, did you have in any of the investigations?
 20 A. Which investigations are we talking
 21 about?
 22 Q. The -- I am sorry. The March 23rd, 2005
 23 event.
 24 Did you have internal
 25 investigations or external investigations? I mean,

<p style="text-align: right;">Page 406</p> <p>1 if you want me to, I can break them down. Let's do 2 that.</p> <p>3 The fatal report, the 4 investigation done by Mogford's group, what role 5 did you have in participating in that study?</p> <p>6 A. Providing documents, being interviewed. 7 I didn't participate in any of the 8 root cause analysis or preparation of the report. 9 I am certainly kind of a recipient of the 10 investigation report, review of that with our 11 process safety committee, entry of those action 12 items into our tracking database and then helping 13 to promote resolution of those actions.</p> <p>14 Q. What about the CSB? What have you done 15 with them?</p> <p>16 A. It's been a very similar sort of role, 17 providing documents, being interviewed.</p> <p>18 Q. OSHA? 19 A. The same thing. 20 Q. What about the internal investigation by 21 Ms. Lucas and Mr. Willis, the disciplinary 22 investigation?</p> <p>23 A. I was not involved in that. 24 Q. Any other investigations? 25 A. The EPA has been doing an investigation.</p>	<p style="text-align: right;">Page 408</p> <p>1 that investigation? Was that Mr. Bonser? 2 A. Pardon me? 3 Q. A Mr. Bonser, Bill Bonser? 4 A. I honestly don't recall the name. There 5 was one gentleman. I want to say he had a Scottish 6 accent. There -- Jeff Heller was one of the names. 7 Jeff is internal BP counsel. And then there was 8 another gentleman and a lady, both internal to BP; 9 and I don't recall their names. 10 Q. Okay. Did you give a statement? 11 A. Yes, I was interviewed. 12 Q. Do you have an understanding that BP, 13 from an internal standpoint -- again, without 14 divulging confidences with respect to 15 attorney/client privilege issues. 16 But in talking to BP management 17 people, non-lawyers, do you have an understanding 18 as to the general nature of the inquiry? 19 A. No. 20 MR. PATTERSON: Objection, form. 21 A. No, I don't. 22 Q. (BY MR. COON) Were you asked questions 23 specific to Mr. Parus? 24 A. I don't recall specific questions. 25 Generally, the line of questioning</p>
<p style="text-align: right;">Page 407</p> <p>1 Q. Anything you are doing with them in terms 2 of providing documents -- 3 A. Documents -- 4 Q. -- and -- 5 A. Documents and statements. 6 Q. Anyone else? 7 A. The TCEQ was involved early on. Again, 8 the same sort of role, documents and statements. 9 Actually, I don't know if I gave any statements in 10 that one. 11 Q. Any others? 12 A. Not any direct involvement. 13 Q. I understand that there is a renewed 14 investigation, an internal investigation at some 15 level by BP that has focused on some of the 16 management team at BP Texas City: Mr. Parus, 17 Ms. Lucas, Mr. Willis. 18 Do you know anything about that? 19 MR. PATTERSON: Objection, form. 20 A. The only thing I am aware of is I have 21 been interviewed and the explanation for that 22 interview was related to a senior -- senior 23 executive review of management's involvement in 24 this incident. 25 Q. (BY MR. COON) Who interviewed you in</p>	<p style="text-align: right;">Page 409</p> <p>1 was what was my role in process safety management, 2 what were my concerns, who was I making those 3 concerns -- who was I presenting those concerns to. 4 Q. Who were you presenting your concerns to? 5 MR. PATTERSON: Objection, form. 6 A. I made attempts to raise my concerns with 7 various members of the leadership team over the 8 years. I previously testified Andy Fiedler, who 9 was the maintenance manager at the time, I talked 10 to him about it. Norine Stein, who was for a 11 period of time my direct supervisor. She was the 12 facility services manager with Rick Hale, who was 13 the plant manager for a while; Don Parus. 14 I had made presentations to a 15 wider group of superintendents and managers which 16 reflected my concerns certainly with the HSE 17 managers. Joel Robins was the HSE manager for a 18 time; Joe Barnes; Walt Wundrow, who is the 19 technical manager. 20 Q. (BY MR. COON) Can you give me a list of 21 the things you expressed as concerns coming from 22 you as head of the process safety management at 23 Texas City? 24 MR. PATTERSON: Objection, form. 25 A. Generally, the concern I was raising with</p>

<p style="text-align: right;">Page 410</p> <p>1 those individuals in speaking with them one-on-one 2 was a lack of focus on process safety, that 3 attention was being diverted to other very good 4 areas, but nonetheless, from my perspective, a lack 5 of focus in the more general setting, the meeting 6 presentation, raised concerns. 7 It was kind of broken down by 8 process safety elements, where we were not really 9 meeting our own goals in terms of, you know, 10 completion of action items, like I had spoke about 11 earlier, proper completion and commissioning of 12 management of change, mechanical integrity testing 13 that had not been executed at the desired 14 frequency. 15 It raised issues relative to the 16 trends of serious near miss incidents that had been 17 occurring at the site. 18 Q. (BY MR. COON) What was that? Can you 19 elaborate on that? 20 MR. PATTERSON: Objection, form. 21 A. The fact that we had had additional 22 releases that had significant potential for 23 explosion or fire. Fortunately, you know, they 24 didn't result in that, but that that was an 25 indicator that things were -- were not healthy on</p>	<p style="text-align: right;">Page 412</p> <p>1 To my knowledge, they did not 2 undertake any kind of an objective review that 3 would cause them to do field verification, a review 4 of documents, the structure of that; and really the 5 intent of Don Parus in commissioning that study was 6 to get a sense of the opinions of the workforce 7 relative to safety issues and concerns. 8 And as I recall, there were a 9 number of opinions expressed regarding the health 10 of process safety management and the potential for 11 catastrophic events. 12 Q. In fact, there was a lot of criticism 13 towards the infrastructure of the Texas City 14 facility in that report, wasn't there? 15 A. I recall a number of people and the way 16 the report was structured -- or the portion of the 17 report that I was allowed to review used a format 18 where it was quotations from individuals; and there 19 were a number of those quotations that expressed 20 concern about the overall state of the equipment 21 and the general health of process safety 22 management. 23 Q. Do you recall a number of criticisms with 24 respect to lack of sufficient budgets to address a 25 number of the infrastructural deficiencies that</p>
<p style="text-align: right;">Page 411</p> <p>1 the PSM front. 2 Q. (BY MR. COON) And your perception was 3 that at that refinery, as a result of the lack of 4 focus in the things you just described, that y'all 5 were out there dodging bullets and sooner or 6 later -- 7 MR. PATTERSON: Objection, form. 8 Q. (BY MR. COON) -- you would catch one 9 unless management refocused on the core values of 10 PSM? 11 MR. PATTERSON: Objection, form. 12 A. My concern was that if -- if we can -- if 13 we didn't refocus on the core principles of process 14 safety management, that eventually that could 15 result in a catastrophic event. 16 Q. (BY MR. COON) Did you know that the Veba 17 report in 2002 told management the same thing? 18 MR. PATTERSON: Objection, form. 19 A. Again, I wasn't provided a copy of the 20 Veba report. So I'm not sure what it said. 21 Q. (BY MR. COON) The Telos Report and the 22 numerous comments contained within it pretty much 23 said the same thing as well, didn't it? 24 A. The Telos Report itself was, as I would 25 describe it, an opinion survey.</p>	<p style="text-align: right;">Page 413</p> <p>1 were in existence out there? 2 A. I recall that there were a number of 3 comments regarding insufficient funding. 4 Q. Were you head of process safety 5 management in 1999 when Lord John Browne issued the 6 25 percent budget cut edict? 7 MR. PATTERSON: Objection, form. 8 A. I was process safety manager in 1999. 9 I am not aware of any edict from 10 Lord Browne for a 25 percent cut. 11 Q. (BY MR. COON) How were you made aware 12 that there were going to be budget reductions in 13 the fixed operational budget at Texas City around 14 that time? 15 A. Through my general awareness as, you 16 know, a manager at the site, I was aware that there 17 had been requests for reductions in budgets. 18 Q. Did you not know where those requests had 19 come from? 20 A. I was never told where the requests came 21 from. 22 Q. Were you ever told where the budget cuts 23 would be made? 24 A. My general understanding was the request 25 was across the board, that every department should</p>

