

Page 647 1 In The Superior Court 2 Of The State Of Delaware 3 In And For New Castle County 4 -----X 5 Monsanto Company, : 6 Plaintiff, : 7 : Civil Action Number 8 v. : 88c-ja-118-1-cv 9 Aetna Casualty & Surety Company, : Non-arbitration 10 et al. , : Case 11 Defendants. : 12 -----X 13 Deposition Of James R. Savage (Volume 4) 14 Wilmington, Delaware 15 Friday, May 21, 1993 16 Deposition of James R. Savage, called for further 17 examination pursuant to agreement by counsel, at the law 18 offices of Smith, Katzenstein and Furlow, 1220 Market 19 Street, Fifth Floor, at 9: 20 a. m. before Kristine A. 20 O'connor, Court Reporter, when were present on behalf of the 21 respective parties: 22 -- continued --	Page 649 1 C O N T E N T S 2 Witness Examination 3 James R. Savage (Resumed) 4 by Mr. Brock 650 5 by Mr. Burnett 784 6 by Mr. Brock 785 7 E X H I B I T S 8 Savage Deposition Number Identified 9 Exhibit 133 - Drawing 651 10 Exhibit 134 - 4/27/71 memorandum 652 11 Exhibit 135 - Project expenditures 662 12 Exhibit 136 - 3/24/69 report 670 13 Exhibit 137 - Status memorandum 676 14 Exhibits 138 and 139 - Appendices C and D 687 15 Exhibit 140 - 11/15/71 progress report 702 16 Exhibit 141 - 10/14/75 memorandum 707 17 Exhibit 142 - 2/6/75 memorandum 710 18 Exhibit 143 - 10/6/70 memorandum 712 19 Exhibit 144 - 12/9/70 memorandum 716 20 Exhibit 145 - 8/7/70 memorandum 718 21 Exhibit 146 - 11/11/71 meeting summary 724 22 Exhibit 147 - 5/19/66 memorandum 727 23 Exhibit 148 - June 1971 monthly report 731 24 Exhibits 149, 150 and 151 - Report documents 734 25 Exhibits 152 through 158 - Monthly reports 752 26 Exhibit 159 - 2/12/70 progress report 765 27 Exhibit 160 - 9/13/67 progress report 768 28 Exhibit 161 - 7/30/74 progress report 770 29 Exhibit 162 - 11/15/71 progress report 777 30 Exhibit 163 - 9/11/67 process improvement plan 782
Page 648 1 Appearances: James F. Burnett, Esq. 2 Potter, Anderson & Corroon 3 350 Delaware Trust Building 4 902 Market Street 5 Wilmington, Delaware 19801 6 On behalf of Plaintiff 7 Monsanto Company. 8 Stephen F. Brock, Esq. 9 Manta and Welge 10 One Commerce Square 11 Thirty-seventh Floor 12 2005 Market Street 13 Philadelphia, Pennsylvania 19103 14 On behalf of Liberty Mutual 15 Insurance Company.	Page 650 1 P R O C E E D I N G S 2 Whereupon, 3 James R. Savage 4 resumed the stand and, having been previously duly sworn, 5 was examined and testified further as follows: 6 Examination (Continued) 7 By Mr. Brock: 8 Q Mr. Savage, let me show you a piece of paper. Is 9 this the piece of paper in which you described, you drew 10 out for Charlie Meyer the processes associated with the 11 Anniston waste treatment plant yesterday? 12 A Yes. 13 Mr. Brock: I just want to mark it for the record 14 and make it an exhibit. 15 Mr. Burnett: That's fine. I think there was 16 one, at least one little circle or something that Mr. Meyer 17 put on there and you just want to maybe make sure that the 18 witness agrees with whatever it was that Mr. Meyer put on. 19 Mr. Brock: That's fine. 20 Mr. Burnett: I forget which one it was. 21 The Witness: This little mark here described as 22 " lagoon/pond. "

Page 651 1 By Mr. Brock: 2 Q What if I give you a pen and you can put 3 " Mr. Meyer " by it if that's not a problem? 4 Mr. Burnett: That's fine, just so the witness 5 can verify he would put the lagoon pond in the same place. 6 By Mr. Brock: 7 Q Would you put the lagoon pond in the same place? 8 A Yeah, I would have represented it a little 9 different because what I remembered it as a test pond which 10 was a side stream and not part of the main flow, but it's 11 in approximately the right place. 12 Mr. Brock: With that I'll just have it marked. 13 (Savage Exhibit 133 identified.) 14 By Mr. Brock: 15 Q One other cleanup thing. I think it was two days 16 ago that you mentioned to me the name of Homer Broadwell 17 and he was a driver. What plant was he a driver at? 18 A At the Anniston plant. 19 Q To your knowledge he would have been one of the 20 people responsible for taking materials to off-site 21 disposal areas or landfills? 22 A Yes. Well, he would have done any kind of	Page 653 1 the Bates number of 322. First of all, can you see the 2 reference up at the top in handwriting to attachment number 3 1? 4 A Yes. 5 Q Have you ever seen this general pile of materials 6 before? I mean, as you glance through you can see that 7 page says " attachment number 1 " and the page that ends in 8 Bates number 328 says " attachment number 2, " and there are 9 various other references to attachments. Do you recall 10 ever seeing these materials before? 11 A No. The subject matter is reasonably familiar to 12 me, but I don't remember these particular documents. 13 Q When you say " the subject matter is reasonably 14 familiar, " what are you referring to? 15 A Mercury losses from Denora cells. 16 Q Do you recall there being attempts to identify 17 the mercury losses from the Denora cells at the Krummrich 18 plant? 19 A Yes. 20 Q What do you recall along those lines? 21 A Well, mercury is an expensive material. The 22 Denora cell house at Krummrich was several times larger
Page 652 1 driving for the shipping department. It would have 2 included that kind of thing. 3 (Savage Exhibit 134 identified.) 4 Mr. Brock: I've marked as Exhibit 134 a 5 multipage document, the first page of which is dated April 6 27, 1971. It has Bates numbers Wgk 4608315 through 7 4608454. 8 By Mr. Brock: 9 Q Mr. Savage, I'd like you to just glance generally 10 through this. If it speeds your review, I believe your 11 name appears on the page that ends in the Bates number 12 322. Let me know when you've had a chance to glance 13 through that, sir. 14 (Witness reviewed the document.) 15 A Okay. 16 Q Do you recall generally there being an attempt to 17 compile literature pertaining to mercury in or about the 18 early 1970s time frame in association with the Krummrich 19 plant? 20 A No. I'd left the Krummrich plant in 1967. I 21 don't remember literature study. 22 Q Let me ask you to turn to the page that ends in	Page 654 1 than the one at Anniston so there was a significant 2 economic impact resulting from mercury losses. And 3 therefore, there was always a motivation to study that 4 question and try to reduce any mercury losses we could 5 identify. 6 Q Were there such studies or investigations ongoing 7 when you took on your responsibilities regarding the Denora 8 operations at the Krummrich plant? 9 A I don't remember if they were already underway at 10 the time that I arrived there. 11 Q Let's turn to the page that ends in Bates number 12 322. Up at the top there are some names. Who is R. M. 13 Scott? 14 A That is Roy Scott. He worked for me. 15 Q What was his position? 16 A I think at that time he was a supervising 17 engineer. 18 Q And who was J. A. Heilala? 19 A John Heilala was the production supervisor, I 20 think, of the Denora cell house. 21 Q Who were C. E. Woodward and W. J. Gresham? 22 A Cliff Woodward was an engineer in my group, I

Page 655 1 think at that time reporting to Roy Scott. Walt Gresham 2 was chief chemist of the plant. 3 Q If you look at the problem to be addressed by 4 this particular attachment, it says " To analyze the various 5 water, brine, gas and caustic streams for mercury. " Do you 6 see that? 7 A Yes. 8 Q Can you identify what those streams were? And 9 we'll start with the water streams from the Denora 10 operations. What did those consist of? First of all, 11 where did they go, in other words? 12 A Well, it was a big, complicated process and I'm 13 not sure I would remember all the water streams. The only 14 obvious one to analyze would be the flow from the cell end 15 boxes and the mercury pump tanks. 16 Q Did you say " cell end boxes " ? 17 A Yes. There may have been others. 18 Q What were the cell end boxes? 19 A Very similar to the Anniston construction. The 20 mercury entered the cell through the inlet end box, left 21 the cell through the outlet end box and then weirs, stone 22 weirs separated the end boxes from the cell proper.	Page 657 1 Q Would the same be true for the clarifier 2 overflow? 3 A I believe so. The clarifier was another step 4 which I think was used to settle any undissolved material 5 in the saturated brine. 6 Q What would that undissolved material consist of? 7 A Rock salt contains sodium sulfate, which is 8 commonly called gyp in this process, g-y-p, and some of 9 that would be left behind in the saturator. Some of it 10 would be carried along with the brine and settled out of 11 the clarifier. 12 Q Is that what the clarifier bottoms would be? 13 A I don't remember. It was probably a sludge of 14 gyp and water. 15 Q Were the clarifier bottoms disposed of somehow? 16 A Yes. 17 Q How were they disposed of? 18 A I don't remember. 19 Q Number 4, would that be gyp? 20 A Yes. That's the solid material which was 21 principally sodium sulfate, as I recall. Perhaps calcium 22 sulfate now that I think about it. Just a common impurity
Page 656 1 Q Do you know when the Denora operations at the 2 Krummrich plant had been set up? 3 A About a year or two before I arrived there. 4 Around ' 61 or ' 62. 5 Q If you look on the page that ends in Bates number 6 323, up at the top it says " The mercury level and losses in 7 Denora operations have not been determined previously. " 8 Does that comport with your recollection as of about the 9 1963 time frame? 10 A Oh, I don't know. 11 Q Let's see if we can go through the items listed, 12 the points listed in the experimental work down below. 13 What was a saturator overflow? 14 A A saturator was a large cylindrical tank with a 15 conical bottom. It was called a saturator because it was 16 used to saturate the brine and salt. Solid salt would be 17 put into the top of it and depleted brine circulate through 18 it. The brine leaving the saturator through an overflow 19 would be saturated with salt. 20 Q Is there anything else that would generally 21 overflow from that other than salt? 22 A It would be brine, saturated brine.	Page 658 1 in rock salt. 2 Q Was that disposed of somehow? 3 A Yes. 4 Q How was that disposed of? 5 A I don't know. 6 Q Let's go to number 8, the sewer trap overflow. 7 What was a sewer trap? 8 A I don't remember. 9 Q There's a reference to " mercury pit. " Do you see 10 that? 11 A Yes. 12 Q What was that? 13 A I don't know. 14 Q Number 9 is Naoh and Koh storage tanks. Do you 15 recall those? 16 A Yes. 17 Q Do you recall there being any leaks or spills 18 from those? 19 A No. That was just a finished product storage. 20 Q And the " P ' line, " where it says " mercury pump 21 tank vent to the atmosphere, " what was that? 22 A I don't remember the term " P ' line. " The

Page 659 1 mercury pump tanks were vented to the atmosphere. 2 Q Would that vent mercury to the atmosphere? 3 A There should have been no flow in that line. It 4 was just to allow thermal breathing, but whatever vapor was 5 in that line would be, I think, would contain mercury 6 vapor. 7 Q Do you recall there being any claims or 8 complaints to the effect that Monsanto had been releasing 9 mercury to the atmosphere, including soil or water from the 10 operations at the Krummrich plant? 11 A No. 12 Q You had the understanding during the time you 13 worked at the Krummrich plant that mercury was a toxic 14 chemical ; is that correct? 15 A Yes. 16 Q Did you have the understanding that mercury had 17 been known to be a toxic chemical for quite some time? 18 A Yes, it's the classic case in toxicology. 19 Q Are you aware of any investigation subsequent to 20 the 1965 time frame into the question of whether mercury 21 was being released from the operations of the Krummrich 22 plant into the air, soil or water?	Page 661 1 Q What was your understanding of the fashion in 2 which mercury was leaving? 3 A For instance, in the water from the end boxes. 4 Q Any other ways that you recall? 5 A It was not unusual to find some mercury in the 6 bottom of caustic storage tanks. That would not go to soil 7 or water, though, because we would check from time to time, 8 draw it off and put it back in the process. 9 Q The release of water from the end boxes or the 10 release of water and whatever materials was in the water 11 from the end boxes, how frequently would that take place? 12 A That was continuous. 13 Q Do you recall there ever being concerns expressed 14 that any mercury being released from the Krummrich plant 15 could be causing damage to property or organic life? 16 A I think perhaps in the context of a larger 17 concern at some point in the ' 60s, I believe mercury had 18 been identified in fish in various parts of the world and 19 the mercury process for chlorine and caustic had been 20 implicated as a source of that mercury. And so at 21 approximately this time, anyone who had a mercury cell 22 house became concerned about the subject, began to
Page 660 1 A The subject was investigated at various levels of 2 intensity almost all the time. It was somewhat confused by 3 the fact that at about this time there were some 4 substantial thefts of mercury from the plant and the true 5 inventory and the fate of what might be missing was the 6 subject of some concern. 7 Q When you say it was being investigated at various 8 levels all the time, who was doing the investigation? 9 A Typically the production supervisor or foreman 10 with assistance from Tsd is required. 11 Q Did you have any involvement in those 12 investigations? 13 A Not direct. The engineers reporting to me worked 14 on that subject and I may have given them some advice. 15 Q Do you recall it ever being reported to you that 16 mercury was being released from the Krummrich operations to 17 the soil or water? 18 A Well, it was evident from the fact that it was 19 necessary to continue adding mercury to the cells just as 20 it had been at Anniston. And since there's no chemical 21 mechanism for consumption of mercury within the process, 22 it's evident that mercury was leaving in some fashion.	Page 662 1 investigate it more carefully. 2 Q Do you recall whether there were any contacts 3 with regulatory agencies concerning possible mercury 4 releases at the Krummrich plant? 5 A I don't remember. 6 Q Were there process changes instituted as a result 7 of the concern about mercury in fish? 8 A I believe there were at some point, but I don't 9 remember what they were. 10 Q Do you recall how you learned about the concern 11 about mercury in fish in the 1960s time frame? 12 A I don't remember specifically, but it was being 13 mentioned in the industry literature. 14 Q Do you recall of any reports or memoranda or 15 correspondence within Monsanto concerning -- 16 A I think there were such reports and memorandums, 17 but I don't remember them specifically. 18 (Savage Exhibit 135 identified.) 19 Mr. Brock: I've marked as Exhibit 135 a 20 multipage document with Bates numbers Wgk 5001575 through 21 579. 22 By Mr. Brock:

Page 663 1 Q My first question, Mr. Savage, is just whether or 2 not you recognize the form of this document? 3 A It's just a tabulation. I don't recognize it as 4 any specific point. 5 Q Up at the top of the first page you can see 6 there's a reference to " 1989 environmental remedial action 7 project expenditures. " Do you see that? 8 A Yes. 9 Q Is the term " Erap " familiar to you? 10 A I've heard it, but I don't remember what it 11 stands for. It seems to stand for the heading of this 12 report. 13 Q That's right. Do you recall having any 14 involvement in the preparation or generation of Erap during 15 your tenure with Monsanto? 16 A The date of this report is long after I'd left 17 manufacturing. 18 Q Have you ever seen this before? 19 A I don't remember it. 20 Q The reference to a " Rivers Edge lawsuit. " Are 21 you familiar with a Rivers Edge lawsuit in connection with 22 the Krummrich plant?	Page 665 1 the Krummrich plant? 2 A No. 3 Q Are you familiar with something called the " Route 4 3 drum site "? And for your reference I'll refer you to 5 what we had previously marked as Exhibit 91 and there's a 6 description of a Route 3 drum site on the second page. 7 A I know where Route 3 is, but I don't remember a 8 site with that name. 9 Q Are you familiar with any area west of Route 3 to 10 which Monsanto took materials from the Krummrich plant for 11 burial? 12 A No. 13 Q Do you have an understanding or belief as to who 14 would be knowledgeable on that subject? 15 A Perhaps plant management or the shipping 16 department. 17 Q On the next page of Exhibit 135, the second page 18 of that, the Erap number 17 refers to a landfill study 19 program. Are you familiar with any landfill study program 20 that was going on in the 1989 time frame? 21 A No. 22 Q Do you have a belief as to who within Monsanto
Page 664 1 A No. 2 Q Are you familiar with any Wgk landfill mitigation 3 costs associated with the Krummrich plant? 4 A I had heard that there was a project like that, 5 but I didn't have anything to do with it. 6 Q Can you tell me what you heard about that 7 project? 8 A Only that it existed. 9 Q Do you recall who it was that you heard from? 10 A No. 11 Q I take it you had no involvement in setting up 12 reserves or cost matters with respect to that project? 13 A No. 14 Q Did you hear about any project regarding lagoons 15 in pits associated with the Krummrich plant at around this 16 time frame? 17 A No. 18 Q Let's go to the projects down below. Are you 19 familiar with a project regarding contaminated soil that 20 was ongoing in the 1989 time frame? 21 A No. 22 Q What about wastewater monitoring associated with	Page 666 1 would be knowledgeable about such a program associated 2 again with the Krummrich site? 3 A Well, it would be someone who was at the 4 Krummrich plant in this time frame. I don't know who that 5 would be. 6 Q I had asked you about Anniston. Are you familiar 7 with any lawsuits alleging pollution or contamination from 8 the operations of the Krummrich plant? 9 A No. 10 Q For example, had you ever heard of a lawsuit by 11 the state of Illinois against Monsanto sometime in the 12 early 1980s? 13 A I think there may have been some bulletin board 14 announcements about some legal action between Monsanto and 15 the state of Illinois that was posted at the general 16 office. But I don't remember any more than that. 17 Q While we have Exhibit 91 in front of us, let me 18 ask you about some of the areas referenced. On the first 19 page there's a description given for Rivers Edge Landfill 20 and I think you said you weren't familiar with the lawsuit 21 relating to that. Are you familiar with that area as 22 described in Exhibit 91?

