



State of Ohio Environmental Protection Agency

**Southwest District Office**

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Ted Strickland, Governor  
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March 5, 2009

Ronald Murawski  
U.S. EPA, Region V  
77 West Jackson Blvd (SR-6J)  
Chicago, IL 60604-3590

**RE: TREMONT CITY BARREL FILL SITE**  
**Email from Jerome Maynard dated February 5, 2009**  
**Bulk Waste Disposal at Barrel Fill**

Dear Mr. Murawski:

Ohio EPA has reviewed the February 5, 2009 email<sup>1</sup> and attachments sent by Jerome Maynard on behalf of Responsible Environmental Solutions Alliance (RESA), the PRP group responding to EPA's RI/FS orders for the Tremont City Barrel Fill site. Mr. Maynard asserts in his email that Ohio EPA misspoke during a December 18, 2008 conference call regarding bulk waste disposal practices at the Barrel Fill. Mr. Maynard's email was accompanied by two attachments: 1) Summary of Cell Reports and Cell Logs; and 2) the deposition of a former employee of the Barrel Fill, Wade Nelson Wallis. This letter responds to these issues and provides additional information on the disposal of bulk waste at the Barrel Fill as documented in Ohio EPA's correspondence files and/or in depositions included in Appendix U of the RI Report.

Mr. Maynard's email discusses the disposal of sludges from oil recovery operations conducted at the Former Waste Transfer Facility based on the deposition of Wade Nelson Wallis.<sup>2</sup> The Wallis deposition and several others are included in Appendix U of the RI Report. On page 93 of this deposition, Mr. Wallis describes these sludges as "heavy gray mud...Mostly it was dirt, floor sweepings from factories. Some of it would have been finely divided carbon from motor operations, bits of metal from bearings and machinery that the oil was in. A small amount of oil would remain in it and some water."

Regarding the quantity of this waste, when asked on page 94 of the deposition if it would amount to thousands of gallons on a cell report, Mr. Wallis responded "I would think in the hundreds. I can't imagine it getting into thousands of gallons. The tank -- the treatment tanks would only hold about four thousand gallons so -- and it was a small percentage of that, so I don't think you would get into the thousands of gallons off that."

<sup>1</sup> See Attachment 1

<sup>2</sup> See Attachment 1, Deposition of Wade Nelson Wallis, December 16, 2005, pages 58 through 61.

The Summary of Cell Reports and Cell Logs (Summary) included as an attachment to Mr. Maynard's email includes an entry for "42 pallets of paint sludge" for cell G-6, along with a notation stating that this was bulk waste. Mr. Wallis is questioned regarding these same pallets on page 110-111 of his deposition:

"Q. But if you see on the first page which is a cell report for cell G-6, the first item listed is PPG Industries, pallets, parentheses, looks like it says paint sludge or PT, period, sludge, and then it says forty-two pallets. What do you think that indicates?"

"A. Sloppy recordkeeping."

"Q. Was sloppy recordkeeping typical at that site?"

"A. No. This particular cell report does not look typical of what you would expect to have seen there. Certainly it would have had to have -- whatever that material was, if it was any kind of sludge, it had to have been in some sort of a container to be on a pallet so whether they had three or four drums sitting on a pallet and rather than record hey, I put four drums in of this material, they just wrote down how many pallets they put in."

"Q. How many drums would fit on one pallet?"

"A. You can put four drums on a possible."

"Q. So does forty-two pallets indicate to you that it would have been forty-two times four, the number of drums?"

"A. That's what I would have expected, yes."

The Summary also lists 120 cubic yards of still bottoms disposed of in cell 2-B. In a June 22, 1977 IOC from Joe Moore, Ohio EPA Southwest District Office, to Bob Brown, Ohio EPA Central Office, Mr. Moore notes:

"I have reviewed Mr. Wright's monthly reports of materials disposed on the site. They are in agreement except for one item - WOO56 Systech Still Bottoms 120 cu yds. This material was disposed bulk in Cell B-2. What is the status of this material? Is it acceptable for disposal in the chemical landfill? Please contact Mr. Wright directly if you need further specific information about the waste - (513) 969-8346."<sup>3</sup>

While there is not a response to Mr. Moore in the file, Mr. Wallis, a former employee of Systech, addresses still bottoms on page 84 of his deposition:

"Q. Getting back to this solvent recovery process, what kind of container would the stillbottoms be in at the end of that process?"

"A. They could either be drummed or it could have been done in bulk. Typically the - at that time most of the people who were recovering solvents would have drawn the still bottoms out."

"Q. Why do you say that?"

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<sup>3</sup> See Attachment 3, Ohio EPA 1977 Correspondence File

"A. Because it's a small part of the total and when they cleaned out the still it's easier to dump it into it -- it's typically a sticky, gooey, chewing gum material and it's a lot easier to rake that out into a drum than do anything else with it."

"Q. Do you remember any of that material, stillbottoms, coming into the site in anything other than drums?"

"A. I don't even remember any of it coming in when I was there."

The Summary also contains two listings of still bottoms in boxes. The deposition of Clyde Hill, a chemist hired by IWD Liquid Waste to assist them in expanding their operations at the Tremont site, is included in Appendix U of the RI Report.<sup>4</sup> Mr. Hill was present during the initiation of operations at the Barrel Fill, and observed disposal practices employed for the first several waste cells, some of which were not continued in subsequent cells. Mr. Hill was the on-site chemist responsible for testing wastes received at the Tremont site (which included the Waste Transfer Facility) to determine its ultimate disposition. A subset of this waste was disposed of in the Barrel fill. Mr. Hill was questioned on the subject of stillbottoms from Systech in boxes. From pages 90-92 of Mr. Hill's deposition:

"Q. Was there anything that you got from Systech that went into the barrellfill?"

"A. Paint sludge when they were -- from their solvent reclamation process. They distilled the solvents out of the paint sludge and then we would water paint sludge. That's the only thing I remember in barrels."

"Q. Is that what would be referred to as stillbottoms?"

"A. Yes, that's the sludge that come out of the still."

"Q. Did that ever come in barrels?"

"A. Yes."

"Q. Do you remember it ever coming in anything that would be recorded as a box on the cell log?"

"A. I don't know, unless they figured out -- later on figured out a way of driving it out where they could get the mostly just dry sludge. It was little -- had some water in it, but if they got -- if you do a real good job, then you opened up the bottom of the still and you get this big glob of goo out of there."

"Q. Do you remember any other generator of stillbottoms besides Systech?"

"A. No, I don't remember anybody else reclaiming anything."

"Q. Do you remember how often you would get Systech stillbottoms?"

"A. No, because they would kind of save it up until they had a bunch of it or something. That way they cut their costs so you made one trip and picked up the whole batch out of there."

"Q. So each time it was picked up from Systech, about how much was in that load, if you remember?"

"A. It was -- I can't remember if they did it with the semi trailer truck or the small state bed truck about half as big as I -- I don't think it was a huge quantity. Came from the Franklin plant where they had the still and they would steam distill the

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<sup>4</sup> See Attachment 4, Deposition of Clyde Hill

sludge or solids, waste solids, and you would get all the paint, the dried paint and everything. It was pretty inert."

"Q. Was there more than one occasion when stillbottoms were picked up from Systech and brought to Tremont?"

"A. I think so."

"Q. You think it was more than five times while you were there?"

"A. Oh, no."

"Q. It was less than five times?"

"A. Yes."

Ohio EPA has not verified the remainder of the information provided in the Summary of Cell Reports and Cell Logs, and does not dispute that this information was gathered from cell reports and cell logs. Ohio EPA correspondence files (attached) document the types of bulk waste initially approved for disposal at the Barrel Fill and as operations progressed.<sup>5</sup>

Lastly, Mr. Maynard asserts in his email that Ohio EPA statements made during the December 18, 2008 conference call "mischaracterized the operational history or were in plain error." Ohio EPA discussed disposal of bulk polyol waste in the first two cells and mentioned that asbestos was permitted to be disposed of as a bulk waste. These statements were made based on the recollection of the deposition of Clyde Hill. From page 38 of the Hill deposition:

"Q. So would they pour the polyol along the edges so it wasn't actually on top of the drum?"

"A. Oh, yeah, it would flow. Usually get -- I imagine it came pretty much over -- Some of the polyol was almost set up and --

"Q. Do you mean almost solidified?"

"A. It was real thick and wouldn't flow very good.

"Q. Was this done with the polyol from the very first cell?"

"A. Yes.

"Q. Was it done with every cell?"

"A. Two of them I know.

"Q. Do you know which two?"

"A. The first two. In the northwest corner was the first cell and the then the next cell was right next to it. Here, I can show you on that picture."

From pages 61-64 of Mr. Hill's deposition:

"Q. Now, you had testified earlier that polyol was poured in there around the edges of the drums in the first two cells?"

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<sup>5</sup> See Attachments 2 and 3, Ohio EPA Correspondence files, 1976-1977

"A. Now, wait. I think the second cell they might have had some rusty paint sludge drums that they took the lid off and dumped because the drum had been setting around and was rusting out and wasn't, you know, couldn't do much with it."

"Q. So they took the lid off and poured the content of the drums directly into the cell?"

"A. Yes."

"Q. How many drums were there if you can estimate? Was it more than –"

"A. I would say probably eighty drums maybe because there was two truckloads that they picked up, Stolle Corporation."

"Q. And did all of those eighty drums go into the same cell?"

"A. As far as I know."

"Q. And your recollection of the rusty drums were the lids were taken off, would that have been all eighty or all of the rusty drums or just some of them?"

"A. It was most of them because the bottom of the drum, a lot of them when you started to go like that (indicating), you didn't have to take the lid off."

"Q. It just fell apart?"

"A. That's right. And went down in the cell."

"Q. So they just let the contents pour directly into the cell?"

"A. Yeah."

"Q. Do you know if that ever happened at any other times with paint sludge?"

"A. I don't remember another batch being that bad."

The reason Ohio EPA discussed the disposal practices of the first two cells during the December 18, 2008 call was that between the cell reports, logs, and Mr. Hill's eyewitness account, it is perhaps the best documented account of the disposal of bulk waste at the Barrel Fill. Mr. Maynard's email refers only to the Wallis deposition, but Mr. Wallis worked at the end of the operating life of the Barrel Fill and apparently was not directly involved in any bulk waste disposal. From page 71 of his deposition:

"Q. Do you have any memory of any material being disposed of in bulk form in order to use up any remaining free space in the cells after the drums were placed in there?"

"A. As I remember, the permit allowed for sludges to be placed around the drums but I don't remember during the time that I was there that we actually did that."

Finally, Mr. Maynard's email concludes:

"Based on the records referred to above and Mr. Wallis' sworn testimony, uncontainerized industrial wastes consisting of sludges which are mostly liquid in nature were disposed of in most if not all of the Barrel Fill Landfill cells during operations in 1977 through the end of 1979. Based upon the presence of liquid uncontainerized industrial wastes in many of the cells over 28 years ago, empirical data indicates that the tills prevent migration of liquids from the cells very effectively."

Mr. Ron Murawski, U.S. EPA Region 5

March 5, 2009

Page 6 of 6

Ohio EPA's correspondence files, the depositions of past employees, the type of bulk waste permitted for disposal at the Barrel Fill, and the test pit investigations conducted during the RI do not support Mr. Maynard's conclusion that the bulk wastes were "sludges which are mostly liquid in nature" or "liquid industrial waste." They are documented as gels and sludges, not liquids. They will not flow into the liquid waste extraction sumps proposed in Alternative 7 of the FS Addendum.

It is noted that RESA has previously tried to characterize water table cell water as bulk liquid industrial waste, performing flawed qualitative evaluations if that were actually the case.<sup>6</sup> It would appear from the concluding statement in Mr. Maynard's email that this continues to be RESA's approach, only this time it's the bulk waste which is mischaracterized as liquid industrial waste and not the cell water.

Please feel free to call me at (937) 285-6059 if you have any questions or if we can be of any further assistance.

Sincerely,



Mark V. Allen

Division of Emergency and Remedial Response

Cc: via email only

Kelly Kaletsky, SWDODERR  
Joan Tanaka, U.S. EPA Region 5  
Diana Embil, U.S. EPA Region 5  
Bob Kay, U.S. EPA Region 5  
David Reisman, U.S. EPA ORD  
Ed Barth, U.S. EPA ORD  
Jewel Keiser, CH2M Hill

Attachments

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<sup>6</sup> "The problem with RESA's analysis is that the drums have not yet released their contents. The concentrations of contaminants detected in the drums from test pit 3 are orders of magnitude higher than concentrations detected in the test pit 3 cell water. This issue of Barrel Fill wastes increasing the permeability of the till as they are released over time remains to be addressed." Page 5, Ohio EPA February 4, 2008 Review Comments, Feasibility Study, Tremont City Barrel Fill Site, Clark County, German Township, Ohio, November, 2007

**Mark Allen**

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**From:** "Maynard, Jerome"  
**To:** ,  
**Date:** Thursday, February 05, 2009 11:56 AM  
**CC:** "Mark Allen" , "Kelly Kaletsky" , , "Salinas, Sharon" , ,  
**Attachments:** "Mark Allen" , "Kelly Kaletsky" , , "Salinas, Sharon" , ,

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Diana and Ron:

RESA wants to correct the record regarding waste disposal at the Tremont City Barrel Fill Site. During our meeting on December 18, 2008, attended by some participants by phone, statements were made by OEPA regarding the operational history of the Barrel Fill Landfill. RESA has confirmed by review of the records, including witness deposition transcripts, that some of those statements mischaracterized the operational history or were in plain error. RESA wants to ensure that all decisions made in this matter are based upon the facts, scientific data and best evidence.

Regarding disposal of uncontainerized or bulk wastes in the cells with the barrels, aka containerized waste, the statement was made that at most only a very few of the Barrel Fill Landfill cells received uncontainerized wastes and that the disposal of such wastes ceased soon after operations began. In fact, two separate and independent sources indicate that large quantities of uncontainerized wastes were disposed of in most if not all cells throughout the operational history of the Barrel Fill Landfill.

First, the Site operational records document disposal of uncontainerized wastes received from customers in 16 cells in 1977. Attached is a spread sheet prepared by H&A that summarizes the recorded uncontainerized waste that was disposed of in the cells. This spreadsheet was prepared from the copies of the original cell reports and logs as prepared by the operator at the time the cells were filled with wastes. Summaries of those cell reports and logs were included as Appendix B to the RI Report. As with all records at the Barrel Fill Landfill, the records are detailed and specific. They indicated that over 300,000 gallons of such wastes were disposed of in 16 of the cells as noted in the records. Those records indicate that such disposal began in April, 1977 and continued throughout 1977. These records are for uncontainerized wastes, primarily sludges, that the site operator received from customers.

In addition, the deposition testimony of Waid Nelson Wallis who worked in a supervisory capacity at the Barrel Fill Landfill for IWD Chemical during most of 1979 and into early 1980 confirms that unrecorded sludges also were disposed of in many of the cells. Mr. Wallis was probably the most lucid and credible of the several former Barrel Fill Landfill employees whom we deposed. He clearly states that during the entire time he worked there, and to his knowledge prior to that, IWD disposed of sludges in the Barrel Fill Landfill from its oil recovery operation located on what is now referred to as the waste transfer station. Please see pp. 89-95 of the attached deposition transcript of Mr. Wallis' testimony. These were wastes that were generated internally by IWD operations rather than being received from IWD customers. We have found no records of the quantity or quality of these wastes, but Mr. Wallis' testimony is uncontroverted.

Based on the records referred to above and Mr. Wallis' sworn testimony, uncontainerized industrial wastes consisting of sludges which are mostly liquid in nature were disposed of in most if not all of the Barrel Fill Landfill cells during operations in 1977 through the end of 1979. Based upon the presence of liquid uncontainerized industrial wastes in many of the cells over 28 years ago, empirical data indicates that the tills prevent migration of liquids from the cells very effectively.

<<wallis.pdf>> <<Dykema\_D.pdf>>

Jerome I. Maynard

**Dykema**

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DYKEMA



Summary of Cell Reports and Cell Logs  
Tremont City Barrel Fill Site  
Clark County, German Township, Ohio

Cell ID	Total Drums	Total Bulk (gallons)	Bulk Waste Description
A1	1,525		
A2	1,177	72,000	Bulk Sludges
A3	1,620	6,000	Latex Glue 4,000 gal, Asbestos & water 2,000 gal
A4	1,176		
A5	693	12,200	Bulk Sludges
A6	910		
A8	1,066		
A9	656		
A10	817		
A11	521		
B1	1,980	35,000	Ash Water 25,000 gal, Latex 10,000 gal
B2	424	25,012	Still Bottom 120 cu yards & 770 gal Latex Glue 1,000 gal & Soap etc. 500 gal & (3 boxes of Still bottoms)*
B3	1,232	1,500	Latex Glue
B4	360	2,000	Bulk Sludges
B5	1,114	20,000	
B6	966		
B7	1,743		
B8	501		
B9	882		
B10	1,517		
C1	1,008		
C2	763	5,000	Bulk Sludges
C3	915	72,000	Bulk Sludges
C4	521		
C6	1,470		
C7	1,466		
C9	660	4000	Bulk Sludges
D1	805	2,000	Latex Glue
D2	1,089	20,500	Bulk Sludges
D3	823	5,000	Bulk Sludges
D4	853	20,000	Latex Glue 2,500 gal, Asbestos 17,500 gal
D6	705		
D7	2,768		
D9	810		
E1	865		
E2	561	2,000	Bulk Sludges & (1 Box of Still bottoms)*
E3	798		
E4	770		
E6	2,150		
E7	1,337		
F2	624		
F3	606		
F4	315		
F6	2,294		
F7	2,005		
G2	480		
G3	599		
G6	1,620		42 pallets of Paint sludge*
H2	314		
H3	575		
Sub Total:		304,212	

Notes:

\* Additional bulk wastes not included total

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IN THE UNITED STATES DISTRICT COURT  
FOR THE SOUTHERN DISTRICT OF OHIO  
WESTERN DIVISION

\* \* \*

RESA,

Plaintiff,

vs.

CASE NO. 1:04-CV-013

WASTE MANAGEMENT, INC.,

et al.,

Defendants.

\* \* \*

Deposition of WAID NELSON WALLIS, Witness  
herein, called by the Plaintiff for  
cross-examination pursuant to the Rules of Civil  
Procedure, taken before me, Mary Jo Stevens, a  
Notary Public in and for the State of Ohio, at  
Thompson Hine, 2000 Courthouse Plaza, NE, 10 West  
Second Street, Dayton, Ohio, on Friday, the 16th  
day of December 2005, at 9:33 a.m.

\* \* \*

<p style="text-align: right;">Page 2</p> <p>1            EXAMINATIONS CONDUCTED            PAGE</p> <p>2 BY MS. WOLFE:..... 4</p> <p>3 BY MS. JALICS:..... 119</p> <p>4</p> <p>5            EXHIBITS MARKED</p> <p>6 (Thereupon, Plaintiff's Exhibit 1            52</p> <p>7 was marked for purposes of</p> <p>8 identification.).....</p> <p>9 (Thereupon, Plaintiff's Exhibit 2            55</p> <p>10 was marked for purposes of</p> <p>11 identification.).....</p> <p>12 (Thereupon, Plaintiff's Exhibit 3            63</p> <p>13 was marked for purposes of</p> <p>14 identification.).....</p> <p>15 (Thereupon, Plaintiff's Exhibit 4            99</p> <p>16 was marked for purposes of</p> <p>17 identification.).....</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p>	<p style="text-align: right;">Page 4</p> <p>1            WAID NELSON WALLIS</p> <p>2 of lawful age, Witness herein, having been first</p> <p>3 duly cautioned and sworn, as hereinafter</p> <p>4 certified, was examined and said as follows:</p> <p>5            CROSS-EXAMINATION</p> <p>6 BY MS. WOLFE:</p> <p>7            Q. Would you please state your name</p> <p>8 for the record?</p> <p>9            A. Waid Nelson Wallis.</p> <p>10          Q. Good morning, Mr. Wallis. My name</p> <p>11 is Leslie Wolfe and I'm the attorney</p> <p>12 representing the plaintiff in this case which</p> <p>13 is Responsible Environmental Solutions</p> <p>14 Alliance. Are you familiar with the</p> <p>15 litigation?</p> <p>16          A. No.</p> <p>17          Q. Okay. Well, this is a</p> <p>18 contribution case relating to a Superfund site</p> <p>19 which is the Tremont landfill Superfund site in</p> <p>20 Clark County, Ohio. Are you familiar with that</p> <p>21 site?</p> <p>22          A. From many, many years ago, yes.</p> <p>23          Q. And do you understand that you are</p> <p>24 here to be deposed today in connection with</p> <p>25 your work at that site?</p>
<p style="text-align: right;">Page 3</p> <p>1 APPEARANCES:</p> <p>2 On behalf of the Plaintiff:</p> <p>3 Walter &amp; Haverfield LLP</p> <p>4 By: Leslie G. Wolfe</p> <p>5 Attorney at Law</p> <p>6 The Tower at Erieview</p> <p>7 1301 East Ninth Street</p> <p>8 Suite 3500</p> <p>9 Cleveland, Ohio 44114-1821</p> <p>10</p> <p>11 On behalf of the Defendant Waste Management,</p> <p>12 Inc.:</p> <p>13 Tucker Ellis &amp; West LLP</p> <p>14 By: Courtenay Y. Jalics</p> <p>15 Attorney at Law</p> <p>16 1150 Huntington Building</p> <p>17 925 Euclid Avenue</p> <p>18 Cleveland, Ohio 44115-1475</p> <p>19 On behalf of the Defendant Systech:</p> <p>20 Frost Brown Todd LLC</p> <p>21 By: Daniel A. Brown</p> <p>22 Attorney at Law</p> <p>23 300 North Main Street</p> <p>24 Suite 200</p> <p>25 Middletown, Ohio 45042-1919</p> <p>ALSO PRESENT:</p> <p>David Hagan</p> <p>* * *</p>	<p style="text-align: right;">Page 5</p> <p>1            A. Yes.</p> <p>2            Q. Are you represented by counsel</p> <p>3 today?</p> <p>4            A. Yes.</p> <p>5            Q. And you have just indicated you</p> <p>6 are represented by Mr. Dan Brown --</p> <p>7            A. Correct.</p> <p>8            Q. -- who is here representing you</p> <p>9 and Systech Environmental Corporation; is that</p> <p>10 correct?</p> <p>11          A. That's correct.</p> <p>12          Q. Have you ever been deposed before?</p> <p>13          A. Yes.</p> <p>14          Q. How many times?</p> <p>15          A. Once.</p> <p>16          Q. What was that in connection to?</p> <p>17          A. That was in connection to a site</p> <p>18 in Columbus, Ohio.</p> <p>19          Q. So that was a similar situation</p> <p>20 where you were being asked about your work at</p> <p>21 that site?</p> <p>22          A. Yes.</p> <p>23          Q. How long ago was that deposition?</p> <p>24          A. '96, I believe.</p> <p>25          Q. Who did you work for at that</p>

Page 6

1 particular site?  
 2 A. I worked for Systech. The site  
 3 was subsequently sold through another -- what,  
 4 two other companies, and ended up being a  
 5 Laidlaw site.  
 6 Q. So what was that site called?  
 7 A. That was originally a Systech  
 8 Liquid Treatment, Hillard, Ohio.  
 9 Q. You said it was near Columbus?  
 10 A. Yes, it is a suburb of Columbus.  
 11 Q. Do you remember when that  
 12 deposition took place?  
 13 A. I believe it was '96, but that's  
 14 about as good as I'm going to do.  
 15 Q. Well, that's not too long ago so  
 16 you might remember some of the basic rules for  
 17 depositions, but I'm going to go over them just  
 18 in case. Okay?  
 19 A. Okay.  
 20 Q. And the first and probably one of  
 21 the most important things to remember is to  
 22 always give verbal responses and that is so the  
 23 court reporter can take your answers down.  
 24 A. Okay.  
 25 Q. Because she can't take down any

Page 7

1 head nod or shaking of the head or um-hums.  
 2 Those are hard to record.  
 3 A. Yes.  
 4 Q. Also, we should both try not to  
 5 interrupt each other. That means I will wait  
 6 for you to give your full responses before I  
 7 ask you the next question and please wait until  
 8 I finish the question before you answer me.  
 9 Okay?  
 10 A. Okay.  
 11 Q. If you don't understand a  
 12 question, please tell me and I'll try to  
 13 rephrase it in a way that you can understand?  
 14 A. Okay  
 15 Q. If you do answer the question,  
 16 then that will be an indication to me that you  
 17 understood it. Okay?  
 18 A. Okay.  
 19 Q. If you need a break, please let me  
 20 know and we can take a break, and if you need  
 21 to help yourself to coffee or water, it's here  
 22 in the room for your convenience. Okay?  
 23 A. Thank you.  
 24 Q. Do you have any questions?  
 25 A. No.

Page 8

1 Q. What is your current address?  
 2 A. 3310 State Route 72 North,  
 3 Cedarville, Ohio.  
 4 Q. How long have you lived there?  
 5 A. Roughly thirty years.  
 6 Q. Do you live there alone?  
 7 A. No.  
 8 Q. Who do you live with?  
 9 A. My wife.  
 10 Q. Anyone else?  
 11 A. No. Kids are all gone.  
 12 Q. What is your date of birth?  
 13 A. 12-12-46.  
 14 Q. Happy birthday a few days ago.  
 15 A. A couple.  
 16 Q. Please tell me a little bit about  
 17 your education starting with high school and  
 18 then moving beyond high school.  
 19 A. High school, Liberty Union Local  
 20 Schools in Fairfield County, Ohio.  
 21 Undergraduate BS in chemistry from Cedarville  
 22 College. Master's degree in chemistry from  
 23 Wright State University.  
 24 Q. Any other graduate or postgraduate  
 25 degrees?

Page 9

1 A. No.  
 2 Q. Did you undertake any other  
 3 training or education in your field?  
 4 A. Numerous courses and seminars on  
 5 various aspects. I'm also a CHMM which is a  
 6 certified hazardous material manager. It's one  
 7 of the certifications for the business.  
 8 Q. For the waste disposal business?  
 9 A. For environmental business in  
 10 general, but waste handling in particular.  
 11 Q. What is your current employment?  
 12 A. I am technical manager for Systech  
 13 Environmental Corporation in Kettering.  
 14 Q. How long have you held that  
 15 position?  
 16 A. I've been in that position since,  
 17 let's see -- I don't remember when I switched.  
 18 I think '98. Prior to that I was a project  
 19 manager for a couple years.  
 20 Q. And what is your responsibility as  
 21 technical manager?  
 22 A. I'm responsible for oversight and  
 23 audit of laboratories, oversee engineering and  
 24 any other technical aspects that may come up on  
 25 different projects.

Page 10

1 Q. What is the business of Systech  
 2 Environmental Corporation?  
 3 A. Systech Environmental is a  
 4 wholly-owned subsidiary of Lafarge Cement and  
 5 its primary function is to provide alternative  
 6 fuel for the cement kiln.  
 7 Q. For the cement what?  
 8 A. Kiln, K I L N. It's a big long  
 9 tube that you throw rocks in at one end and  
 10 fire in at the other and you make cement when  
 11 it comes out.  
 12 Q. And that creates just ordinary  
 13 cement that would be used in building projects?  
 14 A. Yes, Portland Cement.  
 15 Q. So prior to '98, were you still  
 16 working for Systech at that time?  
 17 A. I don't remember when I came back.  
 18 I believe it was March of '97 when I started  
 19 back at Systech.  
 20 Q. So are you indicating that there  
 21 was a time period when you were away from  
 22 Systech and then came back?  
 23 A. Yes. I had worked for Systech  
 24 from March of 1980 until they sold the liquid  
 25 treatment division which I believe was July of

Page 11

1 '82. And when that division was sold I went  
 2 with the group that took that over which was  
 3 Tricell.  
 4 Q. How long were you with Tricell?  
 5 A. Until they were sold to Laidlaw  
 6 which was about 1991 or '92, somewhere in  
 7 there.  
 8 Q. And then what happened?  
 9 A. Then I worked for Laidlaw until  
 10 about '96 when I left there.  
 11 Q. Where did you go when you left  
 12 Laidlaw?  
 13 A. Actually tried being an  
 14 independent contractor for a few months before  
 15 I figured out that that wasn't going to work.  
 16 Q. And at that time what did you do  
 17 when you figured out that wasn't going to work?  
 18 A. Went back to work for Systech.  
 19 Q. What position did you take when  
 20 you went back to Systech at that time?  
 21 A. It was a project manager position.  
 22 Q. And did you hold that position  
 23 until you became a technical manager in '98?  
 24 A. Yes.  
 25 Q. So before you began working for

Page 12

1 Systech in March of 1980, where did you work?  
 2 A. I had worked for a government  
 3 contractor at Wright-Patterson Air Force Base  
 4 that was Stevens Company out of Newport,  
 5 Kentucky.  
 6 Q. How long did you work there?  
 7 A. About seven years.  
 8 Q. So does that mean that you worked  
 9 there from about '73 until 1980?  
 10 A. I believe I started working for --  
 11 started working for Stevens in the fall of '72  
 12 when I finished graduate school.  
 13 Q. So was there a period of time in  
 14 the late '70s or early '80s when you worked for  
 15 IWD or one of the IWD companies?  
 16 A. I worked for IWD for a little less  
 17 than a year after I left Stevens Company and  
 18 before I went to work for Systech the first  
 19 time.  
 20 Q. Do you remember giving an  
 21 interview in connection with the Tremont  
 22 landfill a few years ago?  
 23 A. Yes.  
 24 Q. Do you recall in that interview  
 25 stating that you worked for IWD from about

Page 13

1 spring of '79 until spring of 1980?  
 2 A. That's about right.  
 3 Q. You would say that was probably  
 4 the period of time that you worked for IWD?  
 5 A. Yeah. I know it was March of '80  
 6 when I left there because that's when Chemical  
 7 Waste Management purchased the site.  
 8 Q. Were you ever employed by Chemical  
 9 Waste Management?  
 10 A. For about a week. They took over  
 11 the site and immediately laid everybody off.  
 12 Q. Including yourself?  
 13 A. Including myself.  
 14 Q. Why did they lay everybody off?  
 15 A. They were closing the site.  
 16 Q. When you say the site, do you mean  
 17 the entire Tremont landfill or just the  
 18 barrellfill portion of the site?  
 19 A. The barrellfill, the oil recovery,  
 20 the transportation company which was -- what  
 21 was the correct name for that -- but not the  
 22 sanitary landfill that was down near the river.  
 23 They didn't buy that.  
 24 Q. Was the transportation company  
 25 you're trying to think of IWD Liquid Disposal?

Page 14

1 A. There were several companies. The  
 2 company that I worked for was IWD Chemical  
 3 Disposal of Ohio. There was also an IWD  
 4 Chemical Disposal of Indiana and an IWD -- and  
 5 I'm not sure if I've got -- it was chemical  
 6 transportation or something with  
 7 transportation. It was the trucking part of  
 8 that operation.  
 9 Q. Was it IWD Liquid Waste, Inc.? If  
 10 you're not sure --  
 11 A. I'm not sure how the structure  
 12 was. They were all -- there were several  
 13 independent companies but they were all under  
 14 one IWD umbrella.  
 15 Q. Who was the parent company of  
 16 these entities you're referring to?  
 17 A. All of them were owned by the  
 18 construction company -- I can't think of the  
 19 name. It's a big construction company here in  
 20 Dayton. I can't think of the name right now.  
 21 Q. Are you trying to think of Danis?  
 22 A. Danis, that's correct. They were  
 23 all owned by Danis.  
 24 Q. Do you remember which Danis entity  
 25 was the parent company?

Page 15

1 A. No, I don't.  
 2 Q. So was IWD Disposal of Ohio, your  
 3 employer, also owned by the Danis Company  
 4 you're trying to think of?  
 5 A. I'm not sure whether that company  
 6 was owned by an intermediate company before it  
 7 went to Danis or it was directly to Danis. I  
 8 don't know.  
 9 Q. Did you ever work for any other  
 10 Danis affiliated entity other than IWD Chemical  
 11 Disposal of Ohio?  
 12 A. No.  
 13 Q. Did you ever work for any other  
 14 Waste Management or Chemical Waste Management  
 15 affiliate?  
 16 A. Like I said, for about a week for  
 17 Chemical Waste Management when they bought that  
 18 site.  
 19 Q. Do you know why the site was sold  
 20 to Chemical Waste Management?  
 21 A. I was on the periphery of that. I  
 22 know that the Danis family at that time owned a  
 23 very large number of various companies in the  
 24 area. I think it was close to a hundred and  
 25 fifty companies that they owned and at that

Page 16

1 time they had decided that they wanted to get  
 2 out of this phase of the business.  
 3 Q. Were you involved in any work to  
 4 close the barrelfill site or any of the other  
 5 sites that were closed at the time that  
 6 Chemical Waste Management came in?  
 7 A. The barrelfill had been closed at  
 8 the very end of '79 so there was no activity in  
 9 1980 at the barrelfill.  
 10 Q. What took place to close it at the  
 11 end of '79?  
 12 A. They had made a decision that they  
 13 did not want to operate that barrelfill in the  
 14 future and I don't know exactly all of the --  
 15 there's a supposition in my mind, but I don't  
 16 know that it's true so I'm not going to say it.  
 17 Q. So do you recall when the last  
 18 drums went into the barrelfill?  
 19 A. December 31st, 1979.  
 20 Q. They were disposing of drums up  
 21 until the very last day of 1979?  
 22 A. Yes.  
 23 Q. Was there a push at the end of '79  
 24 to get as many drums buried as possible?  
 25 A. Absolutely.

Page 17

1 Q. What else do you remember about  
 2 that last push?  
 3 A. That's about it.  
 4 Q. Were you involved in that effort?  
 5 A. Indirectly.  
 6 Q. How were you involved indirectly?  
 7 A. The laboratory was part of my  
 8 responsibilities and we did the testing and  
 9 qualification of the waste streams that were  
 10 put into the landfill.  
 11 Q. Did anything about your work  
 12 change at the end of '79 with respect to that  
 13 final push to get drums buried?  
 14 A. I'm not sure what you're asking.  
 15 Did we change procedures, no.  
 16 Q. Did you do anything in addition to  
 17 your previous responsibilities during that  
 18 time?  
 19 A. I don't believe so.  
 20 Q. Were drums buried in a different  
 21 manner than they normally would have been  
 22 during that time?  
 23 A. No.  
 24 Q. Was there anything different done  
 25 other than just a faster process as you seem to

Page 18

1 have indicated? Let me rephrase that. Was it  
 2 just that more drums were buried during that  
 3 time because the end of the year was coming up?  
 4 A. I don't know that there were more  
 5 drums buried than normal, but I know that the  
 6 push was to make sure that all of the drums  
 7 they had on site to be buried were buried  
 8 before they closed out.  
 9 Q. And were they able to do that?  
 10 A. I believe so because they had  
 11 stopped receiving new material prior to that  
 12 time knowing that they were going to close it  
 13 out.  
 14 Q. How much prior to that time did  
 15 they stop receiving new material?  
 16 A. I don't know.  
 17 Q. Do you think it was a matter of  
 18 weeks or months?  
 19 A. Since they never had more than a  
 20 week or two's worth of material on site to  
 21 bury, I would say it was weeks, but, again, I  
 22 don't have anything other than just kind of  
 23 that's how much they had on site.  
 24 Q. From January 1st, 1980 until the  
 25 time you left, were there drums on site in the

Page 19

1 yard or in any area of the site that normally  
 2 would have been buried? Let me rephrase that.  
 3 Was there a yard where drums were stored?  
 4 A. Yes.  
 5 Q. And did that yard have any drums  
 6 in it after the site closed?  
 7 A. They have to be kind of -- the  
 8 rest of the operation continued. The  
 9 barreldump was closed the end of 1980, but we  
 10 continued to be operating as far as oil  
 11 recovery, shipping, receiving, shipping  
 12 materials to other sites which were all ongoing  
 13 processes, so only one piece of the total  
 14 operations stopped.  
 15 MR. BROWN: Just to be clear, I  
 16 thought you said the barreldump had closed the end  
 17 of 1980.  
 18 THE WITNESS: 1979. Pardon me.  
 19 Q. What did your work consist of  
 20 after this barreldump closed before you left  
 21 your employment there?  
 22 A. It was pretty much the same as  
 23 before. We qualified waste streams. We did  
 24 all of the laboratory testing, operated the oil  
 25 recovery system and shipped materials to other

Page 20

1 sites for disposal.  
 2 Q. I would like to go through all of  
 3 those different responsibilities with you one  
 4 by one in some more detail.  
 5 A. Okay.  
 6 Q. Did you say that you tested  
 7 materials?  
 8 A. Yes. We had an on-site  
 9 laboratory.  
 10 Q. What materials did you test in  
 11 that laboratory?  
 12 A. We tested samples that the  
 13 salesmen brought in to qualify the waste  
 14 streams. We tested materials from incoming  
 15 truckloads, both bulk and drum, and after the  
 16 initial sorting of materials on outgoing loads,  
 17 we would do tests, depending on which site it  
 18 was going to to qualify the material into  
 19 another site and we did -- in addition to that,  
 20 we did QC work for like the oil recovery, the  
 21 recovered oil that we were selling.  
 22 Q. What's QC work?  
 23 A. Quality control.  
 24 Q. You mentioned that you tested  
 25 samples of waste streams that the salesmen

Page 21

1 would bring in?  
 2 A. Yes.  
 3 Q. Which salesmen are you referring  
 4 to? And I don't mean identifying by name, I  
 5 mean who were the salesmen employed by?  
 6 A. An excellent question. I think  
 7 they were actually -- I think they were  
 8 actually employees of the transportation  
 9 company.  
 10 Q. Were they employees of any of the  
 11 generators of waste?  
 12 A. No, these salesmen were IWD  
 13 salesmen.  
 14 Q. Did you have representatives from  
 15 any of the generators bringing samples of waste  
 16 to be tested or to be disposed of?  
 17 A. We did get site visits from  
 18 customers, generator representatives, and it's  
 19 possible -- I don't remember. It's probable  
 20 that they had brought samples to us at one time  
 21 or the other to see if we could do something  
 22 with them.  
 23 Q. Did you test a sample of every  
 24 waste that was disposed in the barreldump?  
 25 A. I believe so. Every waste stream

Page 22

1 that came into the site was first sampled and  
 2 paperwork obtained by the sales representative  
 3 that went out. That came in. We did the  
 4 initial testing, qualified it to whether or not  
 5 we could put it there or we had to send it off  
 6 for incineration or what the disposition. The  
 7 salesmen used that information to do the  
 8 pricing, get back to the customer the proposal  
 9 on what we could do for them.

10 When the trucks came in, samples  
 11 were taken from either the bulk truck or the  
 12 individual barrels that were on the truck to  
 13 make sure that we knew which barrels were what.  
 14 Every barrel had a waste qualification number  
 15 which was then spray painted on the barrel for  
 16 identification purposes. And then as those  
 17 barrels were taken out and loaded onto a truck  
 18 to go into the barrellfill, the fellows that  
 19 were running that checked that against the list  
 20 of approved materials and recorded where in the  
 21 cells those materials were placed.

22 Q. Okay. We're going to go through  
 23 some of those steps one by one. With respect  
 24 to the samples, did you say the samples would  
 25 come in prior to the load of waste coming in

Page 23

1 from the generator?  
 2 A. Yes.  
 3 Q. How large were the samples?  
 4 A. Typically they were quart jar  
 5 samples.  
 6 Q. What kind of container were they  
 7 in typically?  
 8 A. Typically they were in glass  
 9 wide-mouth bottles which we provided to the  
 10 salesmen for that purpose. Occasionally  
 11 somebody would send samples in some other type  
 12 of container.  
 13 Q. After the testing was complete,  
 14 was there a portion of that waste sample left  
 15 over?  
 16 A. Yes.  
 17 Q. What did you do with that portion?  
 18 A. It was retained for a certain  
 19 amount of time, and I can't remember how long  
 20 it was retained, whether it was one month or  
 21 three months or whatever that we retained the  
 22 samples in case there was a question that came  
 23 back about the material. And at the end of  
 24 that time depending upon what the sample was,  
 25 if it was, say, a solvent or something like

Page 24

1 that, it would be put into a bulk load of  
 2 solvents going out to be incinerated. If they  
 3 were oil samples, obviously they went into the  
 4 oil recovery operation.  
 5 Q. What if it was a sample of a type  
 6 of waste that was acceptable for disposal in  
 7 the barrellfill, what did you do with that  
 8 sample?  
 9 A. I believe all of those were put  
 10 into the barrellfill, in a barrel put in the  
 11 barrellfill.  
 12 Q. So the sample would be put into a  
 13 barrel and then put into the barrellfill?  
 14 A. As far as I remember, that was the  
 15 way -- there may have been times when samples  
 16 were dumped out of the bottles in a barrel to  
 17 be put in the barrellfill.  
 18 Q. Were samples ever dumped straight  
 19 into a barrellfill cell without being dumped  
 20 into a barrel first?  
 21 A. I don't believe that ever  
 22 happened. Just the logistics were the lab is  
 23 over here, it's much easier to take the samples  
 24 and dump them out at the lab rather than go way  
 25 back in the field someplace to dump out

Page 25

1 bottles.  
 2 Q. Was there a policy or procedure  
 3 related to how those samples would be dealt  
 4 with?  
 5 A. Certainly was a policy and  
 6 procedure. Was it written down, maybe. I  
 7 don't remember.  
 8 Q. And just to get a little bit of  
 9 background on your employment during that time,  
 10 what was your title when you were employed at  
 11 the site?  
 12 A. I was employed as manager of  
 13 Chemical Disposal of Ohio.  
 14 Q. What was your responsibility as  
 15 manager?  
 16 A. I oversaw the day-to-day operation  
 17 of the laboratory, the oil recovery and the  
 18 drum yard.  
 19 MS. JALICS: I'm sorry, did you say  
 20 drum yard?  
 21 THE WITNESS: Yes, drum yard.  
 22 Q. Did you supervise any employees?  
 23 A. Yes.  
 24 Q. Do you recall who you supervised?  
 25 A. Names or positions?



Page 26

1 Q. Names and/or positions, whatever  
 2 you remember.  
 3 A. A few names. In the -- we had  
 4 several people in the laboratory. Our  
 5 laboratory manager at that time was named Gary  
 6 Karas, and that's with a K. We had Vaughn  
 7 Arthur.  
 8 Q. What was Mr. Arthur's title or  
 9 position?  
 10 A. He basically was a technician  
 11 taking samples from trucks and drums and we had  
 12 a couple of other guys who worked in the lab,  
 13 and I can't remember their names.  
 14 Q. Did you work with John Budding?  
 15 A. The name sounds familiar. I'm  
 16 trying to put a face with it. I think John  
 17 worked in oil recovery, if I remember him.  
 18 Q. I think that's correct.  
 19 A. And -- yes. Okay. I can't  
 20 remember any of the names of the other guys who  
 21 were in oil recovery. Too far back.  
 22 Q. Are you in touch with Gary Karas  
 23 today?  
 24 A. I have not talked with Gary for  
 25 probably twenty years.

Page 27

1 Q. Do you know if he's still living  
 2 in the area?  
 3 A. He had left the area at that time.  
 4 He was somewhere in the northeastern part of  
 5 Ohio.  
 6 Q. Do you know if at some point in  
 7 time he worked for the City of Urbana?  
 8 A. He had worked for the City of  
 9 Urbana, I believe before coming to IWD, and I'm  
 10 not sure if he worked for them afterwards or  
 11 not, but he had worked in the laboratory at the  
 12 wastewater treatment plant.  
 13 Q. At the City of Urbana's wastewater  
 14 treatment plant?  
 15 A. I believe that's correct.  
 16 Q. What were his responsibilities as  
 17 lab manager at the Tremont site?  
 18 A. He was in charge of the lab. He  
 19 did -- directed the other people that were in  
 20 the lab as well as doing some of the testing  
 21 himself.  
 22 Q. Was he there the entire time that  
 23 you were there?  
 24 A. Yes. He was there prior to the  
 25 time that I was there.

