

CAUSE NO. A-030272CC

ANN STUBBS, Individually) IN THE DISTRICT
and as Representative of) COURT OF
the Estate of BEN L. STUBBS,)
Deceased,) ORANGE COUNTY, TEXAS
Plaintiff,) 128TH JUDICIAL
VS.) DISTRICT
RADIATOR SPECIALTY COMPANY,)
et al.,)
Defendants.)

HERBERT W. WILKINSON and) IN THE DISTRICT
PEGGY S. HERBERT,) COURT OF
Plaintiffs,)
VS.) ORANGE COUNTY, TEXAS
RADIATOR SPECIALTY COMPANY,) 128TH JUDICIAL
et al.,) DISTRICT
Defendants.)

ORAL AND VIDEOTAPED DEPOSITION OF
DENNIS J. PAUSTENBACH, Ph.D., D.A.B.T.
MAY 18, 2006

#011806-000734

DEPOSITION
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1 ORAL DEPOSITION OF DENNIS J. PAUSTENBACH, Ph.D., 2 D.A.B.T., produced as a witness at the instance of 3 the Plaintiffs, and duly sworn, was taken in the 4 above-styled and numbered cause on the 18th of May, 5 2006, from 8:48 a.m. to 11:30 a.m., before JANET A. 6 STEFFAN, a Registered Diplomatic Reporter and a Notary 7 Public in and for the Commonwealth of Pennsylvania, 8 at the Pittsburgh Marriott City Center, 112 9 Washington Place, Pittsburgh, Pennsylvania, 15219, 10 pursuant to the Texas Rules of Civil Procedure and 11 the provisions stated on the record or attached 12 hereto.	1 INDEX 2 PAGE 3 Appearances..... 3 4 WITNESS: DENNIS J. PAUSTENBACH, Ph.D., D.A.B.T. 5 Direct Examination by Mr. Nemeroff..... 5 6 Cross-Examination by Ms. Riegle..... 88 7 Reporter's certificate..... 93
	8 EXHIBITS 9 PAGE MARKED 10 EXHIBIT PAGE MARKED 11 1 -- Notice of Deposition..... 6 12 2 -- Notes from Wilkinson case..... 12 13 3 -- Notes from Stubbs case..... 12 14 4 -- Report in Wilkinson case..... 12 15 5 -- Report in Stubbs case..... 12 16 6 -- Engagement letter dated 1/18/06..... 14 17 7 -- Engagement letter dated 3/30/06..... 14 18 8 -- US Steel material safety data sheet for 19 Raffinate dated 5/15/67..... 23 20 9 -- Color photographs of Liquid Wrench..... 24 21 10 -- Color photographs of spray version 22 of Liquid Wrench..... 24 23 11 -- 1962 report from Foster Snell, Inc..... 24 24 12 -- 1954 report from Foster Snell, Inc..... 24 25 13 -- 2/19/62 report from Foster Snell, Inc..... 25
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1 APPEARANCES 2 FOR THE PLAINTIFFS: 3 MR. RICK NEMEROFF, ESQ. 4 Highland Park Place 5 4514 Cole Avenue, Suite 806 6 Dallas, Texas 75205 7 Phone: 214-774-2258 8 (Via telephone) 9 (Appearing for Baron & Budd) 10 FOR THE DEFENDANT, United States Steel Corporation: 11 MR. CARL EPPS, ESQ. 12 NELSON, MULLINS, RILEY & SCARBOROUGH 13 1330 Main Street 14 Columbia, South Carolina 29211 15 Phone: 803-255-9751 16 FOR THE DEFENDANT, Radiator Specialty Company: 17 MR. THOMAS AUBRY, ESQ. 18 COATS, ROSE, YALE, RYMAN & LEE 19 3 Greenway Plaza, Suite 2000 20 Houston, Texas 77046 21 Phone: 713-651-0111 22 (Via telephone) 23 FOR THE DEFENDANT, Union Carbide Corporation: 24 MS. CATHERINE R. RIEGLE, ESQ. 25 KING & SPALDING 26 1100 Louisiana Street, 39th Floor 27 Houston, Texas 77002 28 Phone: 713-276-7422 29 (Wilkinson case only) 30 (Via telephone)	1 EXHIBITS (continued) 2 EXHIBIT PAGE MARKED 3 14 -- Radiator Specialty Company 4 product introduction list..... 25 5 15 -- CV of Dr. Paustenbach..... 26 6 16 -- US Steel Corporation's first 7 supplemental disclosure..... 38 8 17 -- Letter dated 6/10/63 from US Steel 9 to Radiator Specialty Company..... 63 10 18 -- Letter dated 5/25/77 from US Steel 11 to Mr. James..... 63 12 13 14 15 16 17 18 19 20 21 22 23 24 25
1 ALSO PRESENT: 2 MR. DENNIS J. PAUSTENBACH, Ph.D., D.A.B.T., 3 The Witness, 4 JULIE M. PANKO, ChemRisk, 5 ERIN SHAY, ChemRisk; and 6 MS. JANET A. STEFFAN, 7 The Court Reporter.	

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1 2 PROCEEDINGS 3 4 DENNIS J. PAUSTENBACH, Ph.D., D.A.B.T., 5 a witness herein, having been first duly sworn, was 6 examined and testified as follows: 7 8 DIRECT EXAMINATION 9 10 BY MR. NEMEROFF: 11 Q. We're on the record. Sir, if you could 12 just go ahead and state your full name for the 13 record. 14 A. Dennis James Paustenbach. 15 (EXHIBIT NO. 1 MARKED.) 16 Q. And, Dr. Paustenbach, I'm going to show 17 you what I've marked as Exhibit No. 1 to this 18 deposition and ask you if you have seen that document 19 before? 20 A. I have. 21 Q. And in response to the duces tecum have 22 you brought certain documents here with you to the 23 deposition? 24 A. Yes, sir. 25 Q. And I'll just go ahead and run through the	1 Wilkinson and Peggy S. Herbert versus Radiator 2 Specialty Company, et al., case materials May 2006; 3 Stubbs/Wilkinson versus Radiator Specialty Company. 4 et al., expert depositions May 2006; Stubbs/Wilkinson 5 versus Radiator Specialty Company, et al., Infante 6 exhibits, binder 1 of 2 and then binder 2 of 2, both 7 dated May of 2006; then Stubbs versus Wilkinson, 8 excuse me, Stubbs/Wilkinson versus Radiator Specialty 9 Company, Mehlman exhibits May 2006, and then I have a 10 binder entitled Liquid Wrench-reliance documents. 11 With respect to the two binders, sir, that 12 are marked case materials, it's a good thing we're 13 both mobile here, the case materials for either 14 Wilkinson and Herbert or for Stubbs, if you could 15 just generally tell me what's contained in these 16 notebooks so I will have an idea of what's in them. 17 A. On one binder case materials they're 18 simply the depositions of Jones, Killen -- 19 MR. AUBRY: Tom Aubry, can you just 20 put the phone closer to the witness? 21 MR. EPPS: Speak up a little bit. 22 Q. Here. 23 A. The social security records, Martin's 24 deposition, notice of depositions of the IH experts, 25 the amended petition and the, I think it's called the
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1 duces tecum and see what you've brought. First is 2 have you brought your most current and complete 3 resume or curriculum vitae? 4 A. Yes. 5 Q. Have you brought all your notes, data, 6 records, reports or other persons -- excuse me -- of 7 other persons or witnesses which you have reviewed in 8 order to arrive at your opinions of any relevant 9 issues to these lawsuits? 10 A. Yes. 11 Q. And with respect to No. 2, are those 12 contained within one of the notebooks at the end of 13 the table? 14 A. Yes. 15 Q. Are they contained in one specific area, 16 or are they spread out through the notebooks? 17 A. No. I think it required all the 18 notebooks. 19 Q. Okay. And I guess for the record we've 20 got a number of notebooks down here at the end of the 21 table that are -- I'll just read off the titles 22 because I'm not going to mark them all. We have 23 Stubbs/Wilkinson v. Radiator Specialty Company, 24 Gardner exhibits May 2006; Stubbs v. Radiator 25 Specialty Company case materials 2006; Herbert	1 disclosure. 2 Q. Probably 194 -- yeah, 194 disclosure. 3 A. And I believe another disclosure, and then 4 the Notice of Deposition. 5 Q. Would the same hold true for the other, 6 essentially the same thing? 7 A. Essentially the same thing in the other 8 binder. 9 Q. Okay. I guess while we're over here, 10 Gardner -- tell me what's in the Gardner exhibits 11 binder. 12 A. These are the exhibits to Gardner's 13 deposition. 14 Q. Okay. And we have expert depositions. I 15 guess that is what it is. 16 A. It is what it is. It's basically Petty's 17 deposition and Spencer, Gardner and Infante. 18 Q. And then I would imagine the Infante 19 exhibits are those to the deposition? 20 A. Yes, sir. 21 Q. Same thing with Mehlman? 22 A. Yes, sir. 23 Q. And then we get to the Liquid Wrench 24 reliance documents, and if you could describe briefly 25 what's contained within that notebook.

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1 A. Yes. These are 23 peer review published 2 papers by various researchers who have published on 3 benzene, including myself, and depending what the 4 questions are we can refer to published papers in 5 this area. 6 Q. And are there any papers that are 7 published specific with respect to Liquid Wrench, or 8 are they generally about benzene and benzene 9 exposures? 10 A. They're generally about benzene and 11 benzene exposures. 12 Q. Okay. I will not have the court reporter 13 mark all those as exhibits and take them home with 14 her. I think we have all that -- 15 A. I think you have them all. 16 Q. -- floating around someplace. Also in 17 front of you you have got copies of Petty's reports? 18 A. Yes, sir. 19 Q. In these two cases? 20 A. Yes. 21 Q. And are those within a different binder? 22 A. Yes. It's called Petty exhibits. 23 Q. Very organized. In addition to the 24 binders that we've discussed, do you have any notes 25 that you've taken with respect to these cases?	1 15, 2006, and 3 is going to be your notes from the 2 Stubbs case dated May 16, 2006, and then I'm going to 3 mark as 4 your report in the Wilkinson case and 4 Exhibit 5 your report in the Stubbs case, and so -- 5 all right. So you've got copies of all these things 6 here? 7 A. Yes, sir. 8 (EXHIBIT NOS. 2 through 5 MARKED.) 9 Q. So that will be No. 4. Great. So 2 and 4 10 deal with Wilkinson, and 3 and 5 deal with Stubbs. 11 A. Okay. 12 Q. Now, with respect to Exhibits 4 and 5, the 13 expert reports, when did you complete those? 14 A. Yesterday. 15 Q. And were you given any indication prior to 16 your completion that there was a due date for those 17 reports in anticipation of trial? 18 A. No. I asked specifically, and they said 19 that no reports were necessary. So they're for my 20 benefit and not necessarily of much interest to you I 21 presume. 22 Q. Dr. Paustenbach, everything you write is 23 of interest to us. With respect to the notes 24 Exhibits 2 and 3, can you describe generally what you 25 do to arrive at that, what you call I guess your case
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1 A. I have the case summary for each. 2 Q. Would that be the report that you've 3 issued in each case? 4 A. No. It's slightly different. 5 Q. Okay. 6 A. I'll pass the first one to you. 7 Q. Sure. 8 A. And here's the Wilkinson -- 9 Q. Let me mark that. 10 A. I have clean copies for you for exhibits, 11 if you like. 12 Q. Yeah. If you could, that would be great. 13 A. Yeah. Let's do that. Do you want to 14 number them now? 15 Q. Yeah. I figured I would just to keep it 16 in order. If you've got paper clips, we can use 17 paper clips. 18 A. So for the record we're going to mark as 19 Exhibit 1 -- 20 Q. I is already the notice of deposition. 21 A. Notice of deposition. 22 Q. And I'll get that back over here. 23 A. No. 2 is going to be -- 24 Q. 2? Why don't we go ahead. 2 will be your 25 notes from the Wilkinson and Herbert case dated May	1 summary. 2 A. What normally happens is we receive 3 materials on a case from the law firm as they are 4 generated, and staff will summarize the relevant 5 materials regarding the chemicals of interest. I 6 will then review the case summary and look at the 7 original materials if I think that they have 8 identified areas I'd like to know more about or 9 confirm, and that's my standard practice. 10 MR. NEMEROFF: And with respect -- and 11 I guess I'm just going to put this on the record not 12 -- we don't have to have an argument about this. I 13 don't know what or if any order was in place with 14 respect to generation of reports, and by asking 15 questions about the reports I'm not going to be 16 waiving any objection to the use of this report or 17 any opinions based upon that report at the time of 18 trial. So I'll just cover whatever base there needs 19 to be covered. 20 Q. Sir, with respect to correspondence and 21 subpoena duces tecum, item No. 3, do you have any 22 correspondence with you from attorneys or parties to 23 this lawsuit? 24 A. I think I have as close as I usually get 25 to an engagement letter.