Page 667 1 A I don't think I ever visited there. 2 Q Down below in the second paragraph there's a 3 reference to chlorobenzenes and aniline derivatives being 4 detected in monitoring wells there. 5 A Yes. 6 Q Were you familiar with chlorobenzenes or aniline 7 derivatives being taken to a landfill from the Krummrich 8 site? 9 A No. 10 Q Some of these areas we've already covered so 11 let's go to site H, which is on the fourth page of the 12 document. Can you just read through the description given 13 for that site and let me know whether you're familiar with 14 that area. And again, for your reference there's a map on 15 the last page of the exhibit. 16 (Witness reviewed the document.) 17 A No. 18 Q Were you familiar with the Cerro Copper Products 19 property? 20 A Only to the extent in driving to work I would go 21 past the site which, at the time I worked there, had a sign 22 out front that said Cerro Copper. That's all.	Page 669 1 Q What leads you to believe that that's your 2 recollection? 3 A It was just kind of part of the folklore at the 4 plant. 5 Q What area of the plant do you believe that that 6 part of Dead Creek passed under? 7 A I don't remember. 8 Q Do you recall seeing a creek on the Cerro Copper 9 Company's property? 10 A No. 11 Q Do you recall or are you familiar with a creek 12 lying between Queeny Avenue and Judith Lane in Sauget and 13 Cahokia, Illinois? 14 A No. 15 Q Had you ever heard or learned that Monsanto was 16 claimed to have -- let me strike that question. 17 Do you recall there being any times in which it 18 was claimed that the portion of Dead Creek that flowed on 19 to the Monsanto plant had been polluted or contaminated? 20 A No. 21 Q That's all you knew about Dead Creek, was that -- 22 A Yes.
Page 668 1 Q My understanding is that was adjacent to the 2 Monsanto property ; is that correct? 3 A I believe that's right. 4 Q Are you familiar with any claims or allegations 5 by the Cerro Copper Company that Monsanto had somehow been 6 causing contamination to its property or the soil or ground 7 thereunder? 8 A No. 9 Q Are you familiar with site K as described in the 10 exhibit? 11 A No. 12 Q What about site L, the surface impoundment? 13 A No. 14 Q Let's skip to the numbers 10 and 11 for the 15 nonowned site, Dead Creek sector A and Dead Creek sector 16 B. Were you familiar with Dead Creek? 17 A I remember that term. 18 Q Did you ever go to Dead Creek? 19 A It's my recollection that there was a portion of 20 Dead Creek that passed through the main part of the plant 21 and it was underground in a storm sewer. I may be mistaken 22 about that, but that's all I remember about Dead Creek.	Page 670 1 Q You heard that part of it flowed under the 2 Monsanto plant? 3 A Yes. I may have seen that on a map of the 4 Monsanto plant. 5 (Savage Exhibit 136 identified.) 6 Mr. Brock: I've marked as 136 a multipage 7 document with Bates numbers Wgk 3012314 through 366. 8 By Mr. Brock: 9 Q Mr. Savage, once you've had a chance to generally 10 glance through the document, could you let me know. 11 (Witness reviewed the document.) 12 A Okay. 13 Q You can see that you're listed as a copy 14 recipient on the second page ; is that correct? 15 A Yes. 16 Q Does that indicate to you that you received a 17 copy of this report in or about the 1969 time frame? 18 A Yes. 19 Q Do you recall there being an investigation into 20 the continuous production of paranitroaniline around this 21 time frame? 22 A Yes.

Page 671 1 Q Can you tell me what you recall about that? 2 A During the time that I was at the Krummrich plant 3 paranitroaniline was made batchwise, and at that time 4 Mr. Fields was working on the paranitroaniline process and 5 we reached the conclusion that it would be feasible to 6 develop a continuous process. And it was to some extent my 7 initiative when this investigation started. By the time of 8 this report I was at the Queeny plant and Mr. Fields had 9 continued to work on a new process. This report reflects 10 the conclusion of that work. 11 Q So you initiated this during the time you were at 12 the Krummrich plant? 13 A Yes, together with some others. 14 Q What others, if you recall? 15 A Well, for such a piece of work to begin, it 16 essentially was a very large project, it would have 17 required the approval of whoever was the technical 18 production manager at the time. I'm not sure who that was 19 because those people changed several times. 20 Q When you say you would have initiated this with 21 some others during your tenure at the Krummrich plant, 22 would that have been during the later period as production	Page 673 1 Pncb per 100 pounds of Pna must be disposed of in this 2 manner. " Does that comport with your recollection of the 3 general ratio of Pncb residue produced per amount of Pna 4 produced? 5 A I don't remember. 6 Q Pncb was a residue ; correct? 7 A Pncb was the main raw material. The expression 8 " unreacted Pncb " means that that's the part that was not 9 converted. 10 Q So the 2 to 2.5 pound reference to Pncb, would it 11 be your understanding that refers to unreacted Pcb that had 12 to be disposed of? 13 A Pncb. 14 Q Pncb, I'm sorry. We've talked so much about 15 Pcb's. 16 Do you know whether unreacted Pncb was disposed 17 of at the toxic dump in association with the batchwise 18 production of Pna at the Krummrich plant? 19 A I believe so. 20 Q Do you know whether the ratios of unreacted Pncb 21 that had to be disposed of to the toxic dump or the 22 percentage of that to the Pna produced changed from the
Page 672 1 superintendent? 2 A I was a Tsd superintendent. It would have been 3 during that time. 4 Q Can you tell me what the impetus was for the 5 initiation of this project? 6 A We thought it would be a more economical 7 process. I don't remember the details. 8 Q Do you recall whether it resulted in any changes 9 in waste disposal methods associated with the Pna 10 operations? 11 A I think it was our intention to redesign the 12 whole process, which would have included anything that 13 related to waste. 14 Q Let me turn you to the last page of the exhibit. 15 That has a heading of " pollution control. " Do you see 16 that? 17 A Yes. 18 Q The last paragraph states " Unreacted Pncb must be 19 drummed off and disposed of in the toxic dump. " Do you see 20 that? 21 A Yes. 22 Q And it gives a figure of " From 2 to 2.5 pounds of	Page 674 1 batchwise process to the continuous process? 2 A I presume it changed somewhat, but I don't 3 remember. 4 Q This document, the first two pages reference a 5 tentative process for the continuous production of Pna. Do 6 you recall whether this process was implemented? 7 A Yes. The plant was built. 8 Q Was that after you left the Krummrich plant? 9 A Oh, yes. It was after this report. 10 Q True. Do you recall generally when it was that 11 that permanent plant was implemented, when it began 12 operations? 13 A No, it wasn't a long time after this report. 14 Q Let's turn back to the last page and up at the 15 top that talks about the " sewerage of Ammonia and Ammonium 16 compounds. " Were you familiar with the sewerage of those 17 materials from the Pna operations at the Krummrich plant? 18 A I was aware of it. I don't recall that I was 19 familiar in detail, but I was aware of it. 20 Q Do you know where the sewers from the Pna 21 operations went? 22 A They went into the general plant sewers.

Page 675 1 Q Are you familiar with any occasions on which 2 those sewers, in which there was found to be leakage from 3 any of those sewers? 4 A No. 5 Q Do you recall there being any complaints about 6 the discharge of ammonia or ammonium compounds from the 7 sewers in the Pna operations? 8 A There were complaints within the plant from 9 operators in other departments. 10 Q What were the nature of those complaints? 11 A Well, the smell of ammonia is quite unpleasant 12 and if ammonia-bearing water in the sewers would meet 13 alkaline water coming from another department, the result 14 would be that ammonia gas would be released in the sewers 15 and come out into areas where people were working. 16 Q Did that happen from time to time? 17 A Yes. That was a source of the complaints. 18 Q When did you learn of those complaints? Was it 19 during your time at the Krummrich plant? 20 A Yes. 21 Q How frequently would that happen? 22 A I don't remember.	Page 677 1 at the top on the right-hand side there's a date stamped on 2 of January 29, 1974. Do you see that? 3 A Yes. 4 Q What responsibilities did you have in that time 5 frame for the status of St. Louis wastes to landfills? 6 A I was manufacturing manager for specialty 7 products. Some of our products were made at the Queeny and 8 Krummrich plants and to the degree that they generated 9 material that was going on the landfill, it would be up to 10 me to sponsor whatever technical effort or project 11 expenditure was required to alleviate the problem. 12 Q When you say " the landfill, " what landfill are 13 you referring to? 14 A Even at that time I don't recall being familiar 15 with the physical location of a landfill. But the issue of 16 " the landfill " had been identified by the manufacturing 17 organization as a problem. We were instructed to stop 18 sending material to the landfill and therefore we were 19 doing the things described in this memo. 20 Q When you say " the landfill, " are you referring to 21 the landfill associated with the Krummrich site? 22 A It's my understanding that that was administered
Page 676 1 Q Do you recall there being any injuries claimed as 2 a result of that? 3 A I don't remember if there were. 4 Q Do you recall any people outside of Monsanto, for 5 example, neighboring companies or properties, complaining 6 about releases of ammonium gas? 7 A No, I don't remember that. 8 (Savage Exhibit 137 identified.) 9 Mr. Brock: I have marked as 137 a one-page 10 document with the Bates number 0091170 Pcp. 11 By Mr. Brock: 12 Q Mr. Savage, could you let me know when you've 13 looked through the document? 14 A Some of it is pretty hard to read. 15 Q I agree. 16 (Witness reviewed the document.) 17 A Okay. 18 Q Is this a memorandum that you wrote concerning 19 " St. Louis Wastes to Landfill " in connection with your 20 employment with Monsanto? 21 A Yes. 22 Q I agree that some of it is not easy to read. Up	Page 678 1 by the Krummrich site. 2 Q When this document is talking about St. Louis 3 wastes to landfill, is it referring to St. Louis wastes to 4 the landfill associated with the Krummrich site? 5 A Yes. 6 Q When you say the issue of that landfill had been 7 identified as a problem, what do you mean by that? 8 A I don't remember where the impetus came from. I 9 just recall that we had to stop sending material to that 10 landfill. 11 Q Do you recall what the nature of the problem was 12 then identified by the 1974 time frame? 13 A No. 14 Q What was your understanding of why -- the reason 15 Monsanto had to stop sending wastes to that landfill? 16 A I don't remember. 17 Q At around that time frame had you heard or 18 learned of any claims of migration of chemicals or leakage 19 from that landfill? 20 A I'm not sure I can connect all of what you said 21 into one answer. I had heard just as kind of a grapevine 22 thing that there was seepage from a landfill that Monsanto

Page 679 1 had used on the bank of the Mississippi River, but whether 2 that was the landfill that we were using at the time of 3 this memo, I don't know. 4 Q Do you recall the general time frame that you 5 heard that through the grapevine? 6 A No, I don't. 7 Q Do you recall, for example, whether it was in the 8 ' 70s or the ' 80s, that type of thing? 9 A I think the ' 70s, but I don't know. 10 Q Did you have any -- 11 A It wouldn't have been the ' 80s because I had 12 nothing to do with manufacturing by that time. 13 Q Did you have any responsibilities for dealing 14 with that situation at the time? 15 A No. 16 Q Your memo talks about a July 1 deadline on 17 hauling of residues to the landfill from Queeny and 18 Krummrich. Do you know what that refers to? 19 A I just remember there was one. I don't remember 20 who imposed that deadline or for what reason. 21 Q And there are two types of wastes identified as 22 major contributors?	Page 681 1 Q Who was Roger Beal? 2 A Our business group accountant at that time. No, 3 he was, I think his title was planning manager, planning 4 and control manager or something like that, or manager of 5 planning control. 6 Q What type of responsibilities did he have? 7 A Financial planning. 8 Q Do you recall why you copied Mr. Beal on this 9 type of memorandum? 10 A He would have been at that time responsible for 11 tracking capital expenditures and the possibility of 12 earnings or nonearnings projects. Since this memo 13 describes a couple of such projects, it would have been a 14 concern to him. 15 Q Who was R. M. Kountz, K-o-u-n-t-z? 16 A Bob Kountz was our engineering manager. 17 Q Do you know whether he had responsibilities 18 regarding landfills to which Monsanto sent materials? 19 A Not directly. The reason for copying him on a 20 memo like this was if the contemplated projects were larger 21 than projects that could be handled at the plant, it would 22 be up to him to organize those projects in the engineering
Page 680 1 A Yes. 2 Q Can you identify for me what the first one is. 3 A The heading is " Ee Building. " The double E 4 building was a facility to Queeny plant where we made 5 phosphate esters. 6 Q What were the wastes from that building? 7 A The waste described here is a phenol residue. 8 Q What form did that take? 9 A As I recall it was a heavy liquid. 10 Q What is Penta wastes referred to in the memo? 11 What does that refer to? 12 A Penta was our trade name for pentachlorophenol, 13 which our business group sold at the time, which was 14 manufactured at the Krummrich plant. 15 Q So the reference in the memo to penta wastes, 16 does that refer to wastes from the Krummrich plant? 17 A Yes. 18 Q What form did that waste take? 19 A I don't remember. 20 Q There's a person named Beal up at the top. Do 21 you see that? 22 A That's Roger Beal.	Page 682 1 department. 2 Q There's a statement in the memo and it's in the 3 third paragraph that " We also must further reduce phenol 4 loading to the sewer over the next 2-3 years. " Do you see 5 that? 6 A Yes. 7 Q What was the reason for that? 8 A The Queeny plant had had a program for reducing 9 phenol loads to the sewers that had really been instituted 10 during my time at the Queeny plant in the late ' 60s, and it 11 had been reasonably successful, but the plant saw a 12 necessity to continue to further reduce that load. 13 Q You said that you were aware of the issue 14 concerning the landfill referring to the Krummrich 15 landfill. Were you at this time aware of similar issues 16 regarding other landfills used by Monsanto? 17 A I don't know what I was aware of at that time. I 18 have been aware of landfill issues at various plants at 19 various times. Again, just kind of a general knowledge of 20 what was going on in the company. 21 Q Can you describe for me, when you say " landfill 22 issues, " what are you referring to?