Page 28

1 Q. Was he fired when Waste Management  
 2 purchased the company?  
 3 A. As far as I know, everyone -- the  
 4 announcement was generally everybody was laid  
 5 off at the same time.  
 6 Q. And you said you also supervised  
 7 Vaughn Arthur?  
 8 A. Yes.  
 9 Q. What was his responsibility at the  
 10 site?  
 11 A. He took samples and helped some in  
 12 the lab.  
 13 Q. Did you work with any of the  
 14 employees that actually placed drums or barrels  
 15 in the cells?  
 16 A. Yes. Primary person in charge of  
 17 that was Butch -- and I don't know his real  
 18 name -- Slaughter.  
 19 Q. Was that Lester Slaughter?  
 20 A. It could -- I don't know, but --  
 21 he always went by Butch. I don't know what his  
 22 real name was.  
 23 Q. Was he responsible for that  
 24 operation in your recollection or --  
 25 A. He was certainly the supervisor of

Page 29

1 that area.  
 2 Q. And you're referring to  
 3 supervising the placement of drums?  
 4 A. Placement of the drums and also  
 5 the construction of the cells.  
 6 Q. Do you recall who else he worked  
 7 with in that capacity?  
 8 A. I don't remember the names of the  
 9 other guys that were back in that area.  
 10 Q. Do you recall anyone with the last  
 11 name Goings, G O I N G S?  
 12 A. There were two, father, son,  
 13 again, nicknames. Shorty was the son for  
 14 obvious reasons and I don't remember the  
 15 father's name right now, but I believe both of  
 16 them worked primarily in the transportation  
 17 side of business transporting materials to and  
 18 from the site.  
 19 Q. In your role as manager of  
 20 Chemical Disposal of Ohio, did you have any  
 21 responsibility for how the drums were placed in  
 22 the cells or which wastes were placed in which  
 23 cells?  
 24 A. We qualified the waste streams  
 25 that were going into the cells, did the lab

Page 30

1 work and we made sure that the record as far as  
 2 the cell logs were completed and turned in, but  
 3 the actual day-to-day placement in the cells  
 4 and how they were working there, I wasn't  
 5 involved in.  
 6 Q. Did you work at the site at the  
 7 same time as Clyde Hill?  
 8 A. I believe he was gone by the time  
 9 that I came there though I heard a lot of  
 10 stories about him.  
 11 Q. Do you remember what his position  
 12 was?  
 13 A. I believe he worked in the  
 14 laboratory.  
 15 Q. Do you know if he had the same  
 16 position that you had?  
 17 A. No, I don't think he did. I think  
 18 he was just a laboratory worker.  
 19 Q. Do you know who would have  
 20 supervised him?  
 21 A. Probably Gary Karas.  
 22 Q. So let me make sure this is  
 23 correct based on your testimony. You  
 24 supervised Gary Karas?  
 25 A. Correct.

Page 31

1 Q. But you believe Gary Karas would  
 2 have been higher up on the ladder than Clyde  
 3 Hill during the time Clyde Hill was there?  
 4 A. I believe so, and this is just  
 5 hearsay from the stories I heard about Clyde  
 6 Hill after I got there.  
 7 Q. Do you recall who held your  
 8 position before you got there?  
 9 A. I believe the position was created  
 10 by splitting out some of the responsibilities  
 11 of Jack Wright. Jack Wright was president of  
 12 all those IWD chemical companies and I believe  
 13 that the portion that I was doing he had been  
 14 doing prior to that. There was also -- there  
 15 was another gentleman who had come in and taken  
 16 some responsibilities in the operation too and  
 17 I don't remember his name.  
 18 Q. I think I know who you're thinking  
 19 of, but I can't think of the name right now off  
 20 the top of my head.  
 21 A. Yeah, he was there shortly before  
 22 I got there and left I believe shortly before  
 23 they shut it down.  
 24 Q. What are some of the stories that  
 25 you heard about Clyde Hill?

Page 32

1 A. This is all very, very hearsay of  
 2 people making fun of a former employee so --  
 3 they claim that he was so afraid of things  
 4 there that they could easily get him to go into  
 5 a faint just by faking the smell of cyanide  
 6 anywhere near him and that was one of the  
 7 things that we did because we did handle  
 8 cyanides. We taught everybody what the smell  
 9 of cyanide smelled like just so that they  
 10 understood if you smelled this burnt almond  
 11 smell, it's time to leave. And so people would  
 12 deliberately take some almond extract and put  
 13 it someplace where Clyde Hill would smell it  
 14 and he would immediately get sick and faint, so  
 15 I don't know if that's true or not.  
 16 Q. So you never witnessed that, but  
 17 from the looks of your expression you would  
 18 like to have witnessed that?  
 19 A. I find it amusing, but there was a  
 20 certain amount of camaraderie among the people  
 21 there that there was some stuff like that that  
 22 happened.  
 23 Q. Was there anything else about  
 24 Clyde Hill's work that you were told that was  
 25 negative about Clyde Hill?

Page 33

1 A. Most of the people there did not  
 2 like him and that's about as much as I know  
 3 about Clyde Hill.  
 4 Q. Was he a chemist?  
 5 A. I believe he had also worked for a  
 6 city at the wastewater -- one of the wastewater  
 7 plants around there before coming. Whether he  
 8 was a chemist or a lab technician, I'm not  
 9 sure.  
 10 Q. Do you know why he left?  
 11 A. Yeah, I think he got tired of  
 12 taking the abuse from the other people and from  
 13 what was said he really was afraid of  
 14 chemicals.  
 15 Q. It's tough to be a chemist or a  
 16 lab analyst and be afraid of chemicals, isn't  
 17 it?  
 18 A. Well, I think that was part of why  
 19 he had left.  
 20 Q. Did you have any reason to think  
 21 based on what you heard that his work wasn't  
 22 adequate at the site?  
 23 A. I don't have any idea on that.  
 24 Q. Do you know whether people didn't  
 25 like the way he handled incoming waste at the

Page 34

1 site or whether the hearsay has anything to do  
 2 with --  
 3 A. I don't know that it has  
 4 anything -- I think it was much more a  
 5 personality thing than anything to do with his  
 6 work or how he was doing his work, but, again,  
 7 that's really hearsay.  
 8 Q. Do you know whether he followed  
 9 procedures that were required to be adhered to  
 10 at the site?  
 11 A. No way of knowing that.  
 12 Q. Is there anyone that you worked  
 13 with that you know didn't follow procedures  
 14 with regard to the laboratory?  
 15 A. Within the laboratory from the  
 16 time I was there, no, everybody was pretty  
 17 good.  
 18 Q. Are you aware of anybody that  
 19 didn't follow procedures or the law applicable  
 20 to disposal of waste in the cells?  
 21 A. As far as disposal in the cells,  
 22 no. We fired one or two people for violating  
 23 work rules and things, but it was more related  
 24 to safety aspects than the disposal of the  
 25 materials.

Page 35

1 Q. I would like to ask you some  
 2 questions about the process for dealing with  
 3 waste that came into the site.  
 4 A. Okay.  
 5 Q. What happened with drummed waste  
 6 that came in on a truck into the site?  
 7 A. Well, if we can step back a step  
 8 before that, the procedure was that you  
 9 qualified the waste streams first and each  
 10 waste stream was assigned a code number, so  
 11 that when the drums came to the site you had a  
 12 number on the barrel which you could then open  
 13 the barrel, take a sample, confirm that what  
 14 was in the barrel was what the generator said  
 15 it was. Then once that happened, the drums  
 16 were sorted as to what their disposal method  
 17 would be, and that was done in the drum area.  
 18 Q. Let me just interrupt you for a  
 19 moment and go back. How did you confirm that  
 20 what was in the drum was actually what it  
 21 was -- what the code number indicated that it  
 22 was?  
 23 A. It depended on the type of waste.  
 24 If someone were telling us we're sending you a  
 25 drum of chlorinated solvent, we would run a GC

Page 36

1 on that, gas chromatograph on that material on  
 2 the original sample. When the material would  
 3 come in they would take samples out of the  
 4 drums, verify that that looked the same. If it  
 5 was supposed to be methylene chloride, that in  
 6 fact it was methylene chloride in the drum.  
 7 Q. This was done in a visual --  
 8 A. No, this was done gas  
 9 chromatograph. It's a laboratory instrument  
 10 that separates organic compounds and gives you  
 11 an indication of which compound you have in a  
 12 particular waste stream.  
 13 Q. So you would run this test on the  
 14 drums that came into the site?  
 15 A. Right.  
 16 Q. Did you run the test on every  
 17 drum?  
 18 A. Not that particular test because  
 19 other materials had other tests that would be  
 20 run on them so it really depended on -- if it's  
 21 an organic waste, you would run a gas  
 22 chromatograph. If it were an acid, you would  
 23 look at pH. If it were a -- some samples were  
 24 done visually. If we got a drum that said it  
 25 was peanut butter and we opened it up and it

Page 37

1 looked like peanut butter, we pretty much said  
 2 okay, that's peanut butter, knowing what site  
 3 it came from and what it looks like, that would  
 4 go on.  
 5 Q. How did you determine which wastes  
 6 would actually be tested chemically versus  
 7 wastes where you felt it wasn't necessary  
 8 because you could tell visually what it was?  
 9 A. I think as we qualified the waste  
 10 streams we pretty much determined what we were  
 11 going to do when it came in as far as tests.  
 12 Q. Did you know which wastes to  
 13 expect to see so many in on each particular day  
 14 or was it a surprise what wastes would come  
 15 into the site?  
 16 A. That depended on the customer. We  
 17 had certain customers who would say I've got  
 18 this waste stream, so many drums of this, so  
 19 many drums of that that would come in. We had  
 20 other customers where we went there every week  
 21 or in some cases every day and picked up drums,  
 22 and in those cases while they were all  
 23 qualified, we would go and pick up whatever  
 24 drums they had, bring them back and then sort  
 25 them when they came back in. And that in

Page 38

1 particular was like Procter & Gamble out of  
 2 Cincinnati which was a very large customer and  
 3 there was one or two truckloads a day that  
 4 would come from them. And the majority of that  
 5 material was pretty innocuous. It was food  
 6 waste, detergent samples, materials like that  
 7 which weren't what we would think of as a high  
 8 risk type material.  
 9 Q. Was the food waste and detergent  
 10 that you just mentioned from Procter & Gamble  
 11 in drums?  
 12 A. Yes.  
 13 Q. Was it ever in bulk form?  
 14 A. I don't think we ever took  
 15 anything from Procter & Gamble in bulk.  
 16 Q. I want to go back just a minute to  
 17 something you said earlier regarding cyanide.  
 18 What handling of cyanide did the site  
 19 undertake?  
 20 A. If we had a cyanide waste stream,  
 21 it was typically from a plating company. Those  
 22 materials would come in, we would sample them,  
 23 look at the amount of cyanide in there because  
 24 that was important from an economic standpoint.  
 25 The disposal cost is based on percentage of

Page 39

1 cyanide. Initially we would look at the metals  
 2 so that we could qualify that into a cyanide  
 3 destruction company and then those drums were  
 4 reloaded onto -- as a truckload to go to a  
 5 treatment site for cyanide.  
 6 Q. Did you do any processing of  
 7 cyanide at the site?  
 8 A. No.  
 9 Q. Did you dispose of any cyanide at  
 10 the site?  
 11 A. No.  
 12 Q. You hesitated for a minute. Did  
 13 you think of anything --  
 14 A. I was just thinking was there  
 15 anything that was cyanide and I don't think  
 16 there was. We did dispose of plating waste,  
 17 but it was all treated plating waste,  
 18 wastewater treatment sludges, and those  
 19 typically would not have cyanide left in them.  
 20 Q. I'm not a chemist so I might have  
 21 a few maybe seemingly elementary questions for  
 22 you. Would you explain why cyanide would not  
 23 be disposed of at the site?  
 24 A. Most of it was in liquid form in  
 25 fairly caustic solution and the preferred

Page 40

1 disposal method was to have that sent to a site  
 2 that would treat the cyanide to destroy it.  
 3 Q. Were there any waste streams that  
 4 contained cyanide that would have been accepted  
 5 for disposal in the barrellfill?  
 6 A. There are probably trace amounts  
 7 of cyanide in some of the metal plating  
 8 sludges, but it would be a fairly low level. I  
 9 can't think of anything else that we dealt with  
 10 that had cyanide in it.  
 11 Q. Do you know when the site was  
 12 permitted to bury materials that had a trace  
 13 amount of cyanide?  
 14 A. Too long ago for me to remember  
 15 what was in the permit.  
 16 Q. Is your recollection that whatever  
 17 was accepted for disposal was permitted by law?  
 18 A. Yes.  
 19 Q. And you do recall that plating  
 20 waste that contained a trace amount of cyanide  
 21 was disposed of?  
 22 A. Well, wait a minute, I said we  
 23 took plating waste and it was probable there  
 24 was trace amounts left in there. I don't know  
 25 if it was there or not.

Page 41

1 Q. But the plating waste was disposed  
 2 of at the site?  
 3 A. Yes, there were plating waste  
 4 sludges that were disposed of.  
 5 Q. Do you recall in general terms how  
 6 much plating waste or what proportion of the  
 7 waste?  
 8 A. Small amount compared to the other  
 9 materials.  
 10 Q. A small amount. Would that be in  
 11 the, you know, tens of drums or hundreds of  
 12 drums if we're talking about what the site took  
 13 in in a week? Can you put in a number on it in  
 14 that regard?  
 15 A. It would be closer in the tens  
 16 than anything else in any week and typically  
 17 you would get that from a plating company so if  
 18 you got drums from them you might get a drum  
 19 and then not see them again for several months  
 20 before they had another group of drums ready.  
 21 Q. Do you know which plating company  
 22 generated that waste?  
 23 A. There were several plating  
 24 companies in the area. I don't remember the  
 25 names now.

Page 42

1 MS. WOLFE: Go off the record for  
 2 just a minute.  
 3 (Pause in proceedings.)  
 4 Q. Mr. Wallis, earlier you talked  
 5 about sampling of waste that came in to the  
 6 site.  
 7 A. Yes.  
 8 Q. And what I would like to know is  
 9 was every drum that came into the site sampled?  
 10 A. The procedure was to take a sample  
 11 out of every drum that came in and then the lab  
 12 would make a decision as to can we composite  
 13 this group of drums and run the test as a group  
 14 or do we need to do them individually because  
 15 they physically looked different or seemed to  
 16 be different materials and so we wanted to look  
 17 at them separately.  
 18 Q. So are you saying --  
 19 A. No, I cannot --  
 20 Q. I'm sorry.  
 21 A. -- tell you that every drum was  
 22 sampled because I was not out in the drum yard  
 23 to see that, but the procedure was that every  
 24 drum be sampled. As far as I know, every drum  
 25 was sampled.

Page 43

1 Q. When you say sampled, you mean a  
 2 portion of the waste was removed from the drum?  
 3 A. Correct.  
 4 Q. But that portion of waste might  
 5 not necessarily have been tested, am I correct?  
 6 A. It would either be tested by  
 7 compositing it with portions from other drums  
 8 or it would have been tested individually, so  
 9 not -- the test wasn't necessarily done on each  
 10 individual drum by itself but it might have  
 11 been included with, say, if you had ten drums  
 12 from the same generator of the same waste code  
 13 and then they brought the samples in, they all  
 14 looked the same, typically you would composite  
 15 that by taking a small portion out of each of  
 16 those samples to put them together.  
 17 Q. So the decision to composite  
 18 samples from different drums was made based on  
 19 how they were identified by the generator and  
 20 how they looked?  
 21 A. Yes. Now, the chemist had the  
 22 leeway to look at those and say yes, I can do  
 23 that or no, this one looks different or has a  
 24 different pH or something and so we're going to  
 25 hold that one separately and figure out what it

Page 44

1 is separately.  
 2 Q. Were there any safeguards to  
 3 prevent compositing samples of different wastes  
 4 if perhaps they were labeled as the same waste  
 5 but in fact they weren't the same waste?  
 6 A. Well, that went back to the  
 7 chemist. If he got two different waste streams  
 8 and they were significantly different, even if  
 9 they had been composited, when he compared the  
 10 result of his test to the original sample, he  
 11 would say they don't match and at that point  
 12 then you go back and you look at each drum.  
 13 Q. And you when you say original  
 14 sample, you mean the one that might have been  
 15 received previously before the load came in?  
 16 A. Right.  
 17 Q. And what was the purpose of  
 18 testing those samples?  
 19 A. Several purposes, I guess. One of  
 20 the main reasons obviously is we were being  
 21 paid to take certain materials and if somebody  
 22 shipped something else to us, it might cost us  
 23 a lot more to ship that to a different disposal  
 24 site and we wanted do make sure that we were  
 25 charging the right amount to the customer and

Page 45

1 we also wanted to make sure we were shipping it  
 2 to the right disposal site. We wouldn't want  
 3 to ship a drum of chlorinated solvent which we  
 4 could sell to an incinerator and pay to have it  
 5 burned if we could sell it to a company to  
 6 reclaim the chlorinated solvent and there's  
 7 also safety aspects to that. We put oil into  
 8 our oil process facility and we wouldn't want  
 9 to put a low flash material in there which  
 10 might cause a fire in that part of the plant.  
 11 So there's several reasons why you wanted to  
 12 know what was in the drums.  
 13 Q. So of the drums that were destined  
 14 for disposal in the barrellfill, was there any  
 15 effort to separate the waste types so that  
 16 particular wastes went into particular cells?  
 17 A. Typical operation was there was  
 18 one cell at a time opened. Occasionally as  
 19 you're finishing out an old cell, finished  
 20 filling this, you have got a new one built  
 21 ready to start putting materials in, but the  
 22 normal operation was to fill the cell that's  
 23 open. The materials were compatible. It  
 24 wasn't the case of if I put this drum next to  
 25 this drum the two of them are going to react

Page 46

1 and cause some sort of a problem so, no, there  
 2 was no need for segregation of the materials.  
 3 Q. When you said that the materials  
 4 were compatible, do you mean that the materials  
 5 that were acceptable for drum disposal were all  
 6 safe to mix together?  
 7 A. Well, they were certainly safe to  
 8 put in the same cell. You wouldn't get -- if  
 9 you took this material, some of this and some  
 10 of this and poured it together, you wouldn't  
 11 get a reaction that would be adverse to the  
 12 health and safety of the people there or cause  
 13 some problem down the road in the cell.  
 14 Q. And is it correct to say that the  
 15 drums were not intended to keep that mixing  
 16 that you just described from happening?  
 17 A. No.  
 18 Q. But rather to encapsulate them  
 19 temporarily?  
 20 A. We expected that the drums would  
 21 eventually decay, but we also expected that  
 22 because the cells were in a very heavy clay and  
 23 very well capped, that the drums would last for  
 24 a long, long time before they decayed out of  
 25 there.

Page 47

1 Q. How long do you think that long,  
 2 long time would actually be?  
 3 A. Pure speculation, we guessed it  
 4 had at least thirty years before these drums  
 5 would have been gone.  
 6 Q. It's been about thirty years.  
 7 A. Yeah, and I don't know. I don't  
 8 know if anybody has dug any up to see how  
 9 intact or nonintact those drums may be.  
 10 Q. Now, when you refer to that  
 11 speculation of a thirty year life on the drums  
 12 before they decay, are you referring only to  
 13 metal drums or are you referring to all types  
 14 of drums?  
 15 A. We're talking about metal drums  
 16 which probably ninety plus percent of the drums  
 17 that went into that drumfill were metal drums.  
 18 Q. What other types of drums went in?  
 19 A. The only other type of drum may  
 20 have been some plastic drums.  
 21 Q. What proportion of the total drums  
 22 do you think were plastic?  
 23 A. It was a very small portion.  
 24 Q. Less than ten percent of the total  
 25 drums that went in?

Page 48

1 A. I would say maybe less than ten  
 2 percent. Maybe less than five percent.  
 3 Q. Do you remember which generators  
 4 would generate waste in plastic drums?  
 5 A. No.  
 6 Q. Do you remember what types of  
 7 wastes were in the plastic drums that went into  
 8 the cells?  
 9 A. No. I would say the choice of a  
 10 plastic drum was probably because they had it  
 11 more than that they needed a particular drum  
 12 for that particular waste stream. It's just at  
 13 that point in time almost all of the drums that  
 14 we got were because the company had received  
 15 something in the drum, used up that raw  
 16 material and then placed the waste that they  
 17 were shipping out in the drum so that they  
 18 didn't have to buy new drums.  
 19 Q. What would the lifespan of a  
 20 plastic drum be in comparison to a metal drum?  
 21 A. I would expect plastic drums to  
 22 last almost forever in there. There's no  
 23 reason for them to deteriorate. They weren't  
 24 exposed to light or anything to cause them to  
 25 deteriorate in the ground.

Page 49

1 Q. So a plastic drum would last even  
 2 longer than a metal drum?  
 3 A. Yes, I would think so.  
 4 Q. Was there any other kind of  
 5 material that a drum would be made out of?  
 6 A. The only other kind of drum that I  
 7 know of is a fiber drum which is a hard paper,  
 8 but I don't ever remember receiving anything  
 9 for the barrellfill in fiber drums.  
 10 Q. Is it possible that some were  
 11 received, even though you don't remember it?  
 12 A. It's possible that could have  
 13 happened. And it could have happened before I  
 14 was there too.  
 15 Q. Did the site accept any kind of  
 16 drum or only certain kinds of drums?  
 17 A. I'm not sure I understand the  
 18 question.  
 19 Q. Was there any kind of drum that  
 20 for any reason wouldn't have been an acceptable  
 21 way to bury waste?  
 22 A. Certainly any drum that we took  
 23 had to be sound. In other words, it couldn't  
 24 be in such a deteriorated state that it was  
 25 falling apart or bent halfway over or something

Page 50

1 coming in. And typically the transportation  
 2 company wouldn't load a drum that didn't look  
 3 good and to be in good shape because they had  
 4 to transport it down the highway and you don't  
 5 want it to fall apart or fall off the truck or  
 6 do something on the highway.  
 7 Q. Is there any other reason you  
 8 would want the drum to be in a sound condition  
 9 other than for ease of transportation?  
 10 A. Well, as they constructed the  
 11 cell, obviously they were stacked in there, so  
 12 drum layer, then another drum layer and you  
 13 would want those drums to be sound enough so  
 14 that the next layer of drums wouldn't tip over  
 15 or fall over because something gave way  
 16 underneath of them.  
 17 Q. Were there any other kind of  
 18 containers other than drums that were disposed  
 19 of in the cells?  
 20 A. I don't believe so. I can't  
 21 remember in the cells that there was anything  
 22 there. There were materials that went into the  
 23 regular landfill down below that certainly  
 24 weren't drums, but in the drum fill itself, I  
 25 think everything was drums.

Page 51

1 Q. Do you remember anything being  
 2 disposed of in a box in the cells?  
 3 A. A box? Not that I remember.  
 4 Q. Do you remember anything being  
 5 disposed of in a tub?  
 6 A. No.  
 7 Q. Were you involved with any  
 8 paperwork associated with waste disposal in the  
 9 cells? And I don't mean lab paperwork, but I  
 10 mean any kind of record of what went into the  
 11 cells.  
 12 A. Yes. I reviewed the cell logs and  
 13 prepared those to go to the health department.  
 14 Q. When you reviewed the cell logs,  
 15 what were you reviewing them for?  
 16 A. Completeness primarily. The logs  
 17 themselves, when they did them, they were  
 18 written out -- as they put the drum into the  
 19 cell, they would write the numbers down so we  
 20 had to translate that into a legible text that  
 21 could be submitted and people could read.  
 22 Q. Are you saying that you would  
 23 rewrite the cell log or transfer the  
 24 information onto --  
 25 A. We transferred that information

Page 52

1 to -- well, occasionally a handwritten sheet  
 2 and then later I believe we went to typing them  
 3 out so that the people could read them easier.  
 4 (Thereupon, Plaintiff's Exhibit 1 was  
 5 marked for purposes of identification.)  
 6 Q. Mr. Wallis, handing you what has  
 7 just been marked for identification purposes as  
 8 Wallis Deposition Exhibit 1, would you please  
 9 take a look at this document and tell me if you  
 10 have seen it before?  
 11 (Pause in proceedings.)  
 12 MS. WOLFE: And I'll represent that  
 13 this document consists of six pages.  
 14 THE WITNESS: I don't believe I've  
 15 seen this particular cell report before.  
 16 Q. Have you seen similar cell  
 17 reports?  
 18 A. I've seen similar reports, but  
 19 this cell finished in February of '79 which was  
 20 probably just before I went to work there.  
 21 Q. But you have seen similar reports  
 22 to this you said?  
 23 A. Yes.  
 24 Q. And are you referring to the first  
 25 page that says cell report?

Page 53

1 A. Yeah, the cell report and the  
 2 sheets -- the back-up sheets for it.  
 3 Q. Are these back-up sheets  
 4 representative of the cell logs you were  
 5 referring to earlier?  
 6 A. Yes.  
 7 Q. Is this the same format that the  
 8 cell logs were in when you were there?  
 9 A. I'm not certain that it is.  
 10 Because we did make some changes as we went  
 11 along to do things.  
 12 Q. What do you think looks different  
 13 about it from what you remember?  
 14 A. It may just be in the way they  
 15 recorded it because it appears that on this  
 16 particular one they chose to put the number  
 17 down and then draw arrows to indicate the  
 18 locations as opposed to recording individual  
 19 drums. It accomplishes the same thing.  
 20 Q. Would it help --  
 21 A. I say, it accomplishes the same  
 22 thing, gives the location of the cell and the  
 23 material in the cell.  
 24 Q. Would it help refresh your  
 25 recollection if you saw another example from

Page 54

1 during the time that you were there?  
 2 A. Yes, it would.  
 3 MS. WOLFE: I'm not going to mark  
 4 this document as an exhibit just yet. I'm just  
 5 going to show you this document dated July 27th,  
 6 1979, see if that looks closer to the cell reports  
 7 you remember.  
 8 A. Yes, this is more familiar. You  
 9 actually have the number for each drum recorded  
 10 on the sheets.  
 11 Q. So now do you remember that  
 12 typically the actual number for each drum would  
 13 be separately written on that grid that you're  
 14 looking at?  
 15 A. On this, yes.  
 16 Q. And you're referring to --  
 17 A. What's called the landfill log  
 18 here.  
 19 MS. JALICS: Could we for the record  
 20 identify the date on the first page of that cell  
 21 report?  
 22 MS. WOLFE: I think it was July 27th,  
 23 1979.  
 24 THE WITNESS: This one runs from June  
 25 11th of '79 to June 18th of '79.

Page 55

1 MR. BROWN: Those are the days of  
 2 start and finish of the report.  
 3 THE WITNESS: Okay. The date that it  
 4 was sent in, yes.  
 5 MS. WOLFE: Why don't we go ahead and  
 6 mark this.  
 7 (Thereupon, Plaintiff's Exhibit 2 was  
 8 marked for purposes of identification.)  
 9 (Recess held.)  
 10 Q. Mr. Wallis, let me just ask you a  
 11 couple more questions about the plastic drums  
 12 that we discussed earlier. You indicated that  
 13 you thought that they would last a long time,  
 14 possibly even longer than metal drums would  
 15 last?  
 16 A. Yes.  
 17 Q. What was the reason for that?  
 18 A. We expected that the metal drums  
 19 would eventually oxidize, turn into rust, just  
 20 from being exposed to moisture in the ground  
 21 and all, whereas the plastic drums you wouldn't  
 22 have that action, but I've got no way of really  
 23 knowing what happened to either one of them in  
 24 the cells.  
 25 Q. So are you saying the composition

Page 56

1 of the plastic material would last longer than  
 2 the metal?  
 3 A. Yeah. If you look at landfills,  
 4 when they have dug up other landfills, certain  
 5 things seem to last forever in landfills and  
 6 plastic is something that once you put it in a  
 7 landfill seems to be there forever.  
 8 Q. Did the plastic drums have the  
 9 same structural integrity as metal drums would  
 10 have?  
 11 A. No. Not that they weren't strong  
 12 enough for their purpose, but a plastic drum  
 13 obviously is much more flexible in the side,  
 14 though they have pretty good top to bottom  
 15 strength.  
 16 Q. Were plastic drums buried in the  
 17 cells in the same method as metal drums?  
 18 A. Yes.  
 19 Q. Would you expect that that lower  
 20 structural integrity would lead to more  
 21 likelihood of crumple or bending or denting of  
 22 the plastic drums?  
 23 A. The way the drums were put into  
 24 the cells, they were set tight against the drum  
 25 next to them so as to help give structure, kind

Page 57

1 of like interlocking blocks across the cell and  
 2 so I wouldn't expect that that would make any  
 3 difference to whether or not the cell would  
 4 collapse or not.  
 5 Q. Would the deterioration of the  
 6 metal drums affect the structural integrity of  
 7 the plastic drums after thirty years?  
 8 A. I don't think so, and that's a  
 9 pure speculation, but I don't think so.  
 10 Q. You wouldn't expect that any of  
 11 the contents of the plastic drums to have  
 12 escaped the drum after thirty years?  
 13 A. Probably not.  
 14 Q. But it's possible?  
 15 A. Anything is possible. And I'm no  
 16 expert on what happens inside of a landfill  
 17 cell after thirty years. A lot of what I know  
 18 I read from EPA reports so I don't think I'm  
 19 qualified to make too many statements about  
 20 that.  
 21 Q. Fair enough. What about fiber  
 22 drums, if there were fiber drums buried in the  
 23 cells, how long would you expect them to  
 24 contain their contents?  
 25 A. As long as the fiber drums were



Page 58

1 dry, they should last indefinitely. The only  
 2 thing that's going to deteriorate them is if  
 3 they get wet, obviously they lose their  
 4 structural strength, but the cells should have  
 5 been fairly dry so I wouldn't expect any  
 6 problem, even though I don't remember there  
 7 being fiber drums buried there.  
 8 Q. Do you know whether all kinds of  
 9 waste could be put in fiber drums or only dry  
 10 materials because you indicated that fiber  
 11 drums shouldn't be wet?  
 12 A. Fiber drums are used for dry  
 13 materials. It's possible to put some moist  
 14 materials into fiber drums if you put a plastic  
 15 liner inside the fiber drum, but typically  
 16 that's not done because the fiber drum is used  
 17 for dry materials.  
 18 Q. Were the wastes that were buried  
 19 in the barreilfill cells wet or dry?  
 20 A. They for the most part would pass  
 21 a paint filler test which means there can be  
 22 some liquid encapsulated into the material but  
 23 not as much as that if you drop this out it's  
 24 going to have free flowing liquid out of it.  
 25 Q. So there was a range of wetness,

Page 59

1 you would say?  
 2 A. Sure. Anywhere from bone dry to  
 3 moist.  
 4 Q. What do you think the majority of  
 5 it was with respect to how wet it was?  
 6 A. I would say the majority of the  
 7 material that was put in there had a fairly low  
 8 moisture content, just from the nature and  
 9 production of the materials that went in.  
 10 Q. So --  
 11 A. I don't know how much water is in  
 12 peanut butter so I'm not sure. I think it's  
 13 mostly oil. I don't think there's much water  
 14 in it.  
 15 Q. So by referencing peanut butter do  
 16 you think that most of the material you're  
 17 thinking of was somewhere around the wetness of  
 18 peanut butter, is that the reference you're  
 19 using, or are you saying that most of the  
 20 material was peanut butter?  
 21 A. There was a lot of peanut butter  
 22 that went in but there were also latex glues  
 23 that went in and the latex glue would have some  
 24 amount of water in it, but I don't know how  
 25 much, but typically it's pretty well bound up

Page 60

1 in that glue. Trying to think of what other  
 2 types of materials went in. There were paint  
 3 sludges that went in. They might have some  
 4 moisture depending upon how the paint sludge  
 5 was produced. Paint sludges from a waterfall  
 6 paint booth typically have some moisture in  
 7 them. If it was a dry paint booth there would  
 8 be virtually no moisture in them.  
 9 Q. So was there some food waste that  
 10 went in?  
 11 A. Yes.  
 12 Q. And some of that was peanut  
 13 butter?  
 14 A. Some of that was peanut butter.  
 15 Q. Was there any food waste that was  
 16 wet enough that hypothetically if there was a  
 17 hole punched in a drum it would run out?  
 18 A. Some of it might ooze out. I  
 19 don't think anything would run out. It's kind  
 20 of like if you punched a hole in a tub of  
 21 peanut butter and squeezed on the drum or  
 22 something, you would get some oozing of the  
 23 material.  
 24 Q. What about with the latex glue  
 25 waste, was that something that would be loose

Page 61

1 enough to run or ooze out if a hole was punched  
 2 in the drum?  
 3 A. It's possible.  
 4 Q. Do you remember anything about how  
 5 wet the latex glue was?  
 6 A. It was everything from dried  
 7 chunks, kind of overspray when they were gluing  
 8 something to almost raw material which was  
 9 pretty much white Elmer's Glue type stuff.  
 10 Q. Elmer's Glue would probably run?  
 11 A. Yeah, Elmer's Glue would probably  
 12 run.  
 13 Q. Now, you also mentioned paint  
 14 sludge. How wet was the paint sludge that you  
 15 remember?  
 16 A. Again, it depends on how it's  
 17 produced. From a waterfall paint booth the  
 18 nature of it is that some water droplets get  
 19 trapped into the paint sludge, encapsulated in  
 20 it, so if you took it and swirled it around you  
 21 would get some water out of it. If you just  
 22 sat it there you probably don't.  
 23 Q. What other waste types do you  
 24 remember being buried in the cells?  
 25 A. We got -- we had a fairly wide

Page 62

1 range of typical manufacturing process waste so  
 2 glues, inks, oils. Now, let me step back for a  
 3 second. I'm just thinking of all the things we  
 4 received. Not all of those would end up in the  
 5 cells.  
 6 If you just want to talk about the  
 7 cells, I've got to think a little bit. I'm  
 8 thinking of all the things that came to the  
 9 site. But in the cells themselves, because  
 10 it's heavily automotive related businesses in  
 11 the area, there were a lot of paints and polyol  
 12 and some glues, some plating sludges and that  
 13 was pretty much all automotive manufacturing  
 14 related. And then the other big category was  
 15 the food and consumer products, the detergent  
 16 samples. Procter & Gamble routinely took a  
 17 little box of soap out of every so much soap  
 18 powder that they made and they did their  
 19 quality control on that and then they take that  
 20 little box and throw it into a drum so you have  
 21 drums of detergent.  
 22 Q. Would it help you to remember if I  
 23 showed you a list that was generated after the  
 24 barrellfill closed but it's a compilation of  
 25 materials that might have been there?

Page 63

1 A. Sure.  
 2 Q. And you can tell me if you have an  
 3 independent memory of these materials being  
 4 buried there.  
 5 (Thereupon, Plaintiff's Exhibit 3 was  
 6 marked for purposes of identification.)  
 7 Q. Handing you what has just been  
 8 marked as Wallis Deposition Exhibit 3 for  
 9 identification purposes, could you please  
 10 examine this two page document and tell me if  
 11 you have seen it before?  
 12 A. I don't believe I've seen this  
 13 before, but --  
 14 Q. I'll represent that there's some  
 15 highlighting on this document that might have  
 16 been done after the document was created and  
 17 might have been done by me. I can't remember.  
 18 But the purpose of showing you this is to see  
 19 if you can generate some memory of the wastes  
 20 that were generated at the site. I believe  
 21 that this is an EPA document that was created  
 22 after the site closed. And do you see that the  
 23 document lists different categories of wastes  
 24 based on the type of waste?  
 25 A. Yes.

Page 64

1 Q. What I would like to do is go  
 2 through these categories and ask some questions  
 3 of each one. Starting at the top where it says  
 4 glues and resins, do you recall any of these  
 5 materials being disposed of in the barrellfill?  
 6 A. Yes, several of those I can say  
 7 for certain were in the barrellfill.  
 8 Q. Several you can or cannot say?  
 9 A. I can say for sure they were  
 10 there.  
 11 Q. Which ones?  
 12 A. The adhesive, the Bondalube  
 13 sludge, the cement and glue, latex paints,  
 14 coatings, grease.  
 15 Q. Anything else in that category?  
 16 A. Polyester, polyol, polyol paint,  
 17 polyvinyl adhesive. I'm not -- probably was  
 18 there, polyurethane. I'm not sure that styrene  
 19 or styrene monomer was buried because typically  
 20 that would have been sent for incineration.  
 21 Q. Why is that?  
 22 A. Styrene and styrene monomer are  
 23 very flammable and very high heat value and I  
 24 think typically that would have been sent for  
 25 incineration. I don't remember ever seeing

Page 65

1 chlorinated polyol. That would be a -- that  
 2 would have been a strange compound.  
 3 Q. Why would that be strange?  
 4 A. Typically polyol is a long chain  
 5 alcohol with a lot of alcohol groups along the  
 6 chain that is used along with TDI to make  
 7 urethane rubber and we got a lot of that from  
 8 the auto manufacturers because they make the  
 9 urethane -- urethane foam-like dashboards and  
 10 headliners with that, and I don't know why they  
 11 would have that chlorinated.  
 12 Q. So are you saying that you  
 13 remember polyol being disposed of but not  
 14 chlorinated polyol?  
 15 A. Yes, that's what I'm saying.  
 16 Q. And you mentioned TDI. What's the  
 17 full chemical name for TDI?  
 18 A. It's toluene diisocyanate which is  
 19 why you call it TDI.  
 20 Q. And you mentioned that that was  
 21 used in the automotive industry --  
 22 A. Yes.  
 23 Q. -- to mix with polyol to make  
 24 urethane foam?  
 25 A. Yes. And they correctly don't

Page 66

1 have that on the list because we do not bury  
 2 that either. It is a very reactive material  
 3 and so it was sent out for incineration also.  
 4 Though I -- I would say most of that was sent  
 5 for incineration. Near the end of that time we  
 6 were treating some of it on site to neutralize  
 7 it.  
 8 Q. What was the treatment process?  
 9 A. You mix TDI and polyol together  
 10 and you get urethane rubber.  
 11 Q. And you would do that on site?  
 12 A. We did that on site.  
 13 Q. Did you do that with all of the  
 14 polyol that came on site?  
 15 A. No. It was a small portion of the  
 16 material.  
 17 Q. Did you do it with all of the TDI  
 18 that came on the site?  
 19 A. I would say over the period of  
 20 time most of the TDI was sent off site but we  
 21 did do some of this -- near the end of the time  
 22 that I was there we did do some of this on  
 23 site.  
 24 Q. And would you go through the  
 25 process of how the polyol and TDI were

Page 67

1 combined?  
 2 A. We would go out on a section of  
 3 the ground there, put in about, oh, a foot to  
 4 two foot deep trench that would be, let's say  
 5 twenty feet wide and maybe forty feet long,  
 6 line that with plastic film, visqueen type  
 7 material, and we had a drum dumper that would  
 8 take a drum of polyol and a drum of TDI and  
 9 release -- tip them so they would run together  
 10 in a mixing trough. And then from that mixing  
 11 trough it ran down into this plastic lined  
 12 area. The two materials reacted together and  
 13 after a short period of time you had a very  
 14 large urethane mattress and then we would take  
 15 the equipment from the loader or whatever and  
 16 break that material up and put it in the  
 17 landfill.  
 18 Q. What was the purpose of doing  
 19 that?  
 20 A. To neutralize the TDI.  
 21 Q. What was the acceptable method of  
 22 disposing of TDI if you didn't go through that  
 23 process?  
 24 A. If you didn't do that, then you  
 25 shipped it off site to an incinerator to be

Page 68

1 burned.  
 2 Q. And that mattress that was the end  
 3 production of mixing polyol and TDI, where was  
 4 that disposed of?  
 5 A. It was either -- I think most of  
 6 it was put into the sanitary landfill.  
 7 Q. Where was the rest of it put?  
 8 A. There may have been some of it  
 9 that was put into a drum cell, but I can't  
 10 remember for sure which way we ended up. I  
 11 think most of it ended up going down to the  
 12 saniter.  
 13 Q. You have a recollection of some of  
 14 it being put into a drum cell?  
 15 A. No, but I don't have a  
 16 recollection that it wasn't, so I'm not certain  
 17 that it was put into the drum cell but I know  
 18 that they did take a lot of it and put it into  
 19 the saniter.  
 20 Q. Do you think it's possible if it  
 21 went into the drum cell it would have been put  
 22 into a drum?  
 23 A. No, it would not have been put  
 24 into a drum. It was big chunks of foam rubber  
 25 and they moved it with like a bulldozer.

Page 69

1 Q. Now, you mentioned earlier  
 2 chlorinated polyol which is on this list?  
 3 A. Yeah, and I don't remember ever  
 4 seeing any chlorinated polyol.  
 5 Q. Would it be unacceptable to put  
 6 chlorinated polyol in the barrellfill?  
 7 A. It was probably permitted. I'm  
 8 trying to think if -- I just don't know they  
 9 would have had chlorinated polyol.  
 10 Q. Is chlorinated polyol an organic  
 11 compound?  
 12 A. Yeah, they are all long chain  
 13 alcohols. The difference between regular  
 14 polyol and chlorinated polyol is they  
 15 substitute chlorine in place of some of the  
 16 alcohol on the chain.  
 17 Q. Is there anything else on this  
 18 list that would be considered a chlorinated  
 19 organic compound?  
 20 A. Let's see.  
 21 Q. And let's just start with the  
 22 glues and resins.  
 23 A. Neoprene is a chlorinated rubber,  
 24 however, if it's truly neoprene it's pretty  
 25 stable. It's going to stay as chlorinated

Page 70

1 rubber for a long, long time. Polyvinyl is a  
 2 PVC, polyvinyl chloride, so if you had a  
 3 polyvinyl adhesive it would have a fair amount  
 4 of chlorine included in that. I think that's  
 5 the only ones I see there that would have been  
 6 chlorinated.  
 7 Q. Do you recall the disposal of  
 8 neoprene in the cells?  
 9 A. No, I don't.  
 10 Q. Do you recall the disposal of  
 11 polyvinyl adhesive in the cells?  
 12 A. We disposed of a lot of adhesives  
 13 and it wouldn't surprise me if some of it was  
 14 polyvinyl, but I don't have any real  
 15 recollection of whether it was there or not.  
 16 Q. Of all the materials in the glues  
 17 and resins category that's listed here on the  
 18 exhibit that you recall being disposed of in  
 19 the cells, was there anything disposed of in  
 20 bulk rather than in a container?  
 21 A. I don't remember ever having any  
 22 of that in bulk. Almost all of this came from  
 23 the manufacturers in drums.  
 24 Q. Was there anything that came from  
 25 the manufacturer in drums that would have been

Page 71

1 emptied out of the drums and disposed of in the  
 2 cell?  
 3 A. No. No. That would have been too  
 4 labor intensive for any good purpose to do.  
 5 Then you would still be left with a drum that's  
 6 got goop in it so I'm almost certain we never  
 7 did that.  
 8 Q. Do you have any memory of polyol  
 9 being emptied out of drums into the cells?  
 10 A. No.  
 11 Q. Do you have any memory of any  
 12 material being disposed of in bulk form in  
 13 order to use up any remaining free space in the  
 14 cells after the drums were placed in there?  
 15 A. As I remember, the permit allowed  
 16 for sludges to be placed around the drums but I  
 17 don't remember during the time that I was there  
 18 that we actually did that.  
 19 Q. Are you aware of that being done  
 20 before you got there?  
 21 A. Like I say, I know it was in the  
 22 permit. I don't know that it was ever done.  
 23 Q. Let's look at the next category on  
 24 this list which is paints. Do you remember any  
 25 of these materials being disposed off?