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1 Q. And do you have a copy of that with you? 2 A. Yes. 3 Q. If we can go ahead and -- 4 A. Would you like them? 00:11:23 5 Q. Yes, please. I will go ahead and mark 6 January 18, 2006, as Exhibit No. 6 and March 30, 7 2006, as Exhibit No. 7, and these are letters from 8 Stephen Dillard at Fulbright & Jaworski? 9 A. Yes, sir. 00:11:44 10 Q. And that's Exhibit 6, and the second 11 letter is from Brett Young at Fulbright & Jaworski. 12 (EXHIBIT NOS. 6 and 7 MARKED.) 13 Q. Who is it that you understand that 14 Mr. Dillard and/or Mr. Young represent at Fulbright & 00:11:57 15 Jaworski relative to these lawsuits? 16 A. If they do, it would be U.S. Steel. 17 That's who's retained me. 18 Q. And that was going to be another question. 19 For whom are you working in these two cases? For 00:12:12 20 which defendant? 21 A. U.S. Steel. 22 Q. Have you been retained as an expert by 23 Exxon Corporation or Exxon Mobil in this case? 24 A. Not to the best of my knowledge. 00:12:22 25 Q. How about Shell?	1 Q. Okay. 2 A. And, of course, Mr. Epps is right. If you 3 take me down certain roads, sometimes judges will 4 compel me to answer your question. 00:13:36 5 Q. Sure. And I'm not looking to -- I don't 6 want to go down roads we don't need to travel. I'm 7 just trying to determine if U.S. Steel is out of this 8 case, so goes Dr. Paustenbach. 9 A. I can't speak to that, but that's my 00:13:50 10 understanding. 11 Q. As far as receiving retainer or having a 12 letter of engagement letter, that's only happened 13 with respect to U.S. Steel? 14 MR. EPPS: He has only been hired as a 00:14:03 15 consultant and expert on behalf of United States 16 Steel Corporation. Now, you know, honestly I can't 17 predict what will happen in the future but -- 18 MR. NEMEROFF: I'm just speaking of 19 this case right now, and the case starts next week, 00:14:16 20 right? 21 MR. EPPS: It's scheduled to start on 22 Monday, yes. 23 MR. NEMEROFF: Fair enough. 24 Q. With respect to subpoena duces tecum item 00:14:35 25 No. 4, let me go ahead and give you this back so you
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1 A. No, sir. 2 Q. And I don't know who else is left. Any of 3 the other defendants? 4 A. And I haven't been retained -- 00:12:32 5 Q. Radiator Specialty? 6 A. -- by Radiator Specialty. 7 Q. And are all of your opinions that you have 8 for both of these cases, Stubbs and Wilkinson, are 9 they specific only to U.S. Steel? 00:12:46 10 A. Yes. 11 Q. Do you have any indication, or any 12 intention to offer opinions as to Exxon, about Exxon 13 Mobil or Exxon's conduct at their Baytown facility? 14 A. No. 00:13:01 15 Q. Or Shell with respect to their conduct? 16 A. No. 17 MR. EPPS: I would say not unless 18 asked by plaintiff's counsel. 19 Q. Okay. I guess you understand what I'm 00:13:13 20 trying to do is avoid the surprise of U.S. Steel 21 settling this case and you appearing as a witness on 22 behalf of Exxon or somebody else at trial. 23 A. That's always a concern whenever I 24 testify, so I think I understand what your concern 00:13:29 25 is.	1 can see it, instead of reading the whole thing, are 2 there any documents that you have brought with you 3 that are responsive to this particular request? 4 A. Not beyond that which we have already 00:14:55 5 discussed. 6 Q. Okay. And those are all the depositions 7 and transcripts and pleadings and statements, et 8 cetera, that were covered in the binders down at the 9 end of the table? 00:15:04 10 A. That's correct. 11 Q. How about with respect to subpoena duces 12 tecum No. 5? Does the same hold true? 13 A. That's all true. 14 Q. And I didn't notice any audio records or 00:15:16 15 video tapes. 16 A. No, but anything that I have that 17 resembles a photograph or chart is in Petty's report. 18 Q. And with respect to subpoena duces tecum 19 No. 6, textbooks, treatises, journal articles, et 00:15:36 20 cetera, I understand and wouldn't expect you to bring 21 all your textbooks, but there is a reliance document 22 binder down at the end of the table for the Liquid 23 Wrench that contains certain medical articles. Would 24 that be in response to this number here? 00:15:51 25 A. Yes.

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1 Q. With respect to No. 7, codes, regulations, 2 et cetera, did you bring anything separate and apart 3 from what we have discussed down at the end of the 4 table? 00:16:01 5 A. There may be something inside a binder. I 6 have a couple codes and regulations here, but they 7 may also be in the binder. 8 Q. Okay. No. 8, invoices to any person or 9 party for services rendered by you or any of your 00:16:17 10 employees, agents or representatives in connection 11 with these lawsuits. Do you have any such invoices 12 with you today? 13 A. No. We have not prepared any invoices in 14 this case yet. It's a relatively new case to us. 00:16:30 15 Q. When were you first engaged by U.S. Steel 16 to perform any services with respect to the Stubbs 17 and Wilkinson cases? 18 A. We didn't start performing services until 19 recently, but the retention, that is the phone call, 00:16:46 20 occurred in January and in March, but our activities 21 have been fairly recent. 22 Q. And what were you asked to do by the 23 lawyers for U.S. Steel? 24 A. Well, it's changed over time. At this 00:17:05 25 point it's to discuss the matters that are in my	1 since it's through today. I would guess it's closer 2 to 20 to \$40,000. 3 Q. And my question was, as you sit here 4 today, do you expect or intend to perform any 00:19:13 5 additional work or services with respect to these two 6 cases on behalf of U.S. Steel? 7 A. Only to prepare for trial. 8 Q. And the two women sitting to your left, 9 are they ChemRisk employees as well? 00:19:09 10 A. Yes, sir. 11 Q. And if you could identify them for the 12 record, please. 13 A. Yes. One is Erin Shay, and the other is 14 Julie Panko. They are from the local Pittsburgh 00:19:39 15 office, and I told them Baron & Budd had good lawyers 16 and they might want to enjoy coming to the 17 deposition. So they're observers. 18 Q. If a Baron & Budd lawyer were here, he or 19 she would really appreciate it. With respect to your 00:20:00 20 charges, what are you charging per hour for your work 21 in these cases? 22 A. I don't recall if Mr. Epps has the \$445 an 23 hour or the \$485 an hour rate for this case, but I 24 think -- I think he has the \$485 rate based upon my 00:20:33 25 opinion letter.
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1 opinion letter which is fundamentally involving 2 exposure assessment and warnings and a little bit on 3 toxicology. 4 Q. And would those opinions with respect or 00:17:27 5 work with respect to exposure assessment and warnings 6 and toxicology be limited to the Liquid Wrench 7 product at issue in this case? 8 A. That's right. 9 Q. Are you able to estimate for us at the 00:17:44 10 current time if you were engaged to perform work by 11 U.S. Steel starting in January of 2006, we're sitting 12 here May, whatever, what's that, May 17 -- 13 MR. EPPS: May 18th. 14 Q. -- May 18, 2006, are you able to estimate 00:18:02 15 approximately how much money in terms of billing 16 ChemRisk has done with respect to these two cases? 17 A. It would have to be a range. 18 Q. A range is fine. 19 (Discussion off the record.) 00:18:24 20 A. I'm going to say between 15 and \$30,000. 21 That's through today I presume you're asking. 22 Q. Yes, through today. As you sit here right 23 now, do you expect or do you intend to perform any 24 additional work with respect to these two cases? 00:18:59 25 A. I'm going to correct what I just said	1 MR. EPPS: We'll talk about that. 2 Q. Well, yes, it is. In looking it is the 3 \$485 an hour rate. 4 A. It depends on when the case started. 5 Q. And is the money that -- is there a 6 separate or a separation that you can determine as 7 far as your personal contribution to the 20 to 8 \$40,000 versus the contribution of your staff to 9 arrive at that number? Was that not clear? 00:21:01 10 A. No. It was clear. I'm going to say I'm 11 between 25 and 35 percent, maybe 25 to 40 percent. 12 Q. Have you prepared any photographs, video, 13 audio recordings or models with respect to your 14 opinions in this case? 00:21:38 15 A. No. 16 Q. And with respect to exhibits, the only 17 exhibits I guess would be those which would be marked 18 as exhibits your reports in these cases? 19 A. Correct. Well, and whatever you declare 00:21:54 20 to be an exhibit from binders. 21 Q. Okay. Do all the materials that we've 22 identified so far being the binders, your case notes 23 and your reports, constitute your entire file in this 24 case? And if not, are there any additional materials 00:22:10 25 that would have to be included?