Page 683 1 A Well, in recent years Superfund issues, which of 2 course are well known when they arise because they 3 represent a lot of money. 4 Q What about in earlier years? 5 A Well, this memo is an example of being aware of a 6 landfill issue. I really can't pinpoint any others. 7 Q What Superfund issues are you aware of with 8 respect to landfills used by Monsanto? 9 A Just very recently an engineer or a manager who 10 worked for me transferred to Texas to become manager of the 11 Brio site. 12 Q What other Superfund issues did you become aware 13 of? 14 A I can't even specify what they are, but it was 15 bulletin board kind of stuff. Things that Monsanto was 16 involved in. 17 Q During the time that you were manager of 18 manufacturing, do you recall what the landfill issues were 19 that you were aware of? 20 A The only one that occurs to me right now was at 21 Anniston. While I was manufacturing manager for specialty 22 products, the Anniston plant decided to put a fence around	Page 685 1 A Well, in general the standard for landfills had 2 been tightened up. 3 Q Were you aware of standards for landfills during 4 your time as manufacturing manager? 5 A Not specifically. It's not a subject that I had 6 any particular expertise in. 7 Q Did you have dealings with somebody who was more 8 knowledgeable on that subject? 9 A Well, the people at the plant had investigated 10 what was required and at that time described that landfill 11 to me in general terms. And while I had been up in that 12 general area in previous years, I can't make any particular 13 connection between the two. 14 Q When you say " the people at the plant, " what 15 plant was this? 16 A This was at the Anniston plant. As I recall, 17 Bill Tafey led that effort. 18 Q Do you recall whether Mr. Tafey was familiar with 19 landfill standards around that time frame? 20 A I presume that he had made himself familiar. 21 Q Do you recall anybody at the Krummrich or Nitro 22 plants who were familiar with the landfill standards around
Page 684 1 the property on the other side of the highway and it was a 2 project, I believe, to upgrade that landfill that required 3 my approval or sponsorship. 4 Q What's your understanding of the reason for 5 putting a fence around that landfill? 6 A It was deemed desirable to prevent public access 7 to it. 8 Q Why was that? I mean, why was it deemed 9 desirable to prevent public access? 10 A I think some people were still using the rifle 11 range in an unauthorized way. 12 Q Following your example? 13 A Yes. 14 Q Do you recall what the impetus was for the 15 decision to upgrade that landfill? 16 A No. I'm sure it was explained to me at the time, 17 but I don't remember. 18 Q What did you mean by " upgrade "? 19 A I think to put a clay cap on parts of it that may 20 have been uncovered. 21 Q Why was that deemed a desirable thing to do at 22 the time?	Page 686 1 that time frame? 2 A We certainly had pollution specialists at both 3 those plants at that time. I presume that they would have 4 been familiar with such standards, but I don't know who it 5 would be. 6 Q Did you have dealings with the pollution 7 specialists at the Nitro plant during that time frame? 8 A Not directly. 9 Q What about indirectly? 10 A During my time as manufacturing manager, during 11 part of that time I had responsibility for paper chemicals 12 which for part of the existence of that business group, 13 paper chemicals had been among the specialty products. So 14 as a manufacturing manager I traveled to Nitro from time to 15 time to review operations. 16 Q I'm going to come back to Nitro later. Sticking 17 with Krummrich for the moment, were you familiar with the 18 closure of the Krummrich landfill in or about the late 19 1970s? 20 A I'm not familiar with it. I'm aware of it. 21 Q When you say you're aware of it, how did you 22 become aware of it?

Page 687 1 A Somebody told me. 2 Q Did you have an understanding as to why it was 3 being closed? 4 A No. 5 Mr. Brock: Off the record. 6 (Discussion off the record.) 7 (Savage Exhibits 138 and 139 identified.) 8 Mr. Brock: I've marked Exhibits 138 and 139 for 9 the record. For the record, these appear to be -- 138 is 10 an appendix C and 139 is an appendix D. The Bates numbers 11 appear to be sequential so these are not necessarily two 12 separate documents. They may be part of one document, but 13 I thought it would be clearer to mark them separately. The 14 Bates numbers of 138 are K&e 0019057 through 071 and the 15 Bates numbers of appendix D are K&e 0019072 through 9116. 16 By Mr. Brock: 17 Q Mr. Savage, could you first just glance through 18 exhibit C or appendix C, Exhibit 138. And if it speeds 19 your review, I believe your name is referenced on the page 20 that ends in the Bates number the K&e Bates number of 069. 21 (Witness reviewed the document.) 22 A Okay.	Page 689 1 organization? 2 A Yes. 3 Q Do you recall what the impetus was for 4 determining the quantity of waste material sent to sanitary 5 landfill around that time frame? 6 A No. 7 Q Do you recall whether there was any particular 8 event that motivated Monsanto's coming up with this 9 inventory? 10 A No, this seems to be a routine survey. It 11 describes the previous 12-month period. 12 Q When you say " routine, " were these conducted on 13 some sort of routine schedule? 14 A I don't remember. 15 Q Let me turn you back to the first page of the 16 exhibit. There's a reference to an October 27, 1975 memo 17 concerning the Iepa landfill inspection, and that's the 18 first document in the appendix. Do you recall generally an 19 Illinois Epa inspection of the Krummrich landfill in or 20 about the 1975 time frame? 21 A No. 22 Q Earlier I had showed you a memorandum that you
Page 688 1 Q Let's start -- or do you see your name referenced 2 on that page, the page ending in Bates number 069 under the 3 " John F. Queeny Plant, " the second column? 4 A Yes. 5 Q If you look up above the date on that particular 6 page is July 24 and it appears to be 1968. Do you see 7 that? 8 A Yeah, that looks right. 9 Q What, if any, responsibilities did you have in 10 the 1968 time frame for waste disposal at sanitary 11 landfills? 12 A I was general superintendent of technical 13 services and lab at the Queeny plant at that time. 14 Mr. Solari worked for me and Mr. Nemeth worked for 15 Mr. Solari. Mr. Nemeth is the author of this report. My 16 responsibility was a general one. I had all the old 17 technical organization of the plant under me and the 18 pollution control group is part of that. 19 Q When you say " technical organization of the 20 plant, " what plant? 21 A Tsd at the Queeny plant. 22 Q And the Queeny plant also had a pollution control	Page 690 1 wrote that was in 1974. And you said during that time you 2 were aware of certain landfill issues. During the 1974, 3 ' 75 time frame did you have any understanding that the 4 Illinois Epa had expressed concerns relating to potential 5 pollution from the Krummrich landfill? 6 A I don't remember. 7 Q Let's go to the pages that end in Bates numbers 8 060 to 062. 9 A Okay. 10 Q And that's a listing of waste materials disposed 11 of at the Monsanto/sauget landfill site ; is that correct? 12 A Yes. 13 Q Can you tell me which of these wastes you're 14 familiar with. For example, stabilizing residue, are you 15 familiar with that? 16 A No, I don't know what that is. 17 Q What about spent vanadium catalyst, are you 18 familiar with that? 19 A I have a rough idea of what that is. I think 20 that refers to catalyst from the manufacture of sulfuric 21 acid. I was never associated with that operation. 22 Q Would that be at the Krummrich plant?

Page 691 1 A Yes. 2 Q What about vacuum distillation residues, where 3 would that have come from? 4 A Let me back up a second. I'm familiar with two 5 kinds of vanadium catalyst. There's the one that's used 6 for sulfuric acid. There's also a catalyst that's used in 7 the manufacture of maleic anhydride which contains 8 vanadium. Maleic anhydride was manufactured at one time at 9 the Queeny plant. That was stopped a long time ago. But 10 it's possible that vanadium catalyst might refer to either 11 one of those. 12 Q What about vacuum distillation residue, are you 13 familiar with that? 14 A From the composition described, I would presume 15 that had to do with the rubber chemical operation. That's 16 the only place I know of that potassium carbonate was used. 17 Q Would that be at the Krummrich plant? 18 A Yes. 19 Q What about phosphate ester residues, where would 20 those have come from? 21 A Possibly either Queeny or Krummrich. Phosphate 22 esters were made at both plants by different processes.	Page 693 1 just go through the list and tell me which of these you're 2 familiar with and what operations they would be from. 3 A We got down through number 6. Number 7 might 4 have come from anywhere. I don't know what that is. 5 Number 8 is chlor-alkali sludge. We discussed that 6 earlier. Number 9, I don't know what that is. 7 Q The chlor-alkali sludge, just so I'm clear, that 8 would be from the Denora operations? 9 A That might have been from either Denora or from 10 the Hooker cells. Although I believe at the time that this 11 was written, the Hooker cells had been by then shut down. 12 Q Okay. 13 A I don't know what the filter mud, 9, is. The 14 number 10, I think came from a department of Krummrich that 15 used phenacetin. That was a raw material, but I don't 16 remember what it was. Number 11, still residue, mentions 17 methyl salicylate. That was the Queeny plant. Number 12 18 is the Queeny plant. Number 13 is Queeny plant. Also 19 number 14. I don't know what number 15 is. 20 Q When you said " also number 14, " you mean from the 21 Queeny plant? 22 A Yes. Number 15 I don't recognize. Number 16 is
Page 692 1 They were different processes and different esters. The 2 term " phosphate ester residue " implies a still residue 3 which would imply a Krummrich source because there was a 4 distillation step at Krummrich and not at Queeny. 5 Q Generally do you recall how this information was 6 come up with? 7 A I have no idea. 8 Q The memo that precedes that list appears to have 9 been written by a Robert L. Harness. Do you recall 10 Mr. Harness? 11 A I knew him. He was in the pollution group at 12 Krummrich, but I think it was after I was there. 13 Q Do you know whether he's still alive? 14 A I believe he's still involved in pollution work 15 at Monsanto. 16 Q Is that at the Krummrich plant? 17 A No, I don't think so. 18 Q What is " Phosphorus Pentasulfide-scrap Product "? 19 A I don't know what the scrap is. There was a 20 department at the Krummrich plant that made phosphorus 21 pentasulfide. 22 Q Let's see if we can do it this way. If you could	Page 694 1 the Queeny plant. Number 17 I don't know. Number 18 I 2 don't know. Number 19 I don't know. Number 20 I think is 3 Queeny plant. Number 21 is Queeny plant. Number 22 I 4 don't know. Number 23 is Queeny plant. 5 Q Do you know any method by which any of these 6 materials would have been taken to the Krummrich landfill 7 other than being trucked and dumped in the landfill? 8 A I know I don't know any other way. 9 Q Do you recall ever seeing this appendix before? 10 A No. 11 Q Let's go to Exhibit 139, the appendix B. Do you 12 ever recall seeing that before? 13 A No. 14 Q Let me ask you to turn to the Bates -- the page 15 with the Bates number that ends in 9106. 16 A Okay. 17 Q Do you see your name referenced or at least part 18 of your name referenced up in the top right-hand corner? 19 A Yes. 20 Q Does that indicate to you that you received a 21 copy of this in or about 1970 ; is that correct? 22 A Yes.

Page 695 1 Q Do you recall being involved in a determination 2 of the volume and disposal costs of all Wgk solid chemical 3 wastes disposed of at the Wgk landfill around this time? 4 A I believe this report was addressed to me in 5 error because it's dated August of 1970 and by that time I 6 was no longer at the Queeny plant. This apparently was 7 addressed to me at the Queeny plant. 8 Q Do you recall generally there being a solid waste 9 disposal survey of this type in or about the 1969 time 10 frame? 11 A No. 12 Q If you look through the information on that page 13 and the next two pages, do you know how that information 14 was come up with? 15 A No. This is Krummrich plant work and I had left 16 there in 1967. 17 Q Fair enough. Did you review these types of 18 materials while you were manufacturing manager? 19 A Only if it posed some particular issue for our 20 business group's operation. 21 Q Do you recall any landfill issues posing 22 particular issues for the business group operations under	Page 697 1 S-p-r-a-n-d-e-l? 2 A Lou Sprandel was an engineer at the Krummrich 3 plant. He was, as I recall, the head of the plant 4 improvement group. 5 Q During what time frame? 6 A Certainly during the time that I was at Krummrich 7 plant and for some period of time after that. 8 Q Do you know whether he's still alive? 9 A No, I don't. 10 Q There's a heading for " Interviews. " Were you 11 familiar with people being interviewed concerning the 12 nature of materials taken to the Krummrich landfill? 13 A No. 14 Q And there's a statement in the second paragraph 15 " Prior to landfill material was dumped on the 16 W. G. Krummrich Plant site. " 17 A Yes. 18 Q Were you familiar with materials being dumped on 19 the Krummrich plant site? 20 A No, but Mr. Sprandel was at the Krummrich plant 21 for many years before I was. 22 Q Do you know what the F parking lot is?
Page 696 1 your purview? 2 A We previously talked about the closure of the 3 landfill which resulted in our having to take some steps to 4 eliminate some materials that had been going there. Other 5 than that, I don't remember anything. 6 Q Do you recall dealing with Mike Pierle or 7 Clarence Buckley concerning materials going to the 8 Krummrich landfill? 9 A No. I know them both very well and I've had many 10 conversations with them, but I don't remember anything in 11 particular about this. 12 Q Do you recall conversing with them about 13 materials going to the landfill? 14 A No. 15 Q Let me turn you back to the Bates numbers at the 16 bottom that end in 094 through 097. These are some 17 handwritten notes? 18 A Yes. 19 Q The handwriting on page 094, do you recognize 20 that? 21 A No. 22 Q Are you familiar with a Mr. Sprandel,	Page 698 1 A No. 2 Q There's a reference to " P4, phenol, Oncb were 3 dumped there. " Are you familiar with any dumping of those 4 materials? 5 A No. 6 Q Who was B. Moody? 7 A Bob Moody was at Queeny and then at Anniston and 8 then at Krummrich. 9 Q Do you know whether he's still alive? 10 A He's dead. 11 Q So I guess we can't depose him. The next page 12 there's a reference to an L. Reeves and it says " retired in 13 village. " Do you know who L. Reeves is? 14 A No. 15 Q What about Jim Smith? 16 A I seem to remember that name, but I can't connect 17 it with anything. 18 Q The reference to " day operator of landfill, " does 19 that help you at all? 20 A I wouldn't have known an operator at the 21 landfill. 22 Q There's a reference below that to Chuck Duebner,

Page 699 1 D-u-e-b-n-e-r ; is that a name that's familiar to you? 2 A Yes, he was in the maintenance department at the 3 Krummrich plant. He was a maintenance superintendent at 4 the time I believe that I was there. 5 Q Was he also an engineer? 6 A He was an engineer before that. 7 Q Do you know whether he had any responsibilities 8 regarding the landfill? 9 A No, I don't know. 10 Q Let's go to the next page. On the right-hand 11 side there's some handwriting and there's two names and the 12 first appears to me to be Paul Heisler and then there's a 13 name under that. Do you recognize the name under that? 14 A No. 15 Q And there's some handwriting in quotes that 16 appears to say " no lead. " Were you ever familiar with any 17 concern about lead being disposed of in landfills? 18 A No. 19 Q Was lead something that was used or produced or 20 somehow involved in the operations in the Krummrich, 21 Anniston or Nitro plants? 22 A Yes, at the Krummrich plant.	Page 701 1 A I don't know specifically. Normally, in melting 2 that kind of material there's some kind of slag at the 3 surface, but I don't recall observing that. 4 Q So you just don't recall whether that lead was 5 gotten rid of somehow or another? 6 A No, I never did anything specific related to that 7 cell rebuilding operation. 8 Q The page in the exhibit with the Bates number of 9 096, do you recognize whose handwriting that is? 10 A No. 11 Q Can you read the last statement on that page? 12 A I can -- I think I can make it out, but I don't 13 know what it means. I believe it says " outside sales in 14 mines but maybe before 1950. " That doesn't mean anything 15 to me. 16 Q Were there any mines that you're aware of 17 associated with the Krummrich plant? 18 A No. There's coal mining in that area and the 19 Krummrich plant at one time bought coal from those mines, 20 but it still doesn't make any connection for me. 21 Q Do you have any knowledge of what the term 22 " mines " would mean there aside from reference to coal
Page 700 1 Q How was lead involved at the Krummrich plant? 2 A In the Hooker cell operation each cell had an 3 anode assembly consisting of a number of blades, vertical 4 blades of graphite. Those vertical blades of graphite were 5 set in lead so each time that the cell was rebuilt that 6 replace the anodes after they had been consumed by the 7 reaction, the lead would be melted out of the base of the 8 cell. New anodes would be put in place and lead would be 9 poured around the anodes to hold them in place. That 10 operation was done in a small shop next to the Hooker cell 11 house. 12 Q What was that operation called, to your 13 knowledge? 14 A I think it was called the cell rebuilding area or 15 something like that. 16 Q Was there ever a need to get rid of any of that 17 lead? 18 A My recollection is that the lead was melted down 19 and reused. I don't know of any reason to get rid of any 20 of it. 21 Q When the lead was melted down, would there 22 sometimes come to be impurities in the lead?	Page 702 1 mines? 2 A No. 3 Q The next page references a memo to file. It says 4 " Attached is Xerox of information sent to government on 5 waste streams. Much of the information was obtained from 6 my files. " 7 Are you aware of any people who were keeping 8 files concerning landfill issues or information sent to 9 governmental agencies concerning landfills in the 1975 time 10 frame? 11 A No. 12 (Savage Exhibit 140 identified.) 13 Mr. Brock: I've marked as Exhibit 140 a 14 multipage document with Bates numbers Mco 8411400 through 15 410. 16 By Mr. Brock: 17 Q Mr. Savage, let me know when you've had a chance 18 to look through this document. 19 (Witness reviewed the document.) 20 A Okay. 21 Q You can see you're listed as a copy recipient? 22 A Yes.