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1 look to see what they might be able to contribute
 2 towards a reduction goal.
 3 Q. Did you know whether or not this budget
 4 cut was being applied to other plants as well, or
 5 just Texas City?
 6 A. I was unaware at that time.
 7 Q. Have you since been made aware there was
 8 a mandate that was to apply to all plants?
 9 A. In conversation with Rick Porter, who was
 10 the plant manager at the Cherry Point facility,
 11 when I was a participate -- participant on a task
 12 force for our Grangemouth refinery, he made the
 13 comment that at a recent plant managers' meeting
 14 they had talked about cuts and requests for
 15 additional cuts.
 16 Q. Did you know that other plant managers at
 17 other plants refused to cut their budgets pursuant
 18 to that request?
 19 MR. PATTERSON: Objection, form.
 20 A. I am not aware of that.
 21 Q. (BY MR. COON) There was a note in the
 22 Telos Report regarding George Carter cutting
 23 training.
 24 Do you know anything about his
 25 request to cut the budgets in training as a result

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1 of this mandate?
 2 MR. PATTERSON: Objection, form.
 3 A. I am not aware of that, no.
 4 Q. (BY MR. COON) I think one of the quotes
 5 in the Telos Report was -- I will show you this
 6 one.
 7 It says, "George Carter cut
 8 training and said 'Until you tell me I could go to
 9 jail, I won't change anything as long as the paper
 10 covers us.'"
 11 Do you know anything about that?
 12 MR. PATTERSON: Objection, form.
 13 A. I simply know that that's what was in the
 14 report.
 15 Q. (BY MR. COON) In addition to training
 16 reductions, there were also staffing reductions
 17 coming from that budget cut, wasn't there?
 18 MR. PATTERSON: Objection, form.
 19 A. There were staffing reductions that were
 20 part of cost-cutting measures, yes.
 21 Q. (BY MR. COON) And one of the staff
 22 reductions was a board operations position in the
 23 ISOM unit, wasn't it?
 24 MR. PATTERSON: Objection, form.
 25 A. I recall that there was a proposal to

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1 reduce the number of board operators and that there
 2 was a management of change conducted.
 3 Q. (BY MR. COON) And you were involved with
 4 that management of change, weren't you?
 5 A. Yes, I was.
 6 Q. And as a result of your oversight in that
 7 management of change, the number of board operators
 8 in the ISOM unit went from two to one, correct?
 9 A. That was the proposal for the management
 10 of change, yes.
 11 Q. And it was acted upon, wasn't it?
 12 A. I believe it was.
 13 Q. And do you recall the representatives of
 14 the local union down there complaining to
 15 management about the risk associated with reducing
 16 the control room operations from two board
 17 operators to one?
 18 MR. PATTERSON: Objection, form.
 19 A. My role in that management of change was
 20 to lead the hazard review; and part of that process
 21 was to involve hourly personnel in that, just as we
 22 do with all of our management of change hazard
 23 reviews.
 24 And I was very aware how sensitive
 25 an issue this was with the hourly workforce, and

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1 one of my roles in leading that management of
 2 change is to have them focus on what would be the
 3 potential consequences of reducing that and then
 4 what safeguards could we put in place such that
 5 that reduction could be successful, that the ISOM
 6 and the aromatic -- AU2, aromatics recovery unit
 7 Number 2, could be successfully run with one board
 8 operator rather than two.
 9 Q. And long story short, you ended up going
 10 from two board operators in the ISOM unit control
 11 room to one, correct?
 12 MR. PATTERSON: Objection, form.
 13 A. After the MOC was properly executed. So
 14 any actions that were identified from the hazard
 15 review and any of the pre-startup safety review
 16 requirements were satisfied, then -- then the
 17 reduction was acted upon.
 18 Q. (BY MR. COON) Okay. Do you recall
 19 criticism from anyone that actually had to work in
 20 that unit that irrespective of an MOC, it was not
 21 safe to go from two board operators to one?
 22 A. I don't recall any specific comments to
 23 that effect.
 24 I am aware of the general concern
 25 and the sense or the feeling from the hourly

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1 workers that reductions were a bad idea.
 2 Q. And it wasn't just the hourly people.
 3 The ISOM supervisor out there, Mr. Trapp, do you
 4 know him?
 5 A. Paul Trapp?
 6 Q. Yes, sir.
 7 A. Yes.
 8 Q. He is not hourly, is he?
 9 A. No.
 10 Q. He is salary, management team, right?
 11 A. Yes. He is a shift supervisor.
 12 Q. Do you know he agreed with them and also
 13 lodged complaints to management about reductions in
 14 the board operations at the ISOM unit?
 15 A. I don't --
 16 MR. PATTERSON: Objection, form.
 17 A. I don't know that.
 18 Q. (BY MR. COON) Were you aware that the
 19 union grieved the reduction of board operators from
 20 two to one when any startup activities were taking
 21 place at the ISOM unit?
 22 MR. PATTERSON: Objection, form.
 23 A. I am not aware of that.
 24 Q. (BY MR. COON) Do you know that
 25 Mr. Carter denied that grievance?

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1 MR. PATTERSON: Objection, form.
 2 A. I am not aware of that.
 3 Q. (BY MR. COON) Do you know that the
 4 request to go back to two board operators was
 5 renewed in 2003 when the NDU was tied in to that
 6 control room?
 7 A. I don't --
 8 MR. PATTERSON: Objection, form.
 9 A. -- recall that specifically.
 10 I do recall some discussions
 11 around what the initial staffing would be with the
 12 NDU coming on stream.
 13 Q. (BY MR. COON) What role, if any, did you
 14 have with respect to re-evaluating the MOC when the
 15 NDU was tied in to that same control room
 16 increasing the demands on the board operator?
 17 A. What I recall was that their intention
 18 was to have a separate board operator for the NDU.
 19 I recall other conversations regarding -- regarding
 20 staffing for an outside operator for the new unit.
 21 Q. And yet, at the end of the day, that
 22 control room continued to be operated, with the
 23 addition of the NDU, with one board operator?
 24 A. I believe that's correct.
 25 Q. And there was one board operator

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1 operating the control room on the date of this
 2 incident, was there not?
 3 MR. PATTERSON: Objection, form.
 4 A. I don't know how many were operating it.
 5 Q. (BY MR. COON) Have you ever been made
 6 aware that there was just one board operator in the
 7 ISOM control room the date they were starting up
 8 the splitter and running to other units?
 9 MR. PATTERSON: Objection, form.
 10 A. I don't recall what the status of the
 11 other units were or how many people were running
 12 the board.
 13 I am aware that effectively there
 14 was double staffing since they were on turnaround
 15 schedule, which typically involves taking the four
 16 shifts and splitting those personnel over just a
 17 day and a night shift.
 18 Q. (BY MR. COON) Well, there wasn't a
 19 double staffing of control room operators that day
 20 was there, sir?
 21 MR. PATTERSON: Objection, form.
 22 A. I don't know.
 23 Q. (BY MR. COON) If the record reflects
 24 that there was only one board operator in there,
 25 you would agree that was not a double staffing of