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1 A. These may or may not be in the binders, 2 but there are photographs of Liquid Wrench cans which 3 I believe your firm has. 4 Q. Okay. 00:22:56 5 A. There's a report of an original safety 6 data sheet. There are several copies there. 7 Q. These are U.S. Steel's material safety 8 data sheets separate from -- I'm trying to remember 9 whose. Were they Radiator Specialty's MSDS? 00:23:23 10 MR. EPPS: Radiator has produced a 11 number of MSDS reports in litigation. 12 MR. NEMEROFF: Right. 13 MR. NEMEROFF: The one you have is 14 United States Steel's safety data sheet I think. If 00:23:33 15 you mark that, you can give us a number, we'll make a 16 record of it. 17 MR. NEMEROFF: That's all right. I'm 18 going to go ahead and mark this as Exhibit No. 8. 19 MR. EPPS: Would you mind marking a 00:23:43 20 clean copy? There are three copies there. 21 MR. NEMEROFF: Oh, there are? I'm 22 sorry. There we go. I'll give you back yours. Let 23 me go ahead and mark as No. 8 safety -- 24 MR. EPPS: Do you mind if I interrupt 00:24:08 25 when I do that?	1 A. Yeah. We can share them today. 2 (EXHIBIT NO. 9 MARKED.) 3 Q. Exhibit No. 9 is a group of Liquid Wrench 4 color photographs. 00:25:26 5 A. It's of the same can, and it's called can 6 15. 7 Q. Can 15, and did you take these pictures. 8 sir? 9 A. No. 00:25:40 10 Q. And for Exhibit No. 10 we're going to mark 11 these color photographs, and this is -- 12 A. That's the spray version. 13 Q. -- the spray version of Liquid Wrench, and 14 the title of this one says never has raffinate, 00:25:54 15 whereas Exhibit 9 states that it is raffinate 16 containing. 17 (EXHIBIT NO. 10 MARKED.) 18 A. Okay. And then there's a document from 19 1962. It's a report from Foster Snell, Incorporated 00:26:16 20 to Radiator Specialty, and it's a description of the 21 toxicology study. 22 MR. NEMEROFF: We'll go ahead and mark 23 that as Exhibit No. 11. 24 (EXHIBIT NO. 11 MARKED.) 00:26:35 25 Q. Any other items?
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1 MR. NEMEROFF: No, please. I didn't 2 realize there were three copies, and I didn't want to 3 mark his only copy. 4 (EXHIBIT NO. 8 MARKED.) 00:24:16 5 MR. NEMEROFF: I have marked as 6 Exhibit No. 8 a safety data sheet for raffinate, and 7 it is a seven page document, appears to be dated, I 8 want to say 5, either 5/15/67, and it's the you USS 9 chemical safety data sheet for raffinate. And help 00:24:47 10 me out. Are these already, do these already exist in 11 terms of Baron & Budd having them, or should I in 12 abundance of caution go ahead and mark these? 13 MR. EPPS: I'm not going to -- I don't 14 know whether to affirm or not because they haven't 00:25:03 15 I'm confident that the firm does, but since I'm not 16 absolutely positive I would go ahead and mark them 17 MR. NEMEROFF: All right. I'll go 18 ahead and mark them as Exhibit No. -- all right. 19 Now, these are yours. 00:25:13 20 MR. EPPS: I'm not sure if we have 21 extra copies of that. 22 MR. NEMEROFF: Yeah. I don't want to 23 put this -- 24 THE WITNESS: We can share them today 00:25:19 25 Q. Can I put these up top here?	1 A. There's an item also describing work done 2 by Foster Snell, Incorporated, dated October 15, 3 1954, where it discusses the test results on 4 penetrating oil. 00:26:59 5 Q. Go ahead and mark that as Exhibit No. 12, 6 and who is Foster Snell to your knowledge as you 7 described it? 8 A. It's a consulting chemical, chemist firm, 9 and then this last one is dated February 19th, 1962, 00:27:17 10 from Foster Snell, Incorporated to Mr. Kologiski. 11 Q. We'll go ahead and mark that as No. 13. 12 (EXHIBIT NOS. 12 and 13 MARKED.) 13 A. The next documents are from Radiator 14 Specialty, and they simply describe apparently when 00:27:57 15 products were introduced to the market place. 16 Q. All right. We'll go ahead and mark this 17 list as No. 14. 18 (EXHIBIT NO. 14 MARKED.) 19 Q. And whose products are these? 00:28:14 20 A. Radiator Specialty. 21 Q. Okay, Radiator Specialty. 22 A. And, counsel, you did not want more paper 23 with respect to my CV. You're going to take one of 24 the last ones that you have in the firm? 00:28:28 25 Q. You know what, I'm just going to go ahead

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1 and mark it just for completeness, and then we'll 2 mark the CV as 15. 3 (EXHIBIT NO. 15 MARKED.) 4 Q. See, if we keep track of your photographs, 00:28:39 5 we can see whether or not you are continuing to use 6 the same one over the course of your career? 7 A. You can give a young associate attractive 8 changes as well. 9 Q. Absolutely. We morph the pictures to see 00:28:52 10 what you'd look like later as well as to what you 11 look like younger. 12 A. Yes. The thing is the firm ought to quit 13 putting my head on other people's bodies. It's a 14 problem. 00:29:00 15 Q. I suffer the same fate at times from my 16 own friends, so I apologize. Is there any formal 17 retainer agreement that you've entered into with 18 respect to your work for U.S. Steel in this case, 19 like a written contract of any sort? 00:29:19 20 A. Not beyond what you've seen. 21 Q. Who was it that first contacted you from 22 U.S. Steel? 23 A. Do you mean for this case? 24 Q. For this case, yes. 00:29:32 25 A. Either Mr. Dillard or Mr. Epps.	1 tell me about. 2 A. For your purposes I think the answer is 3 no, but technically my firm, people that I've, 4 companies that I've worked for over the last 20 00:30:15 5 years, have done work for U.S. Steel. In other 6 words, they might have been hazardous waste sites or 7 things like that. 8 So for sake of completeness the firm has 9 done work. Personally I don't recall interacting 00:30:32 10 with U.S. Steel in any intimate way. 11 Q. So either Exponent in the past or ChemRisk 12 today may have done work with U.S. Steel, but you 13 personally have not? 14 A. It would have been McClaren Hart -- 00:30:46 15 Q. McClaren Hart. 16 A. -- of about seven to 20 years ago. 17 Q. Okay. And with respect to subpoena duces 18 tecum No. 11 which has to do with any memos, reports, 19 correspondence, et cetera, et cetera, those are 00:30:57 20 contained within Exhibits 4 and 5, your expert 21 reports in these cases, is that correct? 22 A. Right. 23 Q. Are there any drafts of these reports that 24 you've maintained? 00:31:12 25 A. No.
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1 Q. And for how long have you been doing work 2 with U.S. Steel -- well, let me back up. 3 Approximately when -- you say January was 4 approximately when you were first contacted with 00:29:55 5 respect to your work in this case for U.S. Steel; is 6 that correct? 7 A. That's the earliest contact. 8 Q. Had you been working for U.S. Steel or 9 with U.S. Steel in other capacities prior to January 00:30:04 10 of this year? 11 A. Yes. 12 Q. And can you tell me the general nature of 13 the work that you were doing for U.S. Steel prior to 14 January of this year? 00:30:18 15 A. They asked me to assist them in 16 understanding the health hazard posed by raffinate 17 and as it was used in Liquid Wrench. 18 Q. Beyond the raffinate assessment for U.S. 19 Steel, have you been engaged or retained by U.S. 00:30:40 20 Steel to perform any other work on any other topics 21 to date? 22 A. You mean forever? 23 Q. Yes, for anything. And I'll be mindful if 24 there's any consulting expert privilege, and I don't 00:30:59 25 want to go down that road, but to the extent you can	1 Q. With respect to -- let's talk about the 2 Stubbs report first, and that's Exhibit No. 5. Is a 3 part -- well, I want to make sure. Part 3 is 4 overview of opinions, and then part 4 is your opinion 00:33:20 5 and the basis. Is that what I understand this report 6 to be? 7 A. That's right. 8 Q. And the paragraph, I'm just comparing, the 9 paragraph that you've written here as No. 1 is also 00:33:29 10 the same as what's up No. 1 here? 11 A. Correct. 12 Q. That's what threw me for a moment. With 13 respect to Mr. Stubbs, do you know what injury or 14 disease he suffered from? 00:33:50 15 A. Yes. 16 Q. And what was that? 17 A. He was diagnosed with non-Hodgkin's 18 lymphoma. 19 Q. And do you have an opinion as to whether 00:34:08 20 or not that non-Hodgkin's lymphoma was caused in full 21 or in part by exposure to benzene? 22 MR. EPPS: You know, you ventured off 23 into an area that you probably should not have 24 ventured because you've opened a lot of doors. I 00:34:22 25 mean it's up to you.

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1 MR. NEMEROFF: Well, part of -- well, 2 here's what I'm sort of betwixt and between. 3 MR. EPPS: Sure. 4 MR. NEMEROFF: If he has an opinion 00:34:36 5 about that that hasn't been disclosed in a report and 6 he's not going to testify about that, and you call 7 him at trial, that's one thing. If the judge 8 determines that I was sitting here, should have asked 9 him questions about his exposure opinions and you 00:34:52 10 guys are gone or someone else tenders him as an 11 expert and we've not asked him any questions about 12 that, then I'm on the wrong side of that decision. 13 Do you see where I'm sort of -- 14 MR. EPPS: Right. 00:35:04 15 MR. NEMEROFF: Because, and I'll tell 16 you why I say that. In the disclosures, and I hate 17 to have this whole conversation on the record -- 18 THE WITNESS: Do you want it off the 19 record? 00:35:12 20 MR. NEMEROFF: No. Let's keep it on 21 the record, but someone may have to read this other 22 than me. In the witness disclosures Dr. Paustenbach 23 is listed as someone who could offer -- Union Carbide 24 has listed him as somebody who may testify as to 00:35:31 25 causation issues. Radiator Specialty has listed him	1 and testified that he is not at this moment before us 2 or giving opinions about Union Carbide 3 MR. NEMEROFF: I understand. And if 4 you tell me you are withdrawing your designation of 00:36:55 5 Dr. Paustenbach as a witness in this case, then I'm 6 satisfied with that. 7 MR. EPPS: Can I talk with Dr. 8 Paustenbach for a second? 9 MR. NEMEROFF: Sure. We're going to 00:37:05 10 go off the record for a moment. 11 (Discussion off the record.) 12 MR. EPPS: To my knowledge, nobody 13 else has engaged Dr. Paustenbach other than United 14 States Steel Corporation as a consultant or an expert 00:39:10 15 in this case. Now, the disclosure that we have 16 drafted, there are several levels of disclosures if 17 you look at them over time. Initially this 18 disclosure was broad because we at that point in time 19 had not taken any depositions, had very little 00:39:23 20 information about the case. 21 Now, over time the disclosure was narrowed 22 to focus on issues relating to United States Steel, a 23 corporation. Now, we do not intend to offer Dr. 24 Paustenbach as a medical causation expert from a 00:39:43 25 toxicological or industrial hygiene standpoint.
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1 as someone who may testify regarding issues of 2 causation. BP Amoco Chemical, Dr. Paustenbach may 3 testify as to issues of causation. U.S. Steel, may 4 testify as to issues as to causation. This is what 00:36:00 5 my concern is. 6 MR. EPPS: Yeah. Let me see the 7 last -- 8 MR. NEMEROFF: There's the U.S. Steel 9 one. 00:36:04 10 MR. EPPS: Yeah. 11 MS. RIEGLE: I'm going to object to 12 your side bar about Union Carbide. He's already 13 testified that we did not hire him. He's not giving 14 opinions as to our -- 00:36:13 15 MR. NEMEROFF: Sure, and I've got no 16 quarrel with that. I'm just looking at Union 17 Carbide's second supplemental responses to request to 18 disclosures, and you list Dr. Paustenbach as somebody 19 who is an expert that you may call, and if you -- if 00:36:28 20 everyone on the phone is telling me they are 21 withdrawing their disclosure of Dr. Paustenbach, that 22 he's only U.S. Steel's witness and nobody else is 23 calling him, that's fine. 24 MS. RIEGLE: That's not what I'm 00:36:41 25 saying, but I am saying that he's already sat here	1 There is a comment in the Wilkinson report in one of 2 his sections that talks about petroleum workers in 3 general and non-Hodgkin's in Wilkinson, but in Stubbs 4 in particular I think if you'll look at his report, 00:40:04 5 those will be the boundaries of what he will testify 6 to in that case. 7 Now, if the other defendants were to ask 8 him a question that exceeded the boundaries for which 9 he's tendered, I can't control that, but I will tell 00:40:20 10 you that he has not stood in, nor is he prepared to 11 testify in the Stubbs case in particular about 12 anything other than what's listed in that report. 13 MR. NEMEROFF: And I appreciate that. 14 I guess you can also see my concern -- 00:40:38 15 MR. EPPS: I do. 16 MR. NEMEROFF: -- where U.S. Steel has 17 listed the witness, tendered him for deposition, 18 provided me with a report, but by the same time I 19 have Union Carbide, Radiator Specialty, BP Amoco and 00:40:52 20 a whole bunch of others. I've got Exxon Mobil twice, 21 and Ethyl -- and American Chemistry Council all 22 listing him as a potential expert, even though Dr. 23 Paustenbach apparently doesn't know that he's been 24 listed as their expert which, you know, as veterans 00:41:09 25 all of mass tort litigation this is not unusual.