Page 703 1 Q And is this a progress report issued by the 2 Krummrich plant Tsd department in or about the 1971 time 3 frame? 4 A Yes. 5 Q Do you recall there being investigations going on 6 at that time in order to reduce the sewer losses from 7 Department 236 and 237? 8 A I remember work of that sort, yes. 9 Q And again those were the chlorophenol 10 departments ; is that correct? 11 A Yes. 12 Q What do you recall about the work that was 13 ongoing along those lines? 14 A I really don't remember any detail about it at 15 all. 16 Q Do you recall what the impetus was for it? 17 A No. I think it just was routine that by that 18 time frame, pollution issues or losses were of general 19 concern in any operation. 20 Q Why was that? 21 A Just because the increasing emphasis by the 22 government and within our company.	Page 705 1 A Not that I recall. But since I was so closely 2 involved with Pcbs, that was very vivid in my mind and I 3 wouldn't have necessarily responded to similar problems in 4 other areas. 5 Q Do you know whether by this time frame, meaning 6 the 1971 time frame, there had been any claims of pollution 7 or contamination resulting from discharges to the sewers in 8 the chlorophenol operations at the Krummrich plant? 9 A No. 10 Q Let me ask you to turn to the second and third 11 page of the exhibit. Those are the pages with the Bates 12 numbers of 401 and 402 and there's a table 1 on those 13 pages. Do you see that? 14 A Yes. 15 Q And there's a category of " routine losses. " Do 16 you see that? 17 A Yes. 18 Q What does that refer to? 19 A Well, I can only infer that from the context that 20 there's a column labeled " routine " and another labeled for 21 " nonroutine. " I presume that the nonroutine column were 22 those things that resulted from some exceptional incident
Page 704 1 Q When you talk about an increasing emphasis by the 2 government and the company, how did that increasing 3 emphasis manifest itself during the early ' 70s? 4 Mr. Burnett: Objection ; vague. 5 Go ahead. 6 The Witness: I don't remember exactly when 7 various steps were put in place, but over the last couple 8 of decades there's been escalating concern and the company 9 setting new targets that had gone underway, I think, in the 10 late ' 60s. But I don't remember any particular benchmarks. 11 By Mr. Brock: 12 Q When you say " the last couple of decades, " you 13 mean from today dating back a couple decades or from that 14 time dating back? 15 A From today dating back a couple decades. 16 Q Do you recall what the reason or impetus was for 17 that concern growing in the late 1960s? 18 A It was a social trend in the country, I think. I 19 think Monsanto's experience in such areas as Pcbs was 20 emphasized within Monsanto. 21 Q Did Monsanto have similar experiences in 22 additional areas other than Pcbs?	Page 706 1 such as a mechanical failure. And routine would be 2 everything else. 3 Q What were the nature of your responsibilities or 4 job activities with respect to sewer losses from the 5 chlorophenol operations at the Krummrich plant during this 6 time frame? 7 A Penta and Pcbs -- or Pcp were products sold by 8 our business group. So I would have the usual 9 manufacturing manager responsibility for work going on in 10 the department which would include their entire technical 11 program. A program to reduce sewer losses would simply be 12 a part of the technical program. 13 Q Do you recall having any input into such a 14 program? 15 A I had regular meetings at the Krummrich plant to 16 discuss the technical program, so I'm sure I had an 17 opportunity to review and comment on this. 18 Q Do you recall any specific meetings that 19 addressed sewer losses? 20 A I went there every month, but I don't remember 21 specifically this topic came up. 22 Q Do you recall there being any -- other than Pcbs,

Page 707 1 do you recall there being any claims or allegations or 2 notices or lawsuits to the effect that discharges to sewers 3 from the operations at the Krummrich plant had resulted in 4 contamination or pollution? 5 A No, I don't. 6 Q Let's go to the first page of the document. Who 7 are J. E. Rabbitt, R-a-b-b-i-t-t, and D. C. Armstrong? 8 A John Rabbitt had been an engineer in Tsd and I 9 believe at one time was a production supervisor. I don't 10 remember which job he had at the time of this report. 11 Because he's listed as the personnel writing this report, I 12 presume it was while he was still in Tsd. What was the 13 other name? 14 Q D. C. Armstrong? 15 A Dallas Armstrong was a group leader in the -- 16 Dallas Armstrong had been a group leader in the plant 17 research and development organization, what we called 18 Pr&d. At some point he became a Tsd group leader and again 19 because his name is shown here in parentheses, it implies 20 that that had occurred by the time this report was written. 21 (Savage Exhibit 141 identified.) 22 Mr. Brock: I've marked as Exhibit 141 documents	Page 709 1 Q If you turn to the second page, up at the top it 2 says " The sewerage of Ona with the mother liquor is a major 3 cause of sewer pluggage in the area. " Do you see that? 4 A Yes. 5 Q Why was that a cause of sewer pluggage? 6 A This paragraph seems to contradict what I just 7 said. It appears that it's Ona rather than Oncb that was 8 being recovered. Oncb was being used as a way of 9 recovering the Ona. But anyway, in answer to your 10 question, Ona has a high melting point so it would become a 11 solid in contact with cooler water. That could plug a 12 sewer. 13 Q Do you recall any occasions on which that 14 happened? 15 A No. 16 Q Do you recall any times in which a sewer in the 17 Ona operations needed to be replaced or repaired as a 18 result of -- 19 A No. 20 Q -- pluggage? 21 A No. 22 Q What would the effect of pluggage in those sewers
Page 708 1 with the Bates numbers Wgk 3253483 through 486. 2 By Mr. Brock: 3 Q Mr. Savage, could you let me know when you've had 4 a chance to look through the exhibit. 5 (Witness reviewed the document.) 6 A Okay. 7 Q Let's go to the attachment first, the last three 8 pages of the exhibit. Is this a progress report generated 9 by you and R. L. Fields in the 1965 time frame? 10 A It would have been written by R. L. Fields. My 11 name is mentioned because he worked for me at that time. 12 Q Do you recall there being a project undertaken in 13 the 1965 time frame concerning the recovery of sewerage Ona? 14 A I just vaguely remember this project. 15 Q What do you recall about it? 16 A Only that there was one. 17 Q Do you recall what the reason for undertaking 18 this project was? 19 A It was to recover raw material for recycle. 20 Q And that was raw material that previously had 21 been discharged through the sewer? 22 A I believe so.	Page 710 1 be? I mean, what would happen? 2 A What would happen when any sewer plugs up, water 3 would back up. 4 Q How was that situation, how were the pluggage 5 situations taken care of? 6 A I presume somebody would clean it. I don't know. 7 Q Do you recall there being any claims that 8 pluggage of sewers had led to leakage of that kind of 9 material from the sewers? 10 A No, I don't recall that. 11 Q Do you know what those sewers were made of? 12 A Not these specific ones, no. 13 (Savage Exhibit 142 identified.) 14 Mr. Brock: I've marked as Exhibit 142 a February 15 6, 1975 cover memo with an attachment and it has Bates 16 numbers 0092231 Pcp through 0092247 Pcp. 17 By Mr. Brock: 18 Q Mr. Savage, after you've had a chance to glance 19 through the document, could you let me know. 20 (Witness reviewed the document.) 21 A Okay. 22 Q Do you recall there being year-end status reports

Page 711 1 concerning water pollution control at the Krummrich plant? 2 A No. 3 Q Do you recall receiving documents of this type in 4 the mid -' 70s? Let me -- 5 A Generally, that's true. I don't remember this 6 specifically. 7 Q Was it your understanding there were yearly 8 status reports on water pollution control in connection 9 with the Krummrich plant? 10 A Not specifically. 11 Q What was the nature of your responsibilities, if 12 any, in the 1975 time frame with respect to water pollution 13 control at the Krummrich plant? 14 A Since as manufacturing manager I had 15 responsibility for some operations at the Krummrich plant, 16 I would probably receive a report like this if any of my 17 operations were involved in the subject matter. 18 Q The arrow on the cover of this document appears 19 to indicate that this particular copy went to Phocion 20 Park. Do you see that? 21 A Yes. 22 Q Do you have an understanding as to why lawyers	Page 713 1 employment with Monsanto? 2 A Yes. 3 Q I had asked you about the possibility of 4 lawsuits. Do you see the reference in the bottom of the 5 first paragraph to the possibility that Monsanto might 6 become involved in legal actions? Do you see that? 7 A Yes. 8 Q Let me turn you to page, the Bates number that 9 ends in 292 down at the bottom where it says " legal. " Do 10 you see that? 11 A 292? 12 Q 392, I'm sorry. 13 A Yes. 14 Q That references two lawsuits alleging losses due 15 to excessive Pcb contained in milk. 16 A Yes. 17 Q And I believe we've already talked about those? 18 A Yes. 19 Q Aside from those lawsuits, do you recall the 20 subject of the possibility of lawsuits against Monsanto in 21 connection with Pcb's being raised in or about the 1970 time 22 frame?
Page 712 1 within -- or a lawyer at least within Monsanto was sent 2 copies of year-end status reports like this with respect to 3 water pollution control at the Krummrich plant? 4 A Well, you observe that the content of the report 5 makes a number of references to federal regulations. It's 6 my understanding Phocion was involved in interpreting those 7 regulations for us. 8 Q Do you know whether Mr. Park was involved in 9 Monsanto's response to lawsuits or threats of lawsuits 10 concerning water pollution control matters? 11 A No, I don't know. 12 (Savage Exhibit 143 identified.) 13 Mr. Brock: I've marked as Exhibit 143 a 14 multipage document with Bates numbers 0164390 through 402. 15 By Mr. Brock: 16 Q Mr. Savage, this will go back to our favorite 17 subject, Pcb's. Can you let me know when you have had a 18 chance to glance through this. 19 (Witness reviewed the document.) 20 A Okay. 21 Q Is this a copy of an October 6, 1970 memorandum 22 directed to you and some others in connection with your	Page 714 1 A No, I can't place anything in that time frame. 2 Q When you say you can't place anything in that 3 time frame, and again I'm excluding the milk claims that 4 we've seen referenced, did the possibility of lawsuits or 5 legal claims against Monsanto relating to Pcb's come to your 6 attention at some other time frame? 7 A I think I mentioned previously having been 8 deposed previously in some lawsuits and two of those, I 9 believe, were lawsuits against Monsanto. 10 Q Fair enough. When was the first time that it 11 came to your attention that there was a possibility of 12 legal action against Monsanto with respect to the Pcb 13 situation at either the Krummrich or Anniston sites, aside 14 from your depositions and aside from the milk claims? 15 A I think that at the time that I joined the 16 business group in early 1970 that the subject of lawsuits 17 was a current topic. But I don't remember when 18 specifically I learned about any specific suit. 19 Q When you say it was a current topic, what do you 20 mean? 21 A The silo case, for instance. 22 Q If I remember correctly, that was one of the milk

Page 715 1 cases ; is that correct? 2 A Yes. 3 Q Was there discussion to the effect that there 4 might be additional claims asserted against Monsanto with 5 respect to Pcb's? 6 A I don't remember. 7 Q Do you recall whether there was any discussion as 8 to whether a governmental agency might assert a claim 9 against Monsanto with respect to the Pcb situation? 10 A Not a claim specifically. There was considerable 11 discussion about a possibility or likelihood of regulatory 12 action such as by the Epa. 13 Q What type of regulatory action? 14 A At that time there was discussion of the 15 possibility of regulations regarding Pcb content of 16 wastewater and also at some time fairly early in the 1970s, 17 there was discussion of a possibility that the government 18 might ban the use of Pcb's altogether. 19 Q Let me turn you to the page that ends in Bates 20 number 398 of this document. There's a category there for 21 regulatory action. Do you see that? 22 A Yes.	Page 717 1 Bates number 427. 2 A Okay. 3 Q In the first indented paragraph of the page 4 there's a statement that " since the legal threats are more 5 imminent and the problems more visible. " Do you see that? 6 A I see that, yes. 7 Q Do you recall what you meant by legal threats 8 being more imminent in or about this time frame with 9 respect to the Pcb situation? 10 A This memo appears to be minutes written by me of 11 a meeting of a number of people mainly from the business 12 group who were involved in the decisionmaking process. And 13 as far as I can see, I'm simply quoting what Mr. Papageorge 14 said. 15 Q Do you recall Mr. Papageorge bringing up the 16 subject of potential legal threats concerning the Pcb 17 situation? 18 A Well, any possible legal threats were part of 19 Bill's responsibility in those days. I don't remember this 20 meeting. 21 Q There's a statement, it says " Bill Papageorge 22 stated that the Law and Medical Departments and others
Page 716 1 Q Do you recall there being contacts being made 2 with the Alabama Water Improvement Commission concerning 3 the Pcb situation around the 1970s time frame? 4 A I was aware indirectly because the plant would 5 keep me informed. I wasn't directly involved. 6 Q Do you recall there being any discussion of 7 concern about the possibility that the Alabama Water 8 Improvement Commission might take some sort of legal action 9 against Monsanto with respect to the Pcb situation? 10 A I think we anticipated the possibility of state 11 regulatory action at either Krummrich or Anniston, but I 12 don't remember the specific state bodies or what action 13 they might take. 14 (Savage Exhibit 144 identified.) 15 Mr. Brock: I've marked as Exhibit 144 a document 16 with Bates numbers 0005425 through 428. 17 By Mr. Brock: 18 Q Mr. Savage, is this a copy of a December 9, 1970 19 memorandum that you authored in connection with your 20 employment with Monsanto? 21 A Yes. 22 Q Let me turn you first to the page that ends in	Page 718 1 would welcome a decision to shut down Anniston liquid 2 Aroclor. " 3 A Yes. 4 Q Do you recall the law department favoring 5 shutting down Anniston liquid Aroclor operations? 6 A No. In fact, we did. But at the present time I 7 don't remember the reasons that went into that decision. 8 Q The reference up above to " recent Illinois 9 regulatory activity, " do you know what that refers to in or 10 about this time frame? 11 A No. 12 (Savage Exhibit 145 identified.) 13 Mr. Brock: I've marked as Exhibit 145 a document 14 with Bates numbers 0005665 through 668. 15 By Mr. Brock: 16 Q Mr. Savage, could you let me know when you've had 17 a chance to look through it. 18 (Witness reviewed the document.) 19 A Okay. 20 Q Is this a copy of an August 7, 1970 memorandum 21 that was sent to you and some others in connection with 22 your employment with Monsanto?