Page 72

1 A. Certainly we did lots of paint  
 2 sludge, paint filters. I don't remember  
 3 lacquer as a category. That's another one of  
 4 these things that that's fairly liquid, highly  
 5 flammable and would have been sent for  
 6 incineration unless they are talking about a  
 7 sludge or a dried material, but certainly the  
 8 other categories, yes, we did a lot of paint  
 9 sludge.  
 10 Q. Do you recall any paint sludge or  
 11 anything in this category being disposed of in  
 12 bulk in the barreldrum cells?  
 13 A. No.  
 14 Q. Did any of these materials contain  
 15 chlorinated organics or would they be  
 16 considered to be chlorinated organics?  
 17 A. Typically not. The paint, again,  
 18 a lot of this was from auto manufacturing and  
 19 there would have been lacquers or enamels and  
 20 those aren't chlorinated, so I wouldn't expect  
 21 to see anything from that.  
 22 Q. What chemicals would you typically  
 23 find in paint sludge?  
 24 A. Paints are made up of pigment to  
 25 give it color, a resin which can be any number

Page 73

1 of polymers and a vehicle which is the solvent  
 2 that keeps it liquid until you get it -- lets  
 3 it dry to become the solid paint, and in the  
 4 paint sludge most of the vehicle is gone which  
 5 is why it's paint sludge instead of liquid  
 6 paint so you have got mostly the resins left,  
 7 the paint resins, and those can be anything  
 8 from enamels, latexes, lacquers. Almost all of  
 9 them are various organic polymers I guess is  
 10 the general term you would use for that.  
 11 Q. Moving on to the next category,  
 12 cleaning and hygiene, do you remember any of  
 13 these materials being buried in the cells?  
 14 A. Yes.  
 15 Q. Which ones?  
 16 A. All of them.  
 17 Q. Were any of these materials buried  
 18 in bulk?  
 19 A. No.  
 20 Q. And what kind of chemicals would  
 21 you typically find in these products? Is that  
 22 too broad of a question?  
 23 A. That's very broad because it's a  
 24 pretty broad spectrum of materials there but  
 25 those are all consumer products typical to what

Page 74

1 you would find in your bathroom so there's  
 2 nothing particularly hazardous about any of  
 3 them. You're looking at, for instance, a  
 4 toothpaste which has got some form of an  
 5 abrasive powder, a material, probably water,  
 6 depends on the toothpaste. You may have some  
 7 brighteners or some fluoride or other materials  
 8 in there to do it and almost everything has got  
 9 some colorant, some dye. The FBI -- FDA  
 10 numbers, whatever. And something to give it a  
 11 nice smell.  
 12 Q. Were any of those materials in  
 13 their consumer packaging or were they all  
 14 unpackaged, just --  
 15 A. I would say the most of these were  
 16 packaged materials.  
 17 Q. So are you saying that you might  
 18 have a drum full of toothpaste tubes filled  
 19 with toothpaste?  
 20 A. Yes.  
 21 Q. Or a drum filled with shampoo  
 22 bottles?  
 23 A. Yes.  
 24 Q. And what would those packaging  
 25 materials be made of?

Page 75

1 A. Same thing you find in the store,  
 2 plastic bottles. Toothpaste tubes are  
 3 typically a plastic material. A lot of these  
 4 were either QC samples which they also list  
 5 there where they would take a -- grab a tube of  
 6 toothpaste off the production line, take it  
 7 over and test it to make sure that it had the  
 8 right abrasiveness or whatever other tests they  
 9 were doing, and then because they have squeezed  
 10 a little bit out of the tube, the rest of the  
 11 tube got thrown in a drum to be disposed.  
 12 Q. How long would you expect those  
 13 packaging materials to remain intact after  
 14 burial?  
 15 A. A long, long time based on how  
 16 long they last in other landfills so they are  
 17 probably still in good shape.  
 18 Q. Do you recall what kind of  
 19 cleansers were buried?  
 20 A. What kind of cleansers does  
 21 Procter & Gamble make? Typical household  
 22 cleansers, soaps, probably most of those would  
 23 be some form of detergent. I can't remember if  
 24 we had any -- may have been some scouring  
 25 powders in there, but typical types of

Page 76

1 household cleansers.  
 2 Q. Did any of the wastes that are  
 3 listed under cleaning and hygiene contain  
 4 chlorinated organics?  
 5 A. Probably if there's any  
 6 chlorinated organics there it's in the  
 7 packaging because we get a lot of PVC in  
 8 consumer packaging so that's probably the most  
 9 of where you would find any chlorinated.  
 10 Q. Would you say that you would find  
 11 a lot of PVC in most plastic packaging or -- is  
 12 it because of the plastics that you would find  
 13 that?  
 14 A. Yes, it is the plastic that makes  
 15 up your squeeze bottles or your detergent  
 16 bottles, a lot of those are plastic and a lot  
 17 of those have either a layer that's PVC or the  
 18 whole container is PVC depending on the  
 19 material because PVC is a very good packaging  
 20 material for consumer products.  
 21 Q. Is there anything that PVC  
 22 packaging or plastic packaging could come in  
 23 contact with in the barrellfill that could cause  
 24 it to decompose faster than it ordinarily  
 25 would?

Page 77

1 A. I don't believe there was anything  
 2 in that landfill that would decompose PVC. You  
 3 would need a strong solvent to break the PVC,  
 4 dissolve PVC and those solvents weren't put  
 5 into the landfills.  
 6 Q. Were there any solvents put into  
 7 the barrellfill?  
 8 A. There was trace amounts of  
 9 solvents in the vehicle for paints in the paint  
 10 sludge, but not enough to have much effect on  
 11 anything.  
 12 Q. If that paint sludge with trace  
 13 amounts of solvents came into contact with a  
 14 toothpaste tube, would it have any effect on  
 15 the tube's condition over thirty years?  
 16 A. I won't say it's impossible but I  
 17 think it's probably highly unlikely.  
 18 Q. What about in a hundred years?  
 19 A. I don't know. I don't know.  
 20 Q. What about -- I'm sorry.  
 21 A. I think you're getting into the  
 22 point that I don't know that there's anybody  
 23 that knows that yet.  
 24 Q. Well, I'm just trying to find out  
 25 whether there's another solvent in any of the

Page 78

1 waste that went into the barrellfill to have any  
 2 effect on plastic material that was in there at  
 3 the same time?  
 4 A. I don't think so, but that's  
 5 purely a personal speculation. I don't think  
 6 you can really say for sure.  
 7 Q. And would your answer be the same  
 8 if we were talking about material with trace  
 9 solvents coming into contact with a plastic  
 10 drum versus a toothpaste tube?  
 11 A. The drum is certainly going to  
 12 last a lot longer because it's a lot thicker  
 13 and the drums typically were made of like a  
 14 high density polyethylene as opposed to PVC, so  
 15 I would say a drum would last a lot, lot longer  
 16 than a tube of toothpaste.  
 17 Q. The next category on the list is  
 18 waxes and fats, and can you tell me if there's  
 19 anything in that list that you remember being  
 20 buried in the barrellfill?  
 21 A. Well, certainly we did take  
 22 greases and mixtures of greases with floor  
 23 sweepings and dirt, fatty acids, yeah, probably  
 24 we did get those. I don't remember any hexane  
 25 liquids. I don't know why that would have been

Page 79

1 put there. And I don't know how you make  
 2 hexane solid.  
 3 Q. What is hexane liquid?  
 4 A. Hexane is an organic solvent used  
 5 in a lot of materials for solvent capability  
 6 and, again, if it was liquid, that would be  
 7 material we would have incinerated.  
 8 Q. So you don't remember any of it  
 9 going in the barrellfill or you don't remember  
 10 it being allowed to go in the barrellfill?  
 11 A. I don't remember any of it going  
 12 into the barrellfill and we would have certainly  
 13 tried very hard to make sure it didn't go into  
 14 the barrellfill.  
 15 Q. The next category is solvents and  
 16 stillbottoms. Do you remember any of these  
 17 items going in the barrellfill?  
 18 A. I would say probably as part of  
 19 the glues and resins we probably got that --  
 20 just like rubber solvent is really probably  
 21 like rubber cement type materials, I think  
 22 that's probably what they are talking about.  
 23 Certainly solvent sludge-type materials. Not  
 24 sure that ethyl alcohol would have made it to  
 25 the landfill.

Page 80

1 Q. Why do you say that?  
 2 A. Because if it was good somebody  
 3 would have stolen it.  
 4 Q. Why, is it valuable?  
 5 A. It's whiskey.  
 6 Q. Oh.  
 7 A. But I don't know why they would  
 8 have listed that as a separate category.  
 9 Typically we would not have put an alcohol, if  
 10 it was pure alcohol into the landfill. Solvent  
 11 sludge is probably really paint sludge, but,  
 12 again, that's kind of speculation.  
 13 Q. What is the chemical composition  
 14 that could categorize something as a solvent or  
 15 is it not based on its chemical composition?  
 16 A. It's based on its ability to  
 17 dissolve something and make a solution.  
 18 Q. That's what defines a solvent?  
 19 A. Yes. And there's the best one in  
 20 the world (indicating). Water is the ultimate  
 21 solvent for most things in the world. Organic  
 22 solvents typically are used for their ability  
 23 to dissolve a resin or some other organic  
 24 material so that you can produce something,  
 25 make something out of it.

Page 81

1 Q. You testified earlier that  
 2 solvents would usually be recovered and sold  
 3 rather than buried.  
 4 A. Chlorinated solvents were  
 5 typically recovered and sold because they had a  
 6 very good resale value.  
 7 Q. Was there any reason that you  
 8 wouldn't want to bury solvents based on their  
 9 reactivity or any other character of their  
 10 composition?  
 11 A. Chlorinated solvents typically  
 12 because they have value we wouldn't have  
 13 buried. Flammable nonchlorinated solvents  
 14 typically we sent for incineration based on  
 15 partially the safety considerations that  
 16 flammable solvents -- moving them around and  
 17 burying them in the landfill wasn't a good idea  
 18 from a safety standpoint. You don't want to  
 19 run heavy track equipment over a drum which may  
 20 catch fire and explode underneath it. So we  
 21 tried to keep everything like that to go for  
 22 incineration. Now, you could have a paint  
 23 sludge with solvent in it, but typically it  
 24 would be solid -- mostly paint sludge with a  
 25 small amount of solvent, trace amounts in it.

Page 82

1 Q. Were any of the materials listed  
 2 here under the category of solvents and  
 3 stillbottoms flammable or can you not tell from  
 4 looking at this?  
 5 A. You can't tell from looking at  
 6 this. In their pure state, they probably would  
 7 be. Certainly ethyl alcohol, xylene are  
 8 flammable as a pure substance, but when you say  
 9 sludge, generally means there's a little bit of  
 10 xylene and a whole lot of something else and I  
 11 don't know what else is there to be able to say  
 12 that and how much xylene is really there.  
 13 Q. What are stillbottoms?  
 14 A. If you recover solvents you use a  
 15 still. Most of the solvent is boiled off,  
 16 becomes a vapor and is then recovered over  
 17 here. The stuff that's left in the bottom of  
 18 the still is stillbottoms and it's typically  
 19 the pigment, the resins and anything that  
 20 wasn't volatile that was in the waste that you  
 21 started with.  
 22 Q. When you say anything that was  
 23 nonvolatile, do you mean that anything volatile  
 24 would have been vaporized?  
 25 A. Yes. The whole idea of distilling

Page 83

1 something, to run it through the still is that  
 2 you drive off those volatile fractions so that  
 3 you recover it over here as a usable solvent  
 4 again and the material that's left is the  
 5 material that you don't want.  
 6 Q. Do you remember the identity of  
 7 any of the generators of stillbottoms?  
 8 A. During the time that I was there I  
 9 don't remember seeing much in the way of  
 10 stillbottoms, so, no I don't remember any  
 11 generators of them.  
 12 Q. Do you remember any stillbottoms  
 13 coming from Systech's Franklin, Ohio facility?  
 14 A. The Franklin, Ohio facility was  
 15 not in operation while I was at IWD, so, no, I  
 16 don't think anything came from there during the  
 17 time I was there. Now, that's not to say that  
 18 something hadn't come before that.  
 19 Q. Do you know when that facility was  
 20 in operation?  
 21 A. I don't know when it started, but  
 22 I think I remember that it stopped around '78,  
 23 but really, I was -- had no connection with it  
 24 during the time it was running. I just know it  
 25 wasn't running by the time that I was first

Page 84

1 hired by Systech.  
 2 Q. Getting back to this solvent  
 3 recovery process, what kind of container would  
 4 the stillbottoms be in at the end of that  
 5 process?  
 6 A. They could either be drummed or it  
 7 could have been done in bulk. Typically the --  
 8 at that time most of the people who were  
 9 recovering solvents would have drawn the  
 10 stillbottoms out.  
 11 Q. Why do you say that?  
 12 A. Because it's a small part of the  
 13 total and when they cleaned out the still it's  
 14 easier to dump it into it -- it's typically a  
 15 sticky, gooey, chewing gum material and it's a  
 16 lot easier to rake that out into a drum than do  
 17 anything else with it.  
 18 Q. Do you remember any of that  
 19 material, stillbottoms, coming into the site in  
 20 anything other than drums?  
 21 A. I don't even remember any of it  
 22 coming in when I was there.  
 23 Q. Go down the miscellaneous category  
 24 on this exhibit, would you please look at that  
 25 list and tell me what you remember, if

Page 85

1 anything, being buried in the barreldrum.  
 2 A. Certainly abrasive slurry would  
 3 have been drummed and put in there. Some of  
 4 these are -- I have no idea what Cold Snap is.  
 5 Diatomaceous earth. I'm surprised that there  
 6 are four drums of flammable waste. That  
 7 probably shouldn't have happened if it did. I  
 8 don't know what Sta-Sol is for sure and I don't  
 9 know why two drums of water would have been put  
 10 in unless there was something else in the water  
 11 because I know typically we had a small water  
 12 plant that we would process the water through  
 13 and then transport the treated water to the  
 14 local Springfield Municipal Plant, but I guess  
 15 the rest of them could have been there.  
 16 Q. Do you have any idea what kind of  
 17 solid drums trash might have been or solid  
 18 trash in drums might have been put in there?  
 19 A. Hard to say.  
 20 Q. Do you remember any solid trash in  
 21 drums being put in there?  
 22 A. If it was truly trash I would have  
 23 expected it to go to the sanitary landfill, so  
 24 when they are saying solid trash, I don't know  
 25 what kind of category they are talking about.

Page 86

1 Q. Were there any materials in this  
 2 miscellaneous list that would contain  
 3 chlorinated organics?  
 4 A. Other than the couple of them that  
 5 I don't know what they are, I would say the  
 6 rest of them would not contain chlorinated  
 7 contrast.  
 8 Q. Moving on to inks, do you remember  
 9 ink waste or ink sludge being placed in the  
 10 barrellfill?  
 11 A. Certainly ink sludge was and I'm  
 12 guessing ink waste is probably ink sludge also,  
 13 just somebody used a different name.  
 14 Q. Do you recall any ink waste or ink  
 15 sludge in bulk form being disposed of in the  
 16 barrellfill?  
 17 A. No.  
 18 Q. Does that type of waste contain  
 19 any chlorinated compound?  
 20 A. I would not expect there to be any  
 21 chlorinated in there.  
 22 Q. Moving on to asbestos, do you  
 23 remember any asbestos or material containing  
 24 asbestos being buried in the barrellfill?  
 25 A. I don't remember any asbestos but

Page 87

1 certainly they did have customers who had  
 2 asbestos waste, Delco being one of them, but  
 3 typically asbestos waste from Delco, as I said,  
 4 would be put into big plastic bags and went to  
 5 the sanitary landfill. Asbestos and water  
 6 could be something that would have been there.  
 7 Q. Did any dry asbestos come into the  
 8 site or was it just asbestos and water?  
 9 A. I don't remember any asbestos  
 10 during the time I was there, but I do know that  
 11 Delco did make -- a part of their drum  
 12 grinding, they ended up with an asbestos water  
 13 waste.  
 14 Q. Do you remember there being a  
 15 lagoon at the Tremont site or a pond?  
 16 A. There was a pond.  
 17 Q. What was that used for?  
 18 A. It was used to aerate wastewaters  
 19 before they were run through the water  
 20 treatment plant to go out to the city and at  
 21 one point in time when they had decided to  
 22 close that out, they used it for disposal of  
 23 some coal residue from a -- the government  
 24 program to try to make oil out of coal that was  
 25 over in Moundsville, West Virginia.

Page 88

1 Q. Was that called Liquified Coal  
 2 Development?  
 3 A. It could be. I just remember it  
 4 was Moundsville, West Virginia, and the solid  
 5 residue from the coal after they extracted the  
 6 organics was used to fill in that pond.  
 7 Q. Do you remember the pond being  
 8 used to evaporate water from water and asbestos  
 9 mixture?  
 10 A. No. The only other use that I  
 11 know of it was to aerate water to help reduce  
 12 the COD, get some oxygen into the water so that  
 13 the cost of treatment would be lower. That was  
 14 done simply by pulling water from the pond,  
 15 bringing it up through a flat spray nozzle and  
 16 spraying it back over so it would fall through  
 17 the air and pick up the oxygen out of the air.  
 18 Q. Then moving on to oil on this  
 19 exhibit, do you remember any of these materials  
 20 being disposed off in the barrellfill?  
 21 A. Oil sludges, yes. Typically oil  
 22 or oil/water mixtures would have gone to the  
 23 oil treatment plant to recover the oil. It's  
 24 possible separator sludge could have gone there  
 25 too.

Page 89

1 Q. What is separator sludge?  
 2 A. A separator is a device to remove  
 3 oil from water. Typically if you have got a  
 4 big manufacturing operation and a lot of trucks  
 5 moving around you will get drips of oil on the  
 6 ground and when it rains, then that washes off  
 7 the parking lot and so they put a trap to  
 8 collect that water and run it through a  
 9 separator to skim that oil off the top so it  
 10 doesn't get discharged into a stream someplace.  
 11 Q. Would that oil sludge or separator  
 12 sludge be generated at the oil recovery  
 13 facility on site?  
 14 A. Oil sludge certainly was.  
 15 Q. At the end of that oil recovery  
 16 process, what kind of container would the oil  
 17 sludge be in?  
 18 A. The process would have generated  
 19 that in as a bulk form which they probably  
 20 would -- that was vacuumed out with a truck and  
 21 then that oil sludge was used as a bulk into  
 22 the landfill.  
 23 Q. Into the barrellfill or into the  
 24 solid waste landfill?  
 25 A. Into the barrellfill.



Page 90

1 Q. In bulk?  
 2 A. In bulk.  
 3 Q. Can you tell me more about that  
 4 process of vacuuming it out of something and  
 5 then putting it into the barrelfill?  
 6 A. We had several treatment plants  
 7 where you did gravity separation of the oil and  
 8 water and solids, and those were steam heated  
 9 and basically heated the oil/water mixture up,  
 10 held it at temperature for two to three days.  
 11 The oil would float to the surface and was  
 12 skimmed off. The water would be the next layer  
 13 and then on the bottom all of the dirt and  
 14 stuff that was in the oil would drop to the  
 15 bottom. And that sludgy layer on the bottom  
 16 was then -- at the end of that period you  
 17 skimmed the oil off, you pumped the water to  
 18 the water treatment and then this sludge that's  
 19 left on the bottom was vacuumed up by a vacuum  
 20 truck and moved over and put into the landfill  
 21 or the drumfill.  
 22 Q. Can you quantify the amount of  
 23 that material that was generated on site and  
 24 put into the cells?  
 25 A. No. I can tell you that typically

Page 91

1 it would have been ten percent of the total  
 2 volume incoming material for the oil treatment  
 3 plant.  
 4 Q. So ten percent of the material  
 5 that went into the oil treatment plant would  
 6 end up as a sludge by-product?  
 7 A. Yeah, typically I would say that's  
 8 about it.  
 9 Q. And then would that entire amount  
 10 of by-products at the end of the process be put  
 11 into the cells?  
 12 A. Yes.  
 13 Q. So when it was vacuumed into -- a  
 14 tanker truck, you said?  
 15 A. Yes.  
 16 Q. Then would the tanker truck just  
 17 directly immediately drive over to the cell and  
 18 then pump it into the cell?  
 19 A. Well, yeah, typically I would say  
 20 that's what happened because we would have  
 21 already tested the material prior to them  
 22 pumping it out of the treatment tank so there  
 23 wouldn't be any reason to hold it up from  
 24 pouring into the cell at that time.  
 25 Q. How often did the oil recovery

Page 92

1 process yield oil sludge that would be vacuumed  
 2 out?  
 3 A. It was an ongoing process and I'm  
 4 trying to remember. I think we had six  
 5 treatment tanks and typically it was a two to  
 6 three day process for each one but they  
 7 wouldn't clean the sludge out until it built up  
 8 a larger volume in the bottom and so that was  
 9 probably -- I would say probably one of those  
 10 tanks would have been cleaned out maybe one a  
 11 week.  
 12 Q. So one of the six tanks per week  
 13 would be vacuumed out?  
 14 A. Yeah, I think that's a rough  
 15 estimate.  
 16 Q. How many gallons would it yield  
 17 each time it was vacuumed, roughly?  
 18 A. Two hundred, three hundred  
 19 gallons.  
 20 Q. Do you recall what size vacuum  
 21 truck was used to do that?  
 22 A. Whichever truck was available.  
 23 Q. Would it ever fill the truck?  
 24 A. No. No, you're talking very small  
 25 amounts, two or three hundred gallons, and I

Page 93

1 think the smallest vacuum truck was probably  
 2 four thousand gallons and the bigger ones were  
 3 six thousand gallons.  
 4 Q. Can you describe the consistency  
 5 of that sludge? Obviously it was able to be  
 6 vacuumed so it couldn't be too solid, but how  
 7 wet or liquid was it?  
 8 A. It was -- it looked like heavy  
 9 gray mud.  
 10 Q. And what did it consist of?  
 11 A. Mostly it was dirt, floor  
 12 sweepings from factories. Some of it would  
 13 have been finely divided carbon from motor  
 14 operations, bits of metal from bearings and  
 15 machinery that the oil was in. A small amount  
 16 of oil would remain in it and some water.  
 17 Q. Do any of those components contain  
 18 chlorinated compound?  
 19 A. No. We had to be very careful  
 20 about that because chlorinated compound would  
 21 make our finished product unusable. Couldn't  
 22 sell chlorinated oil to somebody.  
 23 Q. Was there any record made of the  
 24 amount of this material that was disposed in  
 25 bulk form in the cells?

Page 94

1 A. It should have been recorded.  
 2 Q. Would it have been recorded on the  
 3 same log used to record the drum disposal?  
 4 A. Yes.  
 5 Q. And when you say should have been,  
 6 are you saying that you believe it might not  
 7 have been all the time?  
 8 A. Well, I'm just thinking if I can  
 9 remember seeing it on cell logs or not and I  
 10 don't remember whether I saw it on cell logs or  
 11 not.  
 12 Q. Would it ever be in the thousands  
 13 of gallons on a cell report or do you think it  
 14 would only be in the hundreds of gallons?  
 15 A. I would think in the hundreds. I  
 16 can't imagine it getting into thousands of  
 17 gallons. The tank -- the treatment tanks would  
 18 only hold about four thousand gallons so -- and  
 19 it was a small percentage of that, so I don't  
 20 think you would get into the thousands of  
 21 gallons off that.  
 22 Q. Did oil sludge only come from the  
 23 on-site facility or did you receive any oil  
 24 sludge from other generators?  
 25 A. We got some oil sludges and

Page 95

1 greases from other places because some of the  
 2 auto plants had their own oil recovery systems  
 3 and so we would get sludges and that from  
 4 those.  
 5 Q. Were those in drums?  
 6 A. Yeah, that was typically in drums.  
 7 Q. Was there any in bulk?  
 8 A. There may have been, but I'm not  
 9 sure that I can actually pin that down and say  
 10 yes. But it would make sense from some of  
 11 those plants that it may have been bulk at  
 12 times.  
 13 Q. Could there have been PCB's in the  
 14 oil sludge that was disposed in bulk in the  
 15 cells?  
 16 A. We tested everything for PCB --  
 17 any of the oils for PCB's, so from our process  
 18 I would say for certain, no, there wasn't any  
 19 PCB's there. From the off site oil sludges,  
 20 the original samples were tested and I think --  
 21 I think we tested PCB's on the oil sludges when  
 22 they came in, but I'm not certain.  
 23 Q. What are PCB's?  
 24 A. Polychlorinated biphenyls.  
 25 Q. Are PCB's something that would be

Page 96

1 permitted to put in the barrelfill?  
 2 A. I doubt it, but I can't remember  
 3 when the PCB rules came into effect. I think  
 4 at that time -- I'm not sure if PCB's had been  
 5 banned from landfills at that time or not. I  
 6 can't remember where in the history of things  
 7 they decided PCB's were bad.  
 8 Q. Why are PCB's banned from  
 9 landfills today?  
 10 A. They are pretty much banned from  
 11 everything today. They decided that -- they  
 12 decided that while this material was extremely  
 13 inert and at one time was thought to be just  
 14 the greatest stuff in the world, they put it  
 15 into transformers, they used it in the wax on  
 16 the wax paper on your cereal cartons and  
 17 everything else, they figured out that it's  
 18 extremely inert and therefore it never goes  
 19 away and it bioaccumulated in various places  
 20 and then somebody decided that maybe this is a  
 21 bad thing and they started doing a lot of  
 22 studies and there's a lot of controversy over  
 23 what the studies really said, but they decided  
 24 that we're not going to allow the disposal of  
 25 PCB's in landfills or other places and they set

Page 97

1 up special incinerators to burn PCB's and  
 2 then -- well, about the same time they banned  
 3 the production and there was a big hump that  
 4 went through the business of getting rid of  
 5 PCB's and now it's pretty rare to run into them  
 6 anymore.  
 7 Q. Getting back to when you were  
 8 discussing the reaction of polyol with TDI --  
 9 A. Okay.  
 10 Q. -- do you remember an incident,  
 11 and this is something that you discussed in  
 12 your interview a couple years ago, where a lid  
 13 of a drum of TDI blew off on a hot day?  
 14 A. Yes.  
 15 Q. And you said in that interview,  
 16 and correct me if this is not your  
 17 recollection, that there was another time when  
 18 you were reacting TDI with polyol and the  
 19 material got too hot and had to be disposed of  
 20 in the active cell in the site rather than in  
 21 the solid waste landfill. Do you remember  
 22 that?  
 23 A. Well, I remember that it did get  
 24 too hot, it caught on -- it spontaneously  
 25 combusted and we had to smother the fire by

Page 98

1 putting dirt on it, but I believe after that  
 2 was done and it was put out that that material  
 3 was dug out and put into the sanitary landfill.  
 4 I think that's it.  
 5 Q. You mean it was put into the  
 6 barrelfill and removed from the barrelfill?  
 7 A. No, not -- go back. What I said,  
 8 we had the trench, if it got too hot it would  
 9 spontaneously combust and then you have got  
 10 burning rubber, and so the way they put it out  
 11 was to just take a bulldozer and push a pile of  
 12 dirt on top of it. When it was smothered,  
 13 couldn't get oxygen and it cooled off and I  
 14 believe the next day they went back and dug  
 15 that out so it was temporarily smothered by  
 16 putting dirt on it, not buried permanent.  
 17 Q. Can you describe where at the site  
 18 that plastic lined trench was located?  
 19 A. Typically I think that was about a  
 20 couple hundred feet away from the drum yard  
 21 into the area of the drumfill and I'm trying to  
 22 remember if that was on top of old closed cells  
 23 or on property that hadn't been developed yet.  
 24 Q. I have a map.  
 25 A. Oh, good.

Page 99

1 Q. Or actually a photograph.  
 2 MS. WOLFE: Why don't we mark this.  
 3 (Thereupon, Plaintiff's Exhibit 4 was  
 4 marked for purposes of identification.)  
 5 Q. Showing you what has just been  
 6 marked as Wallis Exhibit 4, do you recognize  
 7 what this photocopied photograph is depicting?  
 8 A. Yes.  
 9 Q. What is it?  
 10 A. This is the operations of IWD  
 11 Liquid Disposal.  
 12 Q. I'm just giving you the original  
 13 exhibit because I'm going to ask you to mark on  
 14 it. Does this appear the way you remember the  
 15 site to have been laid out?  
 16 A. Yes. Yes. Though I'm curious to  
 17 the date. This looks like it must be a fairly  
 18 old picture.  
 19 Q. I believe it's from 1979 and it  
 20 was found in -- or the original was found in a  
 21 trailer on the site.  
 22 A. Oh, okay. I would say this  
 23 picture is older than '79.  
 24 Q. Why would you say that?  
 25 A. Because the solid waste landfill

Page 100

1 down here isn't developed up into the area that  
 2 a lot of this down in this corner (indicating)  
 3 which is -- trying to remember my directions.  
 4 Okay. Bottom left corner shows this to be a  
 5 lot of green trees and stuff and from what I  
 6 remember from '79, '80, that had already been  
 7 developed into sanitary landfill, so -- and  
 8 there's some things missing from up here  
 9 (indicating), just little things that would  
 10 indicate to me that this is prior to that time  
 11 by some period.  
 12 Q. Does it appear from the picture  
 13 that this was during -- this photo was taken  
 14 during the time that the barrelfill was in  
 15 operation?  
 16 A. Yes.  
 17 Q. Do you see the area on this  
 18 photograph where the barrelfill cells were  
 19 located?  
 20 A. Yes, but interestingly enough, I  
 21 don't see an open cell.  
 22 Q. Would you take this blue pen and  
 23 circle the area that you generally recall the  
 24 barrelfill cells to be located at?  
 25 A. Well, let's see. In general, the

Page 101

1 permitted area is something like (indicating).  
 2 That's kind of the permitted area for the  
 3 drumfill. And then they had filled -- well,  
 4 this is -- '79, trying to think. Most of the  
 5 cells in this area (indicating) up here I think  
 6 all the way back across here (indicating) had  
 7 been filled and they were working in this  
 8 general area (indicating) at the time.  
 9 Q. Well, for purposes of the court  
 10 reporter --  
 11 A. Sorry.  
 12 Q. -- and so that we can understand  
 13 what you're describing, would you draw circles  
 14 with that pen and put an initial or a word in  
 15 the middle of each one that indicates the areas  
 16 that you're talking about?  
 17 A. Cells would have been typically  
 18 something like this (indicating).  
 19 Q. You're drawing sort of --  
 20 A. They are rectangles.  
 21 Q. Rectangles. Okay.  
 22 A. And there were a number of them  
 23 down -- and I don't remember the cell count  
 24 that was down, but typically you dug these out  
 25 and then backfilled in here with drums and then

Page 102

1 capped it off.  
 2 Q. So the areas where you have drawn  
 3 rectangles where it says cells are general  
 4 depictions of what the cells would have been?  
 5 A. General depictions of where the  
 6 cells were.  
 7 Q. Initially we were talking about  
 8 the trench that was used to react polyol and  
 9 TDI. Can you mark -- here's a red pen. Can  
 10 you mark where you think that trench was  
 11 located in red?  
 12 A. It would have been somewhere in  
 13 this area (indicating).  
 14 Q. Looks like that's somewhat beneath  
 15 where you drew the cells or lower down on the  
 16 picture.  
 17 A. It's certainly within the  
 18 permitted area for the cells. I can't remember  
 19 if the cells were filled from this direction  
 20 that way or from this direction that way  
 21 (indicating), so it was either on permitted  
 22 ground that hadn't been used yet or it was over  
 23 top of an already capped cell. I can't tell  
 24 you which.  
 25 Q. Can you tell which direction is

Page 103

1 north on this picture based on your memory of  
 2 the direction that things were laid out?  
 3 A. In general, north I think was kind  
 4 of that way (indicating).  
 5 Q. Can you draw an arrow to what you  
 6 think is north?  
 7 A. I think that's in general  
 8 (indicating). North is kind of that direction  
 9 (indicating).  
 10 Q. So you don't know where the cells  
 11 were dug south to north or north to south?  
 12 A. I just don't remember right now  
 13 which direction they went. I think they went  
 14 north to south, but --  
 15 MS. WOLFE: Can we go off the record  
 16 for just a minute?  
 17 (Thereupon, an off-the-record  
 18 discussion was had.)  
 19 Q. Still looking at Exhibit 4, the  
 20 photograph of the site, can you identify on  
 21 that picture where the oil reclamation plant  
 22 was located and circle it for me?  
 23 A. (Indicating.)  
 24 Q. And write underneath it oil.  
 25 A. Okay. (Indicating.)

Page 104

1 Q. And then what other structures do  
 2 you recognize on that picture?  
 3 A. This is the wastewater plant  
 4 (indicating).  
 5 Q. You have just circled something  
 6 and you wrote WW under it?  
 7 A. Yes, wastewater plant there  
 8 (indicating). This is the transportation  
 9 (indicating).  
 10 Q. And you have circled another  
 11 building, looks like it's to the right of the  
 12 wastewater plant?  
 13 A. Yeah. Pond.  
 14 Q. Just above the --  
 15 A. There's a transportation building  
 16 (indicating).  
 17 Q. Just above the transportation  
 18 building was a pond you circled?  
 19 A. Yes. And then this up here  
 20 (indicating), now, this has to be earlier.  
 21 There's no fence around that I don't think.  
 22 Q. You're looking at an area just  
 23 above the pond?  
 24 A. Yeah, an area just above the pond  
 25 is where the drum yard was.

Page 105

1 Q. Can you tell from the pictures if  
 2 there's any drums in the yard?  
 3 A. Yes, those stacks along there are  
 4 drums (indicating). This has got to be an  
 5 earlier picture because I -- or I'm not able to  
 6 see it. Doesn't appear to be a fence around  
 7 that and that area was also fenced, any time  
 8 I've ever seen it fenced in.  
 9 Q. So what in this picture indicates  
 10 to you the barrellfill was in operation at the  
 11 time this was taken?  
 12 A. Well, there certainly are drums  
 13 stacked back there. There are trucks in the  
 14 areas, both drum trucks and a tanker sitting  
 15 there, so they were definitely doing something  
 16 at the time.  
 17 Q. Is this possible it was taken  
 18 before the first cell was dug?  
 19 A. It's possible, I guess, but I  
 20 can't -- I don't know the history going back  
 21 far enough to know which came first. I thought  
 22 the cells were fairly early in the history of  
 23 the site.  
 24 Q. When did you think the first cell  
 25 was dug based on your knowledge of the site?

Page 106

1 A. I don't know what year. I'm  
 2 just -- kind of chronologically, I thought they  
 3 had started with the drum fill and then added  
 4 the other items in afterward. This would kind  
 5 of indicate that you had a lot of those other  
 6 things there first.  
 7 Q. Where you circled the oil  
 8 treatment facility, are those six upright  
 9 looking cylinders the tanks that you were  
 10 describing earlier?  
 11 A. No. Those are storage tanks for  
 12 the incoming and outgoing product oil. The  
 13 kind of -- you can't tell it, but kind of a  
 14 real dark looking area there (indicating),  
 15 those are the six treatment tanks.  
 16 Q. Do you know when that facility  
 17 began operating?  
 18 A. No.  
 19 Q. Do you know when it ceased  
 20 operating?  
 21 A. It ceased operating in March of  
 22 2008 (sic) but they laid everybody off.  
 23 Q. Was it operational when you  
 24 started working at the site?  
 25 A. Yes.

Page 107

1 Q. Do you know who was running the  
 2 operation when you started?  
 3 A. You mean the workers who were  
 4 actually there?  
 5 Q. Yes.  
 6 A. Well, John was doing most of the  
 7 oil processing.  
 8 Q. John Budding?  
 9 A. Yeah. And Gary was running the  
 10 wastewater plant and working in the lab.  
 11 Jeannie, I can't think of her last name, was  
 12 running the transportation company and Jack  
 13 Wright was over all of it.  
 14 Q. Do you know if the oil treatment  
 15 plant was running before the first cell was  
 16 dug?  
 17 A. No, I don't know.  
 18 Q. Are you aware of any waste  
 19 disposal that took place afterhours or at  
 20 night?  
 21 A. We ran at least two shifts all the  
 22 time, sometimes three shifts.  
 23 Q. So were all of the activities that  
 24 took place during the day also taking place at  
 25 night or just some activities?

Page 108

1 A. Most of the transportation was  
 2 done on first shift, though some trucks on  
 3 longer runs wouldn't get back until fairly late  
 4 at night. The oil process was an ongoing  
 5 operation. Wastewater plant, there was  
 6 sometimes one, sometimes two shift operations.  
 7 Drum yard was mostly in the days but could run  
 8 second shift or more. The drum fill itself, a  
 9 lot of that was two shifts and some of it  
 10 really depended on the weather because if you  
 11 were getting a lot of rain you didn't bury many  
 12 drums but you pumped a lot of water.  
 13 Q. What shift did you work?  
 14 A. Days.  
 15 Q. Only days?  
 16 A. Yes, only days.  
 17 Q. Did anyone in the lab work nights?  
 18 A. Yes.  
 19 Q. Who?  
 20 A. I don't remember their names.  
 21 Q. Was there disposal of drums at  
 22 night or just during the day?  
 23 A. Night as far as second shift,  
 24 yeah, sometimes they would work fairly late to  
 25 finish things up.

Page 109

1 Q. Was the drum disposal a constant  
 2 process or were there times when there were no  
 3 drums waiting to be disposed?  
 4 A. No, there were almost always drums  
 5 waiting to be put into the landfill.  
 6 Q. Do you recall any waste material  
 7 being referred to as ABS?  
 8 A. ABS? No. What -- well --  
 9 Q. Did you as part of your job have  
 10 any dealings with government inspectors that  
 11 came to the site?  
 12 A. Well, yeah. We had the Ohio EPA  
 13 or regional landfill inspector Joe Moore, I  
 14 believe his name was, who came by once every  
 15 week, or once every two weeks he would come by  
 16 to stop in and see how things were going. And  
 17 most -- well, all of the drum logs and reports  
 18 went to the county board of health.  
 19 Q. Do you know of any wastes ever  
 20 being reported on the cell logs as pallets of  
 21 waste?  
 22 A. If something was palletized, it  
 23 would have to still be in some other kind of  
 24 container. A pallet is just a flat wooden  
 25 piece to be able to pick it up with a forklift

Page 110

1 so most of the drums weren't palletized coming  
 2 in. Some of the drums were on pallets,  
 3 depending on the company that was shipping  
 4 them, but they would still have to have some  
 5 other kind of material the drum was in.  
 6 Q. If it was on a drum with a pallet,  
 7 would the pallet always be placed in the cell  
 8 with the drum?  
 9 A. No, most of the time the pallets  
 10 weren't put in the fill.  
 11 Q. Were they sometimes put in the  
 12 cell then?  
 13 A. I don't remember any pallets going  
 14 into the fill.  
 15 Q. Turning back to Plaintiff's  
 16 Exhibit 1, I know you testified that this was  
 17 just before you started working at the site?  
 18 A. Yes.  
 19 Q. But if you see on the first page  
 20 which is a cell report for cell G-6, the first  
 21 item listed is PPG Industries, pallets,  
 22 parentheses, looks like it says paint sludge or  
 23 PT, period, sludge, and then it says forty-two  
 24 pallets. What do you think that indicates?  
 25 A. Sloppy recordkeeping.

Page 111

1 Q. Was sloppy recordkeeping typical  
 2 at that site?  
 3 A. No. This particular cell report  
 4 does not look typical of what you would expect  
 5 to have seen there. Certainly it would have  
 6 had to have -- whatever that material was, if  
 7 it was any kind of sludge, it had to have been  
 8 in some sort of a container to be on a pallet  
 9 so whether they had three or four drums sitting  
 10 on a pallet and rather than record hey, I put  
 11 four drums in of this material, they just wrote  
 12 down how many pallets they put in.  
 13 Q. How many drums would fit on one  
 14 pallet?  
 15 A. You can put four drums on a  
 16 pallet.  
 17 Q. So does forty-two pallets indicate  
 18 to you that it would have been forty-two times  
 19 four, the number of drums?  
 20 A. That's what I would have expected,  
 21 yes.  
 22 Q. So a hundred and sixty-eight  
 23 drums?  
 24 A. Yeah.  
 25 Q. Is there any other kind of

Page 112

1 container that you would find on a pallet other  
 2 than a drum?  
 3 A. You could put a cardboard box on a  
 4 pallet but you typically wouldn't put sludge  
 5 into a cardboard box.  
 6 Q. What would you put into a  
 7 cardboard box for disposal?  
 8 A. Something that was dry.  
 9 Q. Do you recall materials in  
 10 cardboard boxes being placed in the cells?  
 11 A. No, because cardboard boxes would  
 12 have been a real pain for them. They are a  
 13 different size from the drums so the level in  
 14 it wouldn't be good and the boxes wouldn't hold  
 15 weight very well so I don't remember them ever  
 16 putting cardboard boxes in.  
 17 Q. So you think just based on the  
 18 speculation that the recording of forty-two  
 19 pallets is probably just equivalent to four  
 20 drums per pallet and somebody just being sloppy  
 21 about the way they wrote it down?  
 22 A. I think so.  
 23 Q. You don't think that indicates any  
 24 bulk waste?  
 25 A. Certainly you can't -- a pallet is

Page 113

1 not a bulk waste.  
 2 Q. Do you recall any material in  
 3 buckets being placed in the barrellfill cells?  
 4 A. You mean like one gallon cans or  
 5 something?  
 6 Q. Any kind of bucket. How about a  
 7 five gallon bucket?  
 8 A. I don't remember it, but certainly  
 9 you could palletize five gallon buckets and put  
 10 them in that way.  
 11 Q. Do you remember any generators  
 12 that would send waste in buckets?  
 13 A. I don't remember getting waste in  
 14 five gallon buckets during my time, but it's  
 15 possible.  
 16 Q. If something were recorded on a  
 17 cell report as a box, do you have any idea what  
 18 that would mean?  
 19 A. As a box?  
 20 Q. Yes.  
 21 A. I'm guessing that's cardboard box,  
 22 but again, I don't --  
 23 Q. If it were stillbottoms in a box,  
 24 what do you think that would indicate? Do you  
 25 have any idea?

Page 114

1 A. If it's stillbottoms in a box I'll  
 2 change my answer and say it's probably a  
 3 roll-off box which is a bulk delivery then.  
 4 Q. So does that mean that that waste  
 5 would have gone straight from that roll-off box  
 6 into the cell in bulk form?  
 7 A. Possibly.  
 8 Q. You don't have any specific  
 9 recollection of seeing that happen, but you're  
 10 saying it's possible that could have happened?  
 11 A. It's certainly possible it could  
 12 have happened.  
 13 Q. Do you know how big the roll-off  
 14 boxes are that you are thinking about?  
 15 A. The box can be anywhere from three  
 16 cubic yards to forty cubic yards and I think  
 17 the -- we did not have any roll-off trucks,  
 18 boxes or anything in our organization, but  
 19 certainly Blaylock Trucking which was the  
 20 trucking company for the sanitary landfill had  
 21 a number of vehicles and boxes out there  
 22 because that's typically the way the sanitary  
 23 waste is handled.  
 24 Q. Did Blaylock Trucking haul waste  
 25 to the site?