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1 That being said, I need to make sure that I don't 2 have to worry about these folks calling him. 3 MR. EPPS: He has not in this case 4 done any assessment on behalf of Exxon, Union 00:41:24 5 Carbide, Radiator Specialty Company, Shell or any of 6 the other defendants. 7 MR. NEMEROFF: Fair enough. And I'll 8 probably -- let me close, see if I can close this 9 door a little bit more to my satisfaction with this. 00:41:38 10 Q. Dr. Paustenbach, as you sit here today, do 11 you intend to offer opinions to address the exposure 12 assessment -- 13 MR. AUBRY: Excuse me. Are we back on 14 the record? 00:41:51 15 MR. NEMEROFF: Yes. 16 MR. EPPS: Sorry. 17 Q. Dr. Paustenbach, do you intend to offer 18 any opinions as you sit here today to counter the 19 exposure assessment opinions offered by plaintiff's 00:42:01 20 expert Petty in his two reports? 21 A. Yes. 22 MS. RIEGLE: Object to form. 23 MR. EPPS: There are three reports. 24 MR. NEMEROFF: There's the two plus 00:42:11 25 the supplemental?	1 offering opinions about the non-Liquid Wrench 2 specific reports of Petty's or only about the Liquid 3 Wrench specific report? 4 A. I'm only going to address Liquid Wrench. 00:43:35 5 Q. Okay. 6 MR. NEMEROFF: Sometimes narrowing the 7 issue takes more time than actually discussing the 8 issue. 9 MR. EPPS: Sure, yeah. 00:43:44 10 A. In this case not. 11 Q. And I appreciate your patience and working 12 with me on this, but I think you can understand where 13 the confusion comes when it's a big case, and 14 apparently Dr. Paustenbach for the first time in my 00:43:58 15 experience is really going to be limited to a rather 16 narrow specific issue in a particular case. 17 MR. EPPS: Was that a question? 18 Q. Well, yeah. Correct? 19 MR. EPPS: I object to the word "big." 00:44:09 20 MR. AUBRY: Excuse me. Objection to 21 counsel testifying. 22 MR. NEMEROFF: Sustained 23 MR. AUBRY: You know, I think -- this 24 is Tom Aubry with Radiator, and Radiator has made 00:44:22 25 certain designations, and we are not withdrawing any
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1 MR. EPPS: Yes. 2 Q. And I see specifically -- 3 MR. AUBRY: Actually I think there are 4 five reports, are there not? 00:42:33 5 MR. NEMEROFF: For Petty's? 6 MR. AUBRY: Yes. 7 MR. NEMEROFF: I have one for 8 Wilkinson and then two for Stubbs. 9 MS. RIEGLE: There's two for 00:42:42 10 Wilkinson. 11 MR. EPPS: We have a Liquid Wrench 12 specific assessment from Petty in Wilkinson. 13 MR. NEMEROFF: Okay. 14 MR. EPPS: And that's the report that 00:42:52 15 we're focused on. That's the report we have in front 16 of us. 17 MR. NEMEROFF: That would be these big 18 ones here. That's Wilkinson, and then I believe this 19 one. 00:43:04 20 MR. EPPS: No. 21 MR. NEMEROFF: Is there a different 22 one that you have? You have the Liquid Wrench one. 23 A. I do. 24 Q. All right. So let me be more specific. 00:43:14 25 With respect to your opinions in this case, are you	1 of those designations at this time. 2 MR. NEMEROFF: Well, counsel, I guess 3 the question is, is Dr. Paustenbach in your mind a 4 Radiator Specialty expert? 00:44:34 5 MR. AUBRY: It doesn't matter. That's 6 irrelevant. 7 MR. NEMEROFF: Well, actually it's 8 not, because if he's your witness, then I'll ask 9 questions about Radiator Specialty specific to you 00:44:43 10 guys. If not, then I'm going to spend my time 11 talking about Liquid Wrench and U.S. Steel and the 12 raffinates that he's talking about. 13 MR. AUBRY: I think the record is 14 pretty clear that I have designated Dr. Paustenbach 00:44:54 15 as an expert, and you can ask any questions you 16 choose to. 17 MR. NEMEROFF: I'll ask it this way. 18 Q. Dr. Paustenbach, do you consider yourself 19 the retained expert by Radiator Specialty? 00:45:03 20 A. No. 21 MR. AUBRY: Objection; calls for a 22 legal conclusion. 23 MR. EPPS: I think if you move through 24 the testimony, you'll be able to see where the lines 00:45:13 25 are drawn.

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1 Q. Okay. I'm looking now at -- is this your 2 most recent disclosure; do you know? 3 MR. EPPS: It is, but it's been 4 modified by his report. 00:45:26 5 MR. NEMEROFF: Okay. I'm going to go 6 ahead and mark as Exhibit No. 16, I think that's what 7 I'm up to, as defendant U.S. Steel Corporation's 8 first supplemental disclosure in the consolidated 9 matter of Wilkinson and Stubbs against Radiator 00:45:40 10 Specialty Company, et al 11 (EXHIBIT NO. 16 MARKED.) 12 MR. EPPS: That's not really the most 13 recent. The most recent -- 14 A. What's the date? 00:45:44 15 Q. The date on this one is -- it appears to 16 be dated May 5th, 2006? 17 MR. EPPS: That should be the most 18 recent. 19 Q. All right. And, Dr. Paustenbach, as it 00:46:00 20 pertains to your opinions in this case, I'm just 21 going to walk through the designation. 22 MR. EPPS: I think you'd better start 23 by going to his report. Any way you want to do it is 24 fine. I know you need to protect yourself. 00:46:18 25 Q. Well, what I want to -- let me go through	1 MR. NEMEROFF: I understand. 2 MR. EPPS: He'll discuss the basis for 3 that line of his opinions. 4 MR. NEMEROFF: Sure. 00:46:46 5 MR. EPPS: But the report itself tells 6 you the topic and the foundation of his opinions. 7 MR. NEMEROFF: Certainly. 8 Q. And you'd agree with me, Dr. Paustenbach, 9 that in neither of your reports, either in Wilkinson 00:46:00 10 or Stubbs, have you opined that benzene was not a 11 cause of the respective gentlemen's disease; is that 12 correct? 13 A. That's true. I did not offer opinions in 14 that area. 00:46:16 15 Q. Okay. And with respect to your reports, 16 you did not opine that benzene, whether in the Liquid 17 Wrench or not, was a cause or not a cause of either 18 of the gentlemen's diseases in these cases, correct? 19 A. That's correct, only to the extent that at 00:46:46 20 one point I mentioned that the interaction of toluene 21 and benzene were likely to be biologically 22 insignificant, but that's not a causation-related 23 issue. 24 Q. Okay. 00:46:57 25 A. That's the last opinion on Wilkinson.
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1 this, and I think this will help me with respect to 2 the report, and I've looked at the general 3 conclusions of your report. Dr. Paustenbach, it 4 states within the disclosure that you may testify 00:46:42 5 regarding benzene and other chemicals or products 6 which may be alleged to be relevant in this case, the 7 diseases which have been associated with exposure to 8 those chemicals as well as the levels and duration of 9 exposure which have been associated with those 00:46:58 10 diseases. 11 Subject to the limitations in your report 12 or subject to your report itself, do you intend to 13 offer any opinions in addition to what's in your 14 report with respect to that topic? 00:47:12 15 A. No. 16 Q. It says Dr. Paustenbach may testify 17 regarding issues of causation. Doctor, subject to 18 what's in your report do you intend to offer any 19 opinions with respect to causation beyond those which 00:47:31 20 are contained within your report? 21 A. No. 22 MR. EPPS: Let me just -- again, I 23 know everybody is so cautious when you get into 24 situations like this. He's not just going to read 00:47:41 25 his report, you understand.	1 Q. Okay. So with respect to the, that's 2 opinion No. 4, sub 4 in Wilkinson, your opinion is 3 that the presence of other compounds such as toluene 4 in the raffinate used in Liquid Wrench would have 00:49:33 5 decreased the toxic effects of benzene in the 6 raffinate by inhibiting the metabolism of benzene. 7 Is that what you're talking about? 8 A. Right. I was just dealing with 9 Dr. Infante's concerns that maybe the mixture 00:49:45 10 enhanced the toxicity of benzene. 11 Q. And you don't agree that it does. 12 A. That's true. At these doses I would not 13 expect it. Even at higher doses I wouldn't expect 14 it. 00:49:59 15 Q. Dr. Paustenbach, have you performed any 16 specific exposure assessment tests on Liquid Wrench 17 containing a raffinate or containing the raffinate 18 that was manufactured by U.S. Steel? 19 A. Not that I'll be relying on in this case. 00:50:30 20 Q. By that answer I sense that you have done 21 such a test but that you're not relying upon those 22 tests or test results in this particular case. 23 A. That's true. 24 Q. When did you first perform any tests on 00:50:56 25 Liquid Wrench containing a raffinate to determine

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1 levels of exposure? And if -- I know the line that 2 you're worried about crossing. I just want to make 3 sure that -- if you want to talk with counsel, that's 4 fine. 00:51:36 5 MR. EPPS: I'm not saying you're not 6 entitled to the information at all. I'm just 7 suggesting that his answer is correct. I'm not sure 8 -- you know, it's -- you can ask the question. I'm 9 not sure. We didn't review that stuff. 00:51:36 10 MR. NEMEROFF: Okay. 11 MR. EPPS: It's just not pertinent to 12 this lawsuit. 13 MR. NEMEROFF: I guess I will have to 14 wait until it gets published. 00:51:44 15 MR. EPPS: Yeah, essentially, but it's 16 just not pertinent to the lawsuit, but the tests -- 17 go ahead and tell him when the tests were done. 18 Q. Why don't you, if you can, describe for me 19 what the tests were, when they were done, and I 00:51:59 20 imagine if you, what the status of them are as we 21 stand here now or sit here now. 22 A. My group conducted a test of varied 23 concentrations of benzene in raffinate-containing 24 Liquid Wrench, simulated and nonsimulated Liquid 00:51:24 25 Wrench, and we measured the airborne concentration	1 Q. Was the journal to which the paper was 2 submitted and not deemed appropriate for that 3 particular publication, was there any criticism of 4 the method or methodology used by the paper, was 00:54:23 5 there any criticism that was part of the -- I don't 6 want to use the word rejection, but the return to you 7 of that material for any reason? 8 A. Normally to the best of my knowledge this 9 is outside an area that I'm obligated to talk about. 00:54:39 10 Q. I understand. 11 A. So I'm going to choose not to talk about 12 it. 13 Q. Fair enough. And I think you'd appreciate 14 that we have reached a point in litigation science 00:54:49 15 where the lines between this seem to have blurred 16 substantially that asking questions about journals 17 and publications has become sort of intertwined with 18 the litigation process? 19 A. That's quite fair to say. 00:55:06 20 Q. Do you have any expectation as to when 21 your paper would be published if it's accepted in its 22 entirety? Would it be sometime this year? 23 A. It's hard to say today because of the 24 online publishing that's occurring. So we are seeing 00:55:33 25 papers in print about six months before they're in
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1 for the person doing that work. The work was 2 conducted in a well controlled environment, and I 3 considered the test to be representative of typical 4 use of that material. 00:52:45 5 Q. And in terms of that test, is it your 6 intent to at some point submit the results and the 7 analysis of those tests for publication in a peer 8 review journal? 9 A. Yes. 00:53:00 10 Q. Have those results been submitted to any 11 peer review journal as of this date today? 12 A. Yes. 13 Q. Are you able to tell me which journals you 14 have submitted those tests to? 00:53:14 15 A. I am capable of doing that, but I won't do 16 that. 17 Q. Have those tests and the results therefrom 18 been rejected by any peer review journal to date? 19 A. I don't think I have to answer that. They 00:53:36 20 -- but I will say this. The paper was considered in 21 part not consistent with the objectives of that 22 journal. 23 Q. So do I take it that the paper was 24 submitted to more than one journal for publication? 00:53:59 25 A. Ultimately.	1 print. 2 Q. That's true. 3 A. And it's possible that it would be 4 electronically in print in December, but I wouldn't 00:55:46 5 expect it before then. 6 Q. I believe sometimes we've actually seen 7 them in litigation before they make it even 8 electronically or in print. 9 A. To my surprise I've seen a lot the last 00:55:57 10 year. 11 Q. And with respect to the tests that you 12 did, were those done at the request of U.S. Steel? 13 A. Yes. 14 Q. Were these tests financed by U.S. Steel? 00:56:13 15 A. Yes. 16 Q. Any other companies part of the test in 17 terms of financing or request? 18 A. Not that I'm aware of. 19 Q. When were you contacted with respect to 00:56:31 20 first performing the tests on Liquid Wrench? 21 A. The tests were my idea. So I wasn't 22 contacted to do the tests. 23 Q. When did you first begin to test the 24 Liquid Wrench product? 00:56:47 25 A. Last summer.