Page 719 1 A Yes. 2 Q The subject is called " Anniston-pcb-cleanup 3 program. " Do you recall there being a program to clean up 4 Pcb contamination at the Monsanto -- at the Anniston or 5 Krummrich sites in or about this time frame? 6 A I believe that term meant, in that time frame, 7 reducing losses rather than remediation. It was just a 8 general term, not some specific short-term campaign. 9 Q Are you aware of any decision taken at a 10 subsequent time to clean up or remediate Pcb contamination 11 in connection with the Krummrich or Anniston plants? 12 A At the time that we completely shut down our Pcb 13 and Pct operations at Anniston, dismantled the equipment 14 and so forth, there was an effort to, just to restore the 15 site to a level condition and dispose of the scrap from the 16 department that involved decontaminating material that had 17 been dismantled. That's all I recall from it at the time 18 that I had any responsibility. 19 Q Was that generally referred to as the Aroclor 20 dismantling? 21 A Yes. 22 Q If my memory serves, was that sometime in the	Page 721 1 Q On Exhibit 145 there's a line that reads 2 " Confidential -- Fyi and Destroy. " Do you see that? 3 A Yes. 4 Q Why would this type of document, why would there 5 be an instruction to destroy this type of document? 6 A That would be quite unusual. I don't know. I 7 guess there's an implication that somebody thought the 8 information was sensitive, but that was not a usual 9 practice for us. Obviously, it was an instruction that 10 wasn't obeyed in this case. 11 Mr. Brock: Off the record. 12 (Discussion off the record.) 13 By Mr. Brock: 14 Q Did you, from time to time, receive instructions 15 that certain documents that you received should be 16 destroyed? 17 A Well, in two ways. One is that there's a company 18 records retention policy such that we were instructed that 19 at least once a year we should go through files and throw 20 away routine memos that were more than two years old. 21 There were exceptions to that instruction that we might get 22 an instruction from the law department that any document
Page 720 1 1976 time frame or thereabouts? 2 A I think it was finished after I left the business 3 group. 4 Q From your description of it, my understanding is 5 that that involved decontaminating certain equipment that 6 had been used? 7 A Yes. 8 Q Did it also involve attempts to decontaminate 9 soil or water that had become contaminated? 10 A I don't remember that it did. It could be. 11 Q Are you aware of any efforts that have been 12 undertaken at any time to decontaminate soil or water 13 contaminated by Pcb's in connection with the Krummrich or 14 Anniston plants? 15 A I really don't know. The shutdown at Krummrich 16 was after my time in the operation and the Anniston 17 dismantling was complete, I think, after my time. So I 18 would not have been aware, I think, of anything specific. 19 Q Do you recall being involved in any discussions 20 concerning whether or not such a cleanup or remediation 21 should take place? 22 A No, I don't remember that.	Page 722 1 that was subject to controversy shouldn't be destroyed as 2 part of that routine, and also we were allowed to keep 3 documents relating to ongoing transactions where we need to 4 keep history of a negotiation or something like that. 5 The other circumstance in which we have 6 instructions to destroy something would be if someone had 7 written a memo that turned out to be an error -- to contain 8 an error and sometimes we would get a replacement copy with 9 instructions, please destroy the previous copy. 10 Q As I see this, this is different from both of 11 those? 12 A Yes, this is quite unusual. 13 Q The document retention program that you talked 14 about, that would be a generic thing saying destroy certain 15 types of documents? 16 A Yes. 17 Q And the other situation would not be the document 18 itself saying destroy this document? 19 A Yes, yes. So this is an exceptional situation. 20 Q You talked about the possibility that it might 21 contain sensitive information? 22 A That's just a guess. I can't think of any other

Page 723 1 reason why that would be done. 2 Q Do you recall receiving this document? 3 A No. 4 Q Do you recall receiving any documents during your 5 tenure at Monsanto with an instruction on the face of the 6 document to destroy this document? 7 A No, that just was not a normal practice. 8 Q When you referred to the possibility that it 9 might contain sensitive information, what did you mean by 10 sensitive information? 11 A Just information that was considered highly 12 confidential and was not to be spread beyond the parties 13 receiving. I really don't know. This is just quite 14 unusual. 15 Q Do you have an understanding as to why the 16 information in this would not be -- or why Monsanto would 17 take steps to prevent the dissemination of this information 18 outside the company? 19 A No, because we had a procedure for confidential 20 information. If a document was mentioned -- was marked 21 company confidential or some earlier nomenclature for the 22 same thing, then it was understood that it was not to be	Page 725 1 Q Were you kept apprised of those meetings? 2 A I would receive things like these minutes or 3 sometimes in Bill Papageorge's monthly report, there would 4 be some summary of the outcome of such a meeting. 5 Q Let me ask you to turn back to the second page of 6 the document. There's a statement that " Mr. White had two 7 primary areas for concern. " Do you see that? 8 A Yes. 9 Q And it states " The Federal Department of Justice 10 has apparently recommended that suit be initiated against 11 the Anniston plant for Pcb emission under the Federal 12 Refuse Act. " Do you see that? 13 A Yes. 14 Q Do you recall learning that the Federal 15 Department of Justice had recommended a lawsuit against 16 Monsanto with respect to Pcb emissions from the Anniston 17 plant? 18 A No. 19 Q Do you believe you received a copy of this 20 memorandum in the course of your employment with Monsanto? 21 A I'm sure I did. 22 Q Does that reference refresh your recollection
Page 724 1 released outside the company. This is just not the way 2 such things are normally handled. 3 (Recess.) 4 (Savage Exhibit 146 identified.) 5 Mr. Brock: I've marked as Exhibit 146 a document 6 dated November 11, 1971. 7 By Mr. Brock: 8 Q Mr. Savage, after you've had a chance to look 9 through this, could you let me know. 10 (Witness reviewed the document.) 11 A Okay. 12 Q Let me ask you to turn to the second page of the 13 exhibit. First of all, do you recall there being meetings 14 between Monsanto personnel and personnel with the state of 15 Alabama and the Southwest Regional Epa in the 1971 time 16 frame regarding the Pcb situation at the Anniston plant? 17 A I remember in general there were meetings between 18 the Epa and the state authorities in Monsanto about Pcb 19 products both at Anniston and at Krummrich. 20 Q What do you recall about those meetings? 21 A Just that they took place. I didn't attend any 22 of those meetings.	Page 726 1 that generally the subject of potential lawsuits against 2 Monsanto with respect to Pcb emissions had come up by this 3 time frame? 4 A It doesn't remind me of anything specific. The 5 general climate was one of anticipating various 6 governmental actions and therefore we had many different 7 efforts going to reduce emissions and so forth. So this 8 fits the climate as I recall it, but I don't remember 9 anything specific. 10 Q Do you recall that climate, including discussions 11 of potential lawsuits or claims? 12 A No. 13 Q For example, any discussion concerning what 14 Monsanto should do in the event of a lawsuit or claim, do 15 you recall discussions along those lines? 16 A My recollection is that the driving force 17 primarily was the concern about regulation. 18 Q I take it you don't have any recollection as to 19 further developments along -- or concerning the Justice 20 Department's apparent recommendation that suit be 21 initiated? 22 A No, I don't remember.

Page 727 1 Q Do you recall any discussions along the lines of 2 attempting to -- strike that. 3 Do you recall any discussions along the lines of 4 having Monsanto's insurance companies pay for any of the 5 actions Monsanto was taking with regard to the Pcb 6 situation? 7 A No, I don't remember that. 8 (Savage Exhibit 147 identified.) 9 Mr. Brock: Exhibit 147 is a document with Bates 10 numbers 0196218 through 222 and it's dated May 19, 1966. 11 By Mr. Brock: 12 Q Mr. Savage, could you let me know when you've had 13 a chance to look through it. 14 (Witness reviewed the document.) 15 A Okay. 16 Q Is this a memorandum directed to you and some 17 others in May 1966 in the course of your employment with 18 Monsanto? 19 A Yes. 20 Q Who was O. E. Dolin, D-o-l-i-n? 21 A Owen Dolin, I believe at that time was chief 22 chemist at Anniston.	Page 729 1 time to time. This is a joint meeting between the two 2 plants and at such maybe one-of-a-kind meeting. 3 Q Let me turn you to the page that ends in Bates 4 number 221. It's page 4 of the document. The paragraph in 5 the middle begins with the sentence " Jim Savage outlined 6 the Krummrich plant's investigation program. " Do you see 7 that? 8 A Yes. 9 Q What was the investigation program with respect 10 to Aroclors at the Krummrich plant at that time? 11 A I think that just refers to the general technical 12 program that we had going on in the Aroclor department at 13 the time. At this time I was -- I worked at the Krummrich 14 plant as a Tsd superintendent. 15 Q What sort of things would the technical program 16 with respect to Aroclors entail at the time? 17 A I don't think I can add anything to what's listed 18 here. 19 Q This makes a reference to " investigation 20 program. " Do you recall what, if anything, was being 21 investigated with respect to the Aroclor operations at the 22 Krummrich plant at that time?
Page 728 1 Q Who was John Luecken, L-u-e-c-k-e-n? 2 A He was a chemist at the Krummrich plant, the 3 Krummrich plant laboratory. 4 Q What about John Macpherson, M-a-c-p-h-e-r-s-o-n? 5 A I don't recognize that. 6 Q Jim Bryant, do you recognize that name? 7 A Jim Bryant was a chemist at the Anniston plant. 8 Q And G. W. Miller, who was that? 9 A Gerry Miller, he was either a chemist or a 10 chemical engineer. He was at the Anniston plant. 11 Q Who was Jerry Veazey, V-e-a-z-e-y? 12 A He was an engineer at the Anniston plant. I 13 remember he was a mechanical engineer, but I'm not sure of 14 that. 15 Q The reference to Prd meeting, what does that 16 refer to? 17 A I think that stands for process research and 18 development. 19 Q Do you recall there being process research and 20 development meetings concerning Aroclor in or about the 21 1966 time frame? 22 A Each of the plants would have such a meeting from	Page 730 1 A I think the term is used pretty broadly. It just 2 refers to the technical program going on at the time. 3 Q Do you know whether that entailed anything other 4 than investigation into chlorination temperature and 5 removal of catalyst baskets? 6 A No, I don't remember. 7 Q What was the significance of chlorination 8 temperature? 9 A Chlorination temperature had an effect on product 10 quality. It was too low. That was one of the ways 11 poor-quality Aroclor could be made. 12 Q And would poor-quality Aroclor, would that be 13 disposed of rather than sent to customers? 14 A It was totally unacceptable to make Aroclor of 15 that quality. We simply didn't do it. We knew what 16 conditions were required to prevent it. We ran that way. 17 Q Were there any occasions on which Aroclor was 18 produced that was of such a quality that it couldn't be 19 sent to customers to your knowledge? 20 A Sometimes a batch of Aroclor would be 21 unacceptable for an electrical customer and therefore would 22 be sent to a customer that used it in some other way. I

Page 731 1 don't recall ever having made Aroclor that was unacceptable 2 for any customer. 3 Q So you don't recall any occasions on which a 4 decision was made that Aroclor couldn't be sold and 5 therefore it had to be gotten rid of some other way? 6 A No. 7 Q And in reference to removal of a catalyst basket, 8 what does that refer to? 9 A The chlorinators had a metal basket inside which 10 contained chunks of iron. They actually were turnings 11 purchased from people who made railroad car wheels and this 12 was the material that was removed in machining the wheels. 13 And the iron turnings were there to act as a packing for 14 gas distribution and also to provide a secondary source of 15 ferric chloride catalyst. It turned out that was really 16 not necessary for the process. 17 Q And the reference to "proved advantageous," does 18 that refer to taking out something that was not necessary 19 to the process? 20 A Yes. 21 (Savage Exhibit 148 identified.) 22 Mr. Brock: I have marked as Exhibit 148 a	Page 733 1 A It's only one letter. I can't tell. 2 Q Do you recall -- 3 A It really doesn't look like the way I would write 4 a B, but it's very hard to tell from one letter. 5 Q Do you recall receiving information concerning 6 the Aroclor situation at the Anniston plant and forwarding 7 the information in these type of reports along to 8 Papageorge? 9 A Yes. Yes, I think we've seen some other examples 10 of that. 11 Q Right. Having that in mind, would this appear to 12 be -- or does that impact on your statement as to whether 13 or not that's your writing? 14 A Well, that's something I routinely did. It still 15 doesn't look like the way I write a B. 16 Q There's a reference to "normal level" of Aroclor 17 losses. Do you see that? 18 A Yes. 19 Q Do you know what that refers to, "normal level"? 20 A I think it's only there to distinguish it from 21 the next item of digging in the Hcl neutralization pit, 22 which would not have been a routine operation.
Page 732 1 one-page document with Bates number of 0248695. 2 By Mr. Brock: 3 Q Mr. Savage, is this an Anniston plant technical 4 services department monthly report directed to you and some 5 others in connection with your employment with Monsanto? 6 A Yes. 7 Q Again, we can see that the instruction on the 8 right-hand side where it says "confidential, read and 9 destroy." Do you see that? 10 A Yes. 11 Q Does that refresh your recollection as to why 12 that instruction would appear? 13 A No, but it obviously wasn't obeyed. That was not 14 a normal procedure. 15 Q There's a reference to -- strike that. First of 16 all, does the arrow on the left-hand side indicate that 17 this was a copy that was in fact sent to you? 18 A Yes. 19 Q To the left of "Current Level" there's a "B." Do 20 you see that? 21 A Yes. 22 Q Is that your handwriting?	Page 734 1 Q So normal level would be losses due to the 2 routine operations of the plant? 3 A I think that's the implication, but I would guess 4 it was determined by difference. 5 Q When you say "determined by difference," you're 6 just contrasting it to the other item? 7 A Yes. 8 Q Do you recall there being digging in the Hcl 9 neutralization pit at the Anniston plant? 10 A I don't remember this specific incident. 11 Mr. Brock: Off the record. 12 (Discussion off the record.) 13 (Recess.) 14 (Savage Exhibits 149, 150, and 151 15 identified.) 16 Mr. Brock: For the record, I've marked Exhibits 17 149 through 151. Exhibit 149 has Bates numbers of 0248685 18 through 86. 19 By Mr. Brock: 20 Q Mr. Savage, is this Anniston plant Tsd monthly 21 report directed to you and some others in connection with 22 your employment with Monsanto?