Page 115

1 A. Not that I know of. We did all of  
 2 our own transportation.  
 3 Q. And you mean IWD Liquid?  
 4 A. Liquid, yeah.  
 5 Q. Did any of the generators have  
 6 their own trucks that hauled waste to the site?  
 7 A. I think there may have been a  
 8 couple of generators that provided their own  
 9 transportation.  
 10 Q. Do you remember which ones?  
 11 A. No.  
 12 Q. Do you remember any generators  
 13 that generated stillbottoms during the time  
 14 that you were there?  
 15 A. No. I don't remember getting  
 16 stillbottoms when I was there.  
 17 Q. Are you aware of any companies  
 18 that generated any waste at the site that would  
 19 have generated stillbottoms, even if they  
 20 weren't brought to the site but that had an  
 21 operation that would have generated  
 22 stillbottoms?  
 23 A. Ashland Chemical had an operation  
 24 where they generated some stillbottoms from a  
 25 manufacturer of plastic resin, but I don't

Page 116

1 remember that that material ever came to that  
 2 site. I think there were -- there were a  
 3 couple of solvent reclaimers, one over in the  
 4 Newark area -- what was the name of that place?  
 5 But I don't remember that they ever shipped us  
 6 anything and I'm not sure that we ever shipped  
 7 them any solvents for reclamation. Most of the  
 8 solvents that we had, the chlorinateds were  
 9 sent to Inland reclamation in Kentucky, not the  
 10 full name -- I can't remember what the full  
 11 name is, but it was in Kentucky. The flammable  
 12 solvents were shipped to IWD near Paducah,  
 13 Kentucky or to an incinerator that was up in  
 14 Michigan.  
 15 Q. Utica, Michigan?  
 16 A. Michigan Disposal.  
 17 Q. That's okay. It not that  
 18 relevant.  
 19 A. Yeah, but -- so we really didn't  
 20 deal with the people who were shipping out  
 21 stillbottoms.  
 22 Q. One last question about the types  
 23 of waste that you remember. Do you remember  
 24 anything called ash water or that would have  
 25 been recorded as ash water being disposed of at

Page 117

1 the site?  
 2 A. Got anything else you can give me  
 3 about it?  
 4 Q. Well, we have cell reports that  
 5 show it being disposed of in bulk at the site  
 6 and I can tell you how many gallons.  
 7 Twenty-five thousand gallons in one cell.  
 8 A. What kind of industry?  
 9 Q. We don't know. Would that ring  
 10 any bells with you?  
 11 A. No. Does it have a waste number,  
 12 code number on it?  
 13 Q. No.  
 14 A. What time frame are you talking  
 15 about?  
 16 Q. 1977. It was before you were  
 17 there.  
 18 A. 1977. Okay, so it's not the ash  
 19 from the coal reclamation.  
 20 Q. Why do you say that?  
 21 A. Because that was after that.  
 22 Q. Do you remember ash water coming  
 23 into the site from that generator while you  
 24 were there?  
 25 A. I don't think they called it ash

Page 118

1 water but it was essentially the solid residual  
 2 from making the synthetic oil and it was  
 3 similar to fly ash type material.  
 4 Q. So is it something that might have  
 5 been wetted down with water and then came into  
 6 the site in that wet form?  
 7 A. That's what it sounds like. I  
 8 don't know. It could have been a wet fly ash  
 9 from a power plant or something like that. Or  
 10 out of a scrubber. I don't know.  
 11 Q. Do you recall any bulk latex being  
 12 disposed of in the barreldump?  
 13 A. Not in the barreldump. I do  
 14 remember a bulk latex that came in a -- in a  
 15 tank that was buried in the sanitary landfill  
 16 and that was -- I don't remember the generator,  
 17 but this material had solidified inside of the  
 18 tank so they picked up the whole tank with a  
 19 crane and shipped it over and they dug a big  
 20 hole and rolled the tank into it and buried it.  
 21 Q. So is it possible that bulk  
 22 materials that were buried in underground tanks  
 23 were reported on the same cell logs as the cell  
 24 materials?  
 25 A. No, I don't think so because

Page 119

1 those -- I remember that one -- I think that's  
 2 the only tank that I can remember that came in  
 3 and that was put in the sanitary part, not into  
 4 the cell or the drumfill.  
 5 Q. Is it possible that any drummed  
 6 material that was destined for disposal in the  
 7 cell was emptied out of the drums before it  
 8 went into the cell and then reported as bulk on  
 9 the cell log?  
 10 A. I would find that very unlikely  
 11 because that's an extra -- a lot of labor that  
 12 they would have had to have been and then you  
 13 would have ended up with dirty empty drums to  
 14 dispose of, so it just doesn't make sense that  
 15 that would have happened.  
 16 MS. WOLFE: I think that's all I can  
 17 think of to ask you at this time. Do you have any  
 18 questions, Dan?  
 19 MR. BROWN: I don't.  
 20 CROSS-EXAMINATION  
 21 BY MS. JALICS:  
 22 Q. I have just a few. I think a  
 23 question was asked earlier but I just wanted to  
 24 clarify. Did you ever communicate directly  
 25 with the generators themselves?

Page 120

1 A. On occasion, yes. I would either  
 2 meet with them at our site or go to their site  
 3 for various reasons, basically to support the  
 4 sales folks if they had particular questions or  
 5 problems or needed help with something.  
 6 Q. Would these be questions or  
 7 problems pertaining to the specific type of  
 8 waste they were looking to dispose of?  
 9 A. Could be toward the type of waste  
 10 or it could be we found something when we did  
 11 the analysis that they didn't know about it or  
 12 questioned and so you would have to go back and  
 13 help them figure out why they ended up with  
 14 something -- I remember a customer there in  
 15 Springfield that wanted to ship us oil, we  
 16 checked it and found a lot of chlorinated  
 17 solvent in it and they immediately said we  
 18 don't have any chlorinated solvent in our whole  
 19 plant so it can't be, your test is wrong, and  
 20 we took other samples and checked it again and  
 21 no, it's chlorinated solvent, can't take your  
 22 oil, and after a couple of those they said you  
 23 come out to the plant and show us where this  
 24 chlorinated solvent is coming from and the  
 25 salesman and I went and went through the plant,

Page 121

1 found the degreasing operation and explained to  
 2 them that even though they bought it as white  
 3 solvent, it was really chlorinated solvent and  
 4 they were dumping it into their oil tank so  
 5 they didn't know they had chlorinated solvent.  
 6 They switched to something else and eventually  
 7 we got a customer out of it.  
 8 Q. Did that happen often that you  
 9 would, not necessarily that type of situation,  
 10 but did it happen often that you would go with  
 11 the salesman to customers or generators?  
 12 A. I won't say -- it wasn't an  
 13 everyday type of occurrence, but probably a  
 14 couple times a month, something like that.  
 15 Q. Were you as the manager the main  
 16 person who would do that or would other lab or  
 17 lab techs also go?  
 18 A. For the most part I was the one  
 19 who would go out.  
 20 Q. When you -- and correct me if I'm  
 21 wrong. I think when we were going through the  
 22 procedures earlier you said that you tested the  
 23 samples first, long before the waste was ever  
 24 brought, and I think that the example you just  
 25 gave was an example of that?



Page 122

1 A. Yes.

2 Q. Who conveyed the test or the

3 sample for the solvents to the generators, did

4 that go from you directly to them or did that

5 go through a salesperson?

6 A. That typically went through

7 salespeople. The analysis would be done, the

8 lab manager would double-check everything, make

9 sure it looked like it made sense to him, he

10 would sign off on it, it would come back to me

11 and I would review it, make recommendations for

12 what we could do with the material, that would

13 go back to the salesman who would then contact

14 the customer.

15 Q. And I think you have already

16 answered my question, but the generators then

17 would sometimes call if they did have questions

18 and you would be the person to speak to them or

19 explain the situation?

20 A. Well, normally they would talk to

21 the salesman and the salesman, if he could

22 answer, would take care of it. If it was

23 technical in nature or something that he didn't

24 have an answer to, then he would typically get

25 me involved in it.

Page 123

1 Q. And I had a question in my notes

2 that I just wanted to clarify. If the salesmen

3 themselves bring the samples to the lab, those

4 were collected from the generator?

5 A. Most of the time the salesmen went

6 out to the customer, got the sample. We had a

7 form for them to fill out, what kind of

8 material is it, how much do you have, how often

9 you going to ship it, what form, all that.

10 That came back with the sample, went to the lab

11 for analysis and then back through the system.

12 Occasionally a customer, especially an ongoing

13 customer, rather than wait for a salesman to

14 come out would just send in a sample with the

15 information and we would go through it that

16 way.

17 Q. Okay. So then they would still

18 have contact eventually at the back end with a

19 salesman or was that --

20 A. Well, that was generally an

21 ongoing customer that already had a contact but

22 he's got a new waste stream that he wants to do

23 something with.

24 Q. Okay. And I just wanted to

25 clarify one thing that I had a question about

Page 124

1 in my notes. Gary Karas and Vaughn Arthur,

2 when did those people actually work in the lab,

3 were they there before you?

4 A. They were there when I came and we

5 all left together.

6 Q. Do you know how long before you

7 came they had started?

8 A. No, I don't know how long before.

9 MS. JALICS: That's all I have.

10 Thank you.

11 MS. WOLFE: That concludes our

12 deposition for today. The court reporter that's

13 been taking down your testimony today will prepare

14 a written hard copy of a transcript from today's

15 deposition and you will have an opportunity, if

16 you want, to read it and make any corrections to

17 form or substance that you feel are necessary and

18 then sign it and return it to the court reporter.

19 Or if you choose, you can waive that opportunity

20 if you feel that it's not necessary and then just

21 it will go into the record as it is.

22 THE WITNESS: I probably ought to

23 look at it. I don't know how awake I am today.

24 MS. WOLFE: Then it will be sent to

25 you within a couple weeks and you can talk to your

Page 125

1 attorney about getting it signed and returned to

2 the court reporter.

3 (Thereupon, the deposition was

4 concluded at 12:27 p.m.)

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I, WAID NELSON WALLIS, do hereby certify that the foregoing is a true and accurate transcription of my testimony.

Dated \_\_\_\_\_

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STATE OF OHIO )  
COUNTY OF MONTGOMERY ) SS: CERTIFICATE  
I, Mary Jo Stevens, a Notary Public within and for the State of Ohio, duly commissioned and qualified,  
DO HEREBY CERTIFY that the above-named WAID NELSON WALLIS, was by me first duly sworn to testify the truth, the whole truth and nothing but the truth; that said testimony was reduced to writing by me stenographically in the presence of the witness and thereafter reduced to typewriting.  
I FURTHER CERTIFY that I am not a relative or Attorney of either party nor in any manner interested in the event of this action.  
IN WITNESS WHEREOF, I have hereunto set my hand and seal of office at Dayton, Ohio, on this \_\_\_\_ day of \_\_\_\_\_, 2005.

\_\_\_\_\_  
MARY JO STEVENS  
NOTARY PUBLIC, STATE OF OHIO  
My commission expires 9-10-2006

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<p style="text-align: center;"><b>A</b></p> <p><b>ability</b> 80:16,22  <b>able</b> 18:9 82:11 93:5  105:5 109:25  <b>above-named</b> 127:6  <b>abrasive</b> 74:5 85:2  <b>abrasiveness</b> 75:8  <b>ABS</b> 109:7,8  <b>Absolutely</b> 16:25  <b>abuse</b> 33:12  <b>accept</b> 49:15  <b>acceptable</b> 24:6 46:5  49:20 67:21  <b>accepted</b> 40:4,17  <b>accomplishes</b> 53:19,21  <b>accurate</b> 126:2  <b>acid</b> 36:22  <b>acids</b> 78:23  <b>action</b> 55:22 127:14  <b>active</b> 97:20  <b>activities</b> 107:23,25  <b>activity</b> 16:8  <b>actual</b> 30:3 54:12  <b>added</b> 106:3  <b>addition</b> 17:16 20:19  <b>address</b> 8:1  <b>adequate</b> 33:22  <b>adhered</b> 34:9  <b>adhesive</b> 64:12,17 70:3  70:11  <b>adhesives</b> 70:12  <b>adverse</b> 46:11  <b>aerate</b> 87:18 88:11  <b>affect</b> 57:6  <b>affiliate</b> 15:15  <b>affiliated</b> 15:10  <b>afraid</b> 32:3 33:13,16  <b>afterhours</b> 107:19  <b>afterward</b> 106:4  <b>age</b> 4:2  <b>ago</b> 4:22 5:23 6:15 8:14  12:22 40:14 97:12  <b>ahead</b> 55:5  <b>air</b> 12:3 88:17,17  <b>al</b> 1:9  <b>alcohol</b> 65:5,5 69:16  79:24 80:9,10 82:7  <b>alcohols</b> 69:13  <b>Alliance</b> 4:14  <b>allow</b> 96:24  <b>allowed</b> 71:15 79:10  <b>almond</b> 32:10,12  <b>alternative</b> 10:5  <b>amount</b> 23:19 32:20  38:23 40:13,20 41:8  41:10 44:25 59:24</p>	<p>70:3 81:25 90:22  91:9 93:15,24  <b>amounts</b> 40:6,24 77:8  77:13 81:25 92:25  <b>amusing</b> 32:19  <b>analysis</b> 120:11 122:7  123:11  <b>analyst</b> 33:16  <b>and/or</b> 26:1  <b>announcement</b> 28:4  <b>answer</b> 7:8,15 78:7  114:2 122:22,24  <b>answered</b> 122:16  <b>answers</b> 6:23  <b>anybody</b> 34:18 47:8  77:22  <b>anymore</b> 97:6  <b>apart</b> 49:25 50:5  <b>appear</b> 99:14 100:12  105:6  <b>APPEARANCES</b> 3:1  <b>appears</b> 53:15  <b>applicable</b> 34:19  <b>approved</b> 22:20  <b>area</b> 15:24 19:1 27:2,3  29:1,9 35:17 41:24  62:11 67:12 98:21  100:1,17,23 101:1,2  101:5,8 102:13,18  104:22,24 105:7  106:14 116:4  <b>areas</b> 101:15 102:2  105:14  <b>arrow</b> 103:5  <b>arrows</b> 53:17  <b>Arthur</b> 26:7 28:7 124:1  <b>Arthur's</b> 26:8  <b>asbestos</b> 86:22,23,24  86:25 87:2,3,5,7,8,9  87:12 88:8  <b>ash</b> 116:24,25 117:18  117:22,25 118:3,8  <b>Ashland</b> 115:23  <b>asked</b> 5:20 119:23  <b>asking</b> 17:14  <b>aspects</b> 9:5,24 34:24  45:7  <b>assigned</b> 35:10  <b>associated</b> 51:8  <b>attorney</b> 3:4,10,15 4:11  125:1 127:13  <b>audit</b> 9:23  <b>auto</b> 65:8 72:18 95:2  <b>automotive</b> 62:10,13  65:21  <b>available</b> 92:22</p>	<p><b>Avenue</b> 3:11  <b>awake</b> 124:23  <b>aware</b> 34:18 71:19  107:18 115:17  <b>a.m</b> 1:19</p> <hr/> <p style="text-align: center;"><b>B</b></p> <p><b>back</b> 10:17,19,22 11:18  11:20 22:8 23:23  24:25 26:21 29:9  35:7,19 37:24,25  38:16 44:6,12 62:2  84:2 88:16 97:7 98:7  98:14 101:6 105:13  105:20 108:3 110:15  120:12 122:10,13  123:10,11,18  <b>backfilled</b> 101:25  <b>background</b> 25:9  <b>back-up</b> 53:2,3  <b>bad</b> 96:7,21  <b>bags</b> 87:4  <b>banned</b> 96:5,8,10 97:2  <b>barrel</b> 22:14,15 24:10  24:13,16,20 35:12,13  35:14  <b>barrelfill</b> 13:18,19 16:4  16:7,9,13,18 19:9,16  19:20 21:24 22:18  24:7,10,11,13,17,19  40:5 45:14 49:9  58:19 62:24 64:5,7  69:6 72:12 76:23  77:7 78:1,20 79:9,10  79:12,14,17 85:1  86:10,16,24 88:20  89:23,25 90:5 96:1  98:6,6 100:14,18,24  105:10 113:3 118:12  118:13  <b>barrels</b> 22:12,13,17  28:14  <b>Base</b> 12:3  <b>based</b> 30:23 33:21  38:25 43:18 63:24  75:15 80:15,16 81:8  81:14 103:1 105:25  112:17  <b>basic</b> 6:16  <b>basically</b> 26:10 90:9  120:3  <b>bathroom</b> 74:1  <b>bearings</b> 93:14  <b>began</b> 11:25 106:17  <b>behalf</b> 3:2,7,13  <b>believe</b> 5:24 6:13 10:18</p>	<p>10:25 12:10 17:19  18:10 21:25 24:9,21  27:9,15 29:15 30:8  30:13 31:1,4,9,12,22  33:5 50:20 52:2,14  63:12,20 77:1 94:6  98:1,14 99:19 109:14  <b>bells</b> 117:10  <b>bending</b> 56:21  <b>beneath</b> 102:14  <b>bent</b> 49:25  <b>best</b> 80:19  <b>better</b> 37:1  <b>beyond</b> 8:18  <b>big</b> 10:8 14:19 62:14  68:24 87:4 89:4 97:3  114:13 118:19  <b>bigger</b> 93:2  <b>bioaccumulated</b> 96:19  <b>biphenyls</b> 95:24  <b>birth</b> 8:12  <b>birthday</b> 8:14  <b>bit</b> 8:16 25:8 62:7  75:10 82:9  <b>bits</b> 93:14  <b>Blaylock</b> 114:19,24  <b>blew</b> 97:13  <b>blocks</b> 57:1  <b>blue</b> 100:22  <b>board</b> 109:18  <b>boiled</b> 82:15  <b>Bondalube</b> 64:12  <b>bone</b> 59:2  <b>booth</b> 60:6,7 61:17  <b>bottles</b> 23:9 24:16 25:1  74:22 75:2 76:15,16  <b>bottom</b> 56:14 82:17  90:13,15,15,19 92:8  100:4  <b>bought</b> 15:17 121:2  <b>bound</b> 59:25  <b>box</b> 51:2,3 62:17,20  112:3,5,7 113:17,19  113:21,23 114:1,3,5  114:15  <b>boxes</b> 112:10,11,14,16  114:14,18,21  <b>break</b> 7:19,20 67:16  77:3  <b>brighteners</b> 74:7  <b>bring</b> 21:1 37:24 123:3  <b>bringing</b> 21:15 88:15  <b>broad</b> 73:22,23,24  <b>brought</b> 20:13 21:20  43:13 115:20 121:24  <b>Brown</b> 3:14,15 5:6</p>	<p>19:15 55:1 119:19  <b>BS</b> 8:21  <b>bucket</b> 113:6,7  <b>buckets</b> 113:3,9,12,14  <b>Budding</b> 26:14 107:8  <b>building</b> 3:11 10:13  104:11,15,18  <b>built</b> 45:20 92:7  <b>bulk</b> 20:15 22:11 24:1  38:13,15 70:20,22  71:12 72:12 73:18  84:7 86:15 89:19,21  90:1,2 93:25 95:7,11  95:14 112:24 113:1  114:3,6 117:5 118:11  118:14,21 119:8  <b>bulldozer</b> 68:25 98:11  <b>burial</b> 75:14  <b>buried</b> 16:24 17:13,20  18:2,5,7,7 19:2 56:16  57:22 58:7,18 61:24  63:4 64:19 73:13,17  75:19 78:20 81:3,13  85:1 86:24 98:16  118:15,20,22  <b>burn</b> 97:1  <b>burned</b> 45:5 68:1  <b>burning</b> 98:10  <b>burnt</b> 32:10  <b>bury</b> 18:21 40:12 49:21  66:1 81:8 108:11  <b>burying</b> 81:17  <b>business</b> 9:7,8,9 10:1  16:2 29:17 97:4  <b>businesses</b> 62:10  <b>Butch</b> 28:17,21  <b>butter</b> 36:25 37:2  59:12,15,18,20,21  60:13,14,21  <b>buy</b> 13:23 48:18  <b>by-product</b> 91:6  <b>by-products</b> 91:10</p> <hr/> <p style="text-align: center;"><b>C</b></p> <p><b>call</b> 65:19 122:17  <b>called</b> 1:13 6:6 54:17  88:1 116:24 117:25  <b>camaraderie</b> 32:20  <b>cans</b> 113:4  <b>capability</b> 79:5  <b>capacity</b> 29:7  <b>capped</b> 46:23 102:1,23  <b>carbon</b> 93:13  <b>cardboard</b> 112:3,5,7  112:10,11,16 113:21  <b>care</b> 122:22</p>
--	--	---	---	---

<p><b>careful</b> 93:19  <b>cartons</b> 96:16  <b>case</b> 1:7 4:12,18 6:18              23:22 45:24  <b>cases</b> 37:21,22  <b>catch</b> 81:20  <b>categories</b> 63:23 64:2              72:8  <b>categorize</b> 80:14  <b>category</b> 62:14 64:15              70:17 71:23 72:3,11              73:11 78:17 79:15              80:8 82:2 84:23              85:25  <b>caught</b> 97:24  <b>cause</b> 45:10 46:1,12              48:24 76:23  <b>caustic</b> 39:25  <b>cautioned</b> 4:3  <b>ceased</b> 106:19,21  <b>Cedarville</b> 8:3,21  <b>cell</b> 24:19 30:2 45:18              45:19,22 46:8,13              50:11 51:12,14,19,23              52:15,16,19,25 53:1              53:4,8,22,23 54:6,20              57:1,3,17 68:9,14,17              68:21 71:2 91:17,18              91:24 94:9,10,13              97:20 100:21 101:23              102:23 105:18,24              107:15 109:20 110:7              110:12,20,20 111:3              113:17 114:6 117:4,7              118:23,23 119:4,7,8              119:9  <b>cells</b> 22:21 28:15 29:5              29:22,23,25 30:3              34:20,21 45:16 46:22              48:8 50:19,21 51:2,9              51:11 55:24 56:17,24              57:23 58:4,19 61:24              62:5,7,9 70:8,11,19              71:9,14 72:12 73:13              90:24 91:11 93:25              95:15 98:22 100:18              100:24 101:5,17              102:3,4,6,15,18,19              103:10 105:22              112:10 113:3  <b>cement</b> 10:4,6,7,10,13              10:14 64:13 79:21  <b>cereal</b> 96:16  <b>certain</b> 23:18 32:20              37:17 44:21 49:16              53:9 56:4 64:7 68:16</p>	<p>71:6 95:18,22  <b>certainly</b> 25:5 28:25              46:7 49:22 50:23              72:1,7 78:11,21              79:12,23 82:7 85:2              86:11 87:1 89:14              102:17 105:12 111:5              112:25 113:8 114:11              114:19  <b>CERTIFICATE</b> 127:2  <b>certifications</b> 9:7  <b>certified</b> 4:4 9:6  <b>certify</b> 126:1 127:6,12  <b>chain</b> 65:4,6 69:12,16  <b>change</b> 17:12,15 114:2  <b>changes</b> 53:10  <b>character</b> 81:9  <b>charge</b> 27:18 28:16  <b>charging</b> 44:25  <b>checked</b> 22:19 120:16              120:20  <b>chemical</b> 13:6,8 14:2,4              14:5 15:10,14,17,20              16:6 25:13 29:20              31:12 65:17 80:13,15              115:23  <b>chemically</b> 37:6  <b>chemicals</b> 33:14,16              72:22 73:20  <b>chemist</b> 33:4,8,15              39:20 43:21 44:7  <b>chemistry</b> 8:21,22  <b>chewing</b> 84:15  <b>chloride</b> 36:5,6 70:2  <b>chlorinated</b> 35:25 45:3              45:6 65:1,11,14 69:2              69:4,6,9,10,14,18,23              69:25 70:6 72:15,16              72:20 76:4,6,9 81:4              81:11 86:3,6,19,21              93:18,20,22 120:16              120:18,21,24 121:3,5  <b>chlorinateds</b> 116:8  <b>chlorine</b> 69:15 70:4  <b>CHMM</b> 9:5  <b>choice</b> 48:9  <b>choose</b> 124:19  <b>chose</b> 53:16  <b>chromatograph</b> 36:1,9              36:22  <b>chronologically</b> 106:2  <b>chunks</b> 61:7 68:24  <b>Cincinnati</b> 38:2  <b>circle</b> 100:23 103:22  <b>circled</b> 104:5,10,18              106:7</p>	<p><b>circles</b> 101:13  <b>city</b> 27:7,8,13 33:6              87:20  <b>Civil</b> 1:14  <b>claim</b> 32:3  <b>clarify</b> 119:24 123:2,25  <b>Clark</b> 4:20  <b>clay</b> 46:22  <b>clean</b> 92:7  <b>cleaned</b> 84:13 92:10  <b>cleaning</b> 73:12 76:3  <b>cleansers</b> 75:19,20,22              76:1  <b>clear</b> 19:15  <b>Cleveland</b> 3:6,12  <b>close</b> 15:24 16:4,10              18:12 87:22  <b>closed</b> 16:5,7 18:8 19:6              19:9,16,20 62:24              63:22 98:22  <b>closer</b> 41:15 54:6  <b>closing</b> 13:15  <b>Clyde</b> 30:7 31:2,3,5,25              32:13,24,25 33:3  <b>coal</b> 87:23,24 88:1,5              117:19  <b>coatings</b> 64:14  <b>COD</b> 88:12  <b>code</b> 35:10,21 43:12              117:12  <b>coffee</b> 7:21  <b>Cold</b> 85:4  <b>collapse</b> 57:4  <b>collect</b> 89:8  <b>collected</b> 123:4  <b>College</b> 8:22  <b>color</b> 72:25  <b>colorant</b> 74:9  <b>Columbus</b> 5:18 6:9,10  <b>combined</b> 67:1  <b>combust</b> 98:9  <b>combusted</b> 97:25  <b>come</b> 9:24 22:25 31:15              36:3 37:14,19 38:4              38:22 76:22 83:18              87:7 94:22 109:15              120:23 122:10              123:14  <b>comes</b> 10:11  <b>coming</b> 18:3 22:25 27:9              33:7 50:1 78:9 83:13              84:19,22 110:1              117:22 120:24  <b>commission</b> 127:20  <b>commissioned</b> 127:4  <b>communicate</b> 119:24</p>	<p><b>companies</b> 6:4 12:15              14:1,13 15:23,25              31:12 41:24 115:17  <b>company</b> 12:4,17 13:20              13:24 14:2,15,18,19              14:25 15:3,5,6 21:9              28:2 38:21 39:3              41:17,21 45:5 48:14              50:2 107:12 110:3              114:20  <b>compared</b> 41:8 44:9  <b>comparison</b> 48:20  <b>compatible</b> 45:23 46:4  <b>compilation</b> 62:24  <b>complete</b> 23:13  <b>completed</b> 30:2  <b>Completeness</b> 51:16  <b>components</b> 93:17  <b>composite</b> 42:12 43:14              43:17  <b>composited</b> 44:9  <b>compositing</b> 43:7 44:3  <b>composition</b> 55:25              80:13,15 81:10  <b>compound</b> 36:11 65:2              69:11,19 86:19 93:18              93:20  <b>compounds</b> 36:10  <b>concluded</b> 125:4  <b>concludes</b> 124:11  <b>condition</b> 50:8 77:15  <b>CONDUCTED</b> 2:1  <b>confirm</b> 35:13,19  <b>connection</b> 4:24 5:16              5:17 12:21 83:23  <b>considerations</b> 81:15  <b>considered</b> 69:18 72:16  <b>consist</b> 19:19 93:10  <b>consistency</b> 93:4  <b>consists</b> 52:13  <b>constant</b> 109:1  <b>constructed</b> 50:10  <b>construction</b> 14:18,19              29:5  <b>consumer</b> 62:15 73:25              74:13 76:8,20  <b>contact</b> 76:23 77:13              78:9 122:13 123:18              123:21  <b>contain</b> 57:24 72:14              76:3 86:2,6,18 93:17  <b>contained</b> 40:4,20  <b>container</b> 23:6,12              70:20 76:18 84:3              89:16 109:24 111:8              112:1</p>	<p><b>containers</b> 50:18  <b>containing</b> 86:23  <b>content</b> 59:8  <b>contents</b> 57:11,24  <b>continued</b> 19:8,10  <b>contractor</b> 11:14 12:3  <b>contrast</b> 86:7  <b>contribution</b> 4:18  <b>control</b> 20:23 62:19  <b>controversy</b> 96:22  <b>convenience</b> 7:22  <b>conveyed</b> 122:2  <b>cooled</b> 98:13  <b>copy</b> 124:14  <b>corner</b> 100:2,4  <b>Corporation</b> 5:9 9:13              10:2  <b>correct</b> 5:7,10,11 13:21              14:22 26:18 27:15              30:23,25 43:3,5              46:14 97:16 121:20  <b>corrections</b> 124:16  <b>correctly</b> 65:25  <b>cost</b> 38:25 44:22 88:13  <b>counsel</b> 5:2  <b>count</b> 101:23  <b>county</b> 4:20 8:20              109:18 127:2  <b>couple</b> 8:15 9:19 26:12              55:11 86:4 97:12              98:20 115:8 116:3              120:22 121:14              124:25  <b>courses</b> 9:4  <b>court</b> 1:1 6:23 101:9              124:12,18 125:2  <b>Courtenay</b> 3:10  <b>Courthouse</b> 1:17  <b>crane</b> 118:19  <b>created</b> 31:9 63:16,21  <b>creates</b> 10:12  <b>cross-examination</b>              1:14 4:5 119:20  <b>crumple</b> 56:21  <b>cubic</b> 114:16,16  <b>curious</b> 99:16  <b>current</b> 8:1 9:11  <b>customer</b> 22:8 37:16              38:2 44:25 120:14              121:7 122:14 123:6              123:12,13,21  <b>customers</b> 21:18 37:17              37:20 87:1 121:11  <b>cyanide</b> 32:5,9 38:17              38:18,20,23 39:1,2,5              39:7,9,15,19,22 40:2</p>
--	--	---	--	---

<p>40:4,7,10,13,20  <b>cyanides</b> 32:8  <b>cylinders</b> 106:9</p> <p style="text-align: center;"><b>D</b></p> <p><b>Dan</b> 5:6 119:18  <b>Daniel</b> 3:15  <b>Danis</b> 14:21,22,23,24  15:3,7,7,10,22  <b>dark</b> 106:14  <b>dashboards</b> 65:9  <b>date</b> 8:12 54:20 55:3  99:17  <b>dated</b> 54:5 126:8  <b>David</b> 3:19  <b>day</b> 1:19 16:21 37:13  37:21 38:3 92:6  97:13 98:14 107:24  108:22 127:17  <b>days</b> 8:14 55:1 90:10  108:7,14,15,16  <b>Dayton</b> 1:18 14:20  127:16  <b>day-to-day</b> 25:16 30:3  <b>deal</b> 116:20  <b>dealing</b> 35:2  <b>dealings</b> 109:10  <b>dealt</b> 25:3 40:9  <b>decay</b> 46:21 47:12  <b>decayed</b> 46:24  <b>December</b> 1:19 16:19  <b>decided</b> 16:1 87:21  96:7,11,12,20,23  <b>decision</b> 16:12 42:12  43:17  <b>decompose</b> 76:24 77:2  <b>deep</b> 67:4  <b>Defendant</b> 3:7,13  <b>Defendants</b> 1:10  <b>defines</b> 80:18  <b>definitely</b> 105:15  <b>degreasing</b> 121:1  <b>degree</b> 8:22  <b>degrees</b> 8:25  <b>Delco</b> 87:2,3,11  <b>deliberately</b> 32:12  <b>delivery</b> 114:3  <b>density</b> 78:14  <b>denting</b> 56:21  <b>department</b> 51:13  <b>depended</b> 35:23 36:20  37:16 108:10  <b>depending</b> 20:17 23:24  60:4 76:18 110:3  <b>depends</b> 61:16 74:6  <b>depicting</b> 99:7</p>	<p><b>depictions</b> 102:4,5  <b>deposed</b> 4:24 5:12  <b>deposition</b> 1:12 5:23  6:12 52:8 63:8  124:12,15 125:3  <b>depositions</b> 6:17  <b>describe</b> 93:4 98:17  <b>described</b> 46:16  <b>describing</b> 101:13  106:10  <b>destined</b> 45:13 119:6  <b>destroy</b> 40:2  <b>destruction</b> 39:3  <b>detail</b> 20:4  <b>detergent</b> 38:6,9 62:15  62:21 75:23 76:15  <b>deteriorate</b> 48:23,25  58:2  <b>deteriorated</b> 49:24  <b>deterioration</b> 57:5  <b>determine</b> 37:5  <b>determined</b> 37:10  <b>developed</b> 98:23 100:1  100:7  <b>Development</b> 88:2  <b>device</b> 89:2  <b>Diatomaceous</b> 85:5  <b>difference</b> 57:3 69:13  <b>different</b> 9:25 17:20,24  20:3 42:15,16 43:18  43:23,24 44:3,7,8,23  53:12 63:23 86:13  112:13  <b>diisocyanate</b> 65:18  <b>directed</b> 27:19  <b>direction</b> 102:19,20,25  103:2,8,13  <b>directions</b> 100:3  <b>directly</b> 15:7 91:17  119:24 122:4  <b>dirt</b> 78:23 90:13 93:11  98:1,12,16  <b>dirty</b> 119:13  <b>discharged</b> 89:10  <b>discussed</b> 55:12 97:11  <b>discussing</b> 97:8  <b>discussion</b> 103:18  <b>disposal</b> 9:8 13:25 14:3  14:4 15:2,11 20:1  24:6 25:13 29:20  34:20,21,24 35:16  38:25 40:1,5,17  44:23 45:2,14 46:5  51:8 70:7,10 87:22  94:3 96:24 99:11  107:19 108:21 109:1</p>	<p>112:7 116:16 119:6  <b>dispose</b> 39:9,16 119:14  120:8  <b>disposed</b> 21:16,24  39:23 40:21 41:1,4  50:18 51:2,5 64:5  65:13 68:4 70:12,18  70:19 71:1,12,25  72:11 75:11 86:15  88:20 93:24 95:14  97:19 109:3 116:25  117:5 118:12  <b>disposing</b> 16:20 67:22  <b>disposition</b> 22:6  <b>dissolve</b> 77:4 80:17,23  <b>distilling</b> 82:25  <b>DISTRICT</b> 1:1,2  <b>divided</b> 93:13  <b>division</b> 1:3 10:25 11:1  <b>document</b> 52:9,13 54:4  54:5 63:10,15,16,21  63:23  <b>doing</b> 27:20 31:13,14  34:6 67:18 75:9  96:21 105:15 107:6  <b>double-check</b> 122:8  <b>doubt</b> 96:2  <b>draw</b> 53:17 101:13  103:5  <b>drawing</b> 101:19  <b>drawn</b> 84:9 102:2  <b>drew</b> 102:15  <b>dried</b> 61:6 72:7  <b>drips</b> 89:5  <b>drive</b> 83:2 91:17  <b>drop</b> 58:23 90:14  <b>droplets</b> 61:18  <b>drum</b> 20:15 25:18,20  25:21 35:17,20,25  36:6,17,24 41:18  42:9,11,21,22,24,24  43:2,10 44:12 45:3  45:24,25 46:5 47:19  48:10,11,15,17,20,20  49:1,2,5,6,7,16,19,22  50:2,8,12,12,24  51:18 54:9,12 56:12  56:24 57:12 58:15,16  60:17,21 61:2 62:20  67:7,8,8 68:9,14,17  68:21,22,24 71:5  74:18,21 75:11 78:10  78:11,15 81:19 84:16  87:11 94:3 97:13  98:20 104:25 105:14  106:3 108:7,8 109:1</p>	<p>109:17 110:5,6,8  112:2  <b>drumfill</b> 47:17 90:21  98:21 101:3 119:4  <b>drummed</b> 35:5 84:6  85:3 119:5  <b>drums</b> 16:18,20,24  17:13,20 18:2,5,6,25  19:3,5 26:11 28:14  29:3,4,21 35:11,15  36:4,14 37:18,19,21  37:24 38:11 39:3  41:11,12,18,20 42:13  43:7,11,18 45:12,13  46:15,20,23 47:4,9  47:11,13,14,15,16,17  47:18,20,21,25 48:4  48:7,13,18,21 49:9  49:16 50:13,14,18,24  50:25 53:19 55:11,14  55:18,21 56:8,9,16  56:17,22,23 57:6,7  57:11,22,22,25 58:7  58:9,11,12,14 62:21  70:23,25 71:1,9,14  71:16 78:13 84:20  85:6,9,17,18,21 95:5  95:6 101:25 105:2,4  105:12 108:12,21  109:3,4 110:1,2  111:9,11,13,15,19,23  112:13,20 119:7,13  <b>dry</b> 58:1,5,9,12,17,19  59:2 60:7 73:3 87:7  112:8  <b>dug</b> 47:8 56:4 98:3,14  101:24 103:11  105:18,25 107:16  118:19  <b>duly</b> 4:3 127:4,7  <b>dump</b> 24:24,25 84:14  <b>dumped</b> 24:16,18,19  <b>dumper</b> 67:7  <b>dumping</b> 121:4  <b>dye</b> 74:9</p> <p style="text-align: center;"><b>E</b></p> <p><b>earlier</b> 38:17 42:4 53:5  55:12 69:1 81:1  104:20 105:5 106:10  119:23 121:22  <b>early</b> 12:14 105:22  <b>earth</b> 85:5  <b>ease</b> 50:9  <b>easier</b> 24:23 52:3 84:14  84:16</p>	<p><b>easily</b> 32:4  <b>East</b> 3:5  <b>economic</b> 38:24  <b>education</b> 8:17 9:3  <b>effect</b> 77:10,14 78:2  96:3  <b>effort</b> 17:4 45:15  <b>either</b> 22:11 43:6 55:23  66:2 68:5 75:4 76:17  84:6 102:21 120:1  127:13  <b>elementary</b> 39:21  <b>Ellis</b> 3:9  <b>Elmer's</b> 61:9,10,11  <b>employed</b> 13:8 21:5  25:10,12  <b>employee</b> 32:2  <b>employees</b> 21:8,10  25:22 28:14  <b>employer</b> 15:3  <b>employment</b> 9:11  19:21 25:9  <b>emptied</b> 71:1,9 119:7  <b>empty</b> 119:13  <b>enamels</b> 72:19 73:8  <b>encapsulate</b> 46:18  <b>encapsulated</b> 58:22  61:19  <b>ended</b> 6:4 68:10,11  87:12 119:13 120:13  <b>engineering</b> 9:23  <b>entire</b> 13:17 27:22 91:9  <b>entities</b> 14:16  <b>entity</b> 14:24 15:10  <b>environmental</b> 4:13 5:9  9:9,13 10:2,3  <b>EPA</b> 57:18 63:21  109:12  <b>equipment</b> 67:15 81:19  <b>equivalent</b> 112:19  <b>Erievue</b> 3:5  <b>escaped</b> 57:12  <b>especially</b> 123:12  <b>essentially</b> 118:1  <b>estimate</b> 92:15  <b>et</b> 1:9  <b>ethyl</b> 79:24 82:7  <b>Euclid</b> 3:11  <b>evaporate</b> 88:8  <b>event</b> 127:14  <b>eventually</b> 46:21 55:19  121:6 123:18  <b>everybody</b> 13:11,14  28:4 32:8 34:16  106:22  <b>everyday</b> 121:13</p>
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<p><b>exactly</b> 16:14  <b>EXAMINATIONS</b> 2:1  <b>examine</b> 63:10  <b>examined</b> 4:4  <b>example</b> 53:25 121:24  121:25  <b>excellent</b> 21:6  <b>exhibit</b> 2:6,9,12,15  52:4,8 54:4 55:7 63:5  63:8 70:18 84:24  88:19 99:3,6,13  103:19 110:16  <b>EXHIBITS</b> 2:5  <b>expect</b> 37:13 48:21  56:19 57:2,10,23  58:5 72:20 75:12  86:20 111:4  <b>expected</b> 46:20,21  55:18 85:23 111:20  <b>expert</b> 57:16  <b>expires</b> 127:20  <b>explain</b> 39:22 122:19  <b>explained</b> 121:1  <b>explode</b> 81:20  <b>exposed</b> 48:24 55:20  <b>expression</b> 32:17  <b>extra</b> 119:11  <b>extract</b> 32:12  <b>extracted</b> 88:5  <b>extremely</b> 96:12,18</p> <hr/> <p style="text-align: center;"><b>F</b></p> <p><b>face</b> 26:16  <b>facility</b> 45:8 83:13,14  83:19 89:13 94:23  106:8,16  <b>fact</b> 36:6 44:5  <b>factories</b> 93:12  <b>faint</b> 32:5,14  <b>fair</b> 57:21 70:3  <b>Fairfield</b> 8:20  <b>fairly</b> 39:25 40:8 58:5  59:7 61:25 72:4  99:17 105:22 108:3  108:24  <b>faking</b> 32:5  <b>fall</b> 12:11 50:5,5,15  88:16  <b>falling</b> 49:25  <b>familiar</b> 4:14,20 26:15  54:8  <b>family</b> 15:22  <b>far</b> 19:10 24:14 26:21  28:3 30:1 34:21  37:11 42:24 105:21  108:23</p>	<p><b>faster</b> 17:25 76:24  <b>father</b> 29:12  <b>father's</b> 29:15  <b>fats</b> 78:18  <b>fatty</b> 78:23  <b>FBI</b> 74:9  <b>FDA</b> 74:9  <b>February</b> 52:19  <b>feel</b> 124:17,20  <b>feet</b> 67:5,5 98:20  <b>fellows</b> 22:18  <b>felt</b> 37:7  <b>fence</b> 104:21 105:6  <b>fenced</b> 105:7,8  <b>fiber</b> 49:7,9 57:21,22  57:25 58:7,9,10,12  58:14,15,16  <b>field</b> 9:3 24:25  <b>fifty</b> 15:25  <b>figure</b> 43:25 120:13  <b>figured</b> 11:15,17 96:17  <b>fill</b> 45:22 50:24 88:6  92:23 106:3 108:8  110:10,14 123:7  <b>filled</b> 74:18,21 101:3,7  102:19  <b>filler</b> 58:21  <b>filling</b> 45:20  <b>film</b> 67:6  <b>filters</b> 72:2  <b>final</b> 17:13  <b>find</b> 32:19 72:23 73:21  74:1 75:1 76:9,10,12  77:24 112:1 119:10  <b>finely</b> 93:13  <b>finish</b> 7:8 55:2 108:25  <b>finished</b> 12:12 45:19  52:19 93:21  <b>finishing</b> 45:19  <b>fire</b> 10:10 45:10 81:20  97:25  <b>fired</b> 28:1 34:22  <b>first</b> 4:2 6:20 12:18  22:1 24:20 35:9  52:24 54:20 83:25  105:18,21,24 106:6  107:15 108:2 110:19  110:20 121:23 127:7  <b>fit</b> 111:13  <b>five</b> 48:2 113:7,9,14  <b>flammable</b> 64:23 72:5  81:13,16 82:3,8 85:6  116:11  <b>flash</b> 45:9  <b>flat</b> 88:15 109:24  <b>flexible</b> 56:13</p>	<p><b>float</b> 90:11  <b>floor</b> 78:22 93:11  <b>flowing</b> 58:24  <b>fluoride</b> 74:7  <b>fly</b> 118:3,8  <b>foam</b> 65:24 68:24  <b>foam-like</b> 65:9  <b>folks</b> 120:4  <b>follow</b> 34:13,19  <b>followed</b> 34:8  <b>follows</b> 4:4  <b>food</b> 38:5,9 60:9,15  62:15  <b>foot</b> 67:3,4  <b>Force</b> 12:3  <b>foregoing</b> 126:2  <b>forever</b> 48:22 56:5,7  <b>forklift</b> 109:25  <b>form</b> 38:13 39:24 71:12  74:4 75:23 86:15  89:19 93:25 114:6  118:6 123:7,9 124:17  <b>format</b> 53:7  <b>former</b> 32:2  <b>forty</b> 67:5 114:16  <b>forty-two</b> 110:23  111:17,18 112:18  <b>found</b> 99:20,20 120:10  120:16 121:1  <b>four</b> 85:6 93:2 94:18  111:9,11,15,19  112:19  <b>fractions</b> 83:2  <b>frame</b> 117:14  <b>Franklin</b> 83:13,14  <b>free</b> 58:24 71:13  <b>Friday</b> 1:18  <b>Frost</b> 3:14  <b>fuel</b> 10:6  <b>full</b> 7:6 65:17 74:18  116:10,10  <b>fun</b> 32:2  <b>function</b> 10:5  <b>FURTHER</b> 127:12  <b>future</b> 16:14</p> <hr/> <p style="text-align: center;"><b>G</b></p> <p><b>G</b> 3:4 29:11,11  <b>gallon</b> 113:4,7,9,14  <b>gallons</b> 92:16,19,25  93:2,3 94:13,14,17  94:18,21 117:6,7  <b>Gamble</b> 38:1,10,15  62:16 75:21  <b>Gary</b> 26:5,22,24 30:21  30:24 31:1 107:9</p>	<p>124:1  <b>gas</b> 36:1,8,21  <b>GC</b> 35:25  <b>general</b> 9:10 41:5  73:10 100:25 101:8  102:3,5 103:3,7  <b>generally</b> 28:4 82:9  100:23 123:20  <b>generate</b> 48:4 63:19  <b>generated</b> 41:22 62:23  63:20 89:12,18 90:23  115:13,18,19,21,24  <b>generator</b> 21:18 23:1  35:14 43:12,19  117:23 118:16 123:4  <b>generators</b> 21:11,15  48:3 83:7,11 94:24  113:11 115:5,8,12  119:25 121:11 122:3  122:16  <b>gentleman</b> 31:15  <b>getting</b> 77:21 84:2  94:16 97:4,7 108:11  113:13 115:15 125:1  <b>give</b> 6:22 7:6 56:25  72:25 74:10 117:2  <b>gives</b> 36:10 53:22  <b>giving</b> 12:20 99:12  <b>glass</b> 23:8  <b>glue</b> 59:23 60:1,24 61:5  61:9,10,11 64:13  <b>glues</b> 59:22 62:2,12  64:4 69:22 70:16  79:19  <b>gluing</b> 61:7  <b>go</b> 6:17 11:11 20:2  22:18,22 24:24 32:4  35:19 37:4,23 38:16  39:4 42:1 44:12  51:13 55:5 64:1  66:24 67:2,22 79:10  79:13 81:21 84:23  85:23 87:20 98:7  103:15 120:2,12  121:10,17,19 122:4,5  122:13 123:15  124:21  <b>goes</b> 96:18  <b>going</b> 6:14,17 11:15,17  16:16 18:12 20:18  22:22 24:2 29:25  37:11 43:24 45:25  54:3,5 58:2,24 68:11  69:25 78:11 79:9,11  79:17 96:24 99:13  105:20 109:16</p>	<p>110:13 121:21 123:9  <b>Goings</b> 29:11  <b>good</b> 4:10 6:14 34:17  50:3,3 56:14 71:4  75:17 76:19 80:2  81:6,17 98:25 112:14  <b>goopy</b> 84:15  <b>goop</b> 71:6  <b>government</b> 12:2 87:23  109:10  <b>grab</b> 75:5  <b>graduate</b> 8:24 12:12  <b>gravity</b> 90:7  <b>gray</b> 93:9  <b>grease</b> 64:14  <b>greases</b> 78:22,22 95:1  <b>greatest</b> 96:14  <b>green</b> 100:5  <b>grid</b> 54:13  <b>grinding</b> 87:12  <b>ground</b> 48:25 55:20  67:3 89:6 102:22  <b>group</b> 11:2 41:20 42:13  42:13  <b>groups</b> 65:5  <b>guess</b> 44:19 73:9 85:14  105:19  <b>guessed</b> 47:3  <b>guessing</b> 86:12 113:21  <b>gum</b> 84:15  <b>guys</b> 26:12,20 29:9  <b>G-6</b> 110:20</p> <hr/> <p style="text-align: center;"><b>H</b></p> <p><b>Hagan</b> 3:19  <b>halfway</b> 49:25  <b>hand</b> 127:16  <b>handing</b> 52:6 63:7  <b>handle</b> 32:7  <b>handled</b> 33:25 114:23  <b>handling</b> 9:10 38:18  <b>handwritten</b> 52:1  <b>happen</b> 114:9 121:8,10  <b>happened</b> 11:8 24:22  32:22 35:5,15 49:13  49:13 55:23 85:7  91:20 114:10,12  119:15  <b>happening</b> 46:16  <b>happens</b> 57:16  <b>Happy</b> 8:14  <b>hard</b> 7:2 49:7 79:13  85:19 124:14  <b>haul</b> 114:24  <b>hailed</b> 115:6  <b>Haverfield</b> 3:3</p>
--	---	---	--	---