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1 Q. And the Liquid Wrench product that was 2 tested, was it the same one that is identified here 3 in this Exhibit No. 9? 4 A. I wouldn't want to say it's that which is 00:57:12 5 in Exhibit No. 9 because there's uncertainties about 6 the content. 7 Q. Of what's in Exhibit No. 9? 8 A. Yes, because the benzene content, you 9 know, varies over time. I would say that we studied 00:57:25 10 what we believed to be the range of concentrations 11 and some. 12 Q. And what is your understanding as to the 13 range of concentrations of benzene that have been 14 found in the raffinate that is used in Liquid Wrench? 00:57:41 15 A. I can tell you my -- the weight of 16 evidence to me is that over time the mean was less 17 than five percent. 18 Q. And you've seen I'm sure various documents 19 that indicates as high as 30 percent? 00:57:57 20 A. I have seen -- 21 MR. EPPS: Objection as to form. 22 Q. Have you -- 23 THE WITNESS: Could you read back the 24 question, please? 25 (The reporter read from the record as	1 findings of those documents which indicate that the 2 level of benzene within the Liquid Wrench raffinate 3 was as high as 30 percent? 4 A. I would just defer to what I said 00:59:11 5 previously which it would appear that the weight of 6 evidence is that it was less than five percent over 7 the history of use of the product in Liquid Wrench 8 and may well have been significantly less than five 9 percent. 00:59:48 10 Q. Now, is that your opinion based upon the 11 tests you've done recently, or is that based upon 12 your review of documents prior to the tests being 13 done? 14 A. It is not based on my tests of historical 00:59:57 15 documents, or historical product, which is the way I 16 heard your question. 17 Q. Right. And this is why I'm trying to 18 limit what you know from your tests versus what you 19 know from the documents and the work, and I want to 01:00:11 20 narrow that down. Your opinion about that is based 21 upon the historical documents and the materials 22 provided to you and not based upon your personal 23 tests which are in the process of publication? 24 A. Right. I did not conduct some survey of 01:00:29 25 historically obtained documents to arrive at those
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1 requested.) 2 THE WITNESS: Did I respond? 3 THE REPORTER: You started to, and 4 then -- I didn't hear all of the answer. "I have 00:58:21 5 seen" -- 6 A. I usually understand form objections. 7 This one I missed. 8 Q. I thought it was a good question. 9 A. I did, too, so that's why. 00:58:30 10 THE WITNESS: Could I have it one more 11 time? 12 Q. Let me ask it again. 13 A. Maybe you understand why he objected. 14 Q. No, but I'm going to ask it anyway. And 00:58:41 15 you've seen documents that indicate that the benzene 16 concentration in the raffinate used in Liquid Wrench 17 has been as high as 30 percent at times? 18 MR. EPPS: Same objection. 19 A. I don't know if the documents, especially 00:59:00 20 the 30 percent document, is considered a credible 21 report of the benzene content, but I have seen the 22 document that you're referring to. 23 Q. Have any -- 24 A. And the others. 00:59:14 25 Q. So are you in a position to dispute the	1 concentrations. Rather, I looked at the weight of 2 evidence either from testimony or from paper 3 documents. 4 Q. Okay. And you see now why I was trying to 01:00:48 5 limit out what your test results were. 6 A. Sure. If I had found a hundred cans of 7 Liquid Wrench that goes back 40 years, you'd want to 8 know that. 9 Q. Correct. And if all those 40 cans only 01:00:56 10 had two percent benzene and that's the basis of your 11 opinion, I'd want to know that and see the cans. 12 A. Right. 13 Q. Okay. 14 A. You'd probably want a sample out of the 01:01:06 15 cans. 16 Q. Yes, I would want -- maybe we'd probably 17 have one here. Let's take a break for five minutes 18 so I can kind of see where we are with respect to the 19 materials that have been marked. 01:01:16 20 (Discussion off the record.) 21 (A recess was taken.) 22 Q. Dr. Paustenbach -- 23 A. We're back on the record for those of you 24 on the telephone. 01:14:24 25 Q. Dr. Paustenbach, I have -- I am looking at

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1 the safety data sheet for raffinate that we have 2 marked as Exhibit No. 8, and would you agree with me 3 that this safety data sheet for raffinate does not 4 inform the reader that the raffinate contains benzene 01:14:55 5 within it? 6 A. It doesn't appear to specifically say 7 that. It says that death may occur from paralysis 8 following exposure, and it gives the other warnings, 9 but I don't see a specific citation to benzene. 01:15:56 10 Q. Is that the only safety data sheet that 11 you are aware of from U.S. Steel with respect to its 12 raffinate material that was utilized in the Liquid 13 Wrench product? 14 A. There is a disclosure to Radiator 01:16:22 15 Specialty about the benzene content, but it's not on 16 that sheet, and I don't know if we have a copy of the 17 other MSDS where it is alleged to have been 18 discussed. 19 Q. And would that other MSDS post date that 01:16:42 20 1967 exhibit? 21 A. That's my understanding. 22 Q. And would it be during the time frame when 23 the Hazard Communications Act was in effect? 24 A. I don't recall. On the -- I think I 01:17:04 25 misstated. On the page 5, I don't know how I misse	1 skin irritation. Therefore, affected areas of the 2 body should be washed thoroughly with soap and water. 3 Talks about face protection. 4 With respect to respiratory protection it 01:18:07 5 says that employees subjected to such exposures 6 should be provide, should be provided with the proper 7 respiratory -- proper respiratory equipment which 8 meets standards approved by the US Bureau of Mines. 9 So I would say these are standard and 01:19:46 10 customary warnings and, in fact, probably 11 exceptionally thorough warnings for 1967. 12 Q. Now, is there any indication in that 1967 13 document as to the percent of benzene that is 14 contained within the raffinate or raffinate? Do you 01:20:09 15 pronounce it long A or short A? 16 MR. EPPS: Raffinate. 17 MR. NEMEROFF: Raffinate. 18 MR. EPPS: That's the South Carolina 19 pronunciation. 01:20:41 20 A. If you're asking do they report a specific 21 percent, I don't see it. 22 Q. And in looking -- would you agree that the 23 percentage of benzene contained in the raffinate 24 would be significant with respect to meeting any 01:21:05 25 requirements under the federal Hazardous Substance
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1 that, the toxicity of raffinate is principally due to 2 its benzene content. The material is absorbed by all 3 routes, but inhalation is the route of particular 4 concern. 01:17:22 5 Q. So Exhibit 9 -- is that Exhibit 9? 6 A. It wasn't shown on the front. It was back 7 on the medical management section. 8 Q. And what exhibit number is that again? 9 I'm sorry. 01:17:33 10 A. 8. 11 Q. 8, and in Exhibit No. 8, the 1967 safety 12 data sheet, are there any indications or precautions 13 given to how to prevent the benzene exposure? 14 A. Yes. 01:18:11 15 Q. And what are those? 16 A. On the bottom of page 5 it says acute 17 exposure to skin to large concentrations of fume or 18 liquid will not be immediately absorbed but should be 19 thoroughly washed off to prevent delayed absorption. 01:18:29 20 Severe irritation of the eyes follows exposure to 21 high concentrations of fume or liquid. There's a 22 warning for anemic persons should not be employed in 23 areas where this material is used or handled. 24 Again on page 4 it says sustained or 01:19:09 25 intermittent skin contact with raffinate may produce	1 Act? 2 THE WITNESS: Could I hear that back, 3 please? 4 (The reporter read from the record as 01:21:28 5 requested.) 6 A. You have an expectation to understand the 7 benzene content, and that was done. 8 Q. When you say you, who's the you? 9 A. I think either the user or the 01:21:43 10 manufacturer, one or the other. I don't recall which 11 one. 12 Q. How would Radiator Specialty know how much 13 as a percentage of the raffinate they were purchasing 14 or getting from U.S. Steel, how much of a percentage 01:22:03 15 of benzene was in that raffinate if U.S. Steel did 16 not tell them? 17 A. Assuming they didn't tell them, which I 18 don't think is true, but they certainly have the 19 capability like anybody else to assay for a percent 01:22:24 20 benzene at that point in time. 21 Q. I'm not -- I don't think I'm quarrelling 22 with whether or not they knew there was benzene, but 23 my question was more specific. Absent doing their 24 own test on the U.S. Steel's raffinate they 01:22:38 25 purchased, how would the manufacturers of Liquid

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1 Wrench utilizing U.S. Steel's raffinate know how much 2 benzene was in the raffinate if they didn't do tests 3 themselves? 4 MR. EPPS: I have to object to the 01:22:59 5 form of the question. It's a little bit of a two 6 part question. 7 Q. Okay. Let me break it up. 8 A. Well, both -- It's got a time component 9 and an assumption that if they chose not to assay it, 01:23:13 10 how would they know if they weren't told by U.S. 11 Steel? 12 Q. And I'm going to break that up for you. 13 At what point in time did Liquid Wrench contain a 14 raffinate that contained benzene? 01:23:30 15 A. In about 1960. 16 Q. So after 1960 Liquid Wrench did not 17 contain a benzene-containing raffinate? 18 THE WITNESS: Could I hear that back? 19 Q. I'll ask it again. So after 1960 Liquid 01:23:48 20 Wrench did not contain a benzene-containing 21 raffinate; is that right? 22 A. I'm trying to understand the words. Did 23 not contain -- 24 Q. After 1960 -- let's use 1960 as our -- 01:24:04 25 A. They have both benzene containing and not	1 Q. -- Liquid Wrench was available in both a 2 benzene-containing raffinate and a nonbenzene- 3 containing form? 4 A. Depending on volume and type, yes. 01:25:39 5 Q. And after 1978 all Liquid Wrench was 6 benzene free; is that your opinion? 7 A. Well, you have to be careful with the term 8 benzene free in today's world. 9 Q. Let me ask it in a way that may be a 01:25:59 10 little easier. After 1978 did Liquid Wrench contain 11 raffinate that had measurable levels of benzene 12 within it? 13 A. After '78 I don't think it contained 14 raffinate. It may have contained benzene due to 01:26:20 15 other sources. 16 Q. And what would those other sources be? 17 A. Well, whatever petroleum products they may 18 have used, and when we talk about benzene, we're 19 talking about what we once considered insignificant 01:26:33 20 or nonmeasurable quantities, one or the other. 21 Q. This is after 1978. 22 A. Right. 23 Q. Between 1960 and 1978 would you be able to 24 estimate the percentage of benzene that would be 01:26:59 25 found in the raffinate that was utilized in the
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1 containing. 2 Q. After 1960? 3 A. Yes. 4 Q. At what point was Liquid Wrench completely 01:24:13 5 benzene free? 6 A. About 1978. 7 Q. And when -- so prior to 1960 were all 8 Liquid Wrench products benzene containing? 9 A. Prior to 1960 were all Liquid Wrench 01:24:31 10 products benzene containing? 11 Q. Yes. 12 A. I don't know. 13 Q. Have you seen any indication that Liquid 14 Wrench -- 01:24:38 15 A. I mean I don't know if they were or they 16 were not. 17 Q. Have you seen any documents or testimony 18 to indicate to you that prior to 1960 Liquid Wrench 19 was available without a benzene-containing raffinate? 01:25:04 20 THE WITNESS: Can I hear that again? 21 (The reporter read from the record as 22 requested.) 23 A. I haven't studied that matter. 24 Q. And from 1960 to -- was it 1978? 01:25:26 25 A. Yes.	1 Liquid Wrench product? 2 A. And your question applies to those Liquid 3 Wrench products that contained raffinate? 4 Q. Yes. 01:27:14 5 A. And I've said previously I think on 6 average it's less than five percent for those 7 products that contained raffinate between 1960 and 8 1978. 9 Q. Where is Exhibit 4? There it is. I want 01:28:13 10 to talk about your report specifically. Let's start 11 with Exhibit No. 4, your report in the Wilkinson 12 case. Do you have an opinion as to whether or not 13 Mr. Wilkinson was exposed to benzene or not 14 occupationally generally? 01:28:50 15 MR. EPPS: You're asking about the 16 petroleum manufacturers, or what are you talking 17 about? 18 Q. Let me be more specific. During 19 Mr. Wilkinson's career at refineries, and you've read 01:29:03 20 his deposition, you've read the transcripts, do you 21 have an opinion as to whether or not Mr. Wilkinson 22 was exposed to benzene occupationally as a part of 23 his job? 24 MR. EPPS: You know, you're going into 01:29:15 25 an area that he hasn't been tendered. I'm going to