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1 board operations on the date in question?
 2 MR. PATTERSON: Objection, form.
 3 A. If that's true, then I would agree that's
 4 not double staffing.
 5 Q. (BY MR. COON) Okay. You were also asked
 6 some questions earlier by Mr. Bond regarding the
 7 fatigue issues that can be associated with
 8 employees.
 9 Do you recall that line of
 10 questions?
 11 A. I do.
 12 Q. Do you know Mr. Briggs, the man left in
 13 exclusive charge of handling the board on the day
 14 in question, had worked more than 35 or 40 days
 15 straight without a day off before this incident?
 16 MR. PATTERSON: Objection, form.
 17 A. I am not aware of that.
 18 Q. (BY MR. COON) Would that be a concern to
 19 you as it relates to process safety management, to
 20 have an employee working that many days
 21 consecutively, 12-hour or longer shifts?
 22 A. That was the concern I was raising
 23 relative to the topic of fatigue and that if people
 24 work too many hours in a day or work too many days
 25 consecutively without proper rest, that fatigue may

<p style="text-align: right;">Page 422</p> <p>1 could become a factor in their decision-making 2 process and performance of their duties. 3 Q. Could you go back and remind me what it 4 was that you said can happen to people when they 5 work too many days in a row, too many hours a day? 6 MR. PATTERSON: Objection, form. 7 A. My basic understanding is that it can 8 impact their judgment or the efficiency with which 9 they can perform their duties. It's possible that 10 they could make mistakes. 11 Q. (BY MR. COON) So to jump over to the 12 trailers a little bit, were you ever able to 13 determine who was responsible at BP for allowing 14 those trailers to be sited and occupied on 15 March 23rd, 2005? 16 A. I have not determined that, no. 17 Q. Do you know if anybody at BP has 18 determined who was responsible in management for 19 allowing those trailers to be sited and occupied 20 there without being commissioned? 21 A. I don't know. 22 Q. Who do you believe was responsible? 23 MR. PATTERSON: Objection, form. 24 A. In the general context of management of 25 change, typically we assign accountability to the</p>	<p style="text-align: right;">Page 424</p> <p>1 (Exhibit Number 711 marked for 2 identification.) 3 Q. (BY MR. COON) Mr. Ralph, I want to show 4 you Exhibit Number 711. It is dated July 18, 2005. 5 The subject matter is "Update on Trailer Siting 6 MOCs." 7 Have you seen that document 8 before, sir? 9 A. I have not seen this document before. 10 Q. I want to draw your attention to what I 11 have highlighted there on the second page. And 12 let's put it on the monitor so we can -- you can 13 look right there to your right and see it. 14 Okay. This is the ongoing 15 investigation into the trailer siting issues 16 associated with this explosion and it talks 17 about -- well, I will actually go back to the first 18 page so we can identify the document. 19 It's to -- to Mr. Crum from a 20 Mr. Clary. Do you know these gentlemen? 21 A. I do. 22 Q. Who are they? 23 A. Bill Clary is one of our senior PSM 24 coordinators. He was one of my direct reports. 25 Greg Crum was one of the root</p>
<p style="text-align: right;">Page 423</p> <p>1 operations superintendent of the area involved. 2 It gets a bit confused on a topic 3 like trailers which may be located in one 4 particular area of the plant as to whether that 5 would be the operating superintendent that is 6 responsible for that piece of geography or whether 7 it would be the management person that has 8 responsibility for the use of that trailer. 9 So if I am working a construction 10 project and I need a trailer, possibly it would be 11 that person that would have initiated the MOC and 12 been accountable for having successfully completed 13 that MOC prior to occupancy. 14 Q. (BY MR. COON) Do you know that BP 15 management has criticized you for allowing those 16 trailers to be occupied out there that day? 17 MR. PATTERSON: Objection, form. 18 A. I don't know that. 19 Q. (BY MR. COON) That's news to you? 20 MR. PATTERSON: Objection, form. 21 A. It would be news to me. I had not heard 22 that previously. 23 Q. (BY MR. COON) Were you the PSM manager 24 on March 23rd, 2005? 25 A. Yes.</p>	<p style="text-align: right;">Page 425</p> <p>1 cause specialists that participated in the incident 2 investigation. And Bill Clary also was a member of 3 the BP internal investigation team. 4 Q. Okay. And that's a comment here by them 5 regarding this particular e-mail right below it 6 here, and the e-mail was from Mr. Crum, who we just 7 talked about it; and it was to Mr. Mogford. 8 He was the one that headed up the 9 investigation, correct? 10 A. That's correct. 11 Q. And a number of other individuals. And 12 it's talking about "Trailer Siting MOC," right? 13 A. Correct. 14 Q. And at page 2, sir, it talks about 15 Section 13 of the MOC procedures and we don't have 16 that right in front of us, but do you have a 17 personal recollection as to what Section 13 deals 18 with? 19 A. I can probably get it from the context 20 here, yes. 21 Q. Okay. It says -- it states that the PSM 22 manager should be consulted to determine if a 23 proposed change may impact the site major hazards 24 risk assessment. 25 It goes on to talk about that in</p>

<p style="text-align: right;">Page 426</p> <p>1 Section 14.9, dealing with occupied buildings and 2 requirements for facility siting studies of 3 occupied buildings, which includes portable 4 buildings. 5 Which is what we had here, right? 6 A. Correct. 7 Q. And one of the comments made here says, 8 "The PSM manager" -- and this would have been you, 9 right? 10 A. At the time this e-mail was written, that 11 would be me, yes. 12 Q. So they could have said "Bill Ralph" 13 there instead of "PSM manager"? 14 A. Yes. 15 Q. (Continuing) -- "failed to recognize the 16 impact of trailers at the site and commissioned an 17 update to the assessment." 18 Is this the first time you have 19 seen this? 20 A. Yes. 21 Q. What say you to that? 22 A. In the context of this paragraph, it 23 starts out talking about the major accident risk 24 studies that we do, which are looking at extremely 25 unlikely, you know, worst case scenarios.</p>	<p style="text-align: right;">Page 428</p> <p>1 site hazards and such, these trailers that were out 2 there were not supposed to be occupied on 3 March 23rd, 2005? Were they? 4 MR. PATTERSON: Objection, form. 5 A. Our management of change procedure and 6 process requires a hazard review, any actions from 7 that hazard review to have been resolved and any 8 items related to pre-startup safety review to have 9 been satisfied before the change can be 10 commissioned. So in the context of a trailer, 11 commissioning would be occupied. 12 My understanding is that the MOC 13 for the JE Merit trailer had not been successfully 14 completed; and on that basis, no, it should not 15 have been occupied. 16 Q. (BY MR. COON) And, in fact, not only 17 were those trailers not supposed to be outside but 18 there were like 46 other trailers that were out 19 there at the plant at the time, none which have had 20 been properly MOC'd and commissioned for occupancy 21 at the time of the explosion, correct? 22 MR. PATTERSON: Objection, form. 23 Q. (BY MR. COON) Do you recall that from 24 the fatal report? 25 A. I don't recall that from the fatal</p>
<p style="text-align: right;">Page 427</p> <p>1 There is a requirement within the 2 governing document within BP and within our own 3 local management of change procedure that if we 4 make changes to the facility that could impact the 5 results of that study, we would refresh that study. 6 Now, it would take very, very significant changes 7 to impact the results of that study because they 8 are already assuming credible scenarios. 9 So in the context of this and 10 whether or not the siting of an individual trailer 11 or even a small complex of trailers affecting the 12 results of that study, my assessment is: No, it 13 does not affect that. 14 Q. Do you know if other people on the 15 leadership team or high in management at BP Texas 16 City, or even above that in Chicago or London, had 17 been pointing the finger at you with respect to any 18 of what happened on March 23rd? 19 MR. PATTERSON: Objection, form. 20 A. I am not aware of that. 21 MR. BOND: Brent, what was that 22 exhibit number for that one? 23 MR. COON: Sir, that is 711. 24 Q. (BY MR. COON) Mr. Ralph, would it be 25 fair to say that irrespective of proper updating of</p>	<p style="text-align: right;">Page 429</p> <p>1 report. I am aware that there are trailers that 2 had successfully completed their MOCs, but there 3 were also trailers that not had -- that had not 4 completed an MOC. 5 Q. Do you recall that the vast majority of 6 the trailers out there had not completed their 7 MOCs; and, in fact, there was only one properly 8 commissioned MOC that applied to four trailers for 9 that whole facility on the date of the explosion? 10 MR. PATTERSON: Objection, form. 11 A. My understanding is that there was one 12 MOC for the JE Merit trailer and there were another 13 eight or nine trailers in that compound that had 14 not been MOC'd. 15 Q. (BY MR. COON) And with respect to the 16 subsequent investigation regarding MOCs at the 17 entire facility, it was determined that there was 18 only one properly sited and commissioned MOC and 19 that dealt with four trailers in another area at 20 the plant and the other 46 out there had never been 21 through the proper MOC process? 22 MR. PATTERSON: Objection, form. 23 A. I don't recall that. 24 I am aware that trailers were 25 being sited without the proper MOC; and that was</p>