Page 735 1 A Yes. 2 Q Now there's some handwriting on this one. Is 3 that your handwriting? 4 A Yes, it appears to be. That's a little strange 5 because the arrow over on the side seems to indicate that 6 this is Papageorge's copy, but that does look like my 7 writing. 8 Q And again there's a instruction " confidential, 9 read and destroy. " Does that refresh your recollection as 10 to what that might refer to or the reason for it? 11 A No, I obviously didn't take it very seriously. 12 Q Or Mr. Papageorge, I don't know. Under " Spills " 13 there's a reference to " Minor leaks were contained by use 14 of sand and disposal in drums. " Do you see that? 15 A Yes. 16 Q Do you know how those drums were disposed of? 17 A No. 18 Q Let's go to Exhibit 150. This was a copying 19 glitch that I had try to see whether I could correct it. 20 I've not yet been able to do it. But this is page 3. For 21 the record, the Bates number is 0248231 and the full 22 document is 0248229 through 31. For the record, it appears	Page 737 1 Area Monitoring. " Then there's a reference to " Pcb removal 2 from any area from our fence to Choccolocco. " Do you see 3 that? 4 A Yes. 5 Q Are you aware or do you recall the subject of 6 cleaning up Snows Creek and removing Pcb's from any area 7 associated with the Anniston plant coming up in or about 8 1971? 9 A No. 10 Q Do you have an understanding as to why 11 Mr. Landwehr might have sent you a memorandum addressing 12 these subjects in or about January of 1971? 13 A Well, as manufacturing manager I would have had 14 responsibility for cost control and so any special 15 expenditures would be a subject that I would be concerned 16 about. This document seems to be a financial forecast of 17 sorts. 18 Q When you said " special expenditure, " what did you 19 mean by " special expenditure "? 20 A Something that wouldn't have been provided for in 21 the budget. You'll notice the label on the bottom line is 22 " total potential budget overrun " and a budget overrun is
Page 736 1 to me that the full document is a document dated January 2 21, 1971 from J. C. Landwehr, L-a-n-d-w-e-h-r, to Mr. Savage 3 concerning Anniston-1971 Aroclor waste costs. 4 Mr. Savage, looking at the page that we have 5 there's a reference to " Leaching problems-storm drain, pit 6 bypass, groundwater under Aroclor department, and abandoned 7 dumps. " Do you see that? 8 A Yes. 9 Q Do you recall the subject of leaching problems 10 coming up in connection with the operation of the Aroclor 11 department at the Anniston plant in or about 1971 or so? 12 A No. He mentions a mechanical expense of \$2000 13 maximum which sounds like it must have been a very modest 14 situation. I don't remember it. 15 Q Do you recall any situations coming up with 16 respect to Pcb's being found or claimed to be in the 17 groundwater under the Aroclor department at that time? 18 A I don't remember that. 19 Q The reference to abandoned dumps, do you know 20 what that refers to? 21 A No. 22 Q The reference C is to " Clean up Snows Creek and	Page 738 1 something I would be concerned about. 2 Q Realizing that you certainly don't have the 3 entire document in front of you, would it be your 4 understanding that the items referenced on this page would 5 refer to potential budget overruns? 6 Mr. Burnett: I'm going to object to examining 7 him on an incomplete document. But he can try to answer it 8 if he can. 9 The Witness: You can only infer it from what it 10 says here. If it's being considered as an overrun, then 11 these must have been things that had not been provided for 12 in the budget. The budget would have been prepared in 13 perhaps August of the preceding year. 14 By Mr. Brock: 15 Q Let's go to Exhibit 151. Is this a copy of a 16 progress report by the technical services department at the 17 Anniston plant dated July 21, 1970 directed to you and some 18 others in connection with your employment with Monsanto? 19 A Yes. 20 Q Let me ask you to turn to the page with the 21 ending Bates number 294. There's a reference down at the 22 bottom of that page to " Limestone Pit being cleaned out. "

Page 739 1 Do you see that? 2 A Yes. 3 Q And there's an asterisk by it and there are 4 asterisks by certain of the entries above. Do you see 5 that? 6 A Yes. 7 Q Do you recall an effort being made to clean out 8 the limestone pit in or about the July 1970 time frame? 9 A That was done periodically because of the 10 accumulation of material from the limestone that was not 11 consumed by the acid. I don't remember this particular 12 time but certainly there had been occasions like this. 13 Q What was done with the material that was cleaned 14 out from the limestone pit? 15 A I don't know. It was hauled away. 16 Mr. Brock: Off the record. 17 (Discussion off the record.) 18 By Mr. Brock: 19 Q Mr. Savage, when did you first have 20 responsibilities relating to Monsanto's Nitro plant? 21 A At the time that the paper chemicals products 22 were added to the specialty products group. It was	Page 741 1 Q What was the component that Monsanto had an 2 interest in? 3 A Material that was called tall oil rosin acid. 4 Q That's r-o-s-i-n? 5 A Yes. 6 Q What was the component that Emery had an interest 7 in? 8 A It was called tall oil fatty acid. 9 Q How long did you have job responsibilities 10 relating to Monsanto's Nitro plant? 11 A From the time that I just described until I left 12 the business group in 1975. 13 Q So that would be a total of about -- 14 A Three or four years. 15 Q Generally, what was the nature of your -- or to 16 be grammatical, I should say what were the nature of your 17 job responsibilities as they related to the Nitro plant 18 during that time? 19 A As manufacture manager, so it was the same kind 20 of relationship that I had with the other plants. 21 Q Did all the operations that that plant come under 22 purview -- under your purview or only some of them?
Page 740 1 sometime after I joined the specialty products group, but I 2 don't remember exactly when. There had been a business 3 group called Cellu-chem which had been run by John 4 Mullendore as business group director. And that group was 5 disbanded sometime around 1971 or 1972 and certain products 6 from that business group were added to the specialty 7 chemicals group at that time. 8 Q So your first responsibilities regarding the 9 Nitro plant would have come sometime after 1971 or 1972? 10 A About that time because the paper size products 11 called Mersize were added to our business group at that 12 time and also the responsibility for the joint venture at 13 Nitro between Monsanto and Emery was added to our business 14 group. 15 Q Emery, how do I spell Emery? 16 A E-m-e-r-y. I think the name of the company 17 actually is Emery Industries. 18 Q What was the nature of that joint venture? 19 A It was a joint venture for the distillation of 20 tall oil. Tall oil is a product of the paper industry and 21 Monsanto had interest in one component of that mixture and 22 Emery in the other.	Page 742 1 A Just those specific operations that I mentioned, 2 the Mersize department and to some degree the joint venture 3 operations. 4 Q The joint venture operations, was that referred 5 to by a particular department name, for example, the tall 6 oil department? 7 A Yes, that's one name for it. I think the name of 8 the venture was M-e Venture. 9 Q When you said the tall oil department was one 10 name for that operation, were there other names? 11 A Yes, M-e Venture or just M-e or Monsanto-emery. 12 Q Did you, in connection with your responsibilities 13 as manufacturing manager, go visit the Nitro plant? 14 A Yes. 15 Q How many times did you do that? 16 A Oh, perhaps 10 times all together. 17 Q Generally what were the occasions for those 18 visits? 19 A That was routine reviews with the plant people of 20 programs and budgets and the like. 21 Q Who reported to you from the Nitro plant? 22 A It was not a direct reporting relationship. It

Page 743 1 was a dotted-line relationship, but it was Dave Tippey, 2 T-i-p-p-e-y. 3 Q Anybody else during the time that you had 4 responsibilities for that department, for that plant? 5 A Not that I remember. There was also a production 6 supervisor, of course, and some engineers, but my 7 relationship was mainly with Dave Tippey. 8 Q Did you undertake to learn the operations of the 9 Mersize department and the tall oil operations there? 10 A I had a reasonable understanding of Mersize 11 operation. I had a very general understanding of tall 12 oil. For the purposes of the Monsanto-emery venture, Dave 13 formally reported to Howard Bergen rather than me because 14 there were some broader business management issues as well 15 as simply manufacturing. 16 Q When you say they formally reported to Howard 17 Bergen, would personnel in that department as a functional 18 matter report to you about certain things? 19 A Sometimes. If Howard had asked me to get 20 involved in some manufacturing aspect of the tall oil 21 operation. 22 Q I'm just trying to get the distinction down.	Page 745 1 A There were pretty modest differences. The 2 addition of fumaric acid was called fortification so that's 3 sometimes the generic description of the product, was 4 fortified rosin size and for different price performance 5 there were varying degrees of fortification and dilution 6 and the amount of neutralization with caustic soda or 7 caustic potash. 8 Q What was Mersize used for? 9 A It's an internal size used in the manufacture of 10 paper. The function of sizing is so that when the paper is 11 printed or written upon, that the ink doesn't blot and 12 spread in the paper. 13 Q When Mersize came out of what you called the 14 reaction mass, what would its form be? 15 A A thick liquid. 16 Q Do you know whether there were any residues or 17 by-products from those operations during those years? 18 A The entire contents of the reactor were product. 19 It was transferred to storage tank, to storage tanks and 20 from there into tank cars which were shipped to the paper 21 mills. 22 Q Do you recall there being any types of leaks or
Page 744 1 When you said they formally reported to Howard Bergen, what 2 kind of matters would they report to him and what kind of 3 matters to you? 4 A Well, from a formal standpoint it was entirely 5 under Howard rather than me. Since Howard had no 6 manufacturing background, he would sometimes ask me to get 7 involved if there was a specific manufacturing issue to be 8 addressed. 9 Q Can you give me a general overview of the 10 operations of the Mersize department during those years? 11 A The main raw material for Mersize was the tall 12 oil rosin acid from the tall oil plant. There were some 13 batch reactors and the tall oil was reacted with fumaric 14 acid and as I recall it, a mixture of caustic soda and 15 caustic potash. And that essentially was the process. The 16 whole reaction mass was the product. There was no refining 17 step or anything like that. 18 Q And that reaction mass, that was a product, that 19 was Mersize? 20 A That was called Mersize. There were a large 21 number of different grades of Mersize. 22 Q What distinguished the various grades?	Page 746 1 spills or other types of process upsets in those processes 2 during those years? 3 A I don't remember anything specific. 4 Q Did you say the Mersize was shipped in tank cars? 5 A Most of it was. There may have been small 6 amounts shipped in drums. It would be very awkward to 7 handle it in drums so the preferred method was tank cars, 8 possibly tank trucks. 9 Q Why was it awkward to handle in drums? 10 A Because it was thick material which was hard to 11 handle when it was cold. When it was put in a drum, it 12 would have to be heated to get it out. 13 Q When you said cold, did that include room 14 temperature? 15 A Yes. 16 Q What was the process by which the Mersize reached 17 the tank cars? 18 A Pumped. 19 Q Pumped through pipelines? 20 A Yes. 21 Q What happened at the end of the pipeline? 22 A Just went into a storage tank and likewise from a

Page 747 1 storage tank it would be pumped into tank cars. 2 Q I'm envisioning some sort of pipe or hose being 3 funneled from the pipe or attached from the pipe to the -- 4 into the tank car. Is that the way it worked from the 5 pipes to the tank car? 6 A I don't remember that specific unit. It would 7 not have been a hose. A hose would not have been 8 compatible with that material. The usual practice was to 9 have pipes with swivel joints that would be put into the 10 top of the tank car. I assume it was done that way for 11 Mersize but I don't remember specifically. 12 Q Do you know how that material was put in drums? 13 A No. 14 Q Recognizing that you said you had not as 15 extensive an understanding of the tall oil operations at 16 the Nitro plant, can you give me an overview as to what 17 those operations consisted of? 18 A It was a fairly complicated set of distillation 19 columns and I couldn't begin to sketch out how they were 20 connected together. The only thing distinctive that I 21 remember is that at least some of the columns were 22 something called steam distillation which means that rather	Page 749 1 paper there's at some point a place where tall oil is 2 skimmed off from a stream from which it would otherwise be 3 a waste product. 4 Q So your understanding it would be skimmed off 5 from the stream at the paper -- 6 A At paper mills, that's right. 7 Q When when you're talking about paper mills, you 8 mean mills that are making paper? 9 A Yes, mills that take in trees and put out paper. 10 It's a specific kind of paper mill. There's different 11 kinds of paper processes, but I don't remember which one. 12 Q How many paper mills did the Nitro plant receive 13 tall oil from? 14 A I don't know. Several, but I don't know. 15 Q Do you know the names of any of those mills? 16 A No. 17 Q When the tall oil came into the Nitro plant, what 18 would the Nitro plant do with it? 19 A Well, that was the raw material. They would 20 unload it from the barge or the tank car and put it in 21 storage tanks, and that was the raw material for the tall 22 oil plant.
Page 748 1 than indirect heating, which is the normal way of 2 distilling, that steam was introduced directly into the 3 column and in contact with the product. 4 Q Let's back up a step. What chemicals or 5 materials were used in the tall oil operations? 6 A Just the one raw material, the tall oil 7 by-product from paper mills. 8 Q Tall oil would come in from paper mills to the 9 Nitro plant? 10 A Yes. 11 Q How did it reach the Nitro plant? 12 A I believe that some of it was in barges and some 13 of it was in tank cars. 14 Q Tall oil, I'm envisioning an oil ; is that what it 15 was? 16 A Yes. It was a thick, oily material. 17 Q How did the tall oil fit in with the operations 18 of which it was a by-product, the paper operations, meaning 19 was it used in those operations or how was it produced in 20 those operations, if you know? 21 A It's a natural by-product. I'm no expert on 22 making paper, but in the processing of the pulp to make	Page 750 1 Q So the function of the tall oil plant at the 2 Nitro plant was to produce a raw material for the Mersize 3 department ; is that correct? 4 A The function of the venture was to take tall oil 5 from the paper mills and produce a raw material for 6 Monsanto which was tall oil rosin acid and another raw 7 material for Emery, which was the fatty acid. The fatty 8 acid was sometimes referred to as Ufa, which stood for 9 unsaturated fatty acid, and at the plant they would call 10 the rosin acid Tora, which stood for tall oil rosin acid. 11 And on the accounting sheets you would sometimes see a 12 reference to Torufa which was the two added together. 13 Mr. Brock: Off the record. 14 (Discussion off the record.) 15 The Witness: There was also some smaller 16 by-products from tall oil, but I don't remember what they 17 were. 18 By Mr. Brock: 19 Q Was the tall oil rosin acid used for any -- used 20 in any way other than as a raw material in the Mersize 21 department? 22 A There was a related product which was developed

Page 751 1 during the time that I was manufacturing manager which we 2 called Monsize which was -- had the same purpose as Mersize 3 but was a more efficient product. It was a dispersed rosin 4 size, meaning that a fortified material was dispersed in 5 water. 6 Q When you use the term " fortified material, " what 7 are you using that term to refer to? 8 A It was a reaction product of rosin acid and 9 usually fumaric acid. Sometimes maleic anhydride was used 10 instead of fumaric for fortification in very low-cost, 11 low-grade products. 12 Q Can you give me an overview of the Monsize 13 operations at the Nitro plant? 14 A The first step was very similar to the beginning 15 of making Mersize in that the rosin acid was reacted with 16 fumaric acid fortified to a higher extent than normal, 17 meaning more fumaric acid than normal. And then that 18 molten reactor mass went into a homogenization system which 19 dispersed the material I just described, which we called 20 adduct, a-d-d-u-c-t, at that point. It was dispersed into 21 water to make a dispersion, that as I recall was about 30 22 percent adduct in water. Formed a milky-looking material	Page 753 1 Q Generically speaking, Mr. Savage, can you 2 identify what these are for us? 3 A These are the monthly reports of the plant 4 manager of the Nitro plant written for a series of months 5 beginning in January 1975. 6 Q I take it the plant manager during that time 7 period changed from B. G. McGuire to R. M. Scott? 8 A That's right. 9 Q Do you know whether those men are still alive or 10 those individuals are still alive? 11 A I have not heard of Bill McGuire for a long 12 time. Roy Scott recently worked at the general office and 13 I think has retired within the last two or three months. 14 Q What was his position at the general office 15 recently or from which he retired, I'm sorry? 16 A Roy was director of site administration. That 17 may have not been his exact title, but that's reasonably 18 descriptive of what he did. 19 Q When you say " descriptive of what he did " -- 20 A At the general office. 21 Q Right. Generically speaking, what were his job 22 duties in the general office?
Page 752 1 and that was the final product. 2 Q And what was that final product used for? 3 A The same thing as Mersize. It was just a more 4 cost-effective product. 5 Q From the Monsize operations were there any 6 residues or by-products? 7 A I don't recall that there were any. 8 Q Do you recall who the customers were for Mersize 9 and Monsize? 10 A They were paper mills, not necessarily the same 11 ones that were the source of the tall oil, but it was paper 12 mills. 13 Q Throughout the time that you had responsibilities 14 relating to the Nitro plant, were there any other 15 operations there that were -- for which you had job 16 responsibilities? 17 A No. 18 (Savage Exhibits 152 through 158 19 identified.) 20 Mr. Brock: For the record, I've marked Exhibits 21 152 through 158. 22 By Mr. Brock:	Page 754 1 A For taking care of buildings and facilities on 2 site. 3 Q Would that include the Nitro, Krummrich -- 4 A Oh, no, this was just at the general office in 5 St. Louis. 6 Q Do you know whether he still lives in the 7 St. Louis area? 8 A I think he does. 9 Q Your name is on the distribution list at the back 10 of each of these documents? 11 A Yes. 12 Q Does that indicate to you you received a copy of 13 these in connection with your employment at manufacturing 14 manager? 15 A Yes. 16 Q Let's go to the Exhibit 152, the page that ends 17 in Bates number 3008 at the bottom. 18 A Okay. 19 Q That's a discussion of environmental control 20 matters with respect to the Nitro plant. Do you see that? 21 A Yes. 22 Q And that references an Npdes permit, and down in