<p><b>hazardous</b> 9:6 74:2  <b>head</b> 7:1,1 31:20  <b>headliners</b> 65:10  <b>health</b> 46:12 51:13 109:18  <b>heard</b> 30:9 31:5,25 33:21  <b>hearsay</b> 31:5 32:1 34:1 34:7  <b>heat</b> 64:23  <b>heated</b> 90:8,9  <b>heavily</b> 62:10  <b>heavy</b> 46:22 81:19 93:8  <b>held</b> 9:14 31:7 55:9 90:10  <b>help</b> 7:21 53:20,24 56:25 62:22 88:11 120:5,13  <b>helped</b> 28:11  <b>hereinafter</b> 4:3  <b>hereunto</b> 127:15  <b>hesitated</b> 39:12  <b>hexane</b> 78:24 79:2,3,4  <b>hey</b> 111:10  <b>high</b> 8:17,18,19 38:7 64:23 78:14  <b>higher</b> 31:2  <b>highlighting</b> 63:15  <b>highly</b> 72:4 77:17  <b>highway</b> 50:4,6  <b>Hill</b> 30:7 31:3,3,6,25 32:13,25 33:3  <b>Hillard</b> 6:8  <b>Hill's</b> 32:24  <b>Hine</b> 1:17  <b>hired</b> 84:1  <b>history</b> 96:6 105:20,22  <b>hold</b> 11:22 43:25 91:23 94:18 112:14  <b>hole</b> 60:17,20 61:1 118:20  <b>hot</b> 97:13,19,24 98:8  <b>household</b> 75:21 76:1  <b>hump</b> 97:3  <b>hundred</b> 15:24 77:18 92:18,18,25 98:20 111:22  <b>hundreds</b> 41:11 94:14 94:15  <b>Huntington</b> 3:11  <b>hygiene</b> 73:12 76:3  <b>hypothetically</b> 60:16</p> <hr/> <p style="text-align: center;"><b>I</b></p> <p><b>idea</b> 33:23 81:17 82:25 85:4,16 113:17,25</p>	<p><b>identification</b> 2:8,11,14 2:17 22:16 52:5,7 55:8 63:6,9 99:4  <b>identified</b> 43:19  <b>identify</b> 54:20 103:20  <b>identifying</b> 21:4  <b>identity</b> 83:6  <b>imagine</b> 94:16  <b>immediately</b> 13:11 32:14 91:17 120:17  <b>important</b> 6:21 38:24  <b>impossible</b> 77:16  <b>incident</b> 97:10  <b>incinerated</b> 24:2 79:7  <b>incineration</b> 22:6 64:20 64:25 66:3,5 72:6 81:14,22  <b>incinerator</b> 45:4 67:25 116:13  <b>incinerators</b> 97:1  <b>included</b> 43:11 70:4  <b>Including</b> 13:12,13  <b>incoming</b> 20:14 33:25 91:2 106:12  <b>indefinitely</b> 58:1  <b>independent</b> 11:14 14:13 63:3  <b>Indiana</b> 14:4  <b>indicate</b> 53:17 100:10 106:5 111:17 113:24  <b>indicated</b> 5:5 18:1 35:21 55:12 58:10  <b>indicates</b> 101:15 105:9 110:24 112:23  <b>indicating</b> 10:20 80:20 100:2,9 101:1,5,6,8 101:18 102:13,21 103:4,8,9,23,25 104:4,8,9,16,20 105:4 106:14  <b>indication</b> 7:16 36:11  <b>indirectly</b> 17:5,6  <b>individual</b> 22:12 43:10 53:18  <b>individually</b> 42:14 43:8  <b>Industries</b> 110:21  <b>industry</b> 65:21 117:8  <b>inert</b> 96:13,18  <b>information</b> 22:7 51:24 51:25 123:15  <b>initial</b> 20:16 22:4 101:14  <b>Initially</b> 39:1 102:7  <b>ink</b> 86:9,9,11,12,12,14 86:14  <b>inks</b> 62:2 86:8</p>	<p><b>Inland</b> 116:9  <b>innocuous</b> 38:5  <b>inside</b> 57:16 58:15 118:17  <b>inspector</b> 109:13  <b>inspectors</b> 109:10  <b>instance</b> 74:3  <b>instrument</b> 36:9  <b>intact</b> 47:9 75:13  <b>integrity</b> 56:9,20 57:6  <b>intended</b> 46:15  <b>intensive</b> 71:4  <b>interested</b> 127:14  <b>interestingly</b> 100:20  <b>interlocking</b> 57:1  <b>intermediate</b> 15:6  <b>interrupt</b> 7:5 35:18  <b>interview</b> 12:21,24 97:12,15  <b>involved</b> 16:3 17:4,6 30:5 51:7 122:25  <b>item</b> 110:21  <b>items</b> 79:17 106:4  <b>IWD</b> 12:15,15,16,25 13:4,25 14:2,3,4,9,14 15:2,10 21:12 27:9 31:12 83:15 99:10 115:3 116:12</p> <hr/> <p style="text-align: center;"><b>J</b></p> <p><b>Jack</b> 31:11,11 107:12  <b>Jalics</b> 2:3 3:10 25:19 54:19 119:21 124:9  <b>January</b> 18:24  <b>jar</b> 23:4  <b>Jeannie</b> 107:11  <b>Jo</b> 1:15 127:3,19  <b>job</b> 109:9  <b>Joe</b> 109:13  <b>John</b> 26:14,16 107:6,8  <b>July</b> 10:25 54:5,22  <b>June</b> 54:24,25</p> <hr/> <p style="text-align: center;"><b>K</b></p> <p><b>K</b> 10:8 26:6  <b>Karas</b> 26:6,22 30:21,24 31:1 124:1  <b>keep</b> 46:15 81:21  <b>keeps</b> 73:2  <b>Kentucky</b> 12:5 116:9 116:11,13  <b>Kettering</b> 9:13  <b>Kids</b> 8:11  <b>kiln</b> 10:6,8  <b>kind</b> 18:22 19:7 23:6 49:4,6,15,19 50:17</p>	<p>51:10 56:25 60:19 61:7 73:20 75:18,20 80:12 84:3 85:16,25 89:16 101:2 103:3,8 106:2,4,13,13 109:23 110:5 111:7,25 113:6 117:8 123:7  <b>kinds</b> 49:16 58:8  <b>knew</b> 22:13  <b>know</b> 7:20 13:5 15:8,19 15:22 16:14,16 18:4 18:5,16 27:1,6 28:3 28:17,20,21 30:15,19 31:18 32:15 33:2,10 33:24 34:3,8,13 37:12 40:11,24 41:11 41:21 42:8,24 45:12 47:7,8 49:7 57:17 58:8 59:11,24 65:10 68:17 69:8 71:21,22 77:19,19,22 78:25 79:1 80:7 82:11 83:19,21,24 85:8,9 85:11,24 86:5 87:10 88:11 103:10 105:20 105:21 106:1,16,19 107:1,14,17 109:19 110:16 114:13 115:1 117:9 118:8,10 120:11 121:5 124:6,8 124:23  <b>knowing</b> 18:12 34:11 37:2 55:23  <b>knowledge</b> 105:25  <b>knows</b> 77:23</p> <hr/> <p style="text-align: center;"><b>L</b></p> <p><b>L</b> 10:8  <b>lab</b> 24:22,24 26:12 27:17,18,20 28:12 29:25 33:8,16 42:11 51:9 107:10 108:17 121:16,17 122:8 123:3,10 124:2  <b>labeled</b> 44:4  <b>labor</b> 71:4 119:11  <b>laboratories</b> 9:23  <b>laboratory</b> 17:7 19:24 20:9,11 25:17 26:4,5 27:11 30:14,18 34:14 34:15 36:9  <b>lacquer</b> 72:3  <b>lacquers</b> 72:19 73:8  <b>ladder</b> 31:2  <b>Lafarge</b> 10:4  <b>lagoon</b> 87:15</p>	<p><b>laid</b> 13:11 28:4 99:15 103:2 106:22  <b>Laidlaw</b> 6:5 11:5,9,12  <b>landfill</b> 4:19 12:22 13:17,22 17:10 50:23 54:17 56:7 57:16 67:17 68:6 77:2 79:25 80:10 81:17 85:23 87:5 89:22,24 90:20 97:21 98:3 99:25 100:7 109:5,13 114:20 118:15  <b>landfills</b> 56:3,4,5 75:16 77:5 96:5,9,25  <b>large</b> 15:23 23:3 38:2 67:14  <b>larger</b> 92:8  <b>late</b> 12:14 108:3,24  <b>latex</b> 59:22,23 60:24 61:5 64:13 118:11,14  <b>latexes</b> 73:8  <b>law</b> 3:4,10,15 34:19 40:17  <b>lawful</b> 4:2  <b>lay</b> 13:14  <b>layer</b> 50:12,12,14 76:17 90:12,15  <b>lead</b> 56:20  <b>leave</b> 32:11  <b>leeway</b> 43:22  <b>left</b> 11:10,11 12:17 13:6 18:25 19:20 23:14 27:3 31:22 33:10,19 39:19 40:24 71:5 73:6 82:17 83:4 90:19 100:4 124:5  <b>legible</b> 51:20  <b>Leslie</b> 3:4 4:11  <b>Lester</b> 28:19  <b>let's</b> 9:17 67:4 69:20,21 71:23 100:25  <b>level</b> 40:8 112:13  <b>Liberty</b> 8:19  <b>lid</b> 97:12  <b>life</b> 47:11  <b>lifespan</b> 48:19  <b>light</b> 48:24  <b>likelihood</b> 56:21  <b>line</b> 67:6 75:6  <b>lined</b> 67:11 98:18  <b>liner</b> 58:15  <b>liquid</b> 6:8 10:24 13:25 14:9 39:24 58:22,24 72:4 73:2,5 79:3,6 93:7 99:11 115:3,4  <b>liquids</b> 78:25</p>
--	---	---	--	--

<p><b>Liquified</b> 88:1  <b>list</b> 22:19 62:23 66:1          69:2,18 71:24 75:4          78:17,19 84:25 86:2  <b>listed</b> 70:17 76:3 80:8          82:1 110:21  <b>lists</b> 63:23  <b>litigation</b> 4:15  <b>little</b> 8:16 12:16 25:8          62:7,17,20 75:10          82:9 100:9  <b>live</b> 8:6,8  <b>lived</b> 8:4  <b>living</b> 27:1  <b>LLC</b> 3:14  <b>LLP</b> 3:3,9  <b>load</b> 22:25 24:1 44:15          50:2  <b>loaded</b> 22:17  <b>loader</b> 67:15  <b>loads</b> 20:16  <b>local</b> 8:19 85:14  <b>located</b> 98:18 100:19          100:24 102:11          103:22  <b>location</b> 53:22  <b>locations</b> 53:18  <b>log</b> 51:23 54:17 94:3          119:9  <b>logistics</b> 24:22  <b>logs</b> 30:2 51:12,14,16          53:4,8 94:9,10          109:17,20 118:23  <b>long</b> 5:23 6:15 8:4 9:14          10:8 11:4 12:6 23:19          40:14 46:24,24 47:1          47:1,2 55:13 57:23          57:25 65:4 67:5          69:12 70:1,1 75:12          75:15,15,16 121:23          124:6,8  <b>longer</b> 49:2 55:14 56:1          78:12,15 108:3  <b>look</b> 36:23 38:23 39:1          42:16 43:22 44:12          50:2 52:9 56:3 71:23          84:24 111:4 124:23  <b>looked</b> 36:4 37:1 42:15          43:14,20 93:8 122:9  <b>looking</b> 54:14 74:3          82:4,5 103:19 104:22          106:9,14 120:8  <b>looks</b> 32:17 37:3 43:23          53:12 54:6 99:17          102:14 104:11          110:22</p>	<p><b>loose</b> 60:25  <b>lose</b> 58:3  <b>lot</b> 30:9 44:23 57:17          59:21 62:11 65:5,7          68:18 70:12 72:8,18          75:3 76:7,11,16,16          78:12,12,15,15 79:5          82:10 84:16 89:4,7          96:21,22 100:2,5          106:5 108:9,11,12          119:11 120:16  <b>lots</b> 72:1  <b>low</b> 40:8 45:9 59:7  <b>lower</b> 56:19 88:13          102:15</p> <hr/> <p style="text-align: center;"><b>M</b></p> <p><b>machinery</b> 93:15  <b>main</b> 3:16 44:20 121:15  <b>majority</b> 38:4 59:4,6  <b>making</b> 32:2 118:2  <b>Management</b> 1:8 3:7          13:7,9 15:14,14,17          15:20 16:6 28:1  <b>manager</b> 9:6,12,19,21          11:21,23 25:12,15          26:5 27:17 29:19          121:15 122:8  <b>manner</b> 17:21 127:13  <b>manufacturer</b> 70:25          115:25  <b>manufacturers</b> 65:8          70:23  <b>manufacturing</b> 62:1,13          72:18 89:4  <b>map</b> 98:24  <b>March</b> 10:18,24 12:1          13:5 106:21  <b>mark</b> 54:3 55:6 99:2,13          102:9,10  <b>marked</b> 2:5,7,10,13,16          52:5,7 55:8 63:6,8          99:4,6  <b>Mary</b> 1:15 127:3,19  <b>Master's</b> 8:22  <b>match</b> 44:11  <b>material</b> 9:6 18:11,15          18:20 20:18 23:23          36:1,2 38:5,8 45:9          46:9 48:16 49:5          53:23 56:1 58:22          59:7,16,20 60:23          61:8 66:2,16 67:7,16          71:12 72:7 74:5 75:3          76:19,20 78:2,8 79:7          80:24 83:4,5 84:15</p>	<p>84:19 86:23 90:23          91:2,4,21 93:24          96:12 97:19 98:2          109:6 110:5 111:6,11          113:2 116:1 118:3,17          119:6 122:12 123:8  <b>materials</b> 19:12,25          20:7,10,14,16 22:20          22:21 29:17 34:25          36:19 38:6,22 40:12          41:9 42:16 44:21          45:21,23 46:2,3,4          50:22 58:10,13,14,17          59:9 60:2 62:25 63:3          64:5 67:12 70:16          71:25 72:14 73:13,17          73:24 74:7,12,16,25          75:13 79:5,21,23          82:1 86:1 88:19          112:9 118:22,24  <b>matter</b> 18:17  <b>mattress</b> 67:14 68:2  <b>mean</b> 12:8 13:16 21:4,5          43:1 44:14 46:4 51:9          51:10 82:23 98:5          107:3 113:4,18 114:4          115:3  <b>means</b> 7:5 58:21 82:9  <b>meet</b> 120:2  <b>memory</b> 63:3,19 71:8          71:11 103:1  <b>mentioned</b> 20:24 38:10          61:13 65:16,20 69:1  <b>metal</b> 40:7 47:13,15,17          48:20 49:2 55:14,18          56:2,9,17 57:6 93:14  <b>metals</b> 39:1  <b>method</b> 35:16 40:1          56:17 67:21  <b>methylene</b> 36:5,6  <b>Michigan</b> 116:14,15,16  <b>middle</b> 101:15  <b>Middletown</b> 3:17  <b>mind</b> 16:15  <b>minute</b> 38:16 39:12          40:22 42:2 103:16  <b>miscellaneous</b> 84:23          86:2  <b>missing</b> 100:8  <b>mix</b> 46:6 65:23 66:9  <b>mixing</b> 46:15 67:10,10          68:3  <b>mixture</b> 88:9 90:9  <b>mixtures</b> 78:22 88:22  <b>moist</b> 58:13 59:3  <b>moisture</b> 55:20 59:8</p>	<p>60:4,6,8  <b>moment</b> 35:19  <b>monomer</b> 64:19,22  <b>MONTGOMERY</b>          127:2  <b>month</b> 23:20 121:14  <b>months</b> 11:14 18:18          23:21 41:19  <b>Moore</b> 109:13  <b>morning</b> 4:10  <b>motor</b> 93:13  <b>Moundsville</b> 87:25          88:4  <b>moved</b> 68:25 90:20  <b>moving</b> 8:18 73:11          81:16 86:8,22 88:18          89:5  <b>mud</b> 93:9  <b>Municipal</b> 85:14</p> <hr/> <p style="text-align: center;"><b>N</b></p> <p><b>N</b> 10:8 29:11  <b>name</b> 4:7,10 13:21          14:19,20 21:4 26:15          28:18,22 29:11,15          31:17,19 65:17 86:13          107:11 109:14 116:4          116:10,11  <b>named</b> 26:5  <b>names</b> 25:25 26:1,3,13          26:20 29:8 41:25          108:20  <b>nature</b> 59:8 61:18          122:23  <b>NE</b> 1:17  <b>near</b> 6:9 13:22 32:6          66:5,21 116:12  <b>necessarily</b> 43:5,9          121:9  <b>necessary</b> 37:7 124:17          124:20  <b>need</b> 7:19,20 42:14          46:2 77:3  <b>needed</b> 48:11 120:5  <b>negative</b> 32:25  <b>Nelson</b> 1:12 4:1,9 126:1          127:7  <b>neoprene</b> 69:23,24          70:8  <b>neutralize</b> 66:6 67:20  <b>never</b> 18:19 32:16 71:6          96:18  <b>new</b> 18:11,15 45:20          48:18 123:22  <b>Newark</b> 116:4  <b>Newport</b> 12:4</p>	<p><b>nice</b> 74:11  <b>nicknames</b> 29:13  <b>night</b> 107:20,25 108:4          108:22,23  <b>nights</b> 108:17  <b>ninety</b> 47:16  <b>Ninth</b> 3:5  <b>nod</b> 7:1  <b>nonchlorinated</b> 81:13  <b>nonintact</b> 47:9  <b>nonvolatile</b> 82:23  <b>normal</b> 18:5 45:22  <b>normally</b> 17:21 19:1          122:20  <b>north</b> 3:16 8:2 103:1,3          103:6,8,11,11,14  <b>northeastern</b> 27:4  <b>Notary</b> 1:16 127:3,20  <b>notes</b> 123:1 124:1  <b>nozzle</b> 88:15  <b>number</b> 15:23 22:14          35:10,12,21 41:13          53:16 54:9,12 72:25          101:22 111:19          114:21 117:11,12  <b>numbers</b> 51:19 74:10  <b>Numerous</b> 9:4</p> <hr/> <p style="text-align: center;"><b>O</b></p> <p><b>O</b> 29:11  <b>obtained</b> 22:2  <b>obvious</b> 29:14  <b>obviously</b> 24:3 44:20          50:11 56:13 58:3          93:5  <b>occasion</b> 120:1  <b>occasionally</b> 23:10          45:18 52:1 123:12  <b>occurrence</b> 121:13  <b>office</b> 127:16  <b>off-the-record</b> 103:17  <b>oh</b> 67:3 80:6 98:25          99:22  <b>Ohio</b> 1:2,16,18 3:6,12          3:17 4:20 5:18 6:8          8:3,20 14:3 15:2,11          25:13 27:5 29:20          83:13,14 109:12          127:1,4,16,20  <b>oil</b> 13:19 19:10,24          20:20,21 24:3,4          25:17 26:17,21 45:7          45:8 59:13 87:24          88:18,21,21,23,23          89:3,5,9,11,12,14,15          89:16,21 90:7,11,14</p>
--	---	---	--	--



<p>90:17 91:2,5,25 92:1 93:15,16,22 94:22,23 94:25 95:2,14,19,21 103:21,24 106:7,12 107:7,14 108:4 118:2 120:15,22 121:4 oils 62:2 95:17 oil/water 88:22 90:9 okay 4:17 6:18,19,24 7:9,10,14,17,18,22 20:5 22:22 26:19 35:4 37:2 55:3 97:9 99:22 100:4 101:21 103:25 116:17 117:18 123:17,24 old 45:19 98:22 99:18 older 99:23 once 5:15 35:15 56:6 109:14,15 ones 64:11 70:5 73:15 93:2 115:10 ongoing 19:12 92:3 108:4 123:12,21 on-site 20:8 94:23 ooze 60:18 61:1 oozing 60:22 open 35:12 45:23 100:21 opened 36:25 45:18 operate 16:13 operated 19:24 operating 19:10 106:17 106:20,21 operation 14:8 19:8 24:4 25:16 28:24 31:16 45:17,22 83:15 83:20 89:4 100:15 105:10 107:2 108:5 115:21,23 121:1 operational 106:23 operations 19:14 93:14 99:10 108:6 opportunity 124:15,19 opposed 53:18 78:14 order 71:13 ordinarily 76:24 ordinary 10:12 organic 36:10,21 69:10 69:19 73:9 79:4 80:21,23 organics 72:15,16 76:4 76:6 86:3 88:6 organization 114:18 original 36:2 44:10,13 95:20 99:12,20 originally 6:7</p>	<p>ought 124:22 outgoing 20:16 106:12 oversaw 25:16 oversee 9:23 oversight 9:22 overspray 61:7 owned 14:17,23 15:3,6 15:22,25 oxidize 55:19 oxygen 88:12,17 98:13</p> <p style="text-align: center;"><b>P</b></p> <p>packaged 74:16 packaging 74:13,24 75:13 76:7,8,11,19 76:22,22 Paducah 116:12 page 2:1 52:25 54:20 63:10 110:19 pages 52:13 paid 44:21 pain 112:12 paint 58:21 60:2,4,5,6 60:7 61:13,14,17,19 64:16 72:1,2,8,10,17 72:23 73:3,4,5,6,7 77:9,12 80:11 81:22 81:24 110:22 painted 22:15 paints 62:11 64:13 71:24 72:24 77:9 pallet 109:24 110:6,7 111:8,10,14,16 112:1 112:4,20,25 palletize 113:9 palletized 109:22 110:1 pallets 109:20 110:2,9 110:13,21,24 111:12 111:17 112:19 paper 49:7 96:16 paperwork 22:2 51:8,9 Pardon 19:18 parent 14:15,25 parentheses 110:22 parking 89:7 part 14:7 17:7 27:4 33:18 45:10 58:20 79:18 84:12 87:11 109:9 119:3 121:18 partially 81:15 particular 6:1 9:10 36:12,18 37:13 38:1 45:16,16 48:11,12 52:15 53:16 111:3 120:4 particularly 74:2</p>	<p>party 127:13 pass 58:20 Pause 42:3 52:11 pay 45:4 PCB 95:16 96:3 PCB's 95:13,17,19,21 95:23,25 96:4,7,8,25 97:1,5 peanut 36:25 37:1,2 59:12,15,18,20,21 60:12,14,21 pen 100:22 101:14 102:9 people 26:4 27:19 32:2 32:11,20 33:1,12,24 34:22 46:12 51:21 52:3 84:8 116:20 124:2 percent 47:16,24 48:2 48:2 91:1,4 percentage 38:25 94:19 period 10:21 12:13 13:4 66:19 67:13 90:16 100:11 110:23 periphery 15:21 permanent 98:16 permit 40:15 71:15,22 permitted 40:12,17 69:7 96:1 101:1,2 102:18,21 person 28:16 121:16 122:18 personal 78:5 personality 34:5 pertaining 120:7 pH 36:23 43:24 phase 16:2 photo 100:13 photocopied 99:7 photograph 99:1,7 100:18 103:20 physically 42:15 pick 37:23 88:17 109:25 picked 37:21 118:18 picture 99:18,23 100:12 102:16 103:1 103:21 104:2 105:5,9 pictures 105:1 piece 19:13 109:25 pigment 72:24 82:19 pile 98:11 pin 95:9 place 6:12 16:10 69:15 107:19,24,24 116:4 placed 22:21 28:14</p>	<p>29:21,22 48:16 71:14 71:16 86:9 110:7 112:10 113:3 placement 29:3,4 30:3 places 95:1 96:19,25 plaintiff 1:6,13 3:2 4:12 Plaintiff's 2:6,9,12,15 52:4 55:7 63:5 99:3 110:15 plant 27:12,14 45:10 85:12,14 87:20 88:23 91:3,5 103:21 104:3 104:7,12 107:10,15 108:5 118:9 120:19 120:23,25 plants 33:7 90:6 95:2 95:11 plastic 47:20,22 48:4,7 48:10,20,21 49:1 55:11,21 56:1,6,8,12 56:16,22 57:7,11 58:14 67:6,11 75:2,3 76:11,14,16,22 78:2 78:9 87:4 98:18 115:25 plastics 76:12 plating 38:21 39:16,17 40:7,19,23 41:1,3,6 41:17,21,23 62:12 Plaza 1:17 please 4:7 7:7,12,19 8:16 52:8 63:9 84:24 plus 47:16 point 27:6 44:11 48:13 77:22 87:21 policy 25:2,5 Polychlorinated 95:24 Polyester 64:16 polyethylene 78:14 polymers 73:1,9 polyol 62:11 64:16,16 65:1,4,13,14,23 66:9 66:14,25 67:8 68:3 69:2,4,6,9,10,14,14 71:8 97:8,18 102:8 polyurethane 64:18 polyvinyl 64:17 70:1,2 70:3,11,14 pond 87:15,16 88:6,7 88:14 104:13,18,23 104:24 portion 13:18 23:14,17 31:13 43:2,4,15 47:23 66:15 portions 43:7</p>	<p>Portland 10:14 position 9:15,16 11:19 11:21,22 26:9 30:11 30:16 31:8,9 positions 25:25 26:1 possible 16:24 21:19 49:10,12 57:14,15 58:13 61:3 68:20 88:24 105:17,19 113:15 114:10,11 118:21 119:5 possibly 55:14 114:7 postgraduate 8:24 poured 46:10 pouring 91:24 powder 62:18 74:5 powders 75:25 power 118:9 PPG 110:21 preferred 39:25 prepare 124:13 prepared 51:13 presence 127:10 PRESENT 3:18 president 31:11 pretty 19:22 34:16 37:1 37:10 38:5 56:14 59:25 61:9 62:13 69:24 73:24 96:10 97:5 prevent 44:3 previous 17:17 previously 44:15 pricing 22:8 primarily 29:16 51:16 primary 10:5 28:16 prior 9:18 10:15 18:11 18:14 22:25 27:24 31:14 91:21 100:10 probable 21:19 40:23 probably 6:20 13:3 26:25 30:21 40:6 47:16 48:10 52:20 57:13 61:10,11,22 64:17 69:7 74:5 75:17,22 76:5,8 77:17 78:23 79:18,19 79:20,22 80:11 82:6 85:7 86:12 89:19 92:9,9 93:1 112:19 114:2 121:13 124:22 problem 46:1,13 58:6 problems 120:5,7 procedure 1:15 25:2,6 35:8 42:10,23 procedures 17:15 34:9</p>
---	---	---	--	--

<p>34:13,19 121:22  <b>proceedings</b> 42:3 52:11  <b>process</b> 17:25 35:2  45:8 62:1 66:8,25  67:23 84:3,5 85:12  89:16,18 90:4 91:10  92:1,3,6 95:17 108:4  109:2  <b>processes</b> 19:13  <b>processing</b> 39:6 107:7  <b>Procter</b> 38:1,10,15  62:16 75:21  <b>produce</b> 80:24  <b>produced</b> 60:5 61:17  <b>product</b> 93:21 106:12  <b>production</b> 59:9 68:3  75:6 97:3  <b>products</b> 62:15 73:21  73:25 76:20  <b>program</b> 87:24  <b>project</b> 9:18 11:21  <b>projects</b> 9:25 10:13  <b>property</b> 98:23  <b>proportion</b> 41:6 47:21  <b>proposal</b> 22:8  <b>provide</b> 10:5  <b>provided</b> 23:9 115:8  <b>PT</b> 110:23  <b>Public</b> 1:16 127:3,20  <b>pulling</b> 88:14  <b>pump</b> 91:18  <b>pumped</b> 90:17 108:12  <b>pumping</b> 91:22  <b>punched</b> 60:17,20 61:1  <b>purchased</b> 13:7 28:2  <b>pure</b> 47:3 57:9 80:10  82:6,8  <b>purely</b> 78:5  <b>purpose</b> 23:10 44:17  56:12 63:18 67:18  71:4  <b>purposes</b> 2:7,10,13,16  22:16 44:19 52:5,7  55:8 63:6,9 99:4  101:9  <b>pursuant</b> 1:14  <b>push</b> 16:23 17:2,13  18:6 98:11  <b>put</b> 17:10 22:5 24:1,9  24:10,12,13,17 26:16  32:12 41:13 43:16  45:7,9,24 46:8 51:18  53:16 56:6,23 58:9  58:13,14 59:7 67:3  67:16 68:6,7,9,14,17  68:18,21,23 69:5</p>	<p>77:4,6 79:1 80:9 85:3  85:9,18,21 87:4 89:7  90:20,24 91:10 96:1  96:14 98:2,3,5,10  101:14 109:5 110:10  110:11 111:10,12,15  112:3,4,6 113:9  119:3  <b>putting</b> 45:21 90:5 98:1  98:16 112:16  <b>PVC</b> 70:2 76:7,11,17  76:18,19,21 77:2,3,4  78:14  <b>p.m</b> 125:4</p> <hr/> <p style="text-align: center;"><b>Q</b></p> <p><b>QC</b> 20:20,22 75:4  <b>qualification</b> 17:9  22:14  <b>qualified</b> 19:23 22:4  29:24 35:9 37:9,23  57:19 127:5  <b>qualify</b> 20:13,18 39:2  <b>quality</b> 20:23 62:19  <b>quantify</b> 90:22  <b>quart</b> 23:4  <b>question</b> 7:7,8,12,15  21:6 23:22 49:18  73:22 116:22 119:23  122:16 123:1,25  <b>questioned</b> 120:12  <b>questions</b> 7:24 35:2  39:21 55:11 64:2  119:18 120:4,6  122:17</p> <hr/> <p style="text-align: center;"><b>R</b></p> <p><b>rain</b> 108:11  <b>rains</b> 89:6  <b>rake</b> 84:16  <b>ran</b> 67:11 107:21  <b>range</b> 58:25 62:1  <b>rare</b> 97:5  <b>raw</b> 48:15 61:8  <b>react</b> 45:25 102:8  <b>reactability</b> 81:9  <b>reacted</b> 67:12  <b>reacting</b> 97:18  <b>reaction</b> 46:11 97:8  <b>reactive</b> 66:2  <b>read</b> 51:21 52:3 57:18  124:16  <b>ready</b> 41:20 45:21  <b>real</b> 28:17,22 70:14  106:14 112:12  <b>really</b> 33:13 34:7 36:20</p>	<p>55:22 78:6 79:20  80:11 82:12 83:23  96:23 108:10 116:19  121:3  <b>reason</b> 33:20 48:23  49:20 50:7 55:17  81:7 91:23  <b>reasons</b> 29:14 44:20  45:11 120:3  <b>recall</b> 12:24 16:17  25:24 29:6,10 31:7  40:19 41:5 64:4 70:7  70:10,18 72:10 75:18  86:14 92:20 100:23  109:6 112:9 113:2  118:11  <b>receive</b> 94:23  <b>received</b> 44:15 48:14  49:11 62:4  <b>receiving</b> 18:11,15  19:11 49:8  <b>Recess</b> 55:9  <b>reclaim</b> 45:6  <b>reclaimers</b> 116:3  <b>reclamation</b> 103:21  116:7,9 117:19  <b>recognize</b> 99:6 104:2  <b>recollection</b> 28:24  40:16 53:25 68:13,16  70:15 97:17 114:9  <b>recommendations</b>  122:11  <b>record</b> 4:8 7:2 30:1  42:1 51:10 54:19  93:23 94:3 103:15  111:10 124:21  <b>recorded</b> 22:20 53:15  54:9 94:1,2 113:16  116:25  <b>recording</b> 53:18 112:18  <b>recordkeeping</b> 110:25  111:1  <b>recover</b> 82:14 83:3  88:23  <b>recovered</b> 20:21 81:2,5  82:16  <b>recovery</b> 84:9  <b>recovering</b> 13:19 19:11  19:25 20:20 24:4  25:17 26:17,21 84:3  89:12,15 91:25 95:2  <b>rectangles</b> 101:20,21  102:3  <b>red</b> 102:9,11  <b>reduce</b> 88:11  <b>reduced</b> 127:9,11</p>	<p><b>refer</b> 47:10  <b>reference</b> 59:18  <b>referencing</b> 59:15  <b>referred</b> 109:7  <b>referring</b> 14:16 21:3  29:2 47:12,13 52:24  53:5 54:16  <b>refresh</b> 53:24  <b>regard</b> 34:14 41:14  <b>regarding</b> 38:17  <b>regional</b> 109:13  <b>regular</b> 50:23 69:13  <b>related</b> 25:3 34:23  62:10,14  <b>relating</b> 4:18  <b>relative</b> 127:12  <b>release</b> 67:9  <b>relevant</b> 116:18  <b>reloaded</b> 39:4  <b>remain</b> 75:13 93:16  <b>remaining</b> 71:13  <b>remember</b> 6:11,16,21  9:17 10:17 12:20  14:24 17:1 21:19  23:19 24:14 25:7  26:2,13,17,20 29:8  29:14 30:11 31:17  40:14 41:24 48:3,6  49:8,11 50:21 51:1,3  51:4 53:13 54:7,11  58:6 61:4,15,24  62:22 63:17 64:25  65:13 68:10 69:3  70:21 71:15,17,24  72:2 73:12 75:23  78:19,24 79:8,9,11  79:16 83:6,9,10,12  83:22 84:18,21,25  85:20 86:8,23,25  87:9,14 88:3,7,19  92:4 94:9,10 96:2,6  97:10,21,23 98:22  99:14 100:3,6 101:23  102:18 103:12  108:20 110:13  112:15 113:8,11,13  115:10,12,15 116:1,5  116:10,23,23 117:22  118:14,16 119:1,2  120:14  <b>remove</b> 89:2  <b>removed</b> 43:2 98:6  <b>rephrase</b> 7:13 18:1  19:2  <b>report</b> 52:15,25 53:1  54:21 55:2 94:13</p>	<p>110:20 111:3 113:17  <b>reported</b> 109:20  118:23 119:8  <b>reporter</b> 6:23 101:10  124:12,18 125:2  <b>reports</b> 52:17,18,21  54:6 57:18 109:17  117:4  <b>represent</b> 52:12 63:14  <b>representative</b> 22:2  53:4  <b>representatives</b> 21:14  21:18  <b>represented</b> 5:2,6  <b>representing</b> 4:12 5:8  <b>required</b> 34:9  <b>RESA</b> 1:5  <b>resale</b> 81:6  <b>residual</b> 118:1  <b>residue</b> 87:23 88:5  <b>resin</b> 72:25 80:23  115:25  <b>resins</b> 64:4 69:22 70:17  73:6,7 79:19 82:19  <b>respect</b> 17:12 22:23  59:5  <b>responses</b> 6:22 7:6  <b>responsibilities</b> 17:8,17  20:3 27:16 31:10,16  <b>responsibility</b> 9:20  25:14 28:9 29:21  <b>responsible</b> 4:13 9:22  28:23  <b>rest</b> 19:8 68:7 75:10  85:15 86:6  <b>result</b> 44:10  <b>retained</b> 23:18,20,21  <b>return</b> 124:18  <b>returned</b> 125:1  <b>review</b> 122:11  <b>reviewed</b> 51:12,14  <b>reviewing</b> 51:15  <b>rewrite</b> 51:23  <b>rid</b> 97:4  <b>right</b> 13:2 14:20 29:15  31:19 36:15 44:16,25  45:2 75:8 103:12  104:11  <b>ring</b> 117:9  <b>risk</b> 38:8  <b>river</b> 13:22  <b>road</b> 46:13  <b>rocks</b> 10:9  <b>role</b> 29:19  <b>rolled</b> 118:20  <b>roll-off</b> 114:3,5,13,17</p>
--	--	--	--	---

<p>room 7:22                  rough 92:14                  roughly 8:5 92:17                  Route 8:2                  routinely 62:16                  rubber 65:7 66:10                  68:24 69:23 70:1                  79:20,21 98:10                  rules 1:14 6:16 34:23                  96:3                  run 35:25 36:13,16,20                  36:21 42:13 60:17,19                  61:1,10,12 67:9                  81:19 83:1 87:19                  89:8 97:5 108:7                  running 22:19 83:24                  83:25 107:1,9,12,15                  runs 54:24 108:3                  rust 55:19</p> <hr/> <p style="text-align: center;"><b>S</b></p> <p>S 29:11                  safe 46:6,7                  safeguards 44:2                  safety 34:24 45:7 46:12                  81:15,18                  sales 22:2 120:4                  salesman 122:13,21,21                  123:13,19                  salesmen 20:13,25 21:3                  21:5,12,13 22:7                  23:10 120:25 121:11                  123:2,5                  salespeople 122:7                  salesperson 122:5                  sample 21:23 23:14,24                  24:5,8,12 35:13 36:2                  38:22 42:10 44:10,14                  122:3 123:6,10,14                  sampled 22:1 42:9,22                  42:24,25 43:1                  samples 20:12,25 21:15                  21:20 22:10,24,24                  23:3,5,11,22 24:3,15                  24:18,23 25:3 26:11                  28:11 36:3,23 38:6                  43:13,16,18 44:3,18                  62:16 75:4 95:20                  120:20 121:23 123:3                  sampling 42:5                  sanitary 13:22 68:6                  85:23 87:5 98:3                  100:7 114:20,22                  118:15 119:3                  saniter 68:12,19                  sat 61:22</p>	<p>saw 53:25 94:10                  saying 42:18 51:22                  55:25 59:19 65:12,15                  74:17 85:24 94:6                  114:10                  says 52:25 64:3 102:3                  110:22,23                  school 8:17,18,19 12:12                  Schools 8:20                  scouring 75:24                  scrubber 118:10                  seal 127:16                  second 1:18 62:3 108:8                  108:23                  section 67:2                  see 9:17 21:21 37:13                  41:19 42:23 47:8                  54:6 63:18,22 69:20                  70:5 72:21 100:17,21                  100:25 105:6 109:16                  110:19                  seeing 64:25 69:4 83:9                  94:9 114:9                  seemingly 39:21                  seen 52:10,15,16,18,21                  63:11,12 105:8 111:5                  segregation 46:2                  sell 45:4,5 93:22                  selling 20:21                  seminars 9:4                  send 22:5 23:11 113:12                  123:14                  sending 35:24                  sense 95:10 119:14                  122:9                  sent 40:1 55:4 64:20,24                  66:3,4,20 72:5 81:14                  116:9 124:24                  separate 45:15 80:8                  separately 42:17 43:25                  44:1 54:13                  separates 36:10                  separation 90:7                  separator 88:24 89:1,2                  89:9,11                  set 56:24 96:25 127:15                  seven 12:7                  shaking 7:1                  shampoo 74:21                  shape 50:3 75:17                  sheet 52:1                  sheets 53:2,2,3 54:10                  shift 108:2,6,8,13,23                  shifts 107:21,22 108:9                  ship 44:23 45:3 120:15                  123:9</p>	<p>shipped 19:25 44:22                  67:25 116:5,6,12                  118:19                  shipping 19:11,11 45:1                  48:17 110:3 116:20                  short 67:13                  shortly 31:21,22                  Shorty 29:13                  show 54:5 117:5                  120:23                  showed 62:23                  showing 63:18 99:5                  shows 100:4                  shut 31:23                  sic 106:22                  sick 32:14                  side 29:17 56:13                  sign 122:10 124:18                  signed 125:1                  significantly 44:8                  similar 5:19 52:16,18                  52:21 118:3                  simply 88:14                  site 4:18,19,21,25 5:17                  5:21 6:1,2,5,6 13:7                  13:11,15,16,18 15:18                  15:19 16:4 18:7,20                  18:23,25 19:1,6                  20:17,19 21:17 22:1                  25:11 27:17 28:10                  29:18 30:6 33:22                  34:1,10 35:3,6,11                  36:14 37:2,15 38:18                  39:5,7,10,23 40:1,11                  41:2,12 42:6,9 44:24                  45:2 49:15 62:9                  63:20,22 66:6,11,12                  66:14,18,20,23 67:25                  84:19 87:8,15 89:13                  90:23 95:19 97:20                  98:17 99:15,21                  103:20 105:23,25                  106:24 109:11                  110:17 111:2 114:25                  115:6,18,20 116:2                  117:1,5,23 118:6                  120:2,2                  sites 16:5 19:12 20:1                  sitting 105:14 111:9                  situation 5:19 121:9                  122:19                  six 52:13 92:4,12 93:3                  106:8,15                  sixty-eight 111:22                  size 92:20 112:13                  skim 89:9</p>	<p>skimmed 90:12,17                  Slaughter 28:18,19                  sloppy 110:25 111:1                  112:20                  sludge 60:4 61:14,14                  61:19 64:13 72:2,7,9                  72:10,23 73:4,5                  77:10,12 80:11,11                  81:23,24 82:9 86:9                  86:11,12,15 88:24                  89:1,11,12,14,17,21                  90:18 91:6 92:1,7                  93:5 94:22,24 95:14                  110:22,23 111:7                  112:4                  sludges 39:18 40:8 41:4                  60:3,5 62:12 71:16                  88:21 94:25 95:3,19                  95:21                  sludge-type 79:23                  sludgy 90:15                  slurry 85:2                  small 41:8,10 43:15                  47:23 66:15 81:25                  84:12 85:11 92:24                  93:15 94:19                  smallest 93:1                  smell 32:5,8,11,13                  74:11                  smelled 32:9,10                  smother 97:25                  smothered 98:12,15                  Snap 85:4                  soap 62:17,17                  soaps 75:22                  sold 6:3 10:24 11:1,5                  15:19 81:2,5                  solid 73:3 79:2 81:24                  85:17,17,20,24 88:4                  89:24 93:6 97:21                  99:25 118:1                  solidified 118:17                  solids 90:8                  solution 39:25 80:17                  Solutions 4:13                  solvent 23:25 35:25                  45:3,6 73:1 77:3,25                  79:4,5,20,23 80:10                  80:14,18,21 81:23,25                  82:15 83:3 84:2                  116:3 120:17,18,21                  120:24 121:3,3,5                  solvents 24:2 77:4,6,9                  77:13 78:9 79:15                  80:22 81:2,4,8,11,13                  81:16 82:2,14 84:9</p>	<p>116:7,8,12 122:3                  somebody 23:11 44:21                  80:2 86:13 93:22                  96:20 112:20                  someplace 24:25 32:13                  89:10                  somewhat 102:14                  son 29:12,13                  sorry 25:19 42:20                  77:20 101:11                  sort 37:24 46:1 101:19                  111:8                  sorted 35:16                  sorting 20:16                  sound 49:23 50:8,13                  sounds 26:15 118:7                  south 103:11,11,14                  SOUTHERN 1:2                  space 71:13                  speak 122:18                  special 97:1                  specific 114:8 120:7                  spectrum 73:24                  speculation 47:3,11                  57:9 78:5 80:12                  112:18                  splitting 31:10                  spontaneously 97:24                  98:9                  spray 22:15 88:15                  spraying 88:16                  spring 13:1,1                  Springfield 85:14                  120:15                  squeeze 76:15                  squeezed 60:21 75:9                  SS 127:2                  stable 69:25                  stacked 50:11 105:13                  stacks 105:3                  standpoint 38:24 81:18                  start 45:21 55:2 69:21                  started 10:18 12:10,11                  82:21 83:21 96:21                  106:3,24 107:2                  110:17 124:7                  starting 8:17 64:3                  state 1:16 4:7 8:2,23                  49:24 82:6 127:1,4                  127:20                  statements 57:19                  STATES 1:1                  stating 12:25                  stay 69:25                  Sta-Sol 85:8                  steam 90:8</p>
--	--	---	---	---