<p style="text-align: right;">Page 430</p> <p>1 one of the issues -- one of the educational areas I 2 was raising with the people involved in trailer 3 sitings. 4 Q. (BY MR. COON) Well, why was BP so sloppy 5 about that? 6 I mean, if you have a policy that 7 mandates going through an MOC because there is a 8 recognized hazard associated with locating these 9 trailers out in proximity to the units, why were 10 they just throwing them all over the place and not 11 going through the protocols? 12 MR. PATTERSON: Object to sidebar. 13 Object to form. 14 A. The addition of managing trailers or 15 occupied buildings as part of our MOC process was 16 something that we added. It's not something that 17 is specifically required by the PSM regulation. 18 We felt it an appropriate maturing 19 of our program to continue to use what is a -- 20 fundamentally a very sound process of management of 21 change to additional areas that pose risk to people 22 and/or equipment. 23 What was occurring with the 24 trailers is: We were not successful yet in fully 25 educating everybody that that was a requirement and</p>	<p style="text-align: right;">Page 432</p> <p>1 me. 2 I viewed that as an educational 3 issue. I needed to make aware that we were 4 applying an MOC to those and before you could bring 5 a trailer in, before you could occupy that trailer, 6 you needed to have completed an MOC. 7 Q. (BY MR. COON) Was this something that 8 you were having problems and that you addressed 9 with management and said, "Hey, I can't get people 10 to understand MOCs and we are putting trailers out 11 here and we are not commissioning them. And it 12 creates a problem, and people may get hurt"? 13 Did you express those kind of 14 concerns? 15 A. Not to management. I was addressing the 16 issue through the people that I was aware of that 17 were involved in trailer sitings, so the 18 maintenance and turnaround department. 19 Q. Well, it takes a concerted effort to get 20 one of these double-wide trailers brought into the 21 plant, doesn't it? 22 I mean, don't you have a gate -- 23 you have a fence all around it and you have a gate 24 and you check everybody coming in and out, don't 25 you?</p>
<p style="text-align: right;">Page 431</p> <p>1 that they needed to successfully -- successfully 2 commission MOCs prior to occupying trailers. 3 Q. (BY MR. COON) Well, the people that were 4 involved in the MOC process knew that these were 5 not to be occupied until the process hazard 6 analysis had been completed on it? They weren't 7 that stupid, were they? 8 MR. PATTERSON: Object to form. 9 Object to sidebar. 10 A. The training we give is that all the 11 requirements of the MOC must be satisfied before 12 that change can be commissioned. 13 So people that initiated an MOC 14 for the trailer should have been aware that all the 15 requirements needed to be satisfied before they 16 occupied that trailer. 17 Q. (BY MR. COON) Well, that's pretty simple 18 to understand, isn't it? 19 MR. PATTERSON: Objection, form. 20 A. What may be missing in what I was 21 referring to before in terms of additional 22 education and awareness for others is, one, that we 23 had added to our MOC process that it would cover 24 trailers. So the fact that there were other 25 trailers that didn't have an MOC was a concern for</p>	<p style="text-align: right;">Page 433</p> <p>1 A. Yes. 2 Q. So if you are going to bring in some 46- 3 or 80-foot long trailer and stick it out in the 4 middle of one of your units, that's something that 5 is kind of obvious, isn't it? 6 MR. PATTERSON: Objection, form. 7 A. It is clear trailers are being brought 8 in, and we have improved our system to additional 9 checks at the gate that things are properly 10 authorized before they are even allowed to come -- 11 to come on site. 12 Q. (BY MR. COON) Well, in hindsight, now 13 you don't even allow them out there, do you? Don't 14 you have a compound across the street now? 15 A. The -- most all the trailers were moved 16 across the street, and it's -- it would be under 17 some pretty strict controls and very unusual 18 circumstances that we would allow a trailer; and 19 generally, it would be one of a more hardened 20 construction. 21 Q. And irrespective to the MOC process that 22 you had, you had a handbook dealing with trailer 23 siting that had been in existence at that facility 24 for at least a decade, didn't you? 25 A. I believe you are referring to the</p>

<p style="text-align: right;">Page 434</p> <p>1 facility siting workbook? 2 Q. Yes, sir. 3 A. Yeah. That was implemented about 1996 4 time frame, and it dealt with occupied buildings. 5 Q. And even before you put this MOC 6 requirement out there, trailers were still required 7 to go through at least a trailer siting analysis 8 pursuant to the handbook before you located them 9 within the confines of the plant? 10 A. I don't recall -- it would have been 11 about the same time that we were -- had this 12 recognition that we needed to deal with trailers as 13 a management of change issue when we were first 14 performing our facility siting analysis, but the 15 workbook and the studies that were done were a 16 point in time. It was part of the five-year PHA 17 process. 18 And so when we did those studies, 19 we reviewed and addressed any trailers that were on 20 site at that time, and then -- again, I don't 21 recall the exact timing that we made a 22 modification, improvement to our MOC process to say 23 new trailers would need to go -- would need to be 24 managed via the MOC process. 25 Q. I appreciate your comment.</p>	<p style="text-align: right;">Page 436</p> <p>1 than simply review at a point in time every five 2 years. 3 Q. Okay. With respect to the trailer that 4 was out there -- let's talk about the Merit 5 trailer. 6 That's a -- fair to say that's 7 just a trailer -- temporary trailer, kind of like a 8 mobile home, right? 9 A. Yes. My understanding is that it was a 10 wood frame trailer. 11 Q. And under your siting handbook, trailers 12 of that nature are not to be situated closer than 13 350-foot from an operating unit out of 14 consideration of vapor cloud explosions. 15 MR. PATTERSON: Objection, form. 16 A. No. The facility siting workbook uses 17 the 350-foot distance as a screening criteria. 18 If the trailer is located more 19 than 350 feet away, no further analysis is required 20 in that you simply use the siting checklist which 21 looked at other concerns relative to location and 22 operation of that trailer. 23 The 350-foot distance was a 24 trigger as to whether or not the risk calculation 25 would be performed.</p>
<p style="text-align: right;">Page 435</p> <p>1 What I am saying: Even without 2 the MOCs, you had a trailer handbook out there, a 3 building siting handbook that set minimum distances 4 that temporary buildings could be located in 5 proximity to a unit, correct? 6 A. The trailer siting workbook had distances 7 as part of the screening analysis as to whether or 8 not further study was required or not but those 9 were, again, point in time studies. Excuse me. So 10 there was one done in 1997, which was a review of 11 occupied buildings, whether they be permanent or 12 portable at the time that that study was conducted. 13 The PSM regulation requires a 14 five-year review of that study. So, again in 2002, 15 we reviewed the existing occupied buildings and any 16 portable trailers. 17 It is not correct to say the 18 facility siting workbook on itself -- by itself 19 implemented the practice of reviewing trailers as 20 they might be brought in or taken out on an ongoing 21 basis as part of the maintenance and turnaround 22 support. 23 That was the change and the 24 improvement that we made into the MOC process so 25 that it would be managed on an ongoing basis rather</p>	<p style="text-align: right;">Page 437</p> <p>1 Q. Okay. I am going to take the risk 2 calculation out for now. I am just talking about 3 recognition of hazards, not how high the risk is or 4 low the risk is. As I understand, you use all 5 these modeling numbers for that. 6 But there was recognition that a 7 trailer was not of the most durable construction 8 and would be adversely impacted if located too 9 close to a unit where there was a potential for a 10 vapor cloud explosion. That was -- 11 MR. PATTERSON: Object to sidebar. 12 Object to form. 13 Q. (BY MR. COON) That was something to 14 recognize in the distancing requirements associated 15 with the guideline. 16 MR. PATTERSON: Object to sidebar. 17 Object to form. 18 A. That is the point of that screening 19 question. If -- if there was -- the workbook did 20 not set forth a mandate that said, "Trailers must 21 be located 350 feet away," but implicit in that 22 distance is a recognition that if it is more than 23 350 feet away, that in all likelihood if you had a 24 vapor cloud explosion that there would not be 25 serious harm or death to the occupants.</p>