Page 755 1 the next paragraph, a letter being sent to the Epa. Do you 2 see that? 3 A Yes. 4 Q Do you recall there being communications with the 5 Epa concerning the Nitro plant in or about this time frame? 6 A No. 7 Q Did you have any involvement or responsibilities 8 for such communications with the Epa concerning the Nitro 9 plant? 10 A No. 11 Q There's a reference to a treatment plant. Do you 12 see that? 13 A Yes. 14 Q Did you ever have any job responsibilities 15 regarding any treatment plant associated with the Nitro 16 plant? 17 A No. 18 Q Do you know whose responsibility that was? 19 A There was somebody on the plant manager's staff 20 who had that responsibility, but I don't remember who it 21 was. 22 Q If you look at the distribution list of this	Page 757 1 and then died about two weeks later. 2 Q I hope no correlation. 3 A Charlie Smith was somewhere in manufacturing 4 management or perhaps a business director at that time. I 5 don't remember, but he was at the general office. Gerry 6 Bratsch, I believe, was plant manager at Krummrich at that 7 time, although he later became director of manufacturing. 8 It could have been by this time. W. R. Robirds was kind of 9 manufacturing responsibility at the general office for the 10 ag division operations. Arnie Obel was business director 11 for rubber chemicals. 12 Howard Bergen was my boss, head of specialty 13 products. Dick Kozacka I believe at that time was -- had a 14 high-level position in the organic engineering department. 15 Harry Kilbourne I believe was in rubber chemicals research 16 at Acra. W. R. Richard was our research director in 17 specialty products. Howard Mitchell was in personnel, but 18 I don't know where. Des Hosmer was in manufacturing 19 management at the general office. Paul Edwards was 20 manufacturing manager for rubber chemicals. Al Heininger 21 was -- I don't know what his title was. But he had a 22 director level job associated with new business development
Page 756 1 document that's on page 3010, does looking at that refresh 2 your recollection as to who that would have been? 3 A It could have been Max Galloway, but I'm not 4 sure. 5 Q Can we do -- I'm sorry. 6 A Max Galloway, at least for some time, had some 7 pollution responsibilities at the Nitro plant, I believe, 8 but I can't say with any confidence that he would have been 9 in charge of the waste treatment plant. 10 Q Can we do this, and I'd like to just do this as 11 quickly as possible, and I think the quickest way would be 12 for you just to run down the list of names and describe for 13 me whether or not you know the people and what their job 14 duties were with Monsanto, if you know, in or about the 15 1975 time frame. 16 A H. H. Bible I believe is Harold Bible, was a vice 17 president of the corporation. I have no idea why he's 18 listed here. Jim Springgate was at that time with the 19 general office and I think was some kind of general manager 20 but I don't remember what division. F. J. Fitzgerald was a 21 vice president and was general manager of the division that 22 we were in. He eventually became president of the company	Page 758 1 at the general office. 2 John Smith was a manufacturing manager for 3 plasticizers. Bill Kuhn was a manufacturing manager, but I 4 don't remember in what area. I believe in 1975 he was ill 5 and had no direct responsibility, but was working when he 6 could. Hastings I think was in accounting. Bill Ratliff 7 was in accounting. They were both at the general office, I 8 believe. Cayard I believe was in the ag division, but I 9 don't remember what his job was. Howard Tippee was 10 involved in shipping and material handling at the general 11 office. Bill McGuire, plant manager. Jack Munie was plant 12 manager at Queeny. Bob Flint, I believe was plant manager 13 at Krummrich. 14 George Knollmeyer, I believe, was plant manager 15 at Delaware River, which is in New Jersey. Bill Merman, I 16 believe, was in Monsanto Canada at that time. I don't 17 remember what his job was. Vince Matteucci was in 18 manufacturing. I think he had a production responsibility 19 at Nitro at that time, but I don't remember what. I don't 20 recognize Schaefer. Scott, we talked about before. He 21 became plant manager I think at the time of this, this 22 writing he had some other kind of superintendent

Page 759 1 responsibility at Nitro. 2 J. T. Duggan is Jim Duggan, who at one time was at 3 Krummrich and another time at Nitro, but I don't know what 4 his job was at this time. Dave Tippey we talked about. 5 Q That's the Tippey that reported to you? 6 A Yes. 7 Q Go ahead. 8 A Hill Williams had some superintendent 9 responsibility at Nitro. He may have been running Tsd at 10 that time, but I'm not sure. I don't recognize Dodd. Bob 11 Howard had a technical job. I don't know what it was. 12 Max Galloway, I believe, was in Tsd doing pollution work. 13 Q R. L. Null, who was that? 14 A I don't know. 15 Mr. Brock: Off the record. 16 (Discussion off the record.) 17 By Mr. Brock: 18 Q Let's go to Exhibit 153 and the page that ends in 19 Bates number 024. Talking about environmental control 20 matters, that references " A pre-hearing conference to 21 discuss procedural matters of the Adjudicatory Hearing. " 22 Do you see that?	Page 761 1 Exhibit 154 that we're referring to. 2 There's a reference to Nitro environmental 3 group. Do you recall who was in that group at that point 4 in time? And you mentioned Max Galloway, but any other 5 people? 6 A That's the only one that I remember. 7 Q Did Max Galloway report to the plant manager? 8 A I don't think so. He was probably part of Tsd. 9 Q Do you know who he reported to? 10 A No. 11 Q And the reference to " Engineers low flow study of 12 the river, " does that refresh your recollection as to there 13 being a study going on at that time? 14 A No. 15 Q I take it you had no involvement or 16 responsibilities for that study? 17 A That's right. 18 Q And there's a reference to Epa -- or " The Epa has 19 identified certain parameters in our request for 20 adjudicatory hearings. " Do you see that? 21 A Yes. 22 Q Does that refresh your recollection as to any
Page 760 1 A Yes. 2 Q Do you recall there being any sort of hearing or 3 conference scheduled with the Epa concerning the operations 4 of the Nitro plant at this point in time? 5 A I don't remember it. 6 Q There's a reference to Resource Analysis, Inc. of 7 Cambridge, Massachusetts, do you see that? 8 A Yes. 9 Q Did you have any dealings with Resource Analysis? 10 A No. 11 Q Were you aware that Resource Analysis, Inc. had 12 been retained? 13 A I don't remember. 14 Q What is the " five man committee "? 15 A I don't know. 16 Q Were you aware that there was a Corps of 17 Engineers study going on of the Kanawha River at that point 18 in time? 19 A No. 20 Q Let's go to the next exhibit. Let's turn again 21 to the page concerning environmental control and that ends 22 in Bates number 040. Just for the record, this is	Page 762 1 adjudicatory hearings going on with the Epa? 2 A No. 3 Q Let's go to the next exhibit, Exhibit 155. Let's 4 go to the same page with the same subject, " environmental 5 control, " and it ends in Bates number 048. 6 A Okay. 7 Q There's a statement that " The Tall Oil plant 8 accounted for 968 pounds per day of Bod5. " Do you see 9 that? 10 A Yes. 11 Q What was Bod5, what does that refer to? 12 A We've previously discussed Bod as being an 13 analytical method for measuring organic loading in a waste 14 stream. Bod5 is a slightly more precise way of describing 15 that measurement. The 5 refers to five-day Bod, which is 16 the period of the test. It's five days. 17 Q And that measures the biological oxygen demand? 18 A Yes. 19 Q Within a five-day period? 20 A Yes. 21 Q There's a reference to a meeting with the West 22 Virginia Water Resources Division. Were you aware of

Page 763 1 meetings going on between Monsanto and the West Virginia 2 Water Resources Division concerning the Nitro operations at 3 that time? 4 A No. 5 Q Did you have any dealings -- strike that. 6 Did you have any involvement in either preparing 7 or the preparation of an Npdes permit for the Nitro plant 8 or Monsanto's compliance with such a permit? 9 A No. 10 Q I can see where this is going, but let's go to 11 the next exhibit. The environmental control page is the 12 page that ends in Bates number 056. And let me know when 13 you've had a chance to turn to that page. 14 A Yes. 15 Q Are you aware of an Epa river study about the 16 Nitro plant during that time frame? 17 A No. 18 Q Do you know what the " Air Pollution Control 19 Commission " refers to? 20 A No. 21 Q Were you aware of any odor compliance projects 22 involving the Nitro plant at that point in time?	Page 765 1 permit? 2 A No. 3 Q Did you have any involvement in the waste 4 treatment facilities expansion referenced? 5 A Not that I remember. 6 (Savage Exhibit 159 identified.) 7 By Mr. Brock: 8 Q I've marked as Exhibit 159 a document with Bates 9 numbers Nit 1066466 through 482. And Mr. Savage, once 10 you've had a chance to look through the document, could you 11 let me know. 12 (Witness reviewed the document.) 13 A Okay. 14 Q Is this a Nitro plant technical services progress 15 report sent to you and some others in the February 1970 16 time frame in connection with your employment with 17 Monsanto? 18 A Yes. 19 Q Do you recall there being a survey of wastes and 20 disposal methods in connection with the Nitro plant in the 21 early 1970s? 22 A The date of this report was the time I was still
Page 764 1 A No. We didn't have any in the paper chemicals 2 operation. 3 Q So that would have been -- you believe that would 4 have been some other part of the Nitro plant? 5 A I presume so. 6 Q Let's go to the next exhibit. The environment 7 control page is the page that ends in Bates number 064. 8 And again, do you recall there being a six-day river study 9 made of the plant by the Epa? 10 A No. 11 Q Do you know what the emergency H2s flare was? 12 A No. I remember the plant had a flare, but I 13 don't know anything about it. 14 Q Do you recall there being visits by the Epa and 15 the state to inspect air pollution equipment? 16 A No. 17 Q Let's go to the next one, and the environmental 18 control page is the page that ends in Bates number 087. 19 And this is exhibit -- for the record this is Exhibit 158. 20 There's a reference to " Final details of the Npdes permit 21 had been resolved. " Do you know -- are you familiar with 22 the resolution of those -- of the issues pertaining to that	Page 766 1 at the Queeny plant, and I would receive copies of all 2 reports from the technical service department at other 3 plants. So I wouldn't have had any reason to pay 4 particular attention to this report. 5 Q You're saying you were not personally involved -- 6 A That's right. 7 Q -- in these matters? 8 A That's right. 9 Q Do you recall ever being personally involved in a 10 survey or investigation of wastes and disposal methods at 11 the Nitro plant? 12 A No. 13 Q In connection with your duties as manufacturing 14 manager, did you undertake to learn what the wastes and 15 disposal methods were at the Nitro plant? 16 A I would assume that I learned some general idea 17 about it, but I don't remember it. 18 Q Do you recall what, if anything, you may have 19 done to get a general idea about those matters? 20 A No. 21 Q Who was W. D. Spoede, S-p-o-e-d-e? 22 A Where do you see that?

Page 767 1 Q It says " reported by. " 2 A Oh, I don't know. 3 Q Can you identify who the people are under the 4 Nitro plant category? And I think we've already talked 5 about Dodd, Scott and Galloway. 6 A Milke, I believe, was in the maintenance 7 department. Wally Kellogg was in Tsd, Vern Rhodes, I 8 believe was -- well, at one time he was a Tsd engineer and 9 another time he was a production supervisor in tall oil, 10 and I don't know which of those he might have been at the 11 time that this was written. Those are the only additional 12 ones I can identify. 13 Q You don't know who B. J. McGuire was -- or B. G. ? 14 A Yeah, that was Billy McGuire, the plant manager. 15 Q The summary on this page talks about " open pit 16 burning, dumping in waste liquid storage ponds, 17 incineration, and dumping in solid waste dump. " Are you 18 familiar with any open pit burning at the Nitro plant? 19 A No, I don't remember that. 20 Q What about dumping in waste liquid storage ponds? 21 A I don't remember that. 22 Q And incineration?	Page 769 1 project or a progress report from -- issued by technical 2 services at one of the plants, that would be circulated to 3 all technical service personnel? 4 A No, a copy would be sent to each of the plant 5 technical service superintendents and if it appeared to 6 have any relevance that would be of interest to somebody 7 else in the department, I, for instance, might pass it on. 8 Q Did this have any relevance to your job duties in 9 your -- in the 1967 time frame other than that you were the 10 Tsd superintendent? 11 A No, not that I can recall. 12 Q Let me run down some of these names again. Are 13 you familiar with a J. E. Springgate? 14 A Yes, I know Jim Springgate. At one time he was 15 plant manager at Nitro and later on he was business 16 director in rubber chemicals and still later he was in 17 Monsanto Electronic Materials Company. I think he was 18 president. I'm not sure what his job was in 1967, but the 19 fact that he's listed here indicates he was probably -- 20 that was probably the time when he was plant manager at 21 Nitro. 22 Q Okay, Kellogg and Dodd we've talked about. Who
Page 768 1 A No. 2 Q The reference to " solid waste dump, " do you know 3 what that refers to? 4 A No. 5 (Savage Exhibit 160 identified.) 6 By Mr. Brock: 7 Q I've marked as Exhibit 160 a document with Bates 8 numbers Nit 1066680 through 686. 9 Mr. Savage, I'll begin by asking whether this is 10 a Nitro plant technical services progress report directed 11 to you and some others within Monsanto in the September 12 1967 time frame? 13 A Yes. 14 Q Do you recall whether this was during the period 15 that you were at the Krummrich plant or -- 16 A No, I was at Queeny. 17 Q Did you have any responsibilities with respect to 18 determining the time, place and amount of isopropanol 19 losses in connection with the Nitro plant at that time? 20 A No, this was just a routine copy sent to me 21 because I was general superintendent at Queeny. 22 Q Was the general practice to, when there was a	Page 770 1 was J. D. Garrison? 2 A Jack Garrison was in maintenance. 3 Q Do you know what his position was in maintenance? 4 A No. 5 Q Who was W. E. Lynch? 6 A I don't know. 7 Q Who was J. E. Bishop? 8 A I don't know. 9 Q S. J. Stewart? 10 A I don't know. 11 Q What about K. E. Smith, R. L. Sparks or T. R. Boch? 12 A I don't recognize any of those. 13 Q Who was W. J. Wilson? He's on the right-hand 14 column under you. 15 A Bill Wilson at that time was general 16 superintendent of technical services at the Krummrich 17 plant. 18 Q And Fuhrmeister was at the Anniston plant ; is 19 that right? 20 A Yes. 21 (Savage Exhibit 161 identified.) 22 By Mr. Brock:

Page 771 1 Q I've marked as Exhibit 161 a document with Bates 2 numbers Nit 1024129 through 148. 3 Mr. Savage, do you see your name listed as a copy 4 recipient of this document? 5 A Yes. 6 Q And this was during the time that you were 7 manufacturing manager ; is that correct? 8 A That's right. 9 Q For the record, the date of the document is July 10 30, 1974. Do you recall there being a project to eliminate 11 river pollution from tall oil operations at the Nitro 12 plant? 13 A This project, yes, this project looks familiar. 14 Q Can you tell me what you recall about this 15 project? 16 A Just in general terms that the use of direct 17 contact water was a route for some pollution to go to the 18 wastewater and therefore modification was made so that 19 direct contact water would not be used on a once-through 20 basis. 21 Q When you use the term " direct contact water, " 22 what does that mean?	Page 773 1 worked for Hill for the last several years, I recognize his 2 handwriting. 3 Q What was his job duty at that time, his position? 4 A I think he was the head of Tsd, but I'm not sure 5 about that. 6 Q If you turn to the second page of the document, 7 which has a Bates number -- that ends in 130, under the 8 heading of " Pollution Problem " it states " The present Tall 9 Oil discharge averages about 750 pounds per day Bod5 and 10 about 1500 pounds per day total organic carbon. " Do you 11 see that? 12 A Yes. 13 Q Then it references a table I in appendix li and 14 that appears on the page that ends in Bates number 141, I 15 believe, yes. 16 A Where's the numbers? 17 Q At the bottom of the page. 18 A Oh, there it is in the middle. 19 Q The microfilm number is 151. 20 A Okay. 21 Q And that also references a total organic carbon, 22 do you see that?
Page 772 1 A Most of the time heat exchange, heat transfer is 2 accomplished in a chemical plant in an indirect way where a 3 coolant like water will be on one side of a surface and a 4 stream to be cooled will be on the other side of the 5 surface, like the inside and outside of a tube. A direct 6 contact implies that the cooling water is directly 7 contacted with a warm stream to cool it off. What's spoken 8 of here is jet losses. Jet in this context means a vacuum 9 jet driven by steam and it was fairly common practice to 10 use something called a barometric condenser which would be 11 a device for condensing the steam and the jet exhaust. 12 Q The reference to river pollution, do you have an 13 understanding as to what river was being polluted, is that 14 the Kanawha River? 15 A Yes. 16 Q The handwriting up in the top right-hand corner 17 where it says " File-tall Oil, " do you recognize that 18 handwriting? 19 A It looks like Hill Williams's handwriting. 20 Q I also see his name is circled. What was his 21 responsibility at that time? 22 A That leads me to think about Hill, but since I've	Page 774 1 A Yes. 2 Q The reference to total organic carbon, what is 3 that? 4 A That's another way of measuring the organic 5 loading in a stream. It's a little broader measurement 6 than Bod in that Bod only measures that part of the organic 7 carbon that's biodegradable. 8 Q How was this organic carbon generated from the 9 tall oil operations? 10 A I don't remember the process broadly enough to 11 answer that. The immediate subject of this report on jet 12 losses are one path that I don't remember enough about the 13 process to describe it any other ways there might be. 14 Q Can you describe for me the path involving the 15 jet losses that would lead to the discharge of organic 16 carbon from the tall oil operations? 17 A Well, the use of direct cooling, direct contact 18 cooling in a barometric condenser would result in a stream 19 leaving the barometric condenser that contained any organic 20 material that was in the vapor, the vacuum vapor stream 21 going to the jet, and the usual way of handling that direct 22 contact with cooling water was to handle it -- was to use

Page 775 1 it one time and discharge it to the sewer. 2 Q And the sewer, I take it, went from the tall oil 3 operations to the Kanawha River? 4 A I don't remember the details. I believe that 5 went through a waste treatment plant on the way to the 6 river, but eventually reached the river. 7 Q So the organic carbon in that waste stream, did 8 that consist of materials dissolved in the water -- strike 9 that. 10 In what form was that organic carbon discharged 11 from the tall oil operations? 12 A I don't know. I don't remember whether those 13 materials were soluble in water or not. 14 Q Let's go to the last page of the exhibit, the 15 page that ends in Bates number 148. That talks about 16 questions and comments brought out during something called 17 the first scope review meeting. Do you see that? 18 A Yes. 19 Q Do you know the answers to these questions? And 20 maybe it might be -- the quickest way to do it would just 21 say number 1, yes or no, and if you know an answer, tell 22 me.	Page 777 1 Q What about J. L. Trauth, T-r-a-u-t-h? 2 A I don't know. 3 (Savage Exhibit 162 identified.) 4 By Mr. Brock: 5 Q I've marked as Exhibit 162 a document with Bates 6 numbers Nit 1066939 through 952. 7 Mr. Savage, could you let me know when you've had 8 a chance to look through the document. 9 (Witness reviewed the document.) 10 A Okay. 11 Q Is this a copy of a November 1971 Nitro plant 12 technical services progress report directed to you and some 13 others in connection with your employment with Monsanto? 14 A Yes. 15 Q Do you recall there being an investigation of the 16 use of a skimming pond in connection with tall oil water 17 pollution abatement for the Nitro plant in the early 1970s? 18 A No. 19 Q There's a reference in the paragraph under the 20 summary where it states " it was decided that a skimming 21 pond would be the most economical ' medium ' term solution to 22 Tall Oil water pollution abatement. " Do you recall there
Page 776 1 A I don't know the answers to any of these. These 2 are detailed questions about the operation of the proposed 3 project. I don't know the answer to any of these. 4 Q Going to number 13, do you recall any efforts at 5 chlorination of pond water in connection with pollution 6 abatement or pollution control efforts? 7 A No, I don't know what that's about. 8 Q Let's stay on the exhibit for one second. The 9 names on the first page, again, under the heading of " Nitro 10 plant, " who was C. G. Weber? 11 A I'm not sure. I think that may be Chuck Weber, 12 who I think was a mechanical engineer. 13 Q And who was M. L. Hutchison? 14 A I don't know. 15 Q P. M. Dunnivant? 16 A I don't know. 17 Q What about J. P. Hyland, J. E. Allison or G. P. 18 Russell? 19 A I don't know. 20 Q Who was D. R. Eagleson? His name appears under 21 yours. 22 A I don't know.	Page 778 1 being any discussion of longer and shorter term methods of 2 dealing with the subject of water pollution abatement for 3 the tall oil operations? 4 A No. 5 Q Let's go to the page that ends in Bates number 6 941. There's a category with lii of " Alternate Pond 7 Locations. " Do you see that? 8 A Yes. 9 Q Do you recall there being any consideration of 10 alternatives with respect to where ponds could be located 11 to minimize pollution at the Nitro plant? 12 A No. 13 Q I take it you don't recall having any personal 14 involvement in this project? 15 A No. 16 Q Do you know whether this was during the time you 17 were a manufacturing manager? 18 A Yes, yes, it was. 19 Q Let's go through some of these names again. Who 20 was F. J. Helmer? He's in the " reported " byline. 21 A Yes, Frank Helmer was a group leader or 22 supervising engineer in Tsd in the Nitro plant.

Page 779 1 Q If you could quickly go through the names on the 2 second column under Nitro plant, excluding Mr. Tippey. 3 A R. E. Lindemann is Ralph Lindemann. He later 4 transferred to the general office and may still work for 5 Monsanto. I don't know for sure. That's the only one of 6 those names that I can shed any light on. 7 Q Do you recall there being skimming ponds 8 installed at the Nitro plant? 9 A No. 10 Q Does this refresh your recollection at all as to 11 there being concerns about pollution from the Nitro plant 12 during the time that you were manufacturing manager? I 13 mean, in your review of all the documents that we've seen? 14 A I think it was a matter of general knowledge that 15 there were some pollution problems at the Nitro plant. 16 This doesn't -- specifics of these reports don't add 17 anything to my understanding of that. 18 Q Do you recall what the nature of your general 19 knowledge was concerning pollution problems there during 20 the time you were manufacturing manager? 21 A No. I just knew that they had a pollution group 22 and that they had a number of things they were working on.	Page 781 1 examining the economics, for one thing. 2 Q What does that mean? 3 A Meaning that in studying the process looking for 4 potential reduced cost, any unnecessary raw material 5 consumption represented an opportunity for cost reduction. 6 Q You mentioned that there was a realization that 7 the operations were not perfect. During your tenure with 8 Monsanto, was there ever an operation that was perfect in 9 the sense that you used the word " perfect, " meaning that 10 there was 100 percent conversion of raw materials to final 11 product? 12 A You might argue that something like Mersize 13 satisfied that definition. It was not a very elegant 14 operation, but since everything that came out the reactor 15 went into the tank car, in that sense there wasn't any real 16 loss. 17 Q Any others? 18 A I think it was a general feature of the processes 19 I can remember that they ran it at less than 100 percent of 20 their yield. 21 Q Are you familiar with the discharge of water 22 vapor from neutralizers in the Mersize operations at the
Page 780 1 Q By that time did you have any understanding that 2 pollution was a normal aspect of the operation of 3 Monsanto's plants? 4 A I'm not sure I understand that. 5 Mr. Burnett: I object to the question. 6 By Mr. Brock: 7 Q By that time did you have the expectation that 8 there would be some type of pollution from the operations 9 of Monsanto's manufacturing plants? 10 A I think the potential for pollution is something 11 that I understood to be present from the beginning of my 12 time with Monsanto. By this time in 1971 we had become 13 more sensitive to the consequences of pollution. 14 Q Okay, what makes you say that you had the 15 realization from the time you started with Monsanto that 16 Monsanto's operations presented the potential for 17 pollution? 18 A Well, it was evident in the examination of any 19 process that the processes weren't perfect, that not all 20 the raw material wound up in the product and that the 21 difference could be accounted for by various losses that 22 went to water or land. It was a natural consequence of	Page 782 1 Nitro plant? 2 A No. 3 Q Do you recall having any involvement in 4 generating or approving of standard manufacturing processes 5 for the Mersize operations at the Nitro plant in the early 6 1970s? 7 A I think I may have had approval responsibility 8 for standard manufacturing processes at that time. 9 Q Do you recall what, if anything, you did in 10 connection with those approval responsibilities? 11 A I got dozens of standard manufacturing processes 12 from various plants to approve so I would usually look at 13 them to try to be confident that they were reasonably 14 complete. But I would not be able to make a judgment as to 15 whether they were correct in detail. 16 Mr. Brock: Off the record. 17 (Discussion off the record.) 18 (Savage Exhibit 163 identified.) 19 By Mr. Brock: 20 Q I have marked as Exhibit 163 a September 11, 1967 21 document with Bates numbers Nit 1090397 through 436. 22 After you look through the document briefly,

Page 783 1 Mr. Savage, could you tell me whether you recognize this 2 document at all. 3 (Witness reviewed the document.) 4 A It appears to be a fairly typical process 5 improvement plan, but I don't recall having had anything to 6 do with these products. 7 Q You mean thiofide and -- 8 A Thimor. I believe those were rubber chemicals. 9 Q So during your tenure with Monsanto you don't 10 recall having any responsibilities with regard to these 11 products? 12 A No. 13 Q Do you recall having any responsibilities 14 regarding 2,4,5-t operations at the Nitro plant? 15 A No. 16 Q Do you have an understanding as to why -- or any 17 reasons why Nitro technical services progress reports would 18 have been forwarded to you in the June of 1968 time frame 19 regarding the 2,4,5-t operations? And if you'd like, I'd 20 be happy to show you a document, but I was just trying to 21 shortcut it. 22 A No, that would have just been the routine because	Page 785 1 company -- of the companies that any such persons 2 represented? 3 A I think it may have been Liberty Mutual. 4 Mr. Burnett: I have nothing further. 5 Examination 6 By Mr. Brock: 7 Q Do you know who it was, if anybody, who visited 8 the Monsanto plants from Liberty Mutual? 9 A Well, they were inspectors who came in on a 10 periodic basis once a year or once every two years to look 11 at such things as fire protection facilities and the like, 12 and they would make useful recommendations at the end of 13 their visit. 14 Q Do you know whether those representatives were 15 from Liberty Mutual or not? 16 A That's a name that I remember, but I can't be 17 sure. 18 Q So you might be recalling the name Liberty Mutual 19 from some other context? 20 A It could be. Insurance companies are pretty 21 well-known names. 22 Q And you don't recall the names of any of these
Page 784 1 I had Queeny Tsd and we exchanged reports. 2 Q Did you ever have any involvement that you recall 3 in evaluating incinerator needs with respect to wastes to 4 be disposed of from the Nitro plant? 5 A No. 6 Q Mr. Savage, do you have an understanding as to 7 whether you will be asked to testify as a witness at the 8 trial of the lawsuit between Monsanto and its insurance 9 companies? 10 A That's never been mentioned to me. 11 Q If Monsanto asked you to be a witness, do you 12 believe that you would be available to testify at such a 13 trial in Wilmington? 14 A I think so. 15 Mr. Brock: I don't have any further questions. 16 Examination 17 By Mr. Burnett: 18 Q Mr. Savage, do you have any knowledge as to 19 whether representatives of insurance companies ever visited 20 the Anniston or Krummrich plants? 21 A Yes, I think they did. 22 Q Do you recall the names of any such insurance	Page 786 1 people who came to visit the Monsanto plants? 2 A No. There were usually two or three people and 3 they would usually stay for about a week at the big plants. 4 Q What plants do you recall the people coming to 5 see? 6 A Queeny, Krummrich, I think Anniston, but I'm less 7 certain about that. 8 Q What time frame did the people come to the Queeny 9 plant? 10 A During the time that I was on the plant manager 11 staff, which would have been the late ' 60s. 12 Q And what about Krummrich, what time frame did 13 they come? 14 A When I was at Krummrich. 15 Q And that was 1963 to 1967, that time frame? 16 A Yes. 17 Q And what about the Anniston plant? 18 A I don't know. 19 Q Did you meet or speak with those people? 20 A I remember doing so at Queeny. 21 Q What did your dealings with them consist of? 22 A Well, at the end of their visit they would meet

Page 787 1 with the plant manager's staff and give their general 2 impressions and I would attend those meetings. 3 Q Do you recall any subject of waste disposal 4 coming up during those meetings? 5 A I don't remember. 6 Q Do you recall whether those -- you used the term 7 " inspections "; I'm going to use the term " visits. " Do you 8 recall whether those visits were geared towards primarily 9 workers ' compensation matters? 10 A I don't remember that as the thrust of those 11 visits. 12 Q Do you remember anything that they addressed 13 other than fire protection? 14 A Yes. Things like inspections of pressure 15 vessels, boilers. 16 Q Do you know whether these -- strike that. 17 Were these people employees of an insurance 18 company? 19 A That's my recollection. 20 Q But you're not sure? 21 A Possibly a group of insurance companies, I don't 22 know.	Page 789 1 A If there was something they wanted to see, they 2 saw it. 3 Q And how do you come to that understanding, 4 through personal knowledge? 5 A The way I remember it, and I remember it clearly 6 only with respect to the Queeny plant, was that Jack Munie, 7 the plant manager, would discuss such a visit before it 8 took place and he took the position that we should view 9 their visit as an opportunity to learn something and should 10 give them access to what they wanted to see. 11 Q Were you privy to any discussions between 12 Monsanto and the people associated with the insurance 13 company or companies as to what areas of Monsanto's plants 14 they would see? 15 A No. 16 Q Were requests from the insurance company people 17 to see any areas of the plants that you were associated 18 with, were those directed to you? 19 A No. 20 Q So you don't know what areas they would have 21 wanted to see? 22 A No.
Page 788 1 Q But you're not sure? 2 A No, I'm not sure. 3 Q Do you know whether they were associated with any 4 companies that issued boiler and machinery insurance to 5 Monsanto? 6 A I don't know. 7 Q Do you know who determined where at the Monsanto 8 plants these people would visit? 9 A No. 10 Q Did you ever go around on one of the visits with 11 any of these people? 12 A I don't remember doing so. 13 Q Was it generally Monsanto's policy not to let 14 people from outside roam around its plants? 15 A Certainly. 16 Q And do you have any knowledge that Monsanto made 17 an exception for these people and let these people roam 18 around its plants? 19 A I recall that they were given a reasonably free 20 hand, but I can't tell you anything specific. 21 Q When you say " reasonably free hand, " what do you 22 mean?	Page 790 1 Q Meaning my statement is correct? 2 A That's correct. 3 Q Other than fire protection matters and boilers, 4 are you aware of any other matters that the people 5 associated with an insurance company or companies expressed 6 an interest in seeing? 7 A Pressure vessels in addition to boilers, but 8 that's all I remember. 9 Mr. Brock: I don't have anything further. 10 Mr. Burnett: I have nothing further. I will 11 designate the deposition and the exhibits to it as 12 confidential pursuant to the protective order in this 13 action. 14 (Whereupon, at 2: 40 p. m. , the deposition was 15 concluded.) 16 ----- 17 James R. Savage

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