Page 58 1 let him answer the questions if you want to go there. 2 Q. Let me back this up. Let me just see if I 3 can figure out something with you, Dr. Paustenbach, 4 and this may get some objections, but so what. 01:29:41 5 Are your opinions in this case, generally 6 speaking, that the raffinate that was sold by U.S. 7 Steel to Radiator Specialty contained adequate 8 information on the product to inform Radiator 9 Specialty of what was in it and that whatever 01:30:04 10 Radiator Specialty did or didn't do after that is not 11 U.S. Steel's fault? 12 MR. EPPS: Objection as to form. 13 Q. Was that the general context? 14 A. The general context is that U.S. Steel 01:30:18 15 informed Radiator Specialty. They labeled their 16 products accordingly, and it was primarily 17 responsibility of Radiator Specialty to ensure that 18 it met all regulatory and other expectations. 19 Q. And with respect to that stamp of what 01:30:44 20 Radiator Specialty did with respect to meeting 21 regulations or performing whatever responsibilities 22 that it had to with respect to its products, as I 23 read your reports, I see no opinion with respect to 24 Radiator Specialty's conduct; am I correct? 01:31:02 25 MR. EPPS: Objection as to the form.	Page 60 1 looked at the labels, and he has concluded that the 2 labels meet the terms of the regulations. 3 MR. NEMEROFF: On the Liquid Wrench 4 product?" 01:33:55 5 MR. EPPS: On the Liquid Wrench 6 product. So I don't see that in No. 3, and it could 7 just have been something that got omitted in the 8 process of, you know, trying to restrict the scope of 9 his testimony. 01:34:07 10 MR. NEMEROFF: Well, that's helpful 11 because that was going to be one of my narrowing 12 questions which is you have no opinion about the 13 adequacy of what Liquid Wrench or what Radiator 14 Specialty did with their product. 01:34:23 15 MR. EPPS: Yeah. 16 MR. NEMEROFF: And that's why I'm 17 concerned about the scope of this deposition. I'm 18 trying to be narrow. 19 MR. EPPS: No. I appreciate that, and 01:34:30 20 that's something that should have been in No. 3, and 21 it was in No. 3 at some point in time I'm confident. 22 I don't know how it's not in there now, to be honest 23 with you, but I'm going to go ahead and tell you that 24 so you can go ahead and ask questions. 01:34:44 25 MR. NEMEROFF: So for the purpose of
Page 59 1 A. I'm not sure what you mean by conduct, but 2 I don't opine about Radiator Specialty very much. 3 For instance, opinion 3 is probably as close as I 4 get. 01:31:27 5 Q. As a supplier of raw materials? 6 A. Yes. 7 Q. Talking about your opinion, and this would 8 be opinion 3 in the Wilkinson report, page 6, what 9 warning information was provided to Radiator 01:32:17 10 Specialty Company by U.S. Steel with respect to the 11 benzene in the raffinate that was being used to 12 manufacture Liquid Wrench? Are you looking for 13 the -- I think you have it in front of you. 14 A. No. I was looking for the documentation. 01:32:50 15 Q. Is that the safety data sheet that you're 16 looking at? 17 A. No. I'm just looking at my opinion right 18 now. 19 Q. Oh, your opinion. I'm sorry. Off the 20 record. 21 (Discussion off the record.) 22 MR. EPPS: Let's go on the record for 23 a minute. In fairness to you, and again, I don't 24 know how this got left out of No. 3, but Dr. 01:33:45 25 Paustenbach has looked at the regulations, and he has	Page 61 1 the record, in the report in the Wilkinson case which 2 is Exhibit No. 4, at page 6 as part of overview of 3 opinions, master section 4, paragraph No. 3 should 4 include, according to counsel, an opinion about the 01:35:04 5 adequacy of the Liquid Wrench label in light of the 6 Federal Hazardous Substances Act? 7 MR. EPPS: Yes, I think so. 8 MR. NEMEROFF: And -- 9 MR. EPPS: You've got Mr. Stubbs' 01:35:22 10 report? I don't have a copy of any of this stuff. 11 Somebody keeps stealing my copies. 12 MR. NEMEROFF: Now, there is a 13 sentence in the Stubbs case, if you look at page 4, 14 sub B, it says while Radiator Specialty Company 01:35:47 15 complied with the labeling requirements, it made the 16 decision to continue to use raffinate supplied by USS 17 in some of its formulations of Liquid Wrench. 18 MR. EPPS: Yes, and that should have 19 been in the Wilkinson case as well. That's why I was 01:36:01 20 looking back to see what it said. 21 MR. NEMEROFF: Okay. 22 MR. NEMEROFF: Did I have a question? 23 (Discussion off the record.) 24 (The reporter read from the record as 01:45:58 25 requested.)

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1 MR. EPPS: Somchow in the Wilkinson 2 report there's a sentence missing under section 3 3 that's found in the Stubbs report, and it reads as 4 follows: While Radiator Specialty Company complied 01:46:57 5 with the labeling requirements, it made the decision 6 to continue to use raffinate supplied by USS in some 7 of its formulations of Liquid Wrench, and, you know, 8 with that I will just tell you that Dr. Paustenbach 9 has the opinion, posed the opinion that the labels on 01:47:19 10 the Liquid Wrench cans comply with the federal 11 regulations for labeling products that contained 12 benzene. Do you want this back? 13 MR. NEMEROFF: Yeah. I need those 14 back. Okay. 01:47:36 15 Q. And my question to you, Dr. Paustenbach, 16 before we just got off track was what materials or 17 what information did U.S. Steel provide to Radiator 18 Specialty with respect to benzene contained in the 19 raffinate that was used to manufacture Liquid Wrench, 01:47:56 20 and I think -- 21 A. And I would refer you to the letter marked 22 June 10, 1963, from U.S. Steel to Radiator Specialty 23 Company where it says that I feel that the following 24 will prove most helpful, and it is reported that 01:48:25 25 there's five percent benzene at a minimum in their	1 Products Safety Commission regulations? 2 A. I would refer you to Exhibit 9 where it 3 lists the terms danger and poison with a skull and 4 crossbones, flammable, vapor harmful, harmful or 01:50:44 5 fatal if swallowed, and then on the back page it 6 lists caution, contains benzene, use only with 7 adequate ventilation, avoid prolonged or repeated 8 breathing of vapor and contact with skin, harmful if 9 ingested, keep out of reach of children, and I 01:51:14 10 believe those are the words that are expected of the 11 standard. 12 Q. This might be a technical thing or form 13 thing, but with respect to the Stubbs and the 14 Wilkinson case why are the opinions as you list them 01:52:01 15 different looking in terms of the substance? And I 16 ask because it appears that your opinions more or 17 less are the same for both cases. 18 A. They are. 19 Q. They are, is that correct? 01:52:14 20 A. On this matter. 21 Q. On this matter, but they appear in 22 different forms in the two reports which are dated 23 the same day. 24 A. Right. 01:52:22 25 Q. Is there a reason for that? And I'm not
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1 raffinate. 2 Q. I will go ahead and mark that letter of 3 June 10, 1963, from U.S. Steel to Radiator Specialty 4 as Exhibit No. 17 to the deposition. 01:48:41 5 (EXHIBIT NO. 17 MARKED.) 6 A. And then the second letter is dated May 7 25th, 1977, from Mr. Graeber at U.S. Steel to a 8 Dr. Tames. 9 Q. I think Mr. Tames. 01:49:05 10 A. Mister. 11 MR. EPPS: Can you spell it? 12 Q. T-A-M-E-S. 13 A. Well, it's a mister with a Doctor of 14 Science at the end, so, in any event it's marked May 01:49:19 15 25, 1977, and in there he mentions that the USS 16 raffinate contains benzene in the range of 1 to 14 17 percent with an approximate average of 3 percent, and 18 that attachment's also dated May 25, 1977. 19 (EXHIBIT NO. 18 MARKED.) 01:49:37 20 Q. And we've gone ahead and marked that as 21 Exhibit No. 18 to the deposition. Now, sir, with 22 respect to the Liquid Wrench product that contained 23 U.S. Steel raffinate that contained benzene, could 24 you tell us what was on the label that you believe 01:50:04 25 complied with, I guess it would be the Consumer	1 suggesting you should have a boilerplate opinion to 2 just throw on each case, but they do appear that you 3 have some differences that I'm trying to figure out 4 why or what the significance of them are. 01:52:39 5 A. I think the simplest thing to say is that 6 I didn't do an adequate job personally when I tried 7 to make them homogeneous. 8 Q. Now, in, and unfortunately I'm going to 9 keep referring back and forth to Exhibits 4 and 5 01:53:11 10 almost interchangeably because I imagine the opinion 11 you have in Exhibit No. 5 in the Stubbs case about, 12 where you talk about Radiator Specialty Company had 13 full knowledge of any potential health hazards 14 associated with products containing benzene both as a 01:53:29 15 manufacturer and as set forth under the regulations 16 and act for benzene in 1964, would that opinion also 17 hold true in the Wilkinson case? 18 A. Yes. 19 Q. Even though that opinion is not 01:53:44 20 specifically set forth in the Wilkinson case, but 21 that opinion would also hold true in the Wilkinson 22 case? 23 A. Yes. I think there are really less than 24 four or five sentences difference between these two 01:54:01 25 Q. Now, what I see in the Wilkinson case that