<p style="text-align: right;">Page 438</p> <p>1 Q. All right. That brings up the second 2 problem. 3 So I understand first, there is 4 recognition that from an initial perspective, 5 trailers of this nature shouldn't be closer than 6 350 feet to a unit because if it was closer than 7 that, if there was a vapor cloud explosion, the 8 trailer could be impacted. It could collapse or 9 damage could be sustained to it that would put the 10 people at risk, correct? 11 MR. PATTERSON: Objection, form. 12 A. Yeah. That was the potential consequence 13 inside that 350-foot distance. 14 Q. (BY MR. COON) And even within that 15 350-foot minimum standard, did you have an 16 understanding as to why under the handbook a 17 trailer was set at a 350-foot distance as a minimum 18 and that other buildings that were physically more 19 durable had to be further away? 20 A. My understanding of the subject of 21 facility siting is that depending on the individual 22 building construction type, it is more or less 23 susceptible to damage by an overpressure and that 24 buildings that may appear to be more durable, you 25 know, brick and mortar construction, may actually</p>	<p style="text-align: right;">Page 440</p> <p>1 that a trailer could be put closer because if there 2 was an overpressurization as a result of the vapor 3 cloud explosion, that the trailer instead of 4 collapsing like the brick wall would -- could roll 5 over? 6 A. That was my understanding, yes. 7 Q. Okay. And that would lead me to, I 8 guess, the next question. 9 Would you want to be in a trailer 10 that's rolling over? 11 MR. PATTERSON: Objection, form. 12 A. The facility siting workbook and the 13 consequence that was being considered was serious 14 harm or death. That was the level of concern that 15 was being addressed. 16 Obviously, you would likely be 17 injured in some form if you are in a trailer that's 18 rolling over, but are those injuries of a nature 19 that you would recover from versus one where you 20 would be permanently impaired or -- or possibly 21 dead. 22 So again, in the context of the 23 facility siting workbook, the threshold of concern 24 was this serious injury or fatality. 25 Q. Now, that brought up another thing I</p>
<p style="text-align: right;">Page 439</p> <p>1 be more susceptible to harming individuals because 2 of the nature of that construction. It may be that 3 the wall blows over, and they are crushed. 4 And so within the various industry 5 documents and textbooks on the subject, it talks 6 about the vulnerability of different construction 7 types to the same overpressure level. And so what 8 the workbook was reflecting was those distances at 9 which it would no longer be of a sufficient concern 10 that you would allow that building of that 11 particular construction type to exist as an 12 occupied building without performing the risk 13 calculation. 14 Q. And that's the next thing I want to get 15 to. You just used brick and mortar as an example. 16 Under the handbook siting, there 17 is recognition that a trailer could be located 18 closer to an operating unit and closer to a 19 potential vapor cloud explosion than a brick and 20 mortar building because of how those buildings 21 reacted under a vapor cloud explosion scenario, 22 overpressurization scenario, correct? 23 A. That's my understanding, yes. 24 Q. And did you have an understanding that 25 the underlying foundation for that conclusion was</p>	<p style="text-align: right;">Page 441</p> <p>1 thought was kind of interesting about this trailer 2 siting and that was -- as I understand, there was 3 an extra rule dealing with trailers at Texas City 4 and that was that they had to be strapped down. 5 Do you know anything about that? 6 A. Yes. We routinely secure them for high 7 winds or hurricane preparation. 8 Q. Do you know if these trailers were 9 strapped down? 10 A. I don't know. 11 Q. Assuming that you are strapping down the 12 trailers because you are close to the Gulf of 13 Mexico where you get hurricanes, the trailers 14 aren't going to roll over anyway, are they? 15 MR. PATTERSON: Objection, form. 16 A. The purpose of securing them is so that 17 they don't roll over and get blown away in the 18 wind, yes. 19 Q. (BY MR. COON) Well, how do you explain 20 this conflict? You say you can put a trailer 21 350 feet from a unit because it can roll over; and 22 yet, you say, "We have got to stake the trailers 23 down so they don't roll over, so a hurricane can't 24 blow them over." 25 A. I am not a subject matter expert on that</p>

<p style="text-align: right;">Page 442</p> <p>1 and so I don't know to the extent that that's a 2 factor in that distance. 3 How much does that 350-foot 4 distance depend on them being able to roll over? I 5 think there were also comments -- I can't recall 6 whether it was in the workbook or in the guidebook 7 associated with it -- that trailers can flex. 8 So I don't know the contribution 9 of it, as to whether or not, if we went back to the 10 subject matter experts, that they said if it was 11 tied down, does that invalidate the 350-foot 12 distance, does it need to be greater, is it the 13 same or not? 14 Q. Well, with respect to trailer siting at 15 Texas City, who would be responsible for looking at 16 that issue and saying, "We have mutually 17 inconsistent regulations here? One is that you can 18 put it 350 feet away because it can roll over and 19 we have another rule that applies to our plant 20 specifically that says you have to stake them down 21 so they can't roll over"? 22 MR. PATTERSON: Objection, form. 23 Q. (BY MR. COON) So who would be in charge 24 of reconciling those almost mutually exclusive 25 rules to form some consistency?</p>	<p style="text-align: right;">Page 444</p> <p>1 associated with using the flare yard for 2 activities. Do you recall that line of 3 conversation? 4 A. Yeah, that there needed to be a buffer 5 zone. 6 Q. Yeah. 7 A. I remember that. 8 Q. And there is a document there that is 712 9 and it seems to be corroborating what we discussed; 10 that is, a discussion aired several years ago that 11 is documented by an e-mail where you are talking 12 about utilizing the flare yards and that practice 13 needed to cease. 14 A. Okay. Give me a moment -- 15 Q. Yes, sir. 16 A. -- to take a look here. 17 (Examines document.) Okay. 18 Q. Okay. Anyway, can you elaborate on that 19 one, please, sir? 20 A. The top thread of this e-mail is from 21 Dana Ryman -- he is a supervisor within the HSE 22 department -- to me asking who could address an 23 issue that was being raised by one of the 24 employee -- BP employees, Kim Aston. 25 The issue was relative to an</p>
<p style="text-align: right;">Page 443</p> <p>1 MR. PATTERSON: Objection, form. 2 A. I would say that would be the 3 responsibility of the process safety department. 4 Q. (BY MR. COON) And who is in charge of 5 the process safety department? 6 MR. PATTERSON: Objection, form. 7 A. On March 23rd, I was. 8 Q. (BY MR. COON) Mr. Ralph, I have got the 9 next document, Number 712. I want to change the 10 subject briefly. I wanted to make sure while 11 we're -- while I have this in front of you, I want 12 to get you to prove that record up. 13 (Exhibit Number 712 marked for 14 identification.) 15 Q. (BY MR. COON) We talked earlier about 16 flares and the location of trailers adjacent to 17 flares. 18 Do you remember that conversation? 19 A. I am sorry. I was looking at the 20 document instead of paying attention to your 21 question. 22 Q. Maybe I should have given you more time. 23 But anyway, you can look at it here in a minute. 24 You talked earlier about your 25 understanding or recognition of the hazards</p>	<p style="text-align: right;">Page 445</p> <p>1 observation that Kim had had about some portable 2 toilets that were being located -- the document 3 says around -- within the area around the flare. 4 He is referring to the DDU-3 flare. And he is 5 asking for some assistance in addressing this 6 issue. 7 There is another portion of this 8 e-mail, which basically summarizes the concerns 9 that I had been raising about flare yards and the 10 need for a buffer zone. 11 It looks to pretty accurately 12 reflect what I believe to be good practices 13 regarding establishing those buffer zones and 14 control of personnel into those buffer zones. And 15 that portion of the e-mail appears to have been 16 written by David Breedlove, which is one of our 17 shift supervisors. 18 Q. Okay. If I can briefly then, basically, 19 to rehash all of this, there was a recognition by 20 you that the flare yard should not be used for 21 laydown or turnaround activities or anything else. 22 That was an unsafe place to locate 23 equipment and personnel because of the risk of a 24 flare puking, causing a fire around the ground, 25 right?</p>