<p><b>stenographically</b> 127:10  <b>step</b> 35:7,7 62:2  <b>steps</b> 22:23  <b>Stevens</b> 1:15 12:4,11              12:17 127:3,19  <b>sticky</b> 84:15  <b>stillbottoms</b> 79:16 82:3              82:13,18 83:7,10,12              84:4,10,19 113:23              114:1 115:13,16,19              115:22,24 116:21  <b>stolen</b> 80:3  <b>stop</b> 18:15 109:16  <b>stopped</b> 18:11 19:14              83:22  <b>storage</b> 106:11  <b>store</b> 75:1  <b>stored</b> 19:3  <b>stories</b> 30:10 31:5,24  <b>straight</b> 24:18 114:5  <b>strange</b> 65:2,3  <b>stream</b> 21:25 35:10              36:12 37:18 38:20              48:12 89:10 123:22  <b>streams</b> 17:9 19:23              20:14,25 29:24 35:9              37:10 40:3 44:7  <b>Street</b> 1:18 3:5,16  <b>strength</b> 56:15 58:4  <b>strong</b> 56:11 77:3  <b>structural</b> 56:9,20 57:6              58:4  <b>structure</b> 14:11 56:25  <b>structures</b> 104:1  <b>studies</b> 96:22,23  <b>stuff</b> 32:21 61:9 82:17              90:14 96:14 100:5  <b>styrene</b> 64:18,19,22,22  <b>submitted</b> 51:21  <b>subsequently</b> 6:3  <b>subsidiary</b> 10:4  <b>substance</b> 82:8 124:17  <b>substitute</b> 69:15  <b>suburb</b> 6:10  <b>Suite</b> 3:6,16  <b>Superfund</b> 4:18,19  <b>supervise</b> 25:22  <b>supervised</b> 25:24 28:6              30:20,24  <b>supervising</b> 29:3  <b>supervisor</b> 28:25  <b>support</b> 120:3  <b>supposed</b> 36:5  <b>supposition</b> 16:15  <b>sure</b> 14:5,10,11 15:5</p>	<p>17:14 18:6 22:13          27:10 30:1,22 33:9          44:24 45:1 49:17          59:2,12 63:1 64:9,18          68:10 75:7 78:6          79:13,24 85:8 95:9          96:4 116:6 122:9  <b>surface</b> 90:11  <b>surprise</b> 37:14 70:13  <b>surprised</b> 85:5  <b>sweepings</b> 78:23 93:12  <b>swirled</b> 61:20  <b>switched</b> 9:17 121:6  <b>sworn</b> 4:3 127:7  <b>synthetic</b> 118:2  <b>Systech</b> 3:13 5:9 6:2,7              9:12 10:1,3,16,19,22              10:23 11:18,20 12:1              12:18 84:1  <b>Systech's</b> 83:13  <b>system</b> 19:25 123:11  <b>systems</b> 95:2</p> <p style="text-align: center;"><b>T</b></p> <p><b>take</b> 6:23,25 7:20 11:19              24:23 32:12 35:13              36:3 42:10 44:21              52:9 62:19 67:8,14              68:18 75:5,6 78:21              98:11 100:22 120:21              122:22  <b>taken</b> 1:15 22:11,17              31:15 100:13 105:11              105:17  <b>talk</b> 62:6 122:20              124:25  <b>talked</b> 26:24 42:4  <b>talking</b> 41:12 47:15              72:6 78:8 79:22              85:25 92:24 101:16              102:7 117:14  <b>tank</b> 91:22 94:17              118:15,18,18,20              119:2 121:4  <b>tanker</b> 91:14,16 105:14  <b>tanks</b> 92:5,10,12 94:17              106:9,11,15 118:22  <b>taught</b> 32:8  <b>TDI</b> 65:6,16,17,19 66:9              66:17,20,25 67:8,20              67:22 68:3 97:8,13              97:18 102:9  <b>technical</b> 9:12,21,24              11:23 122:23  <b>technician</b> 26:10 33:8  <b>techs</b> 121:17</p>	<p><b>tell</b> 7:12 8:16 37:8              42:21 52:9 63:2,10              78:18 82:3,5 84:25              90:3,25 102:23,25              105:1 106:13 117:6  <b>telling</b> 35:24  <b>temperature</b> 90:10  <b>temporarily</b> 46:19              98:15  <b>ten</b> 43:11 47:24 48:1              91:1,4  <b>tens</b> 41:11,15  <b>term</b> 73:10  <b>terms</b> 41:5  <b>test</b> 20:10 21:23 36:13              36:16,18 42:13 43:9              44:10 58:21 75:7              120:19 122:2  <b>tested</b> 20:6,12,14,24              21:16 37:6 43:5,6,8              91:21 95:16,20,21              121:22  <b>testified</b> 81:1 110:16  <b>testify</b> 127:8  <b>testimony</b> 30:23 124:13              126:3 127:9  <b>testing</b> 17:8 19:24 22:4              23:13 27:20 44:18  <b>tests</b> 20:17 36:19 37:11              75:8  <b>text</b> 51:20  <b>Thank</b> 7:23 124:10  <b>thicker</b> 78:12  <b>thing</b> 34:5 53:19,22              58:2 75:1 96:21              123:25  <b>things</b> 6:21 32:3,7              34:23 53:11 56:5              62:3,8 72:4 80:21              96:6 100:8,9 103:2              106:6 108:25 109:16  <b>think</b> 9:18 13:25 14:18              14:20,21 15:4,24              18:17 21:6,7 26:16              26:18 30:17,17 31:18              31:19 33:11,18,20              34:4 37:9 38:7,14              39:13,15 40:9 47:1              47:22 49:3 50:25              53:12 54:22 57:8,9              57:18 59:4,12,13,16              60:1,19 62:7 64:24              68:5,11,20 69:8 70:4              77:17,21 78:4,5              79:21 83:16,22 92:4              92:14 93:1 94:13,15</p>	<p>94:20 95:20,21 96:3          98:4,19 101:4,5          102:10 103:3,6,7,13          104:21 105:24          107:11 110:24          112:17,22,23 113:24          114:16 115:7 116:2          117:25 118:25 119:1          119:16,17,22 121:21          121:24 122:15  <b>thinking</b> 31:18 39:14              59:17 62:3,8 94:8              114:14  <b>thirty</b> 8:5 47:4,6,11              57:7,12,17 77:15  <b>Thompson</b> 1:17  <b>thought</b> 19:16 55:13              96:13 105:21 106:2  <b>thousand</b> 93:2,3 94:18              117:7  <b>thousands</b> 94:12,16,20  <b>three</b> 23:21 90:10 92:6              92:18,25 107:22              111:9 114:15  <b>throw</b> 10:9 62:20  <b>thrown</b> 75:11  <b>tight</b> 56:24  <b>time</b> 10:16,21 11:16,20              12:13,19 13:4 15:22              16:1,5 17:18,22 18:3              18:12,14,25 21:20              23:19,24 25:9 26:5              27:3,7,22,25 28:5              30:7,8 31:3 32:11              34:16 45:18 46:24              47:2 48:13 54:1              55:13 66:5,20,21              67:13 70:1 71:17              75:15 78:3 83:8,17              83:24,25 84:8 87:10              87:21 91:24 92:17              94:7 96:4,5,13 97:2              97:17 100:10,14              101:8 105:7,11,16              107:22 110:9 113:14              115:13 117:14              119:17 123:5  <b>times</b> 5:14 24:15 95:12              109:2 111:18 121:14  <b>tip</b> 50:14 67:9  <b>tired</b> 33:11  <b>title</b> 25:10 26:8  <b>today</b> 4:24 5:3 26:23              96:9,11 124:12,13,23  <b>today's</b> 124:14  <b>Todd</b> 3:14</p>	<p><b>told</b> 32:24  <b>toluene</b> 65:18  <b>toothpaste</b> 74:4,6,18,19              75:2,6 77:14 78:10              78:16  <b>top</b> 31:20 56:14 64:3              89:9 98:12,22 102:23  <b>total</b> 19:13 47:21,24              84:13 91:1  <b>touch</b> 26:22  <b>tough</b> 33:15  <b>Tower</b> 3:5  <b>trace</b> 40:6,12,20,24              77:8,12 78:8 81:25  <b>track</b> 81:19  <b>trailer</b> 99:21  <b>training</b> 9:3  <b>transcript</b> 124:14  <b>transcription</b> 126:3  <b>transfer</b> 51:23  <b>transferred</b> 51:25  <b>transformers</b> 96:15  <b>translate</b> 51:20  <b>transport</b> 50:4 85:13  <b>transportation</b> 13:20              13:24 14:6,7 21:8              29:16 50:1,9 104:8              104:15,17 107:12              108:1 115:2,9  <b>transporting</b> 29:17  <b>trap</b> 89:7  <b>trapped</b> 61:19  <b>trash</b> 85:17,18,20,22              85:24  <b>treat</b> 40:2  <b>treated</b> 39:17 85:13  <b>treating</b> 66:6  <b>treatment</b> 6:8 10:25              27:12,14 39:5,18              66:8 87:20 88:13,23              90:6,18 91:2,5,22              92:5 94:17 106:8,15              107:14  <b>trees</b> 100:5  <b>Tremont</b> 4:19 12:21              13:17 27:17 87:15  <b>trench</b> 67:4 98:8,18              102:8,10  <b>Tricell</b> 11:3,4  <b>tried</b> 11:13 79:13 81:21  <b>trough</b> 67:10,11  <b>truck</b> 22:11,12,17 35:6              50:5 89:20 90:20              91:14,16 92:21,22,23              93:1  <b>trucking</b> 14:7 114:19</p>
--	--	--	--	--

<p>114:20,24  <b>truckload</b> 39:4  <b>truckloads</b> 20:15 38:3  <b>trucks</b> 22:10 26:11              89:4 105:13,14 108:2              114:17 115:6  <b>true</b> 16:16 32:15 126:2  <b>truly</b> 69:24 85:22  <b>truth</b> 127:8,8,9  <b>try</b> 7:4,12 87:24  <b>trying</b> 13:25 14:21 15:4              26:16 60:1 69:8              77:24 92:4 98:21              100:3 101:4  <b>tub</b> 51:5 60:20  <b>tube</b> 10:9 75:5,10,11              77:14 78:10,16  <b>tubes</b> 74:18 75:2  <b>tube's</b> 77:15  <b>Tucker</b> 3:9  <b>turn</b> 55:19  <b>turned</b> 30:2  <b>Turning</b> 110:15  <b>twenty</b> 26:25 67:5  <b>Twenty-five</b> 117:7  <b>two</b> 6:4 29:12 34:22              38:3 44:7 45:25              63:10 67:4,12 85:9              90:10 92:5,18,25              107:21 108:6,9              109:15  <b>two's</b> 18:20  <b>type</b> 23:11 24:5 35:23              38:8 47:19 61:9              63:24 67:6 79:21              86:18 118:3 120:7,9              121:9,13  <b>types</b> 45:15 47:13,18              48:6 60:2 61:23              75:25 116:22  <b>typewriting</b> 127:11  <b>typical</b> 45:17 62:1              73:25 75:21,25 111:1              111:4  <b>typically</b> 23:4,7,8 38:21              39:19 41:16 43:14              50:1 54:12 58:15              59:25 60:6 64:19,24              65:4 72:17,22 73:21              75:3 78:13 80:9,22              81:5,11,14,23 82:18              84:7,14 85:11 87:3              88:21 89:3 90:25              91:7,19 92:5 95:6              98:19 101:17,24              112:4 114:22 122:6</p>	<p>122:24  <b>typing</b> 52:2</p> <hr/> <p style="text-align: center;"><b>U</b></p> <hr/> <p><b>ultimate</b> 80:20  <b>umbrella</b> 14:14  <b>um-hums</b> 7:1  <b>unacceptable</b> 69:5  <b>Undergraduate</b> 8:21  <b>underground</b> 118:22  <b>underneath</b> 50:16              81:20 103:24  <b>understand</b> 4:23 7:11              7:13 49:17 101:12  <b>understood</b> 7:17 32:10  <b>undertake</b> 9:2 38:19  <b>Union</b> 8:19  <b>UNITED</b> 1:1  <b>University</b> 8:23  <b>unpacked</b> 74:14  <b>unusable</b> 93:21  <b>upright</b> 106:8  <b>Urbana</b> 27:7,9  <b>Urbana's</b> 27:13  <b>urethane</b> 65:7,9,9,24              66:10 67:14  <b>usable</b> 83:3  <b>use</b> 71:13 73:10 82:14              88:10  <b>usually</b> 81:2  <b>Utica</b> 116:15</p> <hr/> <p style="text-align: center;"><b>V</b></p> <hr/> <p><b>vacuum</b> 90:19 92:20              93:1  <b>vacuumed</b> 89:20 90:19              91:13 92:1,13,17              93:6  <b>vacuuming</b> 90:4  <b>valuable</b> 80:4  <b>value</b> 64:23 81:6,12  <b>vapor</b> 82:16  <b>vaporized</b> 82:24  <b>various</b> 9:5 15:23 73:9              96:19 120:3  <b>Vaughn</b> 26:6 28:7              124:1  <b>vehicle</b> 73:1,4 77:9  <b>vehicles</b> 114:21  <b>verbal</b> 6:22  <b>verify</b> 36:4  <b>versus</b> 37:6 78:10  <b>violating</b> 34:22  <b>Virginia</b> 87:25 88:4  <b>virtually</b> 60:8  <b>visits</b> 21:17</p>	<p><b>visqueen</b> 67:6  <b>visual</b> 36:7  <b>visually</b> 36:24 37:8  <b>volatile</b> 82:20,23 83:2  <b>volume</b> 91:2 92:8  <b>vs</b> 1:7</p> <hr/> <p style="text-align: center;"><b>W</b></p> <hr/> <p><b>Waid</b> 1:12 4:1,9 126:1              127:7  <b>wait</b> 7:5,7 40:22 123:13  <b>waiting</b> 109:3,5  <b>waive</b> 124:19  <b>Wallis</b> 1:12 4:1,9,10              42:4 52:6,8 55:10              63:8 99:6 126:1              127:7  <b>Walter</b> 3:3  <b>want</b> 16:13 38:16 45:2              45:8 50:5,8,13 62:6              81:8,18 83:5 124:16  <b>wanted</b> 16:1 42:16              44:24 45:1,11 119:23              120:15 123:2,24  <b>wants</b> 123:22  <b>washes</b> 89:6  <b>wasn't</b> 11:15,17 30:4              33:21 37:7 43:9              45:24 68:16 81:17              82:20 83:25 95:18              121:12  <b>waste</b> 1:8 3:7 9:8,10              13:7,9 14:9 15:14,14              15:17,20 16:6 17:9              19:23 20:13,25 21:11              21:15,24,25 22:14,25              23:14 24:6 28:1              29:24 33:25 34:20              35:3,5,9,10,23 36:12              36:21 37:9,18 38:6,9              38:20 39:16,17 40:3              40:20,23 41:1,3,6,7              41:22 42:5 43:2,4,12              44:4,5,7 45:15 48:4              48:12,16 49:21 51:8              58:9 60:9,15,25              61:23 62:1 63:24              78:1 82:20 85:6 86:9              86:12,14,18 87:2,3              87:13 89:24 97:21              99:25 107:18 109:6              109:21 112:24 113:1              113:12,13 114:4,23              114:24 115:6,18              116:23 117:11 120:8              120:9 121:23 123:22</p>	<p><b>wastes</b> 29:22 37:5,7,12              37:14 44:3 45:16              48:7 58:18 63:19,23              76:2 109:19  <b>wastewater</b> 27:12,13              33:6,6 39:18 104:3,7              104:12 107:10 108:5  <b>wastewaters</b> 87:18  <b>water</b> 7:21 59:11,13,24              61:18,21 74:5 80:20              85:9,10,11,12,13              87:5,8,12,19 88:8,8              88:11,12,14 89:3,8              90:8,12,17,18 93:16              108:12 116:24,25              117:22 118:1,5  <b>waterfall</b> 60:5 61:17  <b>wax</b> 96:15,16  <b>waxes</b> 78:18  <b>way</b> 7:13 24:15,24              33:25 34:11 49:21              50:15 53:14 55:22              56:23 68:10 83:9              98:10 99:14 101:6              102:20,20 103:4              112:21 113:10              114:22 123:16  <b>weather</b> 108:10  <b>week</b> 13:10 15:16              18:20 37:20 41:13,16              92:11,12 109:15  <b>weeks</b> 18:18,21 109:15              124:25  <b>weight</b> 112:15  <b>went</b> 11:1,18,20 12:18              15:7 16:18 22:3 24:3              28:21 37:20 44:6              45:16 47:17,18,25              48:7 50:22 51:10              52:2,20 53:10 59:9              59:22,23 60:2,3,10              68:21 78:1 87:4 91:5              97:4 98:14 103:13,13              109:18 119:8 120:25              120:25 122:6 123:5              123:10  <b>weren't</b> 38:7 44:5              48:23 50:24 56:11              77:4 110:1,10 115:20  <b>West</b> 1:17 3:9 87:25              88:4  <b>WESTERN</b> 1:3  <b>wet</b> 58:3,11,19 59:5              60:16 61:5,14 93:7              118:6,8  <b>wetness</b> 58:25 59:17</p>	<p><b>wetted</b> 118:5  <b>we're</b> 22:22 35:24              41:12 43:24 47:15              96:24  <b>WHEREOF</b> 127:15  <b>Whichever</b> 92:22  <b>whiskey</b> 80:5  <b>white</b> 61:9 121:2  <b>wholly-owned</b> 10:4  <b>wide</b> 61:25 67:5  <b>wide-mouth</b> 23:9  <b>wife</b> 8:9  <b>witness</b> 1:12 4:2 19:18              25:21 52:14 54:24              55:3 124:22 127:11              127:15  <b>witnessed</b> 32:16,18  <b>Wolfe</b> 2:2 3:4 4:6,11              42:1 52:12 54:3,22              55:5 99:2 103:15              119:16 124:11,24  <b>wooden</b> 109:24  <b>word</b> 101:14  <b>words</b> 49:23  <b>work</b> 4:25 5:20,25              11:15,17,18 12:1,6              12:18 15:9,13 16:3              17:11 19:19 20:20,22              26:14 28:13 30:1,6              32:24 33:21 34:6,6              34:23 52:20 108:13              108:17,24 124:2  <b>worked</b> 6:2 10:23 11:9              12:2,8,14,16,25 13:4              14:2 26:12,17 27:7,8              27:10,11 29:6,16              30:13 33:5 34:12  <b>worker</b> 30:18  <b>workers</b> 107:3  <b>working</b> 10:16 11:25              12:10,11 30:4 101:7              106:24 107:10              110:17  <b>world</b> 80:20,21 96:14  <b>worth</b> 18:20  <b>wouldn't</b> 45:2,8 46:8              46:10 49:20 50:2,14              55:21 57:2,10 58:5              70:13 72:20 81:8,12              91:23 92:7 108:3              112:4,14,14  <b>Wright</b> 8:23 31:11,11              107:13  <b>Wright-Patterson</b> 12:3  <b>write</b> 51:19 103:24  <b>writing</b> 127:10</p>
--	---	--	--	--

<p>written 25:6 51:18 54:13 124:14 wrong 120:19 121:21 wrote 104:6 111:11 112:21 WW 104:6</p> <hr/> <p>X</p> <p>xylene 82:7,10,12</p> <hr/> <p>Y</p> <p>Y 3:10 yard 19:1,3,5 25:18,20 25:21 42:22 98:20 104:25 105:2 108:7 yards 114:16,16 yeah 13:5 31:21 33:11 47:7 53:1 56:3 61:11 69:3,12 78:23 91:7 91:19 92:14 95:6 104:13,24 107:9 108:24 109:12 111:24 115:4 116:19 year 12:17 18:3 47:11 106:1 years 4:22 8:5 9:19 12:7,22 26:25 47:4,6 57:7,12,17 77:15,18 97:12 yield 92:1,16</p>	<p>27th 54:5,22</p> <hr/> <p>3</p> <p>3 2:12 63:5,8 300 3:16 31st 16:19 3310 8:2 3500 3:6</p> <hr/> <p>4</p> <p>4 2:2,15 99:3,6 103:19 44114-1821 3:6 44115-1475 3:12 45042-1919 3:17</p> <hr/> <p>5</p> <p>52 2:6 55 2:9</p> <hr/> <p>6</p> <p>63 2:12</p> <hr/> <p>7</p> <p>70s 12:14 72 8:2 12:11 73 12:9 78 83:22 79 13:1 16:8,11,23 17:12 52:19 54:25,25 99:23 100:6 101:4</p>			
<hr/> <p>1</p> <p>1 2:6 52:4,8 110:16 1st 18:24 1:04-CV-013 1:7 10 1:17 11th 54:25 1150 3:11 119 2:3 12-12-46 8:13 12:27 125:4 1301 3:5 16th 1:18 18th 54:25 1977 117:16,18 1979 16:19,21 19:18 54:6,23 99:19 1980 10:24 12:1,9 13:1 16:9 18:24 19:9,17 1991 11:6</p>	<hr/> <p>8</p> <p>80 13:5 100:6 80s 12:14 82 11:1</p> <hr/> <p>9</p> <p>9-10-2006 127:20 9:33 1:19 92 11:6 925 3:11 96 5:24 6:13 11:10 97 10:18 98 9:18 10:15 11:23 99 2:15</p>			
<hr/> <p>2</p> <p>2 2:9 55:7 200 3:16 2000 1:17 2005 1:19 127:17 2008 106:22</p>				

SW

Re: Clark County  
German Township  
Application for A Chemical Landfill for Disposal of Various Solids  
and Chemical Sludges  
Received April 1, 1976  
From I.W.D. Liquid Waste, Inc.

James A. Rhodes  
Governor  
Ned E. Williams, P.E.  
Director

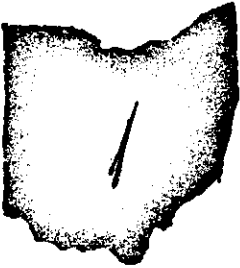
August 4, 1976

RECEIVED

CERTIFIED MAIL  
OhioEPA

I.W.D. Liquid Waste, Inc.  
3975 Wagner Ford Road  
Dayton, Ohio 45414-0005

OHIO EPA  
SOUTHWEST DIST.



Gentlemen:

Enclosed is the Ohio EPA Permit To Install which will allow you to install the described source in the manner indicated in the permit. Because this permit contains several conditions and restrictions, I urge you to read it carefully.

As indicated on the permit, you are required to pay a permit fee as provided for in Ohio EPA regulation EP-39-02. The exact amount of this fee is indicated on page 1 of the Permit To Install. This amount must be remitted within fifteen (15) days of the effective date of the Permit To Install. Checks should be made payable to: Treasurer, State of Ohio and sent to Ohio EPA, New Source Permit Records Section, 361 East Broad Street, Columbus, Ohio 43215.

Under Ohio Revised Code, Chapters 119 and 3734, this permit will take effect on the date indicated unless you or an objector requests an adjudication hearing within thirty (30) days of the date of issuance, as provided for by Ohio Environmental Protection Agency regulation EP-40-13. At an adjudication hearing you may appear in person, or be represented by your attorney, or by such other representative as is permitted to practice before this agency, or you may present your position, arguments, or contentions in writing. At the hearing you may present evidence and examine witnesses appearing for and against you. Requests for hearing shall be in writing and shall specify the issues of fact and law to be contested. Requests for hearing should be sent to the Hearing Clerk, Box 1049, 361 East Broad Street, Columbus, Ohio 43215.

The agency may withdraw this permit at any time before it takes effect.

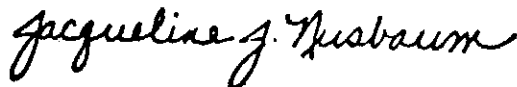
I.W.D. Liquid Waste, Inc.

August 4, 1971

Page 2

If you have any questions, please contact the Ohio EPA District Office or local air pollution control agency to whom you submitted your application.

Very truly yours,



Jacqueline J. Nusbaum, Chief  
New Source Permit Records Section

JJN/bs

Copy to Mr. John C. Wright

" " Clark County Health Department

" " System Technology Corporation

" " Southwest District Office, Public Wastewater



OHIO ENVIRONMENTAL PROTECTION AGENCY

Permit To Install

Application No. 05-139

Applicants Name: I.W.D. Liquid Waste, Inc. Permit Fee: \$ None

Address: 3975 Wagner Ford Road

City: Dayton State: Ohio 45414

Telephone: (513) 323-9382

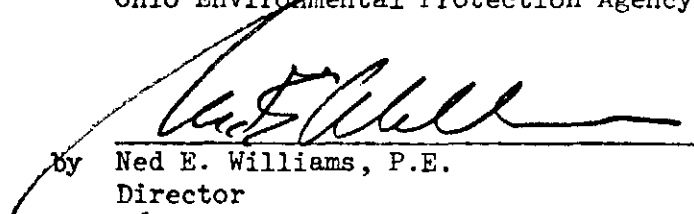
Description of Proposed Source: A chemical landfill for disposal of various solids and chemical sludges, German Township, Clark County

Issuance Date: August 4, 1976

Effective Date: September 20, 1976

The above named entity is hereby granted a permit to install for the above described source pursuant to Chapter EP-30 of the regulations of the Ohio Environmental Protection Agency. Issuance of this permit does not constitute expressed or implied approval or agreement that, if constructed or modified in accordance with the plans included in the application, the above described source of environmental pollutants will operate in compliance with applicable State and Federal laws and regulations, and does not constitute expressed or implied assurance that if constructed or modified in accordance with those plans and specifications, the above described source of pollutants will be granted the necessary operating permits. This permit is granted subject to the following conditions attached hereto:

Ohio Environmental Protection Agency

  
by Ned E. Williams, P.E.  
Director  
361 East Broad Street  
Columbus, Ohio 43215

Substantial construction for installation must take place within eighteen months of the effective date of this permit. This deadline may be extended by up to twelve months, if application is made to the Director no less than sixty days before the expiration of this permit and the party shows good cause for any such extension.

The proposed source shall be constructed in strict accordance with the plans and application submitted for this permit to the Director of the Ohio Environmental Protection Agency. There may be no deviation from the approved plans without the express, written approval of the agency. Any deviations from the approved plans or the above conditions may lead to such sanctions and penalties as provided under Ohio law. Approval of these plans does not constitute an assurance that the proposed facilities will operate in compliance with all Ohio laws and regulations. Additional facilities shall be installed upon orders of the Ohio Environmental Protection Agency if the proposed sources are inadequate or cannot meet applicable standards.

The Director of the Ohio Environmental Protection Agency, or his authorized representatives, may enter upon the premises of the above named applicant during construction and operation at any reasonable time for the purpose of making inspections, conducting tests, examining records or reports pertaining to the construction, modification or installation of the above described source of environmental pollutants.

A permit fee specified above must be remitted within 15 days of the effective date of this permit to install, to the Treasurer, State of Ohio.

This permit shall apply only to the source shown on the plans approved by the Ohio Environmental Protection Agency.

A report, which provides a technical appraisal of the results obtained during normal operating conditions of the new facilities shall be submitted to the appropriate District Office of the Ohio Environmental Protection Agency no later than three months after the new facilities are placed into operation.

Daily records of operation shall be maintained and submitted to the Ohio Environmental Protection Agency at the end of each month.

Monitor wells shall be installed by the owner or operator. Locations, depths, and other characteristics of such wells shall be as required by the Ohio Environmental Protection Agency.

The solid waste disposal site or facility shall be completed and ready for operation before the acceptance of solid wastes. Notification that this condition has been met, shall be submitted in writing, to the appropriate Ohio Environmental Protection Agency District Office at least thirty (30) days prior to the acceptance of any solid wastes.

IWD Chem  
Clark Landfill  
Clark County  
Solid Waste

A. RASHIDI  
~~\_\_\_\_\_~~  
File

November 19, 1976

RECEIVED

NOV 23 11 0 07

Mr. Jack Wright  
701 Thrasher Street  
Springfield, Ohio 45503

OHIO EPA

OhioEPA

COMMUNICATIONS SECTION

Jim Lane

Governor  
Director

Dear Jack,

I finally received the leachate data on the IWD sample IWD 083076 from Howard Laboratories on November 17, 1976. Abduhl Rashidi and I are agreed that this plastic waste from Monsanto should not be placed in your chemical waste landfill because of the high content of soluble phenol in the waste.

We cannot agree with the <sup>Addison</sup> recommendation of your operational panel to dispose of the Monsanto plastic waste #IWD 083076 in your chemical waste landfill at Tremont City, Ohio. Phenol is one of the more toxic industrial organic chemicals. For example the standard for drinking water is less than 0.001 ppm. It is also soluble in water and mobile through soils. For this reason it is not a candidate for landfilling unless the soils under the site are very impermeable and there is sufficient biological activity in the landfill to metabolize the phenol. The permeability of soils under your landfill are from 30 to 70 times greater than that desired for a hazardous waste facility. Also, no one can really say what microbiological activity might develop in your chemical waste landfill since it is quite different from conventional landfills.

I would now like to list the items I verbally approved in the November 16, 1976 meeting between myself and your operational panel. As time permits, I will be writing another draft of Dr. Howard's report so you will have a better idea of the kinds of information your operational should put together for review by OEPA. I gave verbal approval to the following wastes in our November 16 meeting:

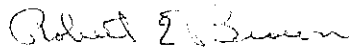
- |       |       |       |                  |
|-------|-------|-------|------------------|
| C0004 | H0021 | F0016 | J0030            |
| E0006 | J0025 | J0031 | Q0049            |
| F0013 | T0052 | J0026 | P0042 thru P0048 |
| G0019 | U0053 | J0027 |                  |

Mr. Jack Wright  
November 19, 1976  
Page Two

You will also recall that N0041 and V0054 were to be buried by themselves and that waste of unknown composition will not be accepted from University laboratories in the future.

Abduhl cannot make a November 30, 1976 meeting. He will set up a meeting as soon as possible.

Sincerely,



Robert E. Brown  
Public Health Engineer  
Office of Land Pollution Control

REB/pam

✓cc: Abduhl Rashidi  
cc: Don Day/file

**HOWARD  
LABORATORIES,  
INC.**

*Clark Co.  
I.W.D.  
Chemical  
Landfill*

*ISR*  
~~ASAM~~  
3601 S. DIXIE  
DAYTON, OHIO 45428  
(513) 294-6856

November 15, 1976

REVIEW OF MATERIAL AWAITING DISPOSAL

On November 10, 1976, a meeting was held for the IWD Chemical Landfill Operational Panel at the offices of the Ohio Environmental Protection Agency, 7 East Fourth Street, Dayton, Ohio, to discuss and describe the precedences in which certain waste materials will be placed in the IWD Chemical landfill disposal cell near Springfield, Ohio.

A list of the 54 different items were proposed for disposal by IWD. After some discussion it was agreed by the Ohio EPA and IWD that Howard Laboratories, Inc. would prepare in writing a list of materials from those 54 items for disposal and action necessary, if any, to investigate and describe more thoroughly the composition of the remaining items in question.

It was further agreed that this report should establish priorities listing those materials which could be disposed of without further investigation and in addition include particular questions which may be raised for the remaining items prior to their disposal.

In order to prepare a list of this nature, we have used the following criteria:

1. Material presently in the disposal cell.
  - a. Safety
  - b. Potential chemical reactions
2. Immediate hazards of material to be added.
  - a. Individual safety
  - b. Toxicity of wastes
  - c. Immediate chemical reactions
3. Prolonged and potential hazards
  - a. Delayed chemical reactions
  - b. Physical and chemical characteristics of reactant products
  - c. Safety

Each heading and subheading of the above criteria is further broken down in order to fully investigate the potential hazards which may exist. These latter criteria, however, are not established in a formal format for it is assumed that the individuals reviewing this report are sufficiently aware of the many questions raised under each heading.

November 15, 1976

After careful review of the waste material contained in the individual drums and indicated as a "material number" on the IWD material data sheet, we have determined that the following material numbers may be readily disposed of in the landfill cell without posing any serious or hazardous problems:

*circled  
OK*

A-0002	M-0037
<u>C-0004</u>	M-0038
<u>E-0006</u>	M-0040
F-0010	<u>N-0041</u> — buried by self
<u>F-0013</u>	P-0042
F-0016	P-0043
<u>G-0019</u>	P-0044
H-0020	P-0045
<u>H-0021</u>	P-0046
H-0023	P-0047
<u>I-0025</u>	P-0048
J-0026	Q-0049
J-0027	R-0051
J-0028	<u>T-0052</u>
J-0029	<u>U-0053</u>
J-0030	<u>V-0054</u> — buried by self
J-0031	W-0055

Statements for approving material for disposal are indicated as follows:

A-0002

This material is partially degraded cellulose and polyelectrolytes. The polyelectrolytes are now being used extensively in waste treatment and in agricultural applications with no adverse effects.

C-0004	H-0021
E-0006	J-0025
F-0013	T-0052
G-0019	U-0053

Paint sludges typically contain zinc, chromium, and a few other metals. However, in view of the polymerized and stable vinyl compounds, the percentage of free metals in such material is negligible. Further, these stable vinyl compounds have a tendency to bind many other metals and compounds which prevent such materials from leaching rapidly.

F-0010  
M-0040  
W-0055

Some ink wastes contain a good deal of lead, chromium, and zinc, but due to the high percentage of carbon black in such compounds, the metals are of little concern. In addition, almost all ink wastes contain a small quantity of organic material used as a solubilizer and these materials tend to chelate the metals.

F-0016  
J-0031

Heavy oils and greases by their very chemical nature are slowly degraded by bacteria by the process of alpha, beta, and gamma oxidation. The process proceeds so slowly that no problems should exist in a landfill.

H-0020

Polyurethanes of this type are quite safe in such landfills. During the polymerization reaction, however, a few toxic chemicals may be driven off depending upon the particular reaction employed. For all practical purposes, these by-products have been released and are below toxic levels.

H-0023  
J-0028  
J-0029

Such material when exposed to free oxygen will polymerize upon volatilization of a low molecular weight hydrocarbon and in some cases, depending upon the manufacturer, many produce organic chemicals during the polymerization reaction. Such chemicals as acetic acid, however, pose no problems.

M-0038

Ethyl cellulose may also be placed in the same category as A-0002 because of its recalcitrant characteristics. The material may contain small quantities of ketones which should pose no problems because of the low quantities.

J-0026

J-0027

J-0030

Q-0049

These materials are in bulk and should be used to cover the drums which have been placed within the cell. The polyols, the polyethylenes, and the asbestos will not produce any hazardous chemical reactions nor will such materials tend to leach and may well be used as a sealant around the drums.

N-0041  
V-0054

These materials would pose the most critical questions in trying to understand the chemical composition. However, since they are incapsulated in concrete, no problems should exist.

P-0042 thru P-0048

These materials are organic in nature, that is, they are chelated fatty acids in some cases containing a relatively inert solid which is used as an abrasive. Since they are organic fatty acids, they will in time produce large quantities of methane gas. The release of such methane gas would be relatively constant and should pose no explosive threats.

M-0037  
R-0051

Heavy metal sludges, in bulk, could be either mixed or placed on the surface of bulk asbestos, polyols, etc. Such a procedure will allow the polyols and other metals to better seal air pockets around the drums. Such bulk metals should not be placed around the drums exclusively and for this reason we will recommend that the bulk heavy metals be placed in this particular cell along with the asbestos and bulk polyols.

It is our understanding that the metals are to be placed in a separate cell and with a few exceptions this material should pose no problems for immediate disposal. Because of the cation effect, such metals do not leach readily. We would recommend that the following material numbers be included in this group:

B-0003  
D-0005  
F-0008  
H-0022  
K-0033

With reference to No. F-0008, the barium hydroxide sludge, some question may arise as to the safety of disposing of barium in this manner. It should be kept in mind that natural deposits of barium within central and western Ohio do exist. However, solubility of barium is dependent, among other factors, upon the pH of the aqueous medium. With this factor in mind, we should have no question about the disposal of barium hydroxide sludge in such a landfill.

F-0011

Heavy metal chlorides are extremely soluble in water and because of the very toxic nature of cadmium, we would recommend this material not be disposed of in this particular landfill unless it is encased in concrete.

F-0015

This material should not be disposed of in this landfill until the quantity of chlorinated solvents has been determined.



November 15, 1976

Similarly we are recommending that the following material numbers be sampled and analyzed for the compound indicated prior to approval for disposal:


<u>Material No.</u>	<u>Compound in Question</u>
A-0001	Volatile Hydrocarbons
E-0007	Phenols
F-0009	Cyanide and phenols
F-0012	Cyanide
F-0014	Cyanide and phenols
G-0017	Percent Chlorinated Solvents
F-0018	Volatile Hydrocarbons
H-0024	" "
J-0032	" "
L-0034	(Phenols test completed.)
L-0035	Volatile Hydrocarbons PCB's
L-0036	Cyanide
M-0039	Silica Dioxide
Q-0050	Phenols and Cyanide

The concentration of each of the components listed in a particular sample should be determined. Since the chemistry employed in the production of those materials is so complex, there exists the potential for high concentrations of a number of toxic compounds. It may well be that the chemistry is not so involved and that the products produced and the by-products so formed may be harmless. However, we recommend as a matter of safety that the compound be investigated at the present time.

It is our recommendation that additional materials upon which approval is being requested for disposal in any particular landfill cell should be investigated for compatibility with those materials presently in that cell. Our recommendations for disposal have considered such compatibility.

It must also be kept in mind that absolute control upon selectively compiling material by the generator cannot be achieved. For this reason we must always maintain a margin of safety in accepting materials for disposal.

This report is respectfully submitted.

  
David L. Howard Ph.D.  
President

DLH:jo

IWD Chemical Landfill  
Operational Panel Meeting  
November 10, 1976

Abdul Rashidi	Ohio EPA
Bob Brown	Ohio EPA
David L. Howard, PhD	Howard Laboratories, Inc.
Bob Wright	IWD Liquid Waste
Clyde E. Hill, Jr.	IWD Liquid Waste

Mr. Davis  
Mrs. Schmidt  
Herb Eager

# Tremont Landfill Talk (South of Springfield)

1969 October - approved under Dept of Health  
Satisfactory site based on geology  
No monitoring was required

## Informational Meeting

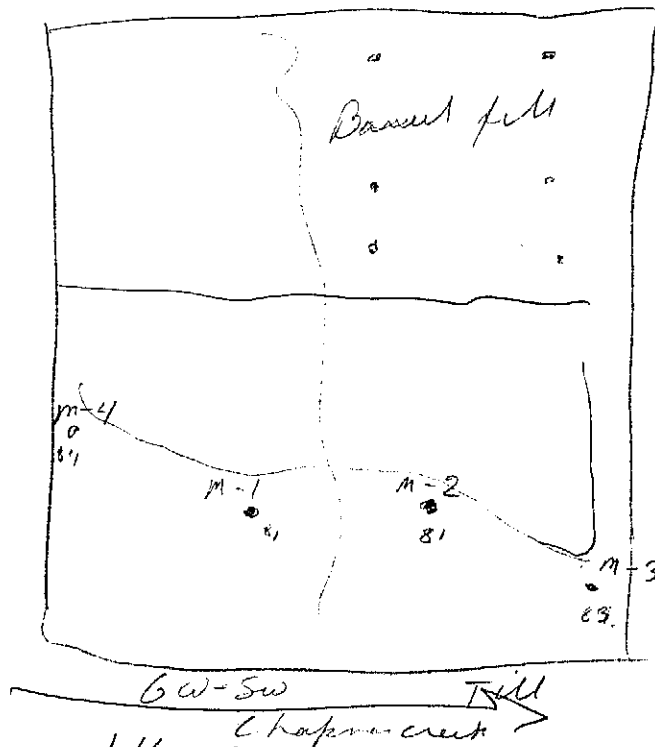
Mr. Davis Jr. - monitoring?