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1 I don't see in the Petty's case is that you discuss 2 Petty's, and that's P-E-T-T-Y's, Petty's exposure 3 assessment for I think cumulative dermal benzene 4 intake. You don't have a similar exposure assessment 01:54:21 5 for Mr. Stubbs' case; is that correct? 6 A. Right. 7 Q. Is it that you have not done one or is it 8 that it was just not included in the report? 9 A. I couldn't find sufficient evidence that 01:54:42 10 he was exposed to raffinate-containing Liquid Wrench 11 to propose an exposure assessment. 12 Q. And that's based upon your reading of the 13 depositions and the transcripts and your knowledge of 14 the Liquid Wrench product? 01:54:56 15 A. That's right. 16 Q. Am I correct that in neither Wilkinson or 17 Stubbs have you attempted to do an exposure 18 assessment for benzene from sources other than Liquid 19 Wrench? 01:55:16 20 A. Correct. 21 Q. And at trial you would offer no opinions 22 or intend to offer no opinions about exposure 23 assessments to benzene from products other than 24 Liquid Wrench? 01:55:29 25 A. I've not been retained to do that.	1 Q. But you have not endeavored to determine 2 what that range would be for these two cases? 3 A. That's right. 4 Q. And if you were called to testify by U.S. 01:56:58 5 Steel in this case, you would be responding to say 6 Dr. Petty's exposure assessment only to the extent 7 that Petty's assessment dealt with the Liquid Wrench 8 benzene exposure? 9 A. Correct. 01:57:12 10 MS. RIEGLE: Object to form. 11 MR. EPPS: As far as questions from 12 United States Steel's counsel are concerned, that is 13 absolutely correct, and let me also just make the 14 statement with respect to the Stubbs case, if the 01:57:24 15 deposition testimony were to change at trial from 16 what it's constituted or found in the deposition 17 testimony, I reserve the right to go back and ask Dr. 18 Paustenbach to do whatever assessment is necessary 19 should the facts change. 01:57:41 20 MR. NEMEROFF: And that's a decision 21 for you all to fight out at trial if there are 22 changes in facts upon which everyone's basing 23 opinions. 24 Q. But I just want to narrow this down for as 01:57:52 25 the purpose of as we sit here today, the only
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1 Q. All right. And you've not done those 2 calculations to date as we sit here? 3 A. Correct. 4 Q. You could if you had wanted to -- well, 01:55:41 5 that was a hard question to ask. But that is 6 something that if you had been asked to do, you would 7 have made an attempt to do similar to how you did it 8 with the Liquid Wrench product? That's a bad 9 question. 01:55:51 10 For each of these cases had you been 11 retained and asked by any of the defendants in this 12 case to perform an exposure assessment for each of 13 these plaintiffs, is that something you feel you 14 could have done? 01:56:07 15 A. Had the deposition testimonies been 16 adequate, I certainly have the capacity to do those 17 calculations as accurately as anyone. 18 Q. Is it your opinion with respect to each of 19 these cases, and if we need to break it out, I will, 01:56:28 20 that the deposition testimony that's been provided to 21 you is insufficient to do an exposure assessment for 22 benzene beyond the Liquid Wrench product? 23 A. No, I wouldn't say that. What I would say 24 is there would be some uncertainty in those 01:56:45 25 estimates, and they may be fairly broad.	1 questions you would answer, that you are prepared to 2 answer based upon your reports in these cases as as 3 to the exposure assessments for Liquid Wrench 4 specifically in the Wilkinson case? 01:58:12 5 THE WITNESS: Can you read that back? 6 (The reporter read from the record as 7 requested.) 8 MR. EPPS: Wait, I think that's 9 incorrect and inconsistent with his prior testimony. 01:58:47 10 Q. All right. Let me withdraw it and ask it 11 in a different way, and pardon my concern, but I 12 still want to make sure that with respect to your 13 exposure assessment that you have done in this case, 14 and we'll talk specifically this case being the 01:59:03 15 Wilkinson case, your exposure assessment is limited 16 to what benzene exposure, if any, Mr. Wilkinson had 17 from the Liquid Wrench product; is that correct? 18 A. From an exposure assessment standpoint, 19 that's correct. 01:59:15 20 Q. And in the Wilkinson case you have done no 21 further benzene exposure assessment of your own; is 22 that correct? 23 A. That's correct. 24 Q. And your -- 01:59:27 25 A. And I assume you're talking about through

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1 other exposures to benzene at facilities he worked 2 at. 3 Q. Correct. And with respect again just to 4 Mr. Wilkinson's case and based upon your report, I 01:59:39 5 see no conclusion or opinion that directly either 6 refutes or addresses the Petty's reports conclusions 7 with respect to benzene exposure from non-Liquid 8 Wrench benzene exposures; is that correct? 9 A. That's correct. 01:59:58 10 Q. And with respect to the Stubbs case there 11 is no exposure assessment whatsoever that you have 12 done with respect to Mr. Stubbs, Mr. Stubbs' 13 exposure, if any, to a Liquid Wrench benzene- 14 containing product; is that correct? 02:00:17 15 A. That's not quite correct. I did an 16 assessment and concluded that there was insufficien 17 evidence that he was exposed to raffinate-containing 18 material. So the assessment was conducted. It was 19 just never quantified as I couldn't find exposure. 02:00:32 20 Q. Okay. And that opinion of a lack of 21 finding is not contained within your report? 22 A. That is not specifically stated. 23 Q. Okay. And let me kind of close the door 24 on that. Your opinion with respect to Mr. Stubbs is 02:00:46 25 based upon your review of the available testimony and	1 well, that you have not been approached by any other 2 defendant in the Wilkinson case to do an exposure 3 assessment? 4 A. Not to date. 02:02:21 5 Q. All right. Turning to the Wilkinson case 6 for a moment and the first conclusion you had with 7 respect to the exposure assessment that Mr. Wilkinson 8 had, what was the basis for your conclusion that 9 Mr. Wilkinson's estimated cumulative dermal benzene 02:02:50 10 intake due to working with Liquid Wrench would be 11 about .036 parts per million years, what is the basis 12 of that opinion? 13 A. I think it's described here. What I 14 basically did is looked at Petty's exposure 02:03:07 15 assessment and took it as a starting point, not 16 questioning his days of exposure, and then looked at 17 the other parameters of influence predicted intake 18 that he considered. So as I said in part B -- 19 Q. B or -- 02:03:30 20 A. I'm sorry, subpart B of opinion 1. 21 Q. You're looking at Stubbs? 22 A. No. I'm looking at Wilkinson. I thought 23 that was your question. 24 Q. It was. Now I'm confused. I'm sorry. Go 02:03:51 25 on. I see where you are.
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1 facts of the Stubbs case. You do not believe there 2 was sufficient evidence upon which to conclude that 3 Mr. Stubbs had exposure to any benzene from a Liquid 4 Wrench product; is that correct? 02:01:06 5 A. It would appear that way if you're -- that 6 is raffinate-containing materials. 7 Q. Raffinate-containing Liquid Wrench or 8 Liquid Wrench containing raffinate? 9 A. Yes. 02:01:19 10 Q. And taking the Liquid Wrench/raffinate 11 product out of the question with respect to 12 Mr. Stubbs, you have not endeavored to do an exposure 13 assessment for any other benzene exposures Mr. Stubbs 14 may have had in his career; is that correct? 02:01:43 15 A. Correct. 16 Q. And you have not been asked to do that by 17 U.S. Steel in this case; is that correct? 18 A. Correct. 19 Q. And as you were only retained by U.S. 02:01:54 20 Steel, no other defendant has approached you in this 21 case to do that exposure assessment; is that correct? 22 A. I think that's true. 23 Q. And the fact that no other defendant in 24 the Wilkinson case has approached you to do an 02:02:08 25 exposure assessment in that case, that's true as	1 A. In 1. 2 Q. What page is that? 7, okay. Go ahead. 3 THE WITNESS: Would you read back my 4 question. 5 (The reporter read from the record as 6 requested.) 7 A. I adopted his value of 4.64 percent 8 benzene in Liquid Wrench for the years 1971 to 1978. 9 I accepted his flux rate for five percent benzene of 02:04:54 10 0.049 milligrams per square centimeter of skin per 11 hour. As described in D, Mr. Wilkinson has 12 conflicting testimony about his dermal contact. 13 Mr. Petty assumed that Mr. Wilkinson's clothing was 14 soaked and that large portions of his body had 02:05:12 15 continuous skin contact with that clothing. I didn't 16 think that was likely or credible. 17 In E of opinion 1 I talk about how 18 Mr. Wilkinson had his hands exposed and why it was 19 unrealistic in my view that large quantities would 02:05:54 20 get on his skin or his chest given the way it was 21 used. So I thought the more realistic approach would 22 be to consider a surface area equal to the surface of 23 the skin which drops the surface area to 495 square 24 centimeters instead of 5,322. So there's a 02:06:24 25 difference of 10.7-fold between Petty's assumed

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1 surface area and mine. 2 Then under F I questioned the amount of 3 time that the benzene remained in contact with his 4 skin. 02:06:45 5 (Discussion off the record.) 6 A. Mr. Petty has assumed 1.75 hours, or I 7 assumed 1.75, although this seems unlikely, and 8 Mr. Petty assumed 4.5 hours. Keep in mind that the 9 -- I misspoke. It's likely that the benzene will 02:07:30 10 evaporate very, very quickly, and I mentioned that 11 it's about six minutes on the top of page 8. 12 Q. Mm-hmm. 13 A. There are data that say that 27 percent of 14 it evaporates in 15 minutes. So I think it's 02:07:44 15 consistent. I think it evaporates very quickly, and 16 the historical record of these studies shows that it 17 does. So I assumed 30 minutes was about as long as 18 the contact with the skin would occur after 19 application ended. 02:08:01 20 So this comparison accounts for a factor 21 of about nine difference between Petty's exposure 22 duration and mine. I discarded the likelihood that 23 tools were cleaned routinely with Liquid Wrench. 24 There's two reasons. It's expensive, and secondly, 02:08:28 25 there's a residue associated with cleaning tools with	1 experiences in using Liquid Wrench as similar to what 2 you read for Mr. Wilkinson's use? 3 A. Well, there's too many differing 4 descriptions between the affidavit in his deposition 02:10:35 5 and my experience. Yes, I'd say what he described is 6 not consistent with my experience, what he generally 7 described. Sometimes he describes it in a manner 8 that's more consistent with what I have experienced, 9 but I've used it a lot over the years. I worked in a 10 car shop, but I'm not a gear head. 11 Q. I'm going to avoid asking you questions 12 about that. Now, your next opinion on page 8 talks 13 about your experience as a chemical engineer, as an 14 industrial hygienist and in working with pipefitters. 02:11:25 15 You didn't work as a pipefitter, did you? 16 A. No, sir. 17 Q. All right. 18 A. I supervised pipefitters to the extent 19 that you can supervise them when they're union. 02:11:40 20 Q. And you were conducting, I don't want to 21 use experiments -- you were doing studies, or was 22 this part of a job someplace? 23 A. It was part of a job. I was a chemical 24 engineer at a chemical plant. So my particular job 02:11:40 25 involved process modifications and building
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1 Liquid Wrench. I just had not heard of it 2 previously. If it occurred, it wouldn't have 3 occurred nearly as often as was assumed. 4 So if you carry through the calculations, 02:08:47 5 I'm assuming about a hundred-fold less dermal uptake 6 than what Mr. Petty assumed for Mr. Wilkinson, and 7 think that these assumptions or exposure factors that 8 I have assumed are still probably a little aggressive 9 that for sake of this case I'll leave them the way 02:09:11 10 they are. 11 Q. Did you have any or do you have any 12 opinion as to any inhalation exposure from the Liquid 13 Wrench product in addition to the dermal that 14 Mr. Wilkinson would have had? 02:09:25 15 A. I adopted Mr. Petty's view that the data 16 were insufficient to do that for this case. 17 Q. Now, in your next -- when you say that 18 Liquid Wrench is expensive when it comes to cleaning 19 tools, what do you base that on? 02:09:47 20 A. Having bought it at the store versus 21 common, common solvents often used to clean tools. 22 Q. And have you personally in a 23 nonprofessional manner used Liquid Wrench? 24 A. Oh, sure, all the time. 02:10:15 25 Q. Would you characterize your own	1 facilities. 2 Q. And to the extent you had to politely ask 3 the union pipefitter to do something, you did so, and 4 that was about the extent of your involvement in 02:11:59 5 their work? 6 A. Well, you're not allowed to use the tools, 7 and you can chat with them about the progress of the 8 job, but there's certain boundaries as to what you 9 can do. 02:12:14 10 Q. Do you agree generally that workers in 11 refinery settings can be exposed to hazardous levels 12 of benzene? 13 MS. RIEGLE: Object to form. 14 A. Well, it depends about the years, of 02:12:51 15 course. I think that's probably what the objection 16 to form is. Over the years and under certain 17 circumstances in certain parts of a chemical plant or 18 refinery you can certainly have been overexposed. 19 Q. Given the years of exposure in 02:12:46 20 Mr. Wilkinson's case would those years be the years 21 in which a person working in refineries as 22 Mr. Wilkinson did, would those be years within which 23 hazardous exposures could take place to benzene? 24 MS. RIEGLE: Object to form. 02:13:02 25 A. I normally won't answer questions like