<p style="text-align: right;">Page 446</p> <p>1 MR. PATTERSON: Objection, form. 2 A. As it relates to active flares. You 3 know, if a flare is out of service, then obviously 4 the danger is not present and it's possible you 5 could use that real estate around the flare yard. 6 Q. (BY MR. COON) And you made a number of 7 recommendations, which is establish no entry zones 8 for the flare yard, marking the boundaries, 9 prohibiting the use of flare yards as laydown or 10 turnaround trailer yards, procedures for 11 authorizing transit entry -- which is just like to 12 check things out, right? 13 A. Yeah. If operators needed to go in and 14 observe a condition or operate a piece of equipment 15 or something that it would, you know, again, if -- 16 not a continuous presence there but I need to go 17 in. I need to take care of a task, and then I will 18 be exiting that area. 19 Q. Okay. And to the best of your 20 understanding, were these policies implemented, 21 these recommendations? 22 A. The practices have been implemented. 23 Unfortunately, the formal policy dictating it has 24 lagged behind. 25 Q. Why is that?</p>	<p style="text-align: right;">Page 448</p> <p>1 five years with people available to revise and 2 update. We have been through a number of 3 reorganizations at the site from when it was just 4 the Texas City refinery to becoming the Texas City 5 site, meaning it combined with the chemical plant 6 that is there to the creation of BP South Houston, 7 which brought in the Chocolate Bayou chemical plant 8 as well as the Deer Park chemical plant. 9 Part of that is each one of those 10 sites had their own individual safety policies. 11 They would all be very consistent with each other, 12 but it's not the same policy. 13 So the intent was to create one 14 uniform set of policies and that process was begun. 15 It just takes a considerable effort and people to 16 do that. 17 Q. Well, you had said earlier resource 18 allocation. 19 Was it your opinion that there 20 was -- as part of this lack of focus on process 21 safety management and underallocation of resources 22 that you needed to stay current with your 23 responsibilities? 24 MR. PATTERSON: Objection, form. 25 A. My comment was relative to being able to</p>
<p style="text-align: right;">Page 447</p> <p>1 MR. PATTERSON: Objection, form. 2 A. Generally, I would say resource 3 allocation, having somebody to be able to progress 4 it through our formal process of creating policies; 5 but again, the practice has been implemented. 6 So when you go to the site, you 7 see these buffer zones, you see the fences around 8 the flare yard, you can find evidence of the units 9 that own and operate those flares having procedures 10 that reflect the good practices that I have 11 outlined. 12 Q. (BY MR. COON) Why has it taken so long 13 to get up to speed on safe practices and policies 14 when that plant has been around, what, 70 years? 15 MR. PATTERSON: Objection, form. 16 A. The plant was first commissioned in 1933. 17 Q. (BY MR. COON) You talked about resource 18 allocation. 19 Is it just where you don't have 20 enough people, enough staff to keep current with 21 policies and procedures, to make sure that they are 22 all reduced to writing and properly implemented and 23 people are trained on the subject matter? 24 MR. PATTERSON: Objection, form. 25 A. We have had an issue in the last four or</p>	<p style="text-align: right;">Page 449</p> <p>1 issue new or revised safety policies, whether they 2 were on the personal safety side of things or the 3 process safety side of things that we had, as in 4 the case of flare yards, recognized a hazard and 5 recognized an improper practice that we needed to 6 change. 7 The practice has, in fact, been 8 changed; but in terms of good systems management, 9 we needed to codify that in a policy. 10 Q. (BY MR. COON) And that was -- 11 A. And that policy has not been formally 12 adopted, and that was my comment about resource to 13 move that to an officially adopted policy. 14 Q. Have you lodged concerns or complaints to 15 management that you were underresourced in the PSM 16 department? 17 MR. PATTERSON: Objection, form. 18 A. I have over the last four or five years 19 raised concerns that effectively we could do more 20 with process safety management and not that people 21 performing process safety management tasks needed 22 to report to me and my department but were there 23 sufficient resources in total at the site devoted 24 to process safety management efforts. I raised 25 that concern.</p>

<p style="text-align: right;">Page 450</p> <p>1 Q. (BY MR. COON) Well -- and just keeping 2 up with even, like, PSM action items has been a 3 problem at Texas City even as of -- going back just 4 to the months before the explosion, just in the 5 last year or two. 6 Those were still major problems, 7 weren't they? 8 A. That was one of the concerns I was 9 raising was that we had fallen back from our peak 10 performance in that specific area. 11 (Exhibit Number 713 marked for 12 identification.) 13 Q. (BY MR. COON) And here is Exhibit 713. 14 This one is a memo of September, 2004, just a few 15 months before the explosion. This is to Mr. Parus 16 from Mr. Barnes, and I will just show it to you 17 right here if you will look at the monitor. 18 Mr. Parus was the BUL at 19 Texas City in September, wasn't he? 20 A. Correct. 21 Q. And it talks about process safety 22 discussions and here is the quote I want to bring 23 your attention to in the string e-mail. 24 It says, "I assume you have seen 25 these slides. Texas City received poor marks for</p>	<p style="text-align: right;">Page 452</p> <p>1 Q. Do you know when you put this together 2 and what its purpose was? 3 A. If I could take a look at the whole 4 document, I could probably comment on that. 5 Q. (Tenders documents.) 6 A. Given that it has got the label of 7 BP South Houston, it would have had to have been 8 sometime after 2002, I believe, when South Houston 9 was formed. 10 I don't know that this is the 11 entirety of the site pack, but these are the types 12 of slides, and I have used very similar slides in 13 other sorts of forms, to introduce the topic of 14 process safety management, what are some of the key 15 components of it and why is it important, why 16 should we pay any attention to it at all. 17 So it's general educational type 18 material. 19 Q. Okay. 20 (Exhibit Number 715 marked for 21 identification.) 22 Q. (BY MR. COON) The next one I want you to 23 authenticate for us, sir, is Exhibit 715. This one 24 is called the "TC-PSC Chair Selection." 25 That's Texas City?</p>
<p style="text-align: right;">Page 451</p> <p>1 PSM action item completion" -- it says 63 percent. 2 And that is, what, second quarter 3 of 2004? 4 A. Correct. 5 Q. (Continuing) -- "and temporary MOC 6 closure." 7 Which was at 56 percent second 8 quarter of '04, correct? 9 A. Correct. 10 Q. And these were the kind of problems that 11 you were having out there that you were having 12 difficulty getting addressed? 13 A. Those were the issues that I was raising; 14 and that's what my comments relative to lack of 15 focus on process safety management, being 16 manifested in these sorts of things. 17 (Exhibit Number 714 marked for 18 identification.) 19 Q. (BY MR. COON) Mr. Ralph, I have a few 20 other documents that have been provided to us, and 21 I just want to have you identify them. Okay. This 22 is 714. It's called "Introduction to PSM, 23 W.H. Ralph." 24 That's you, is it not? 25 A. That's correct.</p>	<p style="text-align: right;">Page 453</p> <p>1 A. Correct. Process safety committee. 2 Q. And it's dated August 1, 2004? 3 A. Correct. 4 Q. And it includes some slides. 5 What was this all about? 6 A. The -- the chair of the process safety 7 committee at the time was John Cearley. John was 8 preparing to retire from the site, and so we would 9 need to select a new chair of that committee. And 10 Don Parus had asked me for my thoughts and input on 11 who that should be, and so I prepared this series 12 of slides for Don. 13 Q. Was that something just you and Don went 14 over? 15 A. Yes. 16 Q. Was it presented to a larger audience? 17 A. No. This was strictly for Don's eyes 18 only. 19 Q. What did he do subsequent to that 20 presentation? 21 MR. PATTERSON: Objection, form. 22 A. He and I had a brief conversation about 23 the principles that I was presenting here in terms 24 of should the -- and the fundamental question -- 25 and it's reflected on this title slide -- is</p>