Mrs. Schmidt - public pressure to get monitoring  
- Landfill would not release the data  
on monitoring wells and water chemistry

Tremont shares data w/ EPA

## ? Location of Site

Herb Eager - History  $\Rightarrow$  4 monitoring wells + detailed report  
on the Landfill



↑  
N

Monitoring wells 1 1/4" PVC pipe

Base of landfill sets on interbedded sand silt and clay layers

Groundwater movement towards the Chapman creek  
Underlying sand outcrops into the creek  $\Rightarrow$  discharge

Groundwater discharges into the stream via the sand +  
gravel lenses

Denised Valley Underlying the sets + deepens to the East

Refuse in container could be on level surface of the site  
> it is not known if the refuse is in the saturated zone

Need elevation of water table

Apparently down gradient flow to lower bedrock aquifer

Barb losses 981 elev  $\nabla$

Lincoln

Here 1<sup>st</sup> impression  $\Rightarrow$  Seasonal sampling  
continue to monitor Residential well



SCALE 1" = 2000'

Figure 1. General Location Map

File

Clark County  
IWD Chemical Landfill



6 October 1976

RECEIVED  
*specialists in environmental technology*  
**SYSTEMS TECHNOLOGY CORPORATION**

245 North Valley Road  
Xenia, Ohio 45385  
Area Code 513/372-8077

1976 OCT 7 11 10 17

Ohio Environmental Protection Agency  
Chief Land Pollution Control Section  
7 East 4th Street  
Dayton, Ohio 45402

OHIO EPA  
SOUTHWEST DIST

ATTN: Mr. Abdul Rashidi

Dear Abdul,

This letter is to inform you that Systems Technology Corporation is withdrawing further participation and do not wish to be listed as the engineer of record for the chemical storage landfill of I.W.D. Liquid Waste Incorporated, Springfield, Ohio. This decision was based upon a mutual agreement between I.W.D. and Systems Technology Corporation.

Very Truly Yours,

SYSTEMS TECHNOLOGY CORPORATION

A handwritten signature in cursive script that reads "Melvin C. Eifer".

Melvin C. Eifer  
Vice-President of Engineering

MCE/map



# I.W.D. LIQUID WASTE, INC.

3975 Wagoner Ford Rd.  
P. O. Box 1458  
Dayton, Ohio 45414  
(513) 278-0821

701 Thrasher St.  
Springfield, Ohio 45503  
(513) 323-9382

RECEIVED

September 20, 1976  
SEP 23 AM 11 24

Abdul S. Rashidi, P.E.  
Chief, Land Pollution Control  
Southwest District Office  
7 East Fourth Street  
Dayton, Ohio 45402

OHIO EPA  
SOUTHWEST DIST

Dear Mr. Rashidi:

I.W.D. Liquid Waste, Inc., will begin work on the new Chemical Landfill on Snyder-Domer Road in German Township, Clark County, on September 20, 1976. We would expect a 2-3 week construction period and we will inform you when we are ready for an inspection.

Regarding Mr. Bob Brown's inter-office communication dated June 25, 1976, I am enclosing our comments and answers to his questions of that day. I believe these will be self-explanatory and I am, of course, available for any further discussion regarding his communication.

**A. Highly Toxic Waste:**

It is our opinion that a definition for a "highly toxic waste" would not be beneficial for the program. You can ask for a definition of highly toxic wastes in the application from 50 different sources and obtain 50 different definitions. We believe that with the checks we have on the material to be landfilled (operation panel), and the final approval of waste by OEPA, that a definition for highly toxic waste is not necessary. We agree that all the materials to be placed in the landfill should be placed in a manner "to protect the landfill employees, nearby residents, and the environment from injury during the process of placing the waste in the landfill."

**B. Monitoring:**

The point that water movement through the cell might dissolve some of the wastes is well taken. However, it



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is our opinion that there will be little water movement in the area of the cells based on the following reasons.

1. The site is near the top of the hill so that there are no large areas above the site from which infiltrated water will flow laterally.
2. Since the permeability of the soil is low the infiltration rate is low. Therefore, only a very small portion of the rain moves vertically through the soil to become groundwater.
3. All surface water will be diverted around the site to reduce the amount of water available for infiltration.
4. The open cells will be pumped before disposal is started and will be diked to prevent the surface rain runoff from flowing in.
5. The water table is so far below (> 100 feet) the bottom of the cells that it would not rise to the bottom of the cells even in the wettest seasons.
6. The water bearing - highly permeable soils that appeared in the soil borings are only lenses or small channels which contain trapped water. In the plans it is stated that if these soils are encountered during the excavation of the cells the lense or channel shall be sealed with compacted earth.

We agree with the analysis for trace organics and metals. This is mentioned in the plans to be done quarterly.

As for the piezometers, the water gradient development (if any) can be monitored by the suction lysimeter wells. We would recommend this approach.

The analysis of soil cores, every 3 to 4 years to determine the extent of movement (if any) of the wastes will be performed.

C. We agree that erosion control is important but we do not believe that the soil testing is required immediately.





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It is required by the operation plans to cover each cell with 5 feet of cover and seed immediately for erosion control. If the grass and plant cover does not develop then the soil test would be appropriate.

D. Sub-paragraph 2 on page 15a should read:

" The Southwest District office of the Ohio EPA will respond in writing within ten days with either a decision regarding the acceptability of the waste stream or a request for more information regarding specific properties of the waste stream. If more information is requested the Southwest District Office of the Ohio EPA will respond with a decision in writing within 10 days after all requested information is supplied. This procedure will be used for all those materials that do not fall into the classifications set forth in attachment 3 of this proposal.

### E. Encapsulation

The only encapsulation method being employed initially is the encapsulation of some of the wastes in barrels. This is only a temporary encapsulation unless the bulk sludges that surround the barrels prevent the barrels from rusting.

### F. Non-Compatible Waste

Waste will be segregated at the site into classes in order to prevent the following reactions in the disposal cell;

1. Liberation of enough heat to cause fire.
2. Generation of explosive pressure.
3. Liberation of toxic gasses.
4. Reaction which would tend to reverse pretreatments and increase the hazards of the waste after it is placed in the disposal cell.

G. A building exists at the sanitary landfill. Materials received in bulk form will be taken directly to the cells on constructed roads. We have never encountered a serious problem with blown dust from stock piled dirt. If however a problem occurs, screens or other appropriate techniques will be implemented to resolve the problem.

### H. Springfield Facility

The Springfield Facility is not an essential part of the



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operation.

I. The paragraph on winter operation (p.13) should read:

" All traveled roads and the disposal site will be clear and well maintained during the winter by plowing with the use of on-site equipment including road graders and dozers."

J. Spills

Since wastes are of relatively low volume and high viscosity they would not flow fast or far. The on-site equipment could then be used to clean up the spill and place it in the cells.

I will be in close contact with your office as the construction proceeds, and hopefully we'll be in operation during the first half of October.

Sincerely,

A handwritten signature in black ink that reads "Jack Wright". The signature is written in a cursive style with a prominent "J" and "W".

Jack Wright,  
Vice President - General Manager  
I.W.D. Liquid Waste, Inc.

JCW:mrf

INTER-OFFICE COMMUNICATION

TO: Abduhl Rashidi, Southwest District Office

DATE: June 28, 1976

RECEIVED

FROM: Bob Brown, Office of Land Pollution Control, Central Office

JUN 28 AM 7 53

SUBJECT: IWD Chemical Waste Landfill in Clark County -- Proposed Plans

OHIO EPA  
SOUTHWEST DIST.

I have reviewed the plans and find that for the most part they are satisfactory. Therefore, the plan approval red tape will be initiated. However, there are some additional points which should be added to the plans as outlined below. Also, I have some questions which I would like IWD to comment on. Hopefully, this can all be handled by letters from IWD which can be attached to the plans as a part thereof.

Additions to the plans

- A. Highly toxic waste. Page 15 of the plan report indicates that no highly toxic waste will be accepted; however, many would consider asbestoes as highly toxic. Therefore, there is a need for IWD and OEPA to come to an agreement at this time as to the meaning of the phrase "highly toxic". A working definition of highly toxic should be added to the plans. A definition for consideration might be the following:

"A highly toxic waste is a material which must be containerized in some fashion in order to protect the landfill employees, nearby residents, and the environment from injury during the process of placing the waste in the landfill. Also, because of the porisity of the soil and the existence of saturated soil conditions above the cell bottom during a portion of the year (pg. 45 of report) this additional restriction is required. The waste must not contain toxic components which are soluble enough in water to leach from the site in a quantity sufficient to threaten the quality of water in nearby wells or surface waters."

- B. Monitoring. Contrary to the arguments presented in the report, in my judgement there is a significant potential for leachate problems. I agree, that the polyol and other viscous materials would leach very slowly; however, the important factor is the rate of water movement through the cell and what might be dissolved by this water. Therefore, it is recommended that the analysis of leachate be expanded to include analysis for solvents and other organics which might be dissolved from paint sludges, glues, and adhesives. Often only small quantities of such organics need be dissolved to adversely affect the taste of water and to have toxic effect on aquatic life. Secondly, it is recommended that a system of piezometers be placed in the initial cells, as they are completed so that we can observe the development (if any) of a hydraulic gradient across the cells. Such a system would provide very useful information when it is time to consider additions to the list of waste to be received at this site and also when liquid wastes and sludges are placed in the cell. It is also recommended that a few soil cores be taken every three or four years to determine the extent of movement (if any) of metals from plating waste and the more viscous materials through the cell walls. The soil cores would be analyzed for such materials. Again this information will be useful in accessing the full potential of the site when consideration is given to adding items to the list of acceptable wastes.

- C. Abandonment. It is quite important to spell out in detail how vegetation will be established on the site. Certainly this is as important as any item in determining the long term security of the site. Therefore, it is recommended that the plans require a soil test for fertilizer and lime requirements of the final cover. This analysis can be performed for a nominal fee by the soil testing laboratory of the Ohio State University College of Agriculture. Lime and fertilizer will then be worked into the surface to six to twelve inches of final cover in accordance with application rates and methods as recommended by the Cooperative Extension Service of the Ohio State University. Tall fescue or a grass equivalent in hardiness and erosion control will be planted and if necessary replanted until a dense plant cover is obtained. This will protect the soil until that time that the land reverts back to forest or is brought into agricultural production with appropriate erosion control practices.
- D. Additions to the list of accepted waste. The sub-paragraph 2 on page 15a should be rewritten. The current draft states "SWDO will determine acceptability of waste stream and will notify IWD in writing within 10 days of its decision." There will be times when not enough information is available for a decision Therefore it is recommended the paragraph be revised as follows:
- "The Southwest District Office of the Ohio EPA will respond in writing within ten days with either a decision regarding the acceptability of the waste stream or a request for more information regarding specific properties of the waste stream, etc."
- E. A brief description of the encapsulation methods to be employed should be added to the plans so there will be no misunderstanding in the future.
- F. Non-compatible waste. This phrase should be defined in more detail on page 12. The following language is recommended; waste will be segregated at the site into classes in order to prevent the following reactions in the disposal cell;
1. liberation of enough heat to cause fire
  2. generation of explosive pressures
  3. liberation of toxic gases
  4. reactions which would tend to reverse pretreatments and increase the hazards of the waste after it is placed in the disposal cell.

Questions for IWD

- A. How did you decide that you do not need a building for storage on the disposal site. I don't understand why rainfall would not cause handling problems for materials received in bulk form. Likewise would wind blown dust from stock piles would be a problem.
- B. Is your storage facility in Springfield going to be an "essential" part of the operation of the chemical waste disposal facility. If so, a brief description of this building should be attached to the plans and comments should be made on how you can prevent the escape of waste from this facility in the event of spills, accidents, fires, etc.

- . The paragraph on winter operation on page 13 is not clear to me.
- . Is there a possibility that a spill might escape from the site via the small creek of intermittent flow on the northeast section (page 15)? I question whether or not a prohibition of not filling within 60 feet of the streams protects you in case of a spill.

REB/pam

Faint, illegible text at the top of the page, possibly a header or address.

OHIO EPA  
SOUTHWEST DIST

76 JUN 28 AM 7 53

RECEIVED

File: Solid Waste  
Clark Co.  
IWD Chemical Landfill

## INTER-OFFICE COMMUNICATION

TO: Abdul Rashidi and Steve Severyn DATE: May 6, 1976

FROM: Jeff Hosler

SUBJECT: IWD Liquid Waste Inc. proposed chemical waste disposal facility,  
Clark County

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I have completed review of the final submission of detail plans for reference facility and have the following comments.

1. The geology as described in the plans is generally suitable for this type of facility.
2. The quality of ground water in reference area is adequately protected by the existing geology and by the precautions that will be taken by IWD Liquid Waste Inc.
3. The ground water monitoring program proposed in the detail plans is adequate to identify movement of waste materials through the site and to provide sufficient time for corrective measures to be taken should a significant problem of this type develop.
4. Given the types of waste for disposal, especially bulk wastes, it is questionable whether monthly analyses of lysimeters samples for conductivity, chlorides, and nitrates will be relevant. It may be more suitable to monitor COD, TOC, or some other parameter more closely related to the waste materials.

SUMMARY REPORT ON THE PROPOSED I.W.D. CHEMICAL LANDFILL, GERMAN TOWNSHIP,  
CLARK COUNTY.

Detail plans and an Application for Permit to Install were received on April 1, 1976. Additional information was received on May 10, 1976. Information pertaining to hydrogeology of the proposed site has been evaluated by Jeff Hosler of this office. He has indicated that the geology of the site is suitable for this type of facility and that the groundwater is adequately protected by the existing geology and by the precautions that will be taken by I.W.D. Liquid Waste Inc.

Clark County Health Department has reviewed the proposed plans and made no adverse comments. Clark County Regional Planning Commission also reviewed the proposed plan and has indicated that the German Township is not zoned, therefore, they have no control over approving or disapproving this project.

Concerning the need for this project, we feel there is a definite need for such facility in this area. At present there is no licensed chemical landfill in this area. Most of the chemical wastes generated end up in unauthorized landfills.



In summary, from a technical and environmental point of view, the project is acceptable and insofar as public acceptance of the site is concerned, we have received no objections from either the public officials or private citizens to this proposal.

Abdul S. Rashidi, P.E.  
Public Wastewater Group

✓ REPORT ON DETAIL PLANS OF PROPOSED I.W.D. LIQUID WASTE, INC. CHEMICAL  
LANDFILL, GERMAN TOWNSHIP, CLARK COUNTY.

Detail plans for the proposed I.W.D. Liquid Waste, Inc. chemical landfill, German Township, Clark County, were received on April 1, 1976 from John C. Wright, Vice President-General Manager, I.W.D. Liquid Wastes, Inc. The plans were prepared by Systems Technology Corporation, subsidiary of Systems Research Laboratories, Inc.

The plans detail the development of a landfill for the disposal of liquid chemical wastes. The chemical landfill will be located adjacent to the existing North Sanitary Landfill, operated by I.W.D. Initially, the wastes to be accepted will consist of metal sludges, asbestos, paint sludges, polyol, glues and adhesives. Polyol and asbestos will be in bulk form; the other materials will be in 55 gallon drums.

The plans for the chemical landfill are satisfactory and it is recommended that they be approved.

Stephen A. Severyn  
Southwest District Office

Abdul S. Rashidi, P.E.  
Public Wastewater Group

✓ Location

The existing North Sanitary Landfill is located in northern Clark County, one mile west of Tremont City, on the north side of Snyder-Domer Road. The proposed chemical landfill will be located immediately north of the existing sanitary landfill.

Site

The site consists of 14 acres located at the top of a hill. Because of that location, the only surface drainage problems will be those due to rainfall on the immediate site. The immediate topography slopes to the east. A small intermittent drainage course traverses the northeast corner of the site. No special precautions will be taken in that area, since no disposal will occur within 60' of the drainage course.

✓ Design Basis

Attachment 3 of the Application for Permit to Install lists the types and quantities of wastes to be initially accepted:

<u>Waste</u>	<u>Quantity</u>	<u>Disposal Method</u>
Metal Sludges	10,000 gal/mo.	encapsulated
Asbestos	20,000 gal/mo.	bulk
Paint sludges	25,000 gal/mo.	encapsulated
Polyol	6,000 gal/mo.	bulk
Glues and adhesives	35,000 gal/mo.	encapsulated

The anticipated lifetime of the project is estimated at 15-20 years.

It is expected, however, that additional types of wastes will be

accepted in the future. Because no such facility as this now exists in the area, it will be difficult to accurately forecast volumes of wastes. Naturally, the life of the landfill will be dependent on that factor.

### ✓ Subsurface Geology

Five boreholes were drilled in and near the site of the proposed chemical landfill. The borings were made by Bowser-Morner Testing Laboratories, Inc., with evaluation and recommendations provided by Mr. Harlan H. Roepke, Geologist. In addition, Mr. Roepke has provided information in accordance with the Southwest District Office form, Hydrogeologic Report of Proposed Waste Disposal Facilities. The above mentioned information was evaluated by Jeff Hosler (SWDO Geologist). He has indicated that the geology of the proposed site is generally suitable for the proposed facility and that the ground water in this area will be adequately protected by the existing geology and by the precautionary measures proposed in the plans by I.W.D. Liquid Waste Inc.

### Surface Water Control

Surface runoff from the site is to the east into a small intermittent creek located east of the proposed site. To control the surface runoff that originates from an area west of the site into and through the proposed site, the final grade along the west end of the site will be several feet above the existing grade. The

general slope of the final grade will be from west to east into the existing creek.

A temporary storage lagoon is also provided in the vicinity of the waste storage area. This lagoon will receive any surface runoff that results from the storage area. The wastewater collected in the lagoon will be pumped out and hauled away from the proposed site.

#### Leachate Control and Monitoring System

In general, formation of leachate will be minimal due to diversion of surface drainage and the combination of low permeable soils and high viscous waste. To monitor the surface and groundwater quality a network of monitoring wells is proposed. Groundwater quality monitoring will be accomplished by one deep well located in the southwest corner of the site. It is doubtful if groundwater contamination will occur in view of the fact that the maximum groundwater elevation is approximately 1,000 feet and the minimum cell elevation is 1085', providing about 85' of separation with many layers of clay in the separating stratum.

Horizontal migration of leachate through the soil, if occurred, may effect surface water quality. In order to monitor this movement suction lysimeter observation wells will be installed. This will consist of early warning wells around the perimeter of this first set of cells and the long term monitoring wells around the perimeter of the landfill site.

Baseline samples will be taken and analyzed from all of the proposed wells. The parameters for which baseline analysis is to be performed will depend on the type of the waste material placed in the cells.

Monthly analysis for samples from the suction lysimeters and quarterly analysis for samples from the deep well for conductivity, chlorides and nitrates will be performed. Additional parameters may be analyzed for, if deemed necessary.

#### Access and On-Site Roadway

The main access to the site will be the existing two lane roadway from Snyder Domer Road to the sanitary landfill. Because of a limited traffic condition to the proposed sites, a one lane roadway will connect the main access roadway to the holding area. On-site roadways will also be one lane. These will be all-weather roads and be maintained during the winter by plowing with the use of on-site equipment.

#### Inclement Weather Operation

All incoming waste during the inclement weather will be stock-piled in the storage areas except for the bulk waste hauled by waste vehicles, owned and operated by I.W.D. which will take the waste material directly to the cell area. However, if weather conditions are very severe and do not permit on-site operation, the bulk waste will be temporarily stored at the I.W.D. liquid waste storage facility in Springfield.

✓ Method of Operation

In general, method of operation will be that of a trench fill operation. Two to three cells will be opened at any one time to segregate the non-compatible waste. Each cell will be 40' x 40' and approximately 22' deep. Cell walls will be sloped to prevent landsliding. Also, wooden pallets will be placed on the bottom and sides of the cells so barrels will be encapsulated by bulk wastes. The barrels will then be placed in the cell in an organized manner and the voids between the barrels will be filled with the bulk waste. No intermediate cover material will be used between the successive barrel layers, however, a final cover layer of a minimum of 5.0' of clay material will be placed on the cell. The final cover will then be graded in accordance with the detail plans and will be seeded immediately. If a sand seam is encountered during the construction of the cell, the seam will either be removed totally, or removed so that it can be plugged with clay material available from the excavation of the cell. Total capacity of the landfill is estimated to be 100,000 cu. yd.

The equipment that will be available for preparing the site, the cell and operation and maintenance of this facility include: one 1 1/2 cu. yd Hydraulic Backhoe, one Fork Lift, and one D-8 Cat Dozer. Standby equipment will also be available at the adjacent sanitary landfill.

#### Future Use of the Site

The intended future use of the site is not known at this time. The site, however, will be graded to the final contour in accordance with the approved detail plans and will be seeded with grass and other shallow rooting vegetation to prevent erosion. As final cover will be a minimum of five feet layer of the topsoil and other material excavated, the site therefore could be used for agricultural purposes. If ponding of water or cracking of the cover occurs within five years after completion of landfill operation, the site will be regraded and/or additional cover material will be brought to the site to repair the undesired condition.

#### Safety Measures

First aid equipment will be available on site. Chemicals for fire fighting equipment will also be available on-site. Loose dirt, chemicals, and the water from the deep monitoring well will be used for fire protection. Fire is not anticipated to be a problem as most of the waste material will be encapsulated in steel drums and are not highly combustible. Additional safety measures include a permanent fence enclosing the storage area, a temporary fence enclosing the open cells, and a permanent 3' fence enclosing the entire proposed site.

#### Operations Panel

Prior to the commencement of the operation, an operational panel will be formed. Members of this panel will include representatives of I.W.D. and their consulting engineer. Ohio EPA will also be



invited on an informal basis. The panel will meet semi-monthly. The major functions of the panel include screening the waste material to determine their suitability for disposal at this site; establishing material logging and reporting requirements, preparing contingency plans for site defects, etc.

No material other than those stated previously, will be accepted at this site without prior consultation with the Southwest District of the Ohio EPA, in accordance with the following procedure:

1. I.W.D. will notify in writing, the Ohio EPA of the material to be disposed and the method of disposal.
2. The Southwest District Office of the Ohio EPA, will determine the acceptability of the waste stream and will notify I.W.D. in writing within 10 days of its decision for the disposal of the waste stream. This procedure will be used for all those materials that do not fall into the classifications set forth in Attachment 3 of this proposal.

#### Chemical Waste Storage

Chemical waste will be stored in segregated storage areas until sufficient quantities have accumulated or during inclement weather. These areas will be diked and enclosed by a fence. When sufficient quantities of waste have accumulated they will be taken to the landfill for final disposal during dry weather.

Building and Utility Facilities

The trailer office for the sanitary landfill will also be used for the proposed facility. A septic tank-leaching system, well water, electricity and telephone will also be available.

Estimated Cost

\$400,000

sjw

6/4/76

IWD North Sanitary Sanitary Landfill Meeting

January 26, 1976

Abdul Rashidi	Ohio EPA - SWDO
Melvin Eifert	Systemech
John D. Gedart	IWD
John C. Wright	IWD
Wdelll McElwee	Ohio EPA - CoIs.
Dave Sharp	Ohio EPA - CoIs.
Joe Moore	Ohio EPA - SWDO
Jeff Hosler	Ohio EPA - SWDO

Mr. Melvin Eiffert  
Systems Technology Corp.  
245 North Valley Road  
Xenia, Ohio 45385

Dear Mel,

The following comments are keyed to the form "Hydrogeologic Characteristics of Proposed Waste Disposal Facilities" you sent me several weeks ago.

Page 1: paragraph 9: I believe that I.W.D. can furnish a more accurate map of their excavations than I can. The topographic map notes 3 other sites of excavation within 1 mile of the proposed site. Two pits are noted in the SW  $\frac{1}{4}$  of Section 17, and a third is about  $\frac{1}{4}$  mile northwest of Tremont City. Whether additional excavation has occurred in the vicinity, since the map was field checked in 1961, I have not determined. It would probably be easier to obtain verification from Ohio Division of Mines than for me to spend a day over there combing the hills & valleys for other excavations. I will do so, however, if you wish. I cannot swear to the extent or kind of quarrying in Clark Co. on the basis of my previous visits.

Page 1, paragraph 10: On the basis of what I have seen on the site, found on topographic and soils maps, and read in water well records, there are probably no rock outcrops within 1 mile of the I.W.D. site in Clark Co. Verification of this would require more waterwell records and/or field work.

#### Page 2, SUBSURFACE GEOLOGY

Paragraph 1 - United Soils Classification notation of the silt loam is ML or CL, probably ML. The sand in EH-2 and EH-3, the upper sand (at 15') in EH-4, and the lower sand (at 34') in EH-5 are SP. The lower sand in EH-4 (28.5 - 34") and the upper sand (5'-12') in EH-5 are SM. To be sure that the silt loam is in fact ML would require performing Atterburg Limit tests on the samples taken by Bowser & Morner. The appropriate notations ~~may~~<sup>have been</sup> be added to the drilling logs (see enclosure)

Paragraph 2-5: These properties were described in the drilling logs submitted 14 January 1976.

Paragraphs 6,7: The water well records indicate that bedrock is fractured limestone lying at elevations of about 915' to 930', i.e. at depths on the order of 150-200' below the site.

Paragraphs 8,9: I cannot answer these questions; to do so would require excavation of considerable magnitude or conjecture based on outcrops seen some 6 - 8 miles to the south. These latter, along US 40, show thin to medium bedded carbonate rocks, with vertical joints in several directions spaced at a few inches to 3 or 4 feet, and weathered noticeably to depths of 6 feet or less.

#### Page 2, GROUND WATER GEOLOGY

Paragraph 1: Several water - bearing strata; moderately rapid to rapid in permeability, were intersected during drilling on the site. Clean, sorted sand at 8-10 feet in EH-3, and 5-12' in EH-5 may be related to the sandy mud at 7-12' in EH-1. These three bore-holes define a line trending NE-SW. EH-2 to the NW of this line, and EH-4, to the southeast of the line, do not have clean sand in this interval, suggesting a NE-SW trending stream channel or two separate lenses of sand. These thin shallow sands may be the causes of seasonal seeps in nearby gullies, but do not appear to be part of significant aquifers.

Similar sand at 30-31 feet in EH-2 and 29 to 34 feet in EH-4 may also be part of a linear sand body, trending NW-SE, or may be isolated sand lenses. Again, these sand bodies may be the sources of seeps in nearby gullies, but are not significant aquifers.

There are no bore-hole data on the site below 40 feet. Nearby water well records indicate one or two thin sand beds in the upper 50 feet or so of glacial till, but drillers bypass these in favor of gravel-rich beds or fractural limestone bedrock at depth of 70 feet or more, which are capable of yielding adequate water for household use.

Paragraph 2. The shallow sand beds are variable in thickness and depth. Bore-hole data indicate the shallowest sand may be intersected at depths ranging from 5' (BH-5) to 40' (BH-1). These sand occurrences are overlain by glacial till. The till is a mixture of all sizes of particles, with silt (.0625 to .0039 mm) dominant, and is not very permeable (laboratory measurements of permeability yield values between  $10^{-5}$  and  $10^{-6}$  cm/sec.). The first sand is separated by as little as 12' and by as much as 28' + feet from still deeper sand layers. The material below the first sand is also glacial till, silt loam in texture and generally less permeable than the weathered till near the surface.

Paragraph 3. Piezometric surfaces occur at three or more levels. Bore-holes to 40 feet show standing water at elevations near 1090'. Three water wells completed nearby in gravels at 120-150' depths show water elevations between 930' and 1000'. Two wells completed in limestone bedrock along Chapman Creek have water levels between 968' - 975'. The deep gravel and the limestone aquifers may well be interconnected. There are insufficient data to map a piezometric surface for these aquifers.

Paragraph 4. Water levels noted when the 40' boreholes were completed were recorded by the Bowser & Morner drill crew, and should appear in their report to you. These levels do not meet the requirement that the hole be open ... "a sufficient amount of time to allow water level to stabilize". The holes were plugged by the drilling crew, as required by their company policy, so there is no way to check the levels now. I believe that records of present water levels, no matter how precise, are measures of transient values, at least in the vadose zone (the brown, oxidized, upper 10-12 feet). Monitoring wells peripheral to the land fill trenches would be good insurance; not so much for recording water table fluctuations as for sampling the quality of the ground water. They could even be rigged with simple ohmmeters to detect variations in resistance, generally correlative with dissolved salt content and therefore with pollution.

Paragraph 5. This requirement is met with the drilling logs.

Paragraph 6. Directions of groundwater flow may be surmised from the slope of the water table and by the presence of seeps and springs. If the watertable corresponds to the contact between brown, oxidized till and underlying gray, unoxidized till, as I believe it does, then the flow gradient in the upper 40+ feet of the till is very low, less than 1 foot vertical to 10 horizontal, on the site. The gully on the east side of the site has cut down below the water table and meager seeps along it indicate groundwater movement from the upland areas of the site eastward toward the gully.

A spring in the valley leading south of T-1 and T-2 has been mentioned by Skip Beckel (Sp?), the I.W.D. landfill supervisor, which indicates groundwater movement to the south as well as east.

Flow directions in the deeper aquifers are unknown but it would be reasonable to expect them to be toward Chapman Creek also.

These observations are based on the limited data in hand. Where more detailed or more specific information are required it may be necessary to spend more time in the field. If piezometric maps are required it would be useful to have the people who put out the "Hydrogeologic Characteristics of Proposed Waste Disposal Facilities" paper spell out very precisely just what kind of data are acceptable for purposes of constructing such a map.

I hope these comments are useful. If they need to be restated in a more formal format, please let me know.

Regards,

  
Harlan H. Roepke  
Geologist

TO: Thomas J. Whittman, President  
Systems Technology Corporation  
Dayton, Ohio

FROM: Harlan H. Roepke, Geologist  
4504 University Avenue West  
Muncie, Indiana

REPORT OF BOREHOLE INVESTIGATIONS, I.W.D. CORP. WASTE DISPOSAL SITE,  
CLARK COUNTY, OHIO  
12 January 1976

Purpose of investigations: The investigations reported here were undertaken to supplement the investigations reported earlier (28 December 1975), on the suitability of the site for burial of certain industrial wastes.

Location: See map, Figure 1.

Topography: See site map, Figure 2.

Method of investigation: Bore holes 6 inches in diameter were drilled to a depth of 40.5 feet with a truck-mounted, continuous-flight auger owned and operated by Bowser and Morner Testing Laboratories, Toledo and Dayton. Samples were taken by split-spoon samplers driven, according to standard penetration test specifications, inside the hollow core of the auger.

Observations: The strata observed in the boreholes are recorded on the attached Drilling Logs. The sequence of brown oxidized glacial till, about 10 feet thick, overlying gray unoxidized glacial till which was found in the four back-hoe trenches described in the earlier report, holds true in a general way for the boreholes as well. In the boreholes, however, sand beds of relatively high permeability were recognized in two distinct depth zones.

Borehole #5 shows muddy coarse sand between 5 and 12 feet. At BH-3 an interval of brown medium sand lies between 8 and 10 feet depth. The brown sandy loam between 7 and 11 feet in BH-1 (which lies midway between BH-3 and BH-5) may be related to both of these.

Similarly, the lower gray till contains intervals of sand at 30-31 feet in BH-2, 28.5-34 feet in BH-4, and a 3 inch bed at about 40 feet in BH-5. This last is overlain by about 13 feet of dark brown silt loam.

Laboratory analyses: Three samples, taken during the preliminary investigations from Trenches T-3 and T-4, were analyzed for their particle size distribution. The results, figure 3, show that the upper and lower till samples from T-4 have similar particle size distributions; about 20% clay, 30-40% silt, 40-30% sand, and less than 10% gravel. The sample of upper till from T-3 shows 28% clay, 50% silt, 20% sand, and 2% gravel. While too few to define the range of sediment types present, these samples indicate that the till is well graded and contains significant amounts of clay minerals.

Interpretation: Cuttings and samples from the boreholes indicate the presence of a darker, slightly coarser till below 31' (elevation 1076') in BH-2, and below 25' (Elev. 1074') in BH-3. This is separated from the overlying grey till by a foot of sand at BH-2 and a possible sand layer at BH-3. At BH-4 brown sand occurs at 1069-1072'. And at BH-5 brown silt loam in the interval 1064-1076' elevation, with a thin sand bed at its base. The inference of these data is that a permeable sand and/or moderately slowly permeable silt loam lies in this elevation range, with the sand occupying a NW-SE trending zone that may extend to the flanks of the southeast-flowing gully near the southeast corner of the area studied.

A shallower sand bed about 3' thick occurs in BH-3, 1089-1092' elevation; a sandy loam interval was found at about the same elevations, 1090-1094', in BH-1; and 7' of sand lies at 1091-1098' in BH-5. The absence of similar beds in BH-2 and BH-4 seems to constrain the sand to a NE-SW trend, thickening toward the SW.

Neither the lateral limits nor, for that matter, the continuity between boreholes for either of the two sandy zones can be determined from the data in hand. Both could potentially carry leachate toward surface seeps, springs, or gullies if they became contaminated.

Recommendations: Initial trenching might best be started in the northwest part of the area, in the general vicinity of BH-2 and T-4, where shallow sand beds were not observed. Successive trenches might be prepared farther southeast, perhaps eventually as far as BH-4, but the thick sand at 5 to 12 feet in BH-5 is good reason to approach the SW part of the area with extreme caution. As excavation progresses care must be taken to seal off with compacted earth any occurrences of the shallow sand bed that might be exposed.

If excavations go no lower than an elevation of about 1085', there is little likelihood of contaminating the lower sand, or any surface springs or wells that might intersect that sand.

  
Harlan H. Roepke, Geologist

James A. Rhodes  
Governor  
Ned E. Williams, P.E.  
Director

Inter-Office  
Communication



Attachment 3

to Abduhl Rashidi, Southwest District Office  
from <sup>BB</sup> Bob Brown, Office of Land Pollution Control, CO  
date 11/9/76

---

subject: The IWD Chemical Waste Landfill

As you will recall in my IOC of June 25, 1976 and during our meeting of July 12, 1976 with Jack Wright and Mel Eiffert, I suggested that a more precise definition be included in the plans for the IWD Chemical Waste Landfill for the wastes which would be received. Because of a breakdown in communications with Jack Wright this detail was not taken care of but no damage was done since we approve each individual waste received at the landfill. In this IOC I would like to state the position of the central office regarding the general types of wastes which should be accepted at IWD's Chemical Waste Landfill.

Director Williams has approved the general content of the criteria for hazardous waste landfills in my June 26, 1976 draft policy statement. In particular he urged us not to reduce the requirements. Therefore, the permeability limit of less than  $10^{-7}$  cm/sec will be cutoff for sites which are to receive hazardous waste. The permeability of the IWD site was from 33 to 70 times greater than  $10^{-7}$  cm per sec and it is therefore not suitable for hazardous waste. The definitions of hazardous waste of the June 26 policy statement will be employed for evaluating the waste which IWD would want to landfill. They will only be permitted to receive non-hazardous waste with a few rare exceptions such as the asbestoes waste.

BB/pam



**Ohio EPA**

*File*

Re: Solid Waste  
Clark County  
IWD Chemical Landfill

Mr. Clyde Hill  
Analytical Chemist  
IWD Chemical Disposal Co.  
3106 Snyder-Domer Road  
Springfield, Ohio 45502

November 30, 1977

Dear Mr. Hill:

We have reviewed your request for the disposal of approximately 40 drums of Phenol Formaldehyde Polyol and 500 drums of polyester xylene resin. These materials are judged to be acceptable for disposal in your chemical landfill.

The Polyol has small amounts of Phenol, Formaldehyde and Triethylamine. The acceptance of the Polyol material should not be interpreted to mean that Phenols, Formaldehyde, Triethylamine, and other substances containing these chemicals have an open approval. New waste materials that contain these chemicals must receive formal approval through our Columbus, Central Office, Hazardous Waste review committee.

Please record the cell used for the disposal of these materials and include it in the monthly reports sent to this office. Thank you again for your cooperation in determining the safe disposal of various industrial wastes.

Sincerely yours,

M. Joe Moore  
District Sanitarian

MJM:sjs

cc: Clark County Health Department  
cc: Dan Redman, Joe Speakman, Ohio EPA



Chemical Disposal Co., Inc. of Ohio

3106 Snyder-Domer Road, Springfield, Ohio 45502 • (513) 969-8346

November 18, 1977

Mr. Joe Moore  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
Southwest District Office  
7 E. Fourth Street  
Dayton, Ohio 45402

RECEIVED  
NOV 21 1977

OHIO ENVIRONMENTAL PROTECTION AGENCY  
SOUTH WEST DISTRICT

Dear Joe:

Koppers Chemical has approximately -500- drums of resin that has set-up. It is a polyester xylene resin containing less than 6% uncombined or free xylene and styrene, has a viscosity of 50,000 to 300,000 centipoise which is greater than the polyol from Inland. The material cannot be poured from the drums; I was able to burn a piece of the resin, it smokes and goes out when flame is removed.

Is this material exceptable or how should it be disposed of?

Sincerely yours,

Clyde Hill, Analytical Chemist  
IWD Chemical Disposal - Ohio

CEH:mrf



*P*

# Chemical Disposal Co., Inc. of Ohio

3106 Snyder-Domer Road, Springfield, Ohio 45502 • (513) 969-8346

November 17, 1977

Mr. Joe Moore ✓  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
Southwest District Office  
7 East Fourth Street  
Dayton, Ohio 45402

RECEIVED

NOV 18 1977

OHIO ENVIRONMENTAL PROTECTION AGENCY  
SOUTH WEST DISTRICT

Dear Joe:

Owens-Corning has approximately -40- drums of Phenol Formaldehyde Polyol that has an outdated shelf life. It contains less than 1% free Phenol, Formaldehyde and Triethylamine, the viscosity is greater than 5,000 centipoise. This is similar to the polyol we are presently putting in the Chemical Landfill now, except it's clear in color. Is this material exceptable or how should it be disposed of?

Sincerely yours,

*Clyde Hill / MRF*

Clyde Hill  
Analytical Chemist  
IWD Chemical Disposal - Ohio

CH;mf

**Ohio EPA**

*File:*

Re: Solid Waste  
Clark County  
IWD Chemical Landfill

Mr. Clyde Hill  
Chemical Engineer  
IWD Chemical Disposal Co.  
3106 Snyder-Domer Road  
Springfield, Ohio 45502

November 8, 1977

Dear Mr. Hill:

We have reviewed your request for the disposal of resorcinol-formoldehyde-latex (a textile adhesive) in the IWD Chemical Landfill. This material is judged to be within the resin and latex classification of wastes approved for disposal in your special chemical landfill. The material is not extremely toxic or hazardous and is therefore acceptable for disposal in your chemical landfill.

If you have further questions, please call me at (513) 461-4670.

Sincerely yours,

M. Joe Moore  
District Sanitarian

MJM:sjs

cc: Clark County Health Department  
cc: Dan Redman, Joe Speakman, Ohio EPA



# Chemical Disposal Co., Inc. of Ohio

3106 Snyder-Domer Road, Springfield, Ohio 45502 • (513) 969-8346

RECEIVED

October 25, 1977 OCT 27 PM 7 16

Mr. Joe Moore  
OHIO ENVIRONMENTAL PROTECTION AGENCY  
Southwest District Office  
7 East Fourth Street  
Dayton, Ohio 45402

OHIO EPA  
SOUTHWEST DIST

Dear Joe:

We would like permission to bury in our Chemical Landfill, a material similar to the laytex we are presently permitted to dispose of.

I am enclosing a copy of Uniroyal's analysis, which compares with ours. I have coagulated samples of the material and it behaves as they said. It will be coagulated and put in drums, they have found a polymer that will do the job without lowering the pH below 7.5. They estimate approximately 40 drums a week. Could you send me a letter of approval or your recommendation for disposal.

Sincerely,

*Clyde Hill ; MRF*

Clyde Hill, Chemical Engineer  
I.W.D. Chemical Disposal - Ohio

CH:mf

Enclosure

**UNIROYAL INDUSTRIAL PRODUCTS**

Division of UNIROYAL, Inc.

P.O. Box L

Port Clinton, Ohio 43452

419-635-2191

August 15, 1977

RECEIVED

Mr. Clyde Hill  
IWD Liquid Waste  
3106 Snyder-Domer Road  
Springfield, OH 45502

77 OCT 27 PM 7 16

Dear Mr. Hill:

OHIO EPA  
SOUTHWEST DIST

Under separate cover (UPS) we are sending you material representative of our liquid waste. It is basically a latex waste. This material I sent you is actually a sample of the actual resorcinol-formaldehyde-latex dip. Our waste material would differ from this in that the waste material which we would send you would typically have only one-half the solid content (10% normally versus 22% for what we sent you). If you dilute this material 1:1 with water you will have material typical of our waste.

This material is a textile adhesive system which is known in the rubber industry as a resorcinol-formaldehyde-latex (RFL) treatment. Our waste consists of this plus water from washing out equipment with which this adhesive comes in contact. It is not explosive. The flammability is quite low because of its high water content. Its low degree of flammability can be illustrated by the fact that in our process fabric saturated with this material is dried in a direct fired (open flame) oven at 300°-400° F. with no problems due to ignition of the treatment.

In addition to the components of this RFL adhesive system, the waste material may contain a small amount of threads of nylon and polyester fabric. Some of this material may contain some dried material which will appear to be a hard dark resin. This is just dried adhesive. When the adhesive dries it becomes hard, brittle, and difficult to re-dissolve.

At times this latex material will coagulate and separate into a water layer and a rubber plus resin layer. This is a normal occurrence for this material and it basically is not an exothermic process (that is there is no appreciable amount of heat given off when this happens). The change is quite noticeable since the material changes from a water-like material to a material which flows similarly to mayonnaise or catsup. Common things which cause this phenomenon are a pH below about 6.0, freezing, and the presence of inorganic salts (particularly polyvalent inorganic salts). Once this coagulation takes place, it cannot normally be reversed. Coagulated adhesive, depending on the rapidity with which it is dewatered, eventually dries out and forms a resinous material which is difficult to dissolve.

August 16, 1977

It is quite easy to ensure that the adhesive does not coagulate during shipment. This can be done simply by adding more ammonia water.

I have enclosed what I feel will be the range of the composition of our liquid waste together with what I would estimate to be its typical composition. I have listed resorcinol as an ingredient. I personally doubt whether there is any present since it reacts with formaldehyde to form a resin; however, I cannot exclude it from the list since it is conceivable that under some conditions it may be present.

Our procedure for making up the adhesive treatment is as follows: Formaldehyde (37% in water with some methanol) is diluted with water to make solution A which has a formaldehyde content of about 9%. Concentrated (28%) ammonia in water is mixed with Kopper's resorcinol-formaldehyde resin (R-2200 which is typically 30% water, 14% free resorcinol, and 56% resorcinol-formaldehyde resins) and water to give a solution (solution B) containing about 2% ammonia and 17% resorcinol and resorcinol resins. Solution A, solution B, Pyratex J-1904 (a latex consisting of 40% styrene-butadiene-vinyl pyridine terpolymer and 60% water plus some soaps and surface-active agents as stabilizers), and water is mixed to give the final adhesive.

I have attempted to describe the properties of this material as fully as possible. I would be happy to answer any questions you might have concerning this waste material.

At present, I would estimate that we would dispose of 1000-2000 gallons of this material per week (the actual amount produced is too variable to predict with certainty). We can ship it to you either in bulk or in drums. *approx. 40 drums*

We would like you to notify us as soon as possible if you can handle this material, and also when we could start shipping to you. We would also need to have a quote of the cost per gallon of disposing of this waste.

Sincerely yours,



J. KELLGREN  
Technical Superintendent

JK:lc

1 Incl.

August 16, 1977

Approximate Percentages for the Various Components in our Liquid Waste

	<u>Range</u>	<u>Typical</u>
Water	78-96	90
Styrene-butadiene-vinyl pyridine terpolymer rubber (dry weight) **, ***	3.5-22	8
Ammonia (pure gas) *	near 0-0.3	0.2
Resorcinol-formaldehyde resin	0.5-4.5	1.4
Formaldehyde (as pure material)	0-1.8	0.2
Methanol	near 0-1.5	0.3
Soaps and surface-active agents **	near 0-0.6	0.1
Resorcinol	0-0.9	0

\* If calculated as the normal concentrated ammonia solution (28% in water) the values would be near 0-1.1 and 0.7% for the range and typical values, respectively.

\*\* From latex.

\*\*\* If calculated on the basis of latex used, this is 9-55% and 20% for the range and typical values, respectively. The value for the water is now reduced to 90-45% and 78% for the range and typical values, respectively. The latex is typically 40% by weight of dry rubber and 60% by weight of water.

pH for uncoagulated waste is 8-10 (lower values are possible but the limitation is pH 5.5-6.0 where the latex coagulates).

Incl 1.



Inter-Office  
Communication



to Robert Brown  
from M. Joe Moore *GM File: Solid Waste*  
date June 22, 1977 *Clark Co*  
subject: IWD Liquid Waste Chemical Landfill

James A. Rhodes  
Governor  
Ned E. Williams  
Director

Thank you for the list of waste classes approved for disposal at this special landfill.