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1 that just because they're too vague. 2 Q. Are you prepared today to offer any 3 opinions about Shell's I think it was 1984 exposure 4 assessment? 02:13:30 5 MS. RIEGLE: Object to form. 6 A. Are you referring to the fairly large 7 report by Kusnetz, et al.? 8 Q. Yes. 9 A. That's commented on by Caroline Phillips? 02:13:41 10 Q. Yes. 11 A. I'm not going to discuss that report 12 today. 13 Q. And so that I'm clear, as we sit here 14 today, you intend to offer no opinions as to the 02:14:01 15 accuracy or validity or lack of accuracy or lack of 16 validity of the Kusnetz 1984 Shell exposure 17 assessment? 18 MS. RIEGLE: Object to form. 19 A. I don't plan to discuss it. 02:14:22 20 Q. Now, is it you have opinions about it or 21 do you have no opinions about it -- 22 MS. RIEGLE: Object to form. 23 MR. NEMEROFF: Hold on a second. 24 Q. I understand that you don't plan on 02:14:31 25 discussing it, but for the purpose of our trial of	1 Plappert? 2 A. Plappert, mm-hmm. Also probably even 3 better is Koop 1989 and Valentine '96. As I say in 4 the next bullet, I really don't think the doses of 02:16:38 5 the benzene or the other solvents, the absorbed dose, 6 is going to be sufficient to cause these metabolic 7 changes. They tend to occur at higher doses, but if 8 you want to embrace the view that the dose is higher, 9 and then all I'm saying is Dr. Infante and maybe 02:17:09 10 others I think are mistaken in thinking that there's 11 an enhancement of toxicity in the presence of these 12 other chemicals. I don't think that is a mechanistic 13 basis for that. 14 Q. So your opinion is at first the dose is 02:17:14 15 not high enough and that -- 16 A. That's right. For times when there is 17 interaction, I think the doses tend to be higher, but 18 if there were interaction, it wouldn't be to make the 19 toxicity greater. 02:17:32 20 Q. Okay. So first is there is not enough 21 dose, but even if there is, second, even if there is 22 enough dose, the combination is not making it worse 23 if that is having an opposite effect. 24 A. That's right. Now, see, we know why you 02:17:51 25 were brought in to cross-examine me. It goes much
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1 these two matters, have you been asked to form 2 opinions about those matters contained within Kusnetz 3 and the report? 4 MS. RIEGLE: Object to form. 02:14:49 5 A. No. 6 Q. I apologize for taking so long. I want to 7 see what the differences are between the line we were 8 talking about, I want to make sure I cover. 9 MR. EPPS: Whichever one is the 02:15:30 10 broader? 11 MR. NEMEROFF: I think the broader one 12 is the Wilkinson report. 13 MR. EPPS: It's broader in that there 14 are more topics covered. 02:15:39 15 MR. NEMEROFF: Right. It seems that 16 the opinions in Stubbs are also the same opinions 17 that are in Wilkinson. Wilkinson has a little bit 18 more to it. 19 Q. For example, you talk about in your 02:15:53 20 conclusion 4 at page 10 in Wilkinson which is Exhibit 21 No. 4, the presence of other compounds such as 22 toluene in the raffinate used in Liquid Wrench would 23 have decreased the toxic effects of benzene in the 24 raffinate by inhibiting the metabolism of benzene, 02:16:10 25 and for that you cite two papers: Purcell and is it	1 faster than with most lawyers. 2 Q. Oh, it's because I don't feel like asking 3 all the questions you've been asked a hundred times 4 before. Let someone else read those depositions. 02:16:06 5 All right. Let's take a five minute break. 6 (A recess was taken.) 7 MR. NEMEROFF: All right. We're going 8 to get back on the record. 9 Q. We're back on the record, and I'm looking 02:30:07 10 back at Exhibit No. 4 which is the Wilkinson report, 11 and I want to turn again to the issue of what USS 12 Corporation, U.S. Steel provided to the Radiator 13 Specialty Company. Have you reviewed for the purpose 14 of your testimony today the material safety data 02:30:34 15 sheets that were provided by Radiator Specialty with 16 respect to their product? 17 A. I've only reviewed those that were in the 18 Petty report. 19 Q. And have those material safety data sheets 02:30:50 20 affected or helped form any opinions that you have in 21 this case about the adequacy of those material safety 22 data sheets in conveying whatever risks that may be 23 attributed to Liquid Wrench product? 24 A. Yes. 02:31:06 25 Q. And what are those?

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1 A. My impression was that they were adequate 2 and appeared to be consistent with the times. 3 Q. Now, when you say consistent with the 4 times, can you explain to me a little bit about what 02:31:28 5 you mean by that? 6 A. Over the histories of MSDSs, there have 7 been varying expectations about the level of 8 precision with which you describe the components of a 9 product such that at some points it was acceptable to 02:31:43 10 say less than five percent benzene. At other times 11 there were expectations that you be more specific 12 than that. So over the journey of 30 or 40 years 13 that's changed. 14 Q. And with respect to the material safety 02:32:05 15 data sheets, and those are the ones that are attached 16 to Petty's report? 17 A. Yes. I think most of them are around 18 page -- 19 Q. Like in the 200s? 02:32:16 20 A. Mine's numbered 96 on the April 20th 21 report. 22 Q. Are you looking at the Radiator Specialty 23 -- yeah. I'm looking at a different report. 24 A. Well -- 02:32:38 25 Q. The sum and substance of the question	1 Q. Is in your opinion the range of 1 to 14 2 percent by volume of benzene in the raffinate, is 3 that a generally accepted range that you would find, 4 if you know? 02:34:28 5 A. It would be toward the low end because 6 it's not their desire to have benzene in there. It's 7 better for them not to have benzene in there. 8 Q. Can you think of any way in which the 9 benzene level that a raffinate would be as high as 30 02:34:45 10 percent? 11 A. I don't see how it would have been or why 12 it would have been. 13 Q. And I know we talked earlier about 14 documents stating that there might have been as much 02:35:11 15 as 30 percent benzene in the raffinate. Do you 16 recall that? 17 MR. EPPS: Objection as to the form. 18 A. Yeah. There weren't certain documents. I 19 only know of one piece of paper that is sometimes 02:35:24 20 referred to by several experts. There's only one 21 piece of paper I'm aware of that says that. 22 Q. And do you know what the basis for 23 concluding that that 30, of how that 30 percent 24 number was reached? 02:35:36 25 A. I don't know the analytical chemistry
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1 would be it's your opinion that the information 2 contained within those material safety data sheets is 3 adequate and sufficient? 4 A. I'd say generally adequate and sufficient 02:32:50 5 for the time. If you were to do a comp analysis 6 versus other people, it would not be unusual. 7 Q. And the information contained in the 8 material safety data sheets of Radiator Specialty 9 Company, did that information contain more or less 02:33:12 10 with respect to the raffinate component than what was 11 in the materials sent to Radiator Supply from U.S. 12 Steel? 13 A. I think we have to do that on an MSDS by 14 MSDS basis. They generally say that they tend to 02:33:35 15 report on the high side. 16 Q. They being -- 17 A. Radiator Specialty. 18 Q. And as of 1977, the U.S. Steel raffinate 19 had a range of 1 to 14 percent benzene with an 02:33:53 20 approximate average of 3 percent based upon Exhibit 21 No. 18, is that correct? 22 A. Right. 23 Q. And are you familiar with the process by 24 which raffinate is manufactured or created? 02:34:05 25 A. Partly.	1 behind it. 2 Q. But you believe it was an incorrect or 3 there's something not right about it? 4 A. There's something not right. It's 02:35:47 5 inconsistent with the historical record of percent 6 benzene in raffinate, and it doesn't make economic 7 sense that U.S. Steel would have that much benzene in 8 there, and it intuitively just doesn't make sense 9 from a chemical engineering standpoint. So I don't 02:36:09 10 know why, why it's that high. We just don't know why 11 that particular report is the way it is. 12 Q. Okay. Dr. Paustenbach, beyond, and I want 13 to -- I'm more or less going to stop in a second. 14 Understanding that the opinions that you have in the 02:36:31 15 cases of Wilkinson and Stubbs are contained within 16 Exhibits 4 and 5, are there any other opinions that 17 you intend to offer at trial with respect to these 18 two matters? 19 MR. EPPS: As further explained during 02:36:45 20 the conversation you and I had with the omission of 21 the Wilkinson case. 22 MR. NEMEROFF: Yes. Well, and in 23 fairness to Dr. Paustenbach and in fairness to U.S. 24 Steel, I am considering Exhibits 4 and 5, while 02:36:59 25 separate reports, essentially one opinion with some

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1 minor differences specifically I think with respect 2 to the dermal exposure assessment from Wilkinson 3 and/or the lack of exposure assessment in Stubbs, but 4 with respect to the doctor's opinions on the Liquid 02:37:25 5 Wrench and the supplier, et cetera, I'm putting that 6 all together. 7 MR. EPPS: Okay. 8 MR. NEMEROFF: Is that okay with you? 9 MR. EPPS: I think so, sure. I think 02:37:38 10 we have an understanding. 11 Q. Okay. And so with that understanding, 12 Doctor, these are all of your opinions that we've 13 talked about today? 14 A. As long as I'm not asked questions outside 02:37:51 15 this range of testimony, these are all the opinions I 16 have for this case. 17 Q. Okay. And those opinions do not include 18 any causation opinions; is that correct? 19 A. That's correct. 02:38:05 20 Q. Nor have you elicited -- or excuse me -- 21 have you set forth any opinions about historical use 22 of benzene in industry; is that correct? 23 MR. EPPS: Well, let me just say, 24 that's part of the dialog wherein you established 02:38:33 25 qualifications. So I mean certainly he will talk	1 CROSS-EXAMINATION 2 ----- 3 BY MS. RIEGLE: 4 Q. This is Catherine Riegler. I have a quick 02:39:59 5 question for you, Dr. Paustenbach. You mentioned 6 that you used Petty's hours or days or years 7 calculations; is that correct? 8 A. As a foundation with the primary factor 9 that I thought underpins the calculations that 30 02:40:22 10 days of exposure could possible exposure Liquid 11 Wrench. 12 Q. You are not expressing the opinion that 13 Petty's calculations on the hours, days or years is 14 correct, are you? 02:40:37 15 A. Only -- no. I'm saying that I adopted his 16 30 days of exposure to Liquid Wrench. I just didn't 17 choose to quibble with it. 18 MS. RIEGLE: Thank you, sir. 19 MR. EPPS: Tom? 02:40:54 20 MR. AUBRY: This is Tom Aubry. I 21 don't have any questions for this witness at this 22 time. 23 MR. EPPS: No questions from U.S. 24 Steel. 02:41:01 25 THE WITNESS: Thank you all.
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1 about the historical use of benzene, the benefits of 2 benzene, the necessity of benzene in production 3 yesterday and today. That's not a part of his 4 opinions but part of his background testimony. 02:38:50 5 MR. NEMEROFF: And I don't think I'm 6 -- and from looking at other testimony those areas 7 have been discussed previously. What I'm talking 8 about is specific to these cases. 9 A. No specific information to these 02:39:04 10 refineries and chemical plants is in my area of 11 testimony. The only thing that comes even close is 12 my opinion 2 where I talk about chemical plants and 13 the kind of exposures that were seen in chemical 14 plants in a paper that I published, but other than 02:39:29 15 that with respect to the refineries and plants in 16 this case I will have, I will offer no opinion in 17 this case. 18 MR. NEMEROFF: All right. Well, 19 subject to that and the understanding we've had 02:39:44 20 throughout this deposition about the limitations of 21 the questions I'm asking, I'm going to pass the 22 witness. 23 Does anyone on the telephone have any 24 questions to ask Dr. Paustenbach? 25 -----	1 MR. NEMEROFF: All right. Thank you. 2 (Whereupon, the deposition was 3 concluded at 11:30 a.m. Signature was not waived.) 4 CHANGES AND SIGNATURE 5 PAGE LINE CHANGE REASON 6 _____ 7 _____ 8 _____ 9 _____ 10 _____ 11 _____ 12 _____ 13 _____ 14 _____ 15 _____ 16 _____ 17 _____ 18 _____ 19 _____ 20 _____ 21 _____ 22 _____ 23 _____ 24 _____ 25 _____

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1 Mr. Thomas Aubry, Attorney for Radiator Specialty
2 Company

3
4 I further certify that I am neither counsel for,
5 related to, nor employed by any of the parties or
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