<p style="text-align: right;">Page 454</p> <p>1 whether or not the chair of the process safety 2 committee should be a very experienced person with 3 lots of operating background, lots of prior 4 exposure and experience to process safety 5 management or should it be a role that would be a 6 developmental opportunity, which I would categorize 7 as the person who is learning more than they are 8 contributing to that. 9 Q. (BY MR. COON) What was decided? 10 MR. PATTERSON: Objection, form. 11 A. Actually, a different player arrived on 12 the scene, who was -- Kathleen Lucas came to the 13 site to become the operations manager; and Don 14 named her as the process safety committee chair in, 15 I believe, December of '04. 16 Q. (BY MR. COON) Do you know who brought 17 her over? 18 MR. PATTERSON: Objection, form. 19 A. I don't know. 20 Q. (BY MR. COON) Do you have any dealings 21 with Mr. Hoffman from time to time? 22 A. No. I have been present in a couple of 23 meetings with him, but I can't recall ever speaking 24 directly with him or interacting with him. 25 Q. What about Mr. Manzoni?</p>	<p style="text-align: right;">Page 456</p> <p>1 know. 2 Q. Okay. But part of what the package 3 included was you showed him -- it's not a good 4 picture, but it's of an explosion. Is that what 5 that was? 6 A. Yeah. That's kind of a file -- you know, 7 a file picture of a major fire. 8 Q. Okay. So you wanted to impress upon 9 Mr. Parus that process safety management incidents 10 could result in big old fireballs like the one 11 here, right? 12 A. Yeah. That's part of the fundamental 13 education I try and give every time I have the 14 opportunity. 15 Q. That all these things could happen as a 16 result? 17 A. Correct. 18 Q. And you also -- you have a lot of 19 statistics that I want to show you. 20 You wanted to remind him that 21 process safety management was easy to ignore and 22 the reasons that it is easily ignored, right? 23 A. Correct. 24 Q. And you were pointing out to him things 25 that are weak signals. These are excuses for not</p>
<p style="text-align: right;">Page 455</p> <p>1 A. Same thing. I remember one meeting being 2 present, but no direct dealings whatsoever. 3 Q. What about when Lord Browne came over 4 after the explosion? 5 A. I -- again, I don't recall the exact 6 timing. He came over, I believe, again, maybe in a 7 month's time or so; and I was present at a town 8 hall meeting that he conducted. I was an audience 9 member. 10 Q. Now, are all these things that are part 11 of this chair selection presentation that you had 12 from Mr. Parus things that you went over with him, 13 each of these slides? 14 A. I prepared the slide pack, and I did not 15 have a chance to go over it personally with him. I 16 left it with Don's secretary in an envelope, you 17 know, basically for his eyes only. 18 At some point in the ensuing days 19 after I had given that, he called me; and we talked 20 about it. 21 Q. So you had an understanding he did review 22 the contents of the material you provided him? 23 A. He called me to talk about it. 24 To the extent of his review and 25 whether he looked at every slide or not, I don't</p>	<p style="text-align: right;">Page 457</p> <p>1 focusing on process safety management? 2 A. Yes. 3 Q. And then you quoted the captain of the 4 Titanic. 5 Do you recall that? 6 A. Yes. 7 Q. I thought it was kind of interesting 8 because BP Texas City has been called "The 9 Flagship," hasn't it? 10 MR. PATTERSON: Objection, form. 11 A. It has, yes. 12 Q. (BY MR. COON) What was your intent in 13 quoting the captain of the Titanic as part of the 14 presentation on PSM? 15 A. The general concept -- and I think it's 16 best captured in the -- kind of the title I put on 17 this slide -- is you can't really rely on past 18 performance. Just because it has never been within 19 your experience for a major accident doesn't mean 20 that potential doesn't exist. 21 That is one of the -- kind of, the 22 fundamentals is that, again, in terms of general 23 education that we try and impart to hazard review 24 teams and things is -- is that you have to somehow 25 bring in a wider body of knowledge. Just because</p>

<p style="text-align: right;">Page 458</p> <p>1 you have never seen it happen doesn't mean it 2 doesn't exist. 3 There have been some other very 4 notable major incidents. One that I recall 5 involved Exxon down at an Australian plant where 6 the people at that facility seemed to be completely 7 ignorant to the issue of brittle fracture, that 8 cold temperature material could make the very thick 9 steel susceptible to breaking. 10 The investigation into that 11 incident revealed that within the wider corporate 12 Exxon that they were very familiar with that 13 incident, that phenomenon and that as a potential 14 incident or potential factor and so that you needed 15 to be able to draw on other resources or in the 16 context of this slide, you know, you just can't 17 turn a blind eye to it or put blinders on and say, 18 "Well, it has never happened to me" and think that 19 it could never happen. 20 The point of the slide is it can 21 happen. 22 Q. You can hit an iceberg and sink? 23 MR. PATTERSON: Objection, form. 24 A. Yeah. I mean -- 25 Q. (BY MR. COON) Therefore --</p>	<p style="text-align: right;">Page 460</p> <p>1 Q. And also -- 2 THE VIDEOGRAPHER: Mr. Coon, I'm 3 sorry. I am out. 4 Q. (BY MR. COON) Okay. And also to avoid 5 taking unnecessary risk? 6 MR. PATTERSON: Objection, form. 7 Q. (BY MR. COON) It's important not to take 8 unnecessary risk, isn't it? 9 A. You need to be aware of risk and, you 10 know, risk tolerance is kind of an individual or a 11 corporate decision as to how much of that you would 12 accept. 13 Q. And you know that Captain Smith went 14 through an iceberg infested area at twice the speed 15 that other ships traveled in so that he could help 16 set a record in transAtlantic travel? 17 Do you recall that part of the 18 history associated with the Titanic? 19 MR. PATTERSON: Objection, form. 20 A. I don't know the specifics. I do recall 21 that, yes, he was trying to set a record for 22 transAtlantic passage. 23 Q. (BY MR. COON) And they knew they were 24 going in areas where there were icebergs and they 25 went at a speed where they couldn't avoid one once</p>
<p style="text-align: right;">Page 459</p> <p>1 A. -- in the context of identifying 2 potential hazards, yeah, a ship could run into an 3 iceberg and the consequence could be sinking. 4 Q. And while you don't want that to happen, 5 if it does happen, you need to have enough life 6 boats just in case, right? 7 MR. PATTERSON: Objection, form. 8 A. That would be the sort of thing. I mean, 9 you would obviously want to address it first from 10 the prevention side of things. 11 Q. (BY MR. COON) And you also want to teach 12 the people how to use life boats, don't you? 13 MR. PATTERSON: Objection, form. 14 A. Yeah. Again, in terms of the overall 15 context, you would want to first identify that as a 16 potential risk. 17 On the prevention side, you would 18 want to see what measures you could put in place 19 for detecting icebergs so that you could avoid them 20 or having your normal route be in areas where 21 icebergs didn't exist. And then I would lump it 22 into the category of mitigation efforts. 23 And that's having enough life 24 boats and then, yes, training people on proper use 25 of those life boats.</p>	<p style="text-align: right;">Page 461</p> <p>1 they ran up on it. 2 Do you recall that? 3 MR. PATTERSON: Objection, form. 4 A. Generally, yes. 5 Q. (BY MR. COON) It was all to set a 6 record -- 7 MR. PATTERSON: Objection, form. 8 Q. (BY MR. COON) -- and in setting that 9 record, he put the lives of those passengers at 10 risk, didn't he? 11 MR. PATTERSON: Objection, form. 12 A. I would conclude, yes, he increased the 13 risk to those passengers. 14 Q. (BY MR. COON) Mr. Ralph, have you 15 understood the questions we have asked you today, 16 sir? 17 A. I have. 18 Q. There are some other ones that we could 19 probably ask, but we will -- I guess we will wait 20 and see what happens at trial. 21 MR. COON: I have no further 22 questions today. 23 MR. PATTERSON: We will save our 24 questions until trial. 25 THE VIDEOGRAPHER: Off the record</p>

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1 at 12:32.
 2 (Deposition concluded.)
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1 I, WILLIAM RALPH, have read the foregoing
 2 deposition and hereby affix my signature that same is
 3 true and correct, except as noted above.
 4
 5 _____
 6 WILLIAM RALPH
 7 THE STATE OF _____)
 8 COUNTY OF _____)
 9 Before me, _____, on this day
 10 personally appeared WILLIAM RALPH, known to me or
 11 proved to me on the oath of _____ or through
 12 _____ (description of identity card or other
 13 document) to be the person whose name is subscribed
 14 to the foregoing instrument and acknowledged to me
 15 that he/she executed the same for the purpose and
 16 consideration therein expressed.
 17 Given under my hand and seal of office on this
 18 _____ day of _____, _____.
 19
 20 _____
 21 NOTARY PUBLIC IN AND FOR
 22 THE STATE OF _____
 23 My Commission Expires: _____
 24
 25

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1 EXAMINATION
 2 CHANGES AND SIGNATURE
 3 PAGE LINE CHANGE REASON
 4 _____
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 8 _____
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 13 _____
 14 _____
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 17 _____
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 22 _____
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 24 _____
 25 WILLIAM RALPH

Page 465

1 CAUSE NO. 05CV0337
 2 MIGUEL ARENAZA, ELIZABETH) IN THE DISTRICT COURT
 3 RAMON, DAVID G. CROW and)
 4 JUANITA G. CROW, et al.)
 5)
 6 VS.) 212TH JUDICIAL DISTRICT
 7)
 8 BP PRODUCTS NORTH AMERICA)
 9 INC., B.P. CORPORATION)
 10 NORTH AMERICA INC., DON)
 11 PARUS, AND JE MERIT)
 12 CONSTRUCTORS, INC.) GALVESTON COUNTY, TEXAS
 13 CAUSE NO. 05CV0337-A
 14 IN RE: BP AMOCO EXPLOSION) IN THE DISTRICT COURT
 15 MARCH 23, 2005)
 16 COORDINATED DISCOVERY) 212TH JUDICIAL DISTRICT
 17 PROCEEDINGS)
 18) GALVESTON COUNTY, TEXAS
 19 REPORTER'S CERTIFICATE
 20 ORAL VIDEOTAPED DEPOSITION OF
 21 WILLIAM RALPH
 22 VOLUME 2
 23 JULY 28, 2006
 24 I, Stephanie Barringer, Certified Shorthand
 25 Reporter in and for the State of Texas, hereby
 certify to the following:
 That the witness, WILLIAM RALPH, was duly sworn
 and that the transcript of the deposition is a true
 record of the testimony given by the witness;
 That the deposition transcript was duly
 submitted on _____ to the witness or to the
 attorney for the witness for examination, signature,
 and return to me by _____.
 That the following is the computer-calculated
 amount of time used by each party at the time of the
 deposition:
 Mr. Coon (2 hours, 12 minutes)
 Mr. Bond (53 minutes)
 Attorneys for Plaintiffs

Page 466

1
2 That pursuant to information given to the
3 deposition officer at the time said testimony was
4 taken, the following includes the parties at the
5 deposition:
6 FOR PLAINTIFFS JAIME ANDREADE, ET AL.:
7 Mr. Brent Coon
8 Mr. Larry Sarten
9 Brent Coon & Associates
10 3550 Fannin
11 Beaumont, Texas 77701
12 Fax: 409-833-4483
13 Telephone: 409-835-2666
14
15 FOR PLAINTIFFS RHONDA DARLENE HEICKMAN,
16 INDIVIDUALLY AND AS DEPENDENT
17 ADMINISTRATOR OF THE ESTATE OF RYAN
18 RENE RODRIGUEZ:
19 Mr. Trent Bond
20 Reaud, Morgan & Quinn
21 801 Laurel Street
22 Beaumont, Texas 77720-6005
23 Fax: 409-833-8236
24 Telephone: 409-838-1000
25
26 FOR PLAINTIFFS, ET AL.:
27 Mr. Jeff Burke
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34
35

Page 467

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2 (Continued)
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13 FOR DEFENDANT BP PRODUCTS NORTH AMERICA, INC.:
14 Mr. Edward J. Patterson, III
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17 1301 McKinney, Suite 5100
18 Houston, Texas 77010-3095
19 Fax: 713-651-5246
20 Telephone: 713-651-5151
21
22 That a copy of this certificate was served on
23 all parties shown herein on _____ and
24 filed with the Clerk.
25 I further certify that I am neither counsel for,
related to, nor employed by any of the parties in the
action in which this proceeding was taken, and
further that I am not financially or otherwise
interested in the outcome of this action.
Further certification requirements pursuant to
Rule 203 of the Texas Code of Civil Procedure will be
complied with after they have occurred.
23
24
25

Page 468

1
2
3
4 Certified to by me on this _____ day of
5 _____.
6
7
8
9
10
11 Stephanie Barringer, CSR
12 Texas CSR 6198
13 Expiration: 12/31/06
14 U.S. Legal Support
15 Firm Registration: 122
16 519 N. Sam Houston Pkwy., Ste. 200
17 Houston, Texas 77060
18 Main number: 713/653-7100
19 Fax number: 713/653-7143
20
21
22
23
24
25

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1 FURTHER CERTIFICATION UNDER TRCP RULE 203
2
3 The original deposition was/was not returned to
4 the deposition officer on _____.
5 If returned, the attached Changes and Signature
6 page(s) contain(s) any changes and the reasons
7 therefor.
8 If returned, the original deposition was
9 delivered to Mr. Brent Coon at Brent Coon &
10 Associates as the custodial attorney.
11 \$_____ is the deposition officer's
12 charges to the Plaintiffs for preparing the original
13 deposition and any copies of exhibits;
14 The deposition was delivered in accordance with
15 Rule 203.3, and a copy of this certificate, served on
16 all parties shown herein, was filed with the Clerk.
17 Certified to by me on this _____ day of
18 _____, _____.
19
20
21 Stephanie Barringer, CSR
22 Texas CSR 6198
23 Expiration: 12/31/06
24 U.S. Legal Support
25 Firm Registration: 122
519 N. Sam Houston Pkwy., Ste. 200
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Main number: 713/653-7100
Fax number: 713/653-7143