I have reviewed Mr. Wright's monthly reports of materials disposed on the site. They are in agreement except for one item - W0056 Systech - Still Bottoms 120 cu yds. This material was disposed bulk in Cell B-2. What is the status of this material? Is it acceptable for disposal in the chemical landfill? Please contact Mr. Wright directly if you need further specific information about the waste - (513) 969-8346.

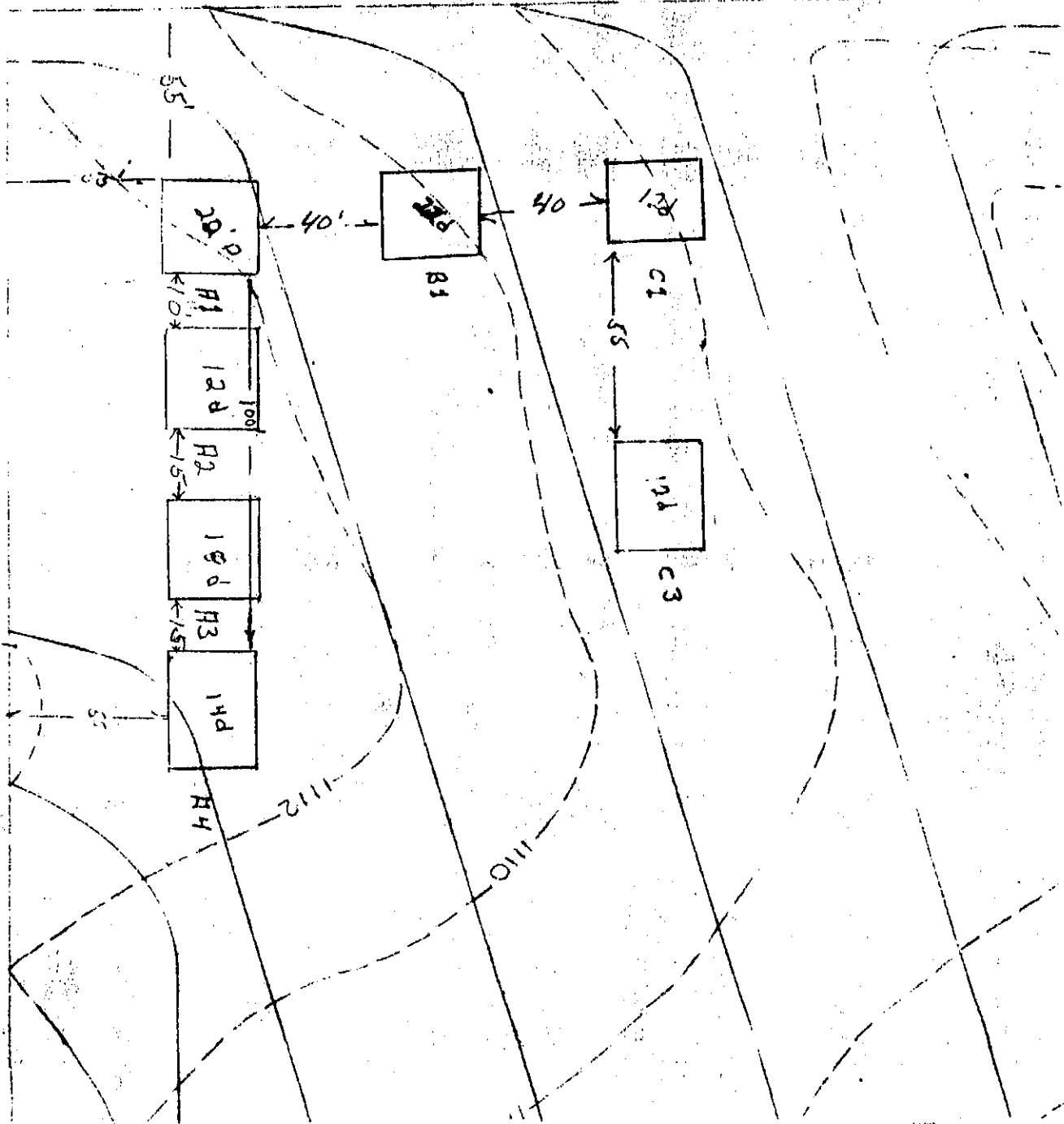
mlk

NW Corner

RECEIVED

MAY 12 1977

Ohio Environmental Protection Agency  
SOUTHWEST DISTRICT



### ATTACHMENT 3

#### TYPES OF WASTE

An estimate of the amount of waste liquid to be landfilled on a monthly basis are the following:

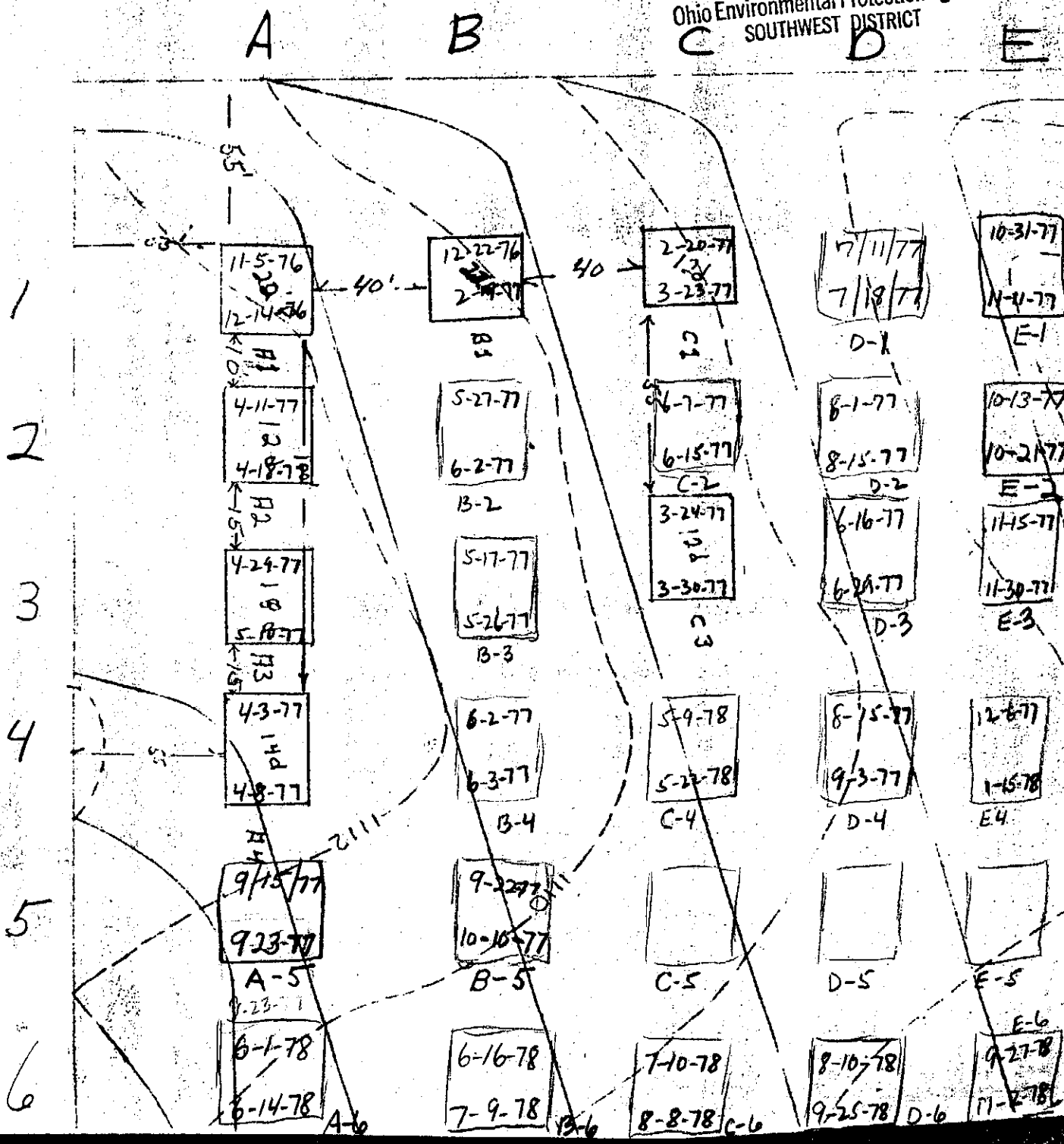
- GROUP 1 - Encapsulated Metal Sludges
  - Approximately 10,000 gal/month
  - Residual sludges resulting from the pre-treatment required from the proper disposal of industrial solutions such as plating solutions, acids, and precipitated salts resulting from the removal of pollutants from these solutions.
  
- GROUP 2 - Bulk Asbestos And Water
  - Approximately 20,000 gal/month
  - Asbestos obtained from air cleaning systems mixed with water for safety and handling purposes.
  
- Polyol
  - Approximately 6,000 gal/month
  - A high viscous (molasses) long chain polyfunctional alcohol produced as a by-product in the manufacture of urethane foams.
  
- GROUP 3 - Encapsulated Paint Sludges
  - Approximately 25,000 gal/month
  - Encapsulated glues and adhesives
    - Approximately 35,000 gal/month
  - Above materials are sludges derived from the use and manufacture of paints and coatings, glues, and adhesives. Typically they will include waste paints, adhesives, and inks; paint spray booth skimmings; surplus unusable paint, glues and adhesives; and sludges from the reclamation of solutions used in the application and manufacture of paints, inks, glues, and adhesives.

NW Corner

RECEIVED

MAY 12 1977

Ohio Environmental Protection Agency  
SOUTHWEST DISTRICT

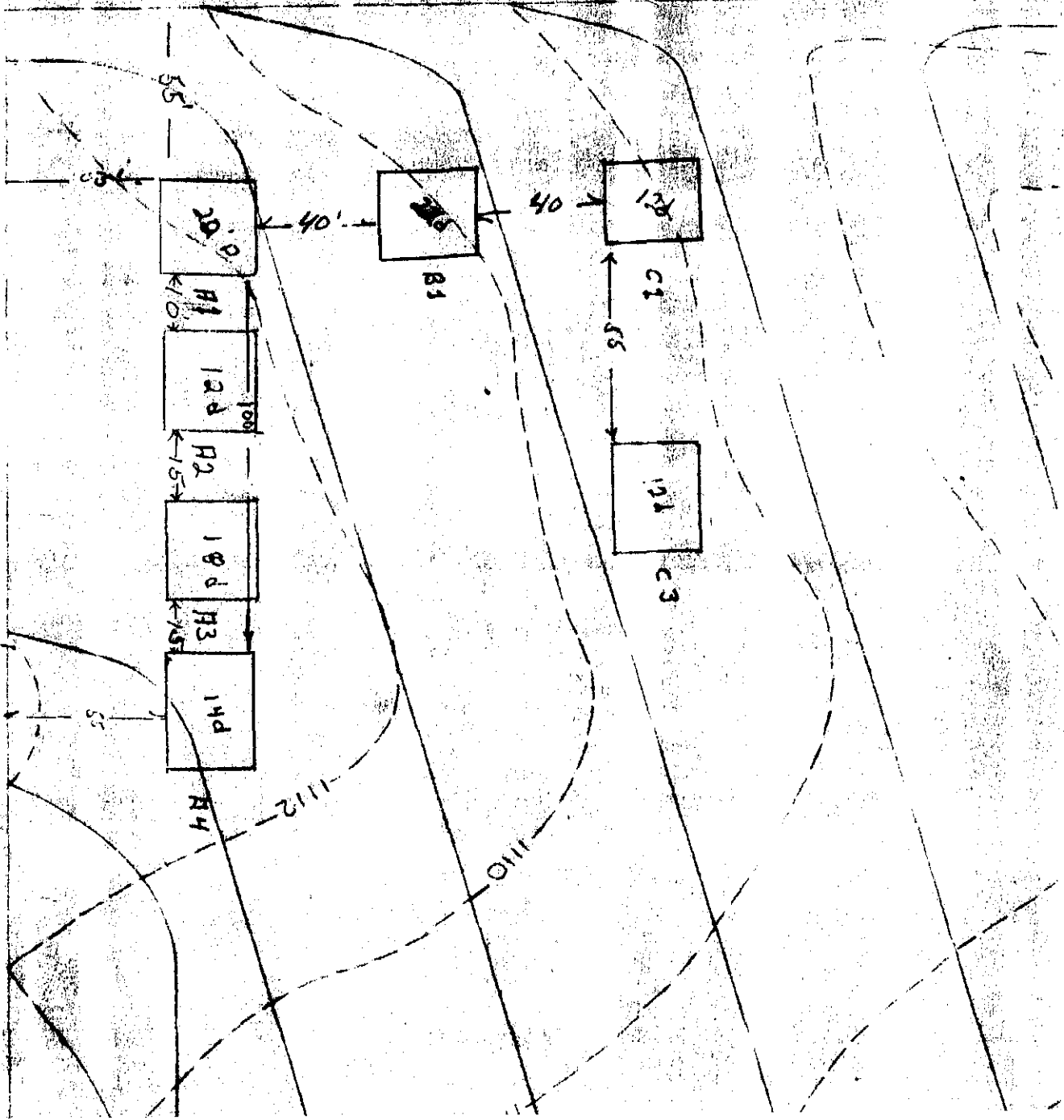


N. W. ...

RECEIVED

MAY 12 1977

Ohio Environmental Protection Agency  
SOUTHWEST DISTRICT



File: IWD Chemical Landfill, Clark County

**OhioEPA Inter-Office Communication**

**TO:** Joe Moore, Southwest District Office **DATE:** May 12, 1977  
**FROM:** <sup>BB</sup> Bob Brown, Office of Land Pollution Control, CO  
**SUBJECT:** Disposal of paint sludge and diatomaceous earth by Systech

I received a letter from Bob Reitz (Systech Corporation), requesting permission to dispose of oil base paint sludge and diatomaceous earth, vegetable oil sludge at the IWD Chemical Waste landfill. Bob Reitz also visited my office to discuss the problem.

The diatomaceous earth sludge is divided into two batches. One is simply diatomaceous earth used by P & G to filter soybean oil. The second batch is the same except for contamination with some metal oxide sludge. The analysis Bob Reitz supplied to me shows that the heavy metal is relatively low. The sludge is presently in holding tanks under water which Bob Reitz states is necessary to hold down severe odors. In my opinion, this sludge could go to any well managed landfill in a good geologic location provided the excess water is drained from the sludge. Bob Reitz stated that they can drain this water easily. The sample Bob Reitz showed me was a stiff solid under a water layer. I would like for you to check this sludge after it is drained and prior to transport to IWD's site. Bob Reitz also mentioned that they may take this sludge to the CER landfill. The metal contaminated sludge would go in the hazardous waste section since this is CER's preference. The remainder could go to the conventional portion of CER.

The oil base paint sludge is more of a problem. The pigment and metal content are not hazardous but the solvent could present a fire hazard and leachate hazard. Bob Reitz assures me that most of this material is dried in the storage drums and is a solid or a jell. Reitz proposes to remove the solid and jell material from drums and take it to IWD as a solid waste. This should be acceptable since the solvent will have evaporated if the material is a solid or jell. I requested that Bob set aside the drums which contain more fluid material. These drums would be handled when a long range solution is developed for the disposal of the approximately 10 cu. yds. of this material which is generated every two weeks. Thus, we must make it clear to Jack Wright of IWD that OEPA has only approved the portion of Systech's paint sludge waste which is a jell or solid.

As a long term solution I suggested that this paint sludge waste be handled in bulk form and spread on a well managed conventional landfill. Hopefully this would result in metabolism of the small amount of solvent in the waste by the landfill organism. However, Dan Redman felt that this waste is a significant fire hazard in the conventional landfill. Dan recommends that Systech incinerate the waste prior to disposal. These points will have to be evaluated more carefully when Systech comes back to us requesting approval of their long term disposal plan.

REB/pam

Called Jack Wright  
5/20/77  
Passed this information on to him.

- Call Joe Morris



specialists in environmental technology  
SYSTEMS TECHNOLOGY CORPORATION

245 North Valley Road  
Xenia, Ohio 45385  
Area Code 513/372-8077

10 May 1977

Mr. Bob Brown  
Ohio EPA  
Office of Land Pollution Control  
P.O. Box 1049  
Columbus, Ohio 43216

Dear Mr. Brown:

Per our phone conversation of 9 May 1977, we would like to request your permission to dispose of the following sludges at I.W.D.'s Springfield landfill:

Pigment	95%
Titanium dioxide	31%
Silicates	56%
Calcium Carbonate	13%
Vehicle	5%
Soya Alkyd Resins	26%
Linseed Oil	24%
Metallic Driers	2%
Mineral Spirits	41%

+ *terrene*

*Fe salts*  
*Co salts*  
*Cu salts*

*fatty acid oil*

*the straight chain organic*

We presently have 300-500 yds<sup>3</sup> of this sludge generated as a result of distilling paint solvents via thin film evaporation. The sludge is further subjected to steam distillation to remove most volatile solvents. The above analysis will vary due to variations in the types of solvents and paints reclaimed.

We also have 950 yds<sup>3</sup> of a sludge consisting primarily of diatomaceous earth which has been used as a vegetable oil filler media. We tested a composite of 6 core samples taken from the storage tank containing the material:

*~ 10 yds per two weeks.*

*Material on hand is largely solids  
It would be removed from drums and  
handled in bulk.*

Solids (wt).	49.6%
Fe* (total)	108 mg/l
Cr* (total)	223 mg/l
Cr <sup>+6</sup>	-0-
Cd**	25 mg/l
Zn**	98 mg/l
Pb**	42 mg/l
Ni**	5 mg/l

\*Present as  $M(OH)_3$   
\*\*Present as  $M(OH)_2$

We do not anticipate generating this material again.

We would appreciate a speedy reply on this matter.

Sincerely,

SYSTECH WASTE TREATMENT CENTERS



Robert D. Reitz  
Technical Representative

RDR/hbs





Re: IWD Chemical Landfill  
Clark County - German Twp.  
Solid Waste

Mr. George Degenhart  
3035 Columbus Avenue  
Springfield, Ohio 45503

April 25, 1977

Dear Mr. Degenhart:

Enclosed please find the information that you requested per our telephone conversation.

According to my telephone discussion with Bob Brown on April 25, 1977, no new substances have been approved for disposal at this site since the original plan approval.

Should you have any questions or comments, please feel free to contact this office.

Sincerely,

A handwritten signature in cursive script that reads "Gary M. Bramble".

Gary M. Bramble, P.E.  
Industrial Wastewater Group

GMB/sjg

Enclosures

April 4, 1977

Industrial Waste,  
3112 Snyder Domer Road,  
Tremont City, Ohio


Mr. Menda:

Find enclosed the inspection report of the Landfill facility,  
located at 3112 Snyder Domer Road, Clark County, Springfield,  
Ohio.

This is not a letter of reprimand, but to caution you against  
bad operating procedures and if not corrected grave problems  
could arise.

Your co-operation would be appreciated in correcting these  
violations.

Sincerely,  
Mrs. Mary Mitch, R. N.,  
Acting Health Commissioner

  
Howard Leist,  
Sanitarian  
HL/mmC

# 706



**I.W.D. LIQUID WASTE, INC.**

3975 Wagoner Ford Rd.  
P. O. Box 1458  
Dayton, Ohio 45414  
(513) 278-0821

701 Thrasher St.  
Springfield, Ohio 45503  
(513) 323-9382

RECEIVED

'77 JAN 24 AM 8 27

Joe

OHIO EPA  
SPRINGFIELD, OHIO

Here is a copy of the data sheet  
We have the new customers fill out on  
new waste material, as per our discussion  
on Tue 18 Jan 77. Additional comments on this form  
will be appreciated.

Thanks Again  
Clyde Hill

1           IN THE UNITED STATES DISTRICT COURT  
2           FOR THE SOUTHERN DISTRICT OF OHIO

3                                   \*   \*   \*

4       RESA,

5                                   Plaintiff,

6               vs.                                   CASE NO. 1:04-CV-013

7       WASTE MANAGEMENT, INC.,

8       et al.,

9                                   Defendants.

10                                   \*   \*   \*

11               Deposition of CLYDE E. HILL, JR., Witness  
12       herein, called by the Plaintiff for  
13       cross-examination pursuant to the Rules of Civil  
14       Procedure, taken before me, Mary Jo Stevens, a  
15       Notary Public in and for the State of Ohio, at  
16       Thompson Hine, 2000 Courthouse Plaza, 10 West  
17       Second Street, Dayton, Ohio, on Friday, the 16th  
18       day of December, 2005, at 1:21 p.m.

19                                   \*   \*   \*

20

21

22

23

24

25

Page 2

1	<b>EXAMINATIONS CONDUCTED</b>	<b>PAGE</b>
2	BY MS. WOLFE:.....	4
3	BY MR. BROWN:.....	133
4	BY MS. WOLFE:.....	149
5		
6	<b>EXHIBITS MARKED</b>	
7	(Thereupon, Plaintiff's Exhibit 1	27
8	was marked for purposes of	
9	identification.).....	
10	(Thereupon, Plaintiff's Exhibit 2	39
11	was marked for purposes of	
12	identification.).....	
13	(Thereupon, Plaintiff's Exhibit 3	53
14	was marked for purposes of	
15	identification.).....	
16	(Thereupon, Plaintiff's Exhibit 4	55
17	was marked for purposes of	
18	identification.).....	
19	(Thereupon, Plaintiff's Exhibit 5	65
20	was marked for purposes of	
21	identification.).....	
22	(Thereupon, Plaintiff's Exhibit 6	74
23	was marked for purposes of	
24	identification.).....	
25		

Page 4

1 CLYDE E. HILL, JR.  
2 of lawful age, Witness herein, having been first  
3 duly cautioned and sworn, as hereinafter  
4 certified, was examined and said as follows:  
5 CROSS-EXAMINATION  
6 BY MS. WOLFE:  
7 Q. Would you please state your full  
8 name for the record and spell your last name?  
9 A. Clyde Ewing Hill, Jr., H I L L.  
10 Q. Good afternoon, Mr. Hill. My name  
11 is Leslie Wolfe and you and I had spoken  
12 before. I'm the attorney for the plaintiff in  
13 this case and do you understand that you're  
14 here for a deposition today?  
15 A. Yes.  
16 Q. Did you receive a subpoena telling  
17 you to be here today? I see you're pulling it  
18 out of your breast pocket.  
19 A. Yes.  
20 Q. So you did receive the subpoena?  
21 A. Yes.  
22 Q. And you received the check with  
23 that?  
24 A. Yes.  
25 Q. And thank you for coming today.

Page 3

1 APPEARANCES:  
2 On behalf of the Plaintiff:  
3 Walter & Haverfield LLP  
4 By: Leslie G. Wolfe  
5 Attorney at Law  
6 The Tower at Erieview  
7 1301 East Ninth Street  
8 Suite 3500  
9 Cleveland, Ohio 44114-1821  
10  
11 On behalf of the Defendant Waste Management,  
12 Inc.:  
13 Tucker Ellis & West LLP  
14 By: Courtenay Y. Jalics  
15 Attorney at Law  
16 1150 Huntington Building  
17 925 Euclid Avenue  
18 Cleveland, Ohio 44115-1475  
19 On behalf of the Defendant Systech:  
20 Frost Brown Todd LLC  
21 By: Daniel A. Brown  
22 Attorney at Law  
23 300 North Main Street  
24 Suite 200  
25 Middletown, Ohio 45042-1919  
  
\* \* \*

Page 5

1 Are you -- do you understand that you're here  
2 for a deposition in connection with the work  
3 that you did in the late '70s at the Tremont  
4 landfill Superfund site in Clark County?  
5 A. I guess. I wasn't there in the  
6 late '70s.  
7 Q. You were not there in the late  
8 '70s?  
9 A. No. It was May of '75 is when I  
10 left and went to Greene Memorial Hospital.  
11 Q. You were not there from -- any  
12 time during the operation of the barrelfill at  
13 the site?  
14 A. Yes, they were -- yeah, they had  
15 had, what, three cells open and they were --  
16 they had filled one and were filling the second  
17 one when I left.  
18 Q. So what year do you think it was  
19 that they had the three cells open?  
20 A. That was -- they started in '74.  
21 I think they got all the paperwork completed in  
22 about '73. It was '73, '74 when they finally  
23 started doing it. They had enough drums on  
24 hand to start doing something with. They were  
25 held up for permits for quite a while.

Page 6

1 Q. Well, we're going to talk about  
 2 that a little bit more, but first before we get  
 3 started I'm just going to go through a few  
 4 preliminary matters. Have you ever had your  
 5 deposition taken before?  
 6 A. On this?  
 7 Q. On anything.  
 8 A. Yes.  
 9 Q. What was that in connection to?  
 10 A. It was an injury at Greene  
 11 Memorial Hospital. One of the employees got  
 12 shot and he worked in the hospital and so they  
 13 were finding out what he did and if he knew  
 14 anybody that disliked him or anything at the  
 15 hospital.  
 16 Q. How long ago was that?  
 17 A. It was about '78.  
 18 Q. So that was quite a while ago?  
 19 A. Yes.  
 20 Q. Well, the rules that applied to  
 21 that deposition are probably the same rules  
 22 that apply now, but I'm going to go over them  
 23 to make sure that we are on the same page.  
 24 Most important thing is to give me verbal  
 25 responses to the questions and that way the

Page 8

1 coffee and water available in the room for you  
 2 to help yourself to at any time.  
 3 A. Okay.  
 4 Q. Did you review any documents to  
 5 prepare for your deposition today?  
 6 A. No.  
 7 Q. Did you talk to anyone to prepare  
 8 for your deposition today?  
 9 A. Just you.  
 10 Q. Are you represented by counsel  
 11 today?  
 12 A. No, I'm not. You said I had an  
 13 opportunity for that, but --  
 14 Q. Right. I said that you had an  
 15 opportunity for that and I think I probably  
 16 told you that the attorney representing Waste  
 17 Management which is a primary defendant in this  
 18 case, Waste Management and Chemical Waste  
 19 Management, was representing some of the former  
 20 IWD employees but I wasn't sure which ones and  
 21 as it turns out I think that they -- based on  
 22 the dates of your employment that they  
 23 determined that they would not offer  
 24 representation to you. If Miss Jalics wants to  
 25 say anything further about that, she can do so.

Page 7

1 court reporter can take down your answers.  
 2 A. She can't see me nodding my head.  
 3 Hear that.  
 4 Q. Right, she can't see you nodding  
 5 your head and it will also make it easier for  
 6 the court reporter if you wait until I ask the  
 7 question before you give an answer and I'll  
 8 wait for you to give a complete answer before I  
 9 have gone to the next question. Agreed?  
 10 MS. JALICS: I'm sorry, Mr. Hill. I  
 11 think that fan is making it difficult for me to  
 12 hear.  
 13 Q. If you don't understand a  
 14 question, please tell me and I'll rephrase it  
 15 in a way that hopefully you will be able to  
 16 understand.  
 17 A. Okay.  
 18 Q. If you do answer a question,  
 19 though, I'll assume that means you understood  
 20 the question. Okay?  
 21 A. Yes.  
 22 Q. If you need a break, please let me  
 23 know.  
 24 A. Yes.  
 25 Q. And if you get thirsty there is

Page 9

1 A. They hadn't bought the company at  
 2 that time. They were negotiating when I left.  
 3 Q. And you represented to me that you  
 4 were never employed by Waste Management, Inc.  
 5 or Chemical Waste Management, Inc.?  
 6 A. No, just IWD, Industrial Liquid  
 7 Waste or Liquid Waste.  
 8 MS. JALICS: And as far as I know,  
 9 that's what our records show as well.  
 10 Q. And if I didn't already indicate,  
 11 Miss Jalics represents Waste Management and  
 12 Chemical Waste Management. So that's why she's  
 13 here. Did you do anything at all to refresh  
 14 your memory or prepare for the discussion that  
 15 we're going to have today?  
 16 A. No.  
 17 Q. Would you please state your  
 18 current address?  
 19 A. 2770 Wyoming Drive, Xenia, Ohio,  
 20 45385.  
 21 Q. How long have you lived at that  
 22 address?  
 23 A. Since October, 1969.  
 24 Q. That is a long time to be living  
 25 at one address. Do you live alone there?

Page 10

1 A. No, I don't.  
 2 Q. Who do you live with?  
 3 A. My wife.  
 4 Q. And, Mr. Hill, what is your date  
 5 of birth?  
 6 A. It's 5 August of '39.  
 7 Q. Where did you go to high school,  
 8 Mr. Hill?  
 9 A. I went to Central High School in  
 10 Oklahoma City, Oklahoma.  
 11 Q. Did you go to college after that?  
 12 A. Yes, I did.  
 13 Q. And did you graduate from high  
 14 school?  
 15 A. Yes.  
 16 Q. Where did you go to college?  
 17 A. I started at Central State  
 18 University and when I graduated it was the --  
 19 well, it was Central State College and when I  
 20 graduated it was University of Central  
 21 Oklahoma.  
 22 Q. What year did you graduate?  
 23 A. 1965.  
 24 Q. Did you go on to postgraduate  
 25 school?

Page 11

1 A. I did some, let's see, courses at  
 2 Wright State.  
 3 Q. What was your undergraduate degree  
 4 in?  
 5 A. I got a BS in chemistry, minor in  
 6 math and physics.  
 7 Q. And the courses at Wright State,  
 8 what area were those in?  
 9 A. Advanced and organic chemistry,  
 10 and what was the other one, instrumental  
 11 analysis.  
 12 Q. Did you receive any degrees from  
 13 Wright State?  
 14 A. No, I didn't.  
 15 Q. Did you receive any other degrees  
 16 from any other institutions?  
 17 A. No.  
 18 Q. Did you go through any other  
 19 training in any of the fields that you were  
 20 involved in, chemistry or any other scientific  
 21 fields?  
 22 A. When I was in the Air Force I went  
 23 to the Air Force Tech School, electronic tech  
 24 school and that's what I did was electronic  
 25 engineering in the Air Force.

Page 12

1 Q. What years were you in the Air  
 2 Force?  
 3 A. From April of '62 to June of '67.  
 4 Q. Where were you stationed?  
 5 A. First was Lackland and then I went  
 6 to tech school at Keesler. Then I went to  
 7 Iwakuni, Japan and then was transferred to Fuji  
 8 Air Base in Japan. Then I came back to Offutt  
 9 Air Force Base, got my final semester TDY where  
 10 the Air Force sent me back to get my last  
 11 semester of college in Oklahoma City at Edmund  
 12 and then went back to Offutt and then was  
 13 assigned six months in Vietnam, came back to  
 14 Offutt and was discharged there.  
 15 Q. So you were discharged in June of  
 16 '67?  
 17 A. Right.  
 18 Q. And at that point you had received  
 19 your undergraduate degree?  
 20 A. Yes.  
 21 Q. And what did you do at that time  
 22 when you were discharged, what did you do next?  
 23 A. I went to work for Systems  
 24 Research Lab as an associate engineer,  
 25 electronic engineer. But -- yeah. No, wait.

Page 13

1 I was -- I started at SRL. We had a one year  
 2 contract doing neutron activation analysis out  
 3 at Wright-Patt, and when that contract was up,  
 4 then I was on a contract designing a  
 5 translucent partial measuring device for models  
 6 at flight dynamics lab at Wright-Patt and then  
 7 I was working on projects for the foreign  
 8 technology division at Wright-Patt.  
 9 Q. Were all of these contracts  
 10 through System Research Labs?  
 11 A. Yes.  
 12 Q. Were you employed there?  
 13 A. Yes, for, what, ten years.  
 14 Q. Were you a salaried employee?  
 15 A. Yes.  
 16 Q. And so after the ten years, would  
 17 that have brought it to about '97 when you left  
 18 Systems Research Lab?  
 19 A. No.  
 20 Q. When did you leave Systems  
 21 Research Lab?  
 22 A. It was -- wait a minute. They  
 23 gave me -- the last part of the '70s I was  
 24 working for Systech for a couple of years.  
 25 Q. Was there some time in between

Page 14

1 working for Systech in the late '70s and  
 2 working for Systems Research Lab in the late  
 3 '60s when you worked for IWD? When did you  
 4 work for IWD?  
 5 A. About -- it was about '73 to April  
 6 of '75, best that I remember.  
 7 Q. And where --  
 8 A. There was five years at Isotech --  
 9 I don't mean Isotech. I mean SRL.  
 10 Q. Five years total at Systems  
 11 Research?  
 12 A. Right. And when the government  
 13 contracts quit, then I shifted over and went to  
 14 work at Systech for about a year and a half, I  
 15 guess.  
 16 Q. And then after that year and a  
 17 half, where did you go?  
 18 A. To IWD Liquid Waste.  
 19 Q. And you're fairly sure that that  
 20 was about 1973 when you started at IWD?  
 21 A. '73, '74, around there. They were  
 22 on Lagonda, the plant over just off of Lagonda  
 23 is where I first started until they had moved  
 24 to Tremont. Whatever date they moved up there  
 25 is --

Page 16

1 Liquid Waste, had that company just come into  
 2 existence or had it been around for a while?  
 3 A. IWD Liquid Waste was probably  
 4 three or four months old and they were bringing  
 5 waste to Systech down at the Franklin, Ohio  
 6 plant and Jack Wright -- well, when they were  
 7 bringing their waste in, he was just getting  
 8 started picking up, mostly oil/water waste and  
 9 stuff and was coming in and dumping it there  
 10 and he told me that they had plans and that  
 11 they would like for me to consider coming to  
 12 work for them.  
 13 Q. And those plans were related to  
 14 the Tremont operation?  
 15 A. Yeah, Tremont where they were  
 16 going to expand and start treating more things,  
 17 disposing of more waste.  
 18 Q. Were you involved in any of the  
 19 permit application processes for the Tremont  
 20 barrellfill?  
 21 A. No, other than asking -- you know,  
 22 they would ask me what I thought of the plan  
 23 and it looked like the same, like it was legal,  
 24 what they wanted to do.  
 25 Q. What aspects of the plan did they

Page 15

1 Q. So what was the actual company  
 2 name that hired you when you worked at Lagonda  
 3 when you first started?  
 4 A. It was IWD Liquid Waste.  
 5 Q. How long do you think you worked  
 6 at that Lagonda location?  
 7 A. It was about six or eight months  
 8 before we went up to the site of Tremont, got  
 9 the building built and everything.  
 10 Q. What were you hired on as?  
 11 A. Chemist.  
 12 Q. And at some point did you become  
 13 the chemist at the Tremont site?  
 14 A. Yes.  
 15 Q. And when you first were hired by  
 16 IWD Liquid, was that the plan, that you  
 17 would -- were you hired for the purpose of  
 18 going over to Tremont eventually?  
 19 A. I was to be their chemist wherever  
 20 they were but they had talked about that this  
 21 was just a temporary location and eventually  
 22 when they get the permits and everything, then  
 23 they were going to build a building up at the  
 24 Tremont site.  
 25 Q. But when you were hired by IWD

Page 17

1 consult with you on?  
 2 A. What tests they would need to do  
 3 and how they would need to like put the test  
 4 that I was in, make sure the cells were sealed  
 5 and if they put all the drums in and then  
 6 backfilled with polyol between the drums if  
 7 that would be feasible or not.  
 8 Q. Who was asking you, was it IWD  
 9 Liquid people asking you?  
 10 A. Jack Wright primarily.  
 11 Q. Would you say that you were --  
 12 played a large role in consulting with them on  
 13 those issues?  
 14 A. He would run what -- run by me  
 15 whatever he had figured out, if that would be  
 16 feasible and see what I thought of it.  
 17 Q. Do you know when the permit for  
 18 the barrellfill was issued by EPA, Ohio EPA, or  
 19 actually by Clark County, I think it was?  
 20 A. For using the cells?  
 21 Q. Yes.  
 22 A. Because they had a permit for the  
 23 plant before they had -- using the cells.  
 24 Q. Are you --  
 25 A. I'm guessing it was in '74.



Page 18

1 Q. When you refer to the plant, what  
 2 plant are you talking about?  
 3 A. The one on Tremont. They had a  
 4 plant that they would -- a garage for the  
 5 trucks and oil/water separation and bulk  
 6 storage tanks set up to handle the large  
 7 volumes of liquid waste and they processed the  
 8 oil/water waste where it split the oil out and  
 9 recovered that to make cold spray and treat the  
 10 water. The only problem they wound up with was  
 11 the water was loaded with a lot of organics  
 12 that wouldn't come out of it that were  
 13 biodegradable so if you didn't treat it it  
 14 would smell and they were still having to  
 15 dispose of that.  
 16 Q. Were they chlorinated organics?  
 17 A. No. Chlorinated organics wouldn't  
 18 dissolve, I mean, they won't biodegrade very  
 19 good.  
 20 Q. When did that oil/water separation  
 21 process begin at the Tremont site, if you know?  
 22 A. It was within three or four months  
 23 after they moved everything up there from the  
 24 Lagonda site. It was being done over off of  
 25 Lagonda. There's a side street where the

Page 19

1 hardware store is where they were doing the  
 2 oil/water separations and then they moved that  
 3 up there and we got it set up, brought a boiler  
 4 in to heat the water to separate itself.  
 5 Q. What else was taking place at the  
 6 Lagonda site before the move to the Tremont  
 7 site?  
 8 A. Storing drums of paint sludge and  
 9 polyol and stuff that they were going to  
 10 eventually hope to bury.  
 11 Q. Were there drums stored at the  
 12 Lagonda site already at the time that you were  
 13 hired?  
 14 A. Part of the problem is finding out  
 15 which ones had paint sludge in them and which  
 16 ones had oil/water and we pumped the oil/water  
 17 waste from the cutting machines where they  
 18 dumped the emulsion. That's what we had and  
 19 then those drums were sold to Cincinnati  
 20 Barrel, I believe.  
 21 Q. I'm going to ask you some more  
 22 questions about that a little later on, but I  
 23 want to just -- I just want to be clear about  
 24 when you refer to the operation being moved to  
 25 Tremont, which aspects of the operation were

Page 20

1 moved from Lagonda to Tremont? You said they  
 2 were doing the oil separation process at the  
 3 Lagonda site?  
 4 A. Right.  
 5 Q. And then they transferred all of  
 6 that equipment and the facility over to the  
 7 Tremont site?  
 8 A. Right.  
 9 Q. So can you estimate about the time  
 10 that that move to Tremont happened? Was it  
 11 about six to eight months after you started you  
 12 said; is that correct?  
 13 A. Yes. Probably in -- they built  
 14 the garage and were storing the trucks out  
 15 there, the vacuum trucks and -- you know, the  
 16 vacuum trucks, and then they had some tank  
 17 trucks that were vacuum trucks that they  
 18 usually moved waste or vacuum so that you could  
 19 pump drums or tanks or whatever and put it in  
 20 the six thousand gallon trailer where you can  
 21 haul it.  
 22 The waste is not clean and they  
 23 throw rags and stuff and the suction will  
 24 usually pull just about everything. It's like  
 25 a vacuum cleaner, it will suck everything out

Page 21

1 of there and then you have to figure out how to  
 2 get the sludge out of your truck later.  
 3 Q. You're talking about vacuuming --  
 4 A. They put a vacuum on the trailer.  
 5 They have an air blower on the back of the cab  
 6 and it sucks in through a tank and then they  
 7 reverse the valve and push it into the trailer  
 8 so it still dumps about a two hundred gallon  
 9 tank on the back of the trailer.  
 10 Q. Two hundred gallon tank. That's  
 11 not a very big tank.  
 12 A. No, you can do about three or four  
 13 drums and then you got to reverse it and dump  
 14 it. They found out that if they just -- you  
 15 can't get a trailer that would hold a vacuum  
 16 very well. It's too much surface area so it  
 17 tends to want to collapse so you have a small  
 18 tank and you pull it and then if you get  
 19 something in there that messes up and you can't  
 20 transfer it, well, then you just got a small  
 21 tank you have to clean out and it seemed to  
 22 work pretty good for us.  
 23 Q. Now, where did that process take  
 24 place of using that small tank and the vacuum?  
 25 A. Wherever you were picking up your

Page 22

1 waste.  
 2 Q. So there was a small two hundred  
 3 gallon tank on a trailer that was --  
 4 A. On the back.  
 5 Q. Let me finish asking the question  
 6 just so we can make it easier for the court  
 7 reporter. You're talking about a vehicle with  
 8 a trailer and a tank that would go to the  
 9 generators and pick up waste and suck it out of  
 10 whatever container it was in at the generator's  
 11 facility?  
 12 A. Yes. It was mounted on the back  
 13 of the tractor and the tractor could hook up,  
 14 depending on what kind of waste you're getting,  
 15 to a stainless steel tank, or if you're getting  
 16 oil/water, you can put an iron tanker on there,  
 17 or if you're picking up acid waste, you use a  
 18 stainless steel.  
 19 Q. Are you describing a process that  
 20 went on once the Tremont operation was up and  
 21 running?  
 22 A. Correct.  
 23 Q. Are you describing a process that  
 24 took place with respect to oil/water waste that  
 25 went into the Tremont oil recovery plant?

Page 23

1 A. Yes. That was one of the -- most  
 2 bulk waste, that's how it was handled.  
 3 Q. And were there also larger tanks  
 4 used, larger than a two hundred gallon tank?  
 5 A. On three of the trucks they had a  
 6 four thousand gallon tank truck and that's what  
 7 they started with where they could just pull it  
 8 into that and they were getting stuff, they  
 9 kept piling it up and so they -- on a semi you  
 10 can't do that, you can't just suck up all the  
 11 waste into one tank because of the trailer. So  
 12 they had to go to the small tank and air pump  
 13 to pump whatever and a lot of times you would  
 14 pick up slurries and whatever and you had to  
 15 add water where it could suck it up, but that  
 16 was another way of kind of measuring your  
 17 volume to know how much waste you're picking up  
 18 and putting in the big tanker.  
 19 Q. I would like to ask you some more  
 20 questions about this in a few minutes, but  
 21 first I want to backtrack just a little bit to  
 22 the time when the Tremont operation was just  
 23 getting underway. Were you involved in any  
 24 meetings to discuss the proposed plan for the  
 25 barrellfill at the Tremont site?

Page 24

1 A. Well, define -- you mean a meeting  
 2 where it was other than Jack Wright and myself?  
 3 Q. Yes.  
 4 A. Just discussing things, no.  
 5 Q. Were you ever involved in a  
 6 meeting with anyone from Ohio EPA to discuss  
 7 the proposed barrellfill?  
 8 A. The people I met from Ohio EPA, I  
 9 met them and talked to them but I was never in  
 10 a meeting with them.  
 11 Q. Do you know who John Gedart was,  
 12 G E D A R T?  
 13 A. The name sounds familiar but I'm  
 14 not -- I don't have any idea what he looks  
 15 like.  
 16 Q. Were you involved in any meetings  
 17 with anyone from Systech to discuss the Tremont  
 18 barrellfill before it began operation?  
 19 A. No. I didn't realize that they  
 20 were doing that.  
 21 Q. I'm trying to focus in on the time  
 22 frame that you began work at Tremont because my  
 23 records show that it was more -- it started in  
 24 '76 and closed in '79 and that doesn't agree  
 25 with some of your earlier testimony about your

Page 25

1 employment history.  
 2 A. Yeah, I started at the hospital in  
 3 June of '75 so I had left IWD, but that sounds  
 4 like the time frame that Waste Management --  
 5 that's when Waste Management took over, wasn't  
 6 it?  
 7 MS. JALICS: No, it was later.  
 8 THE WITNESS: Okay, they were talking  
 9 about it, but --  
 10 Q. When you worked at the Tremont  
 11 site, did you work at the sanitary landfill or  
 12 at the drum --  
 13 A. Oh, no, I didn't work for IWD  
 14 Waste -- Industrial Waste. That's who was  
 15 running the landfill, the sanitary landfill. I  
 16 worked only for IWD Liquid Waste which was the  
 17 drum and liquid waste operation.  
 18 Q. And you're sure that you were  
 19 working for IWD Liquid at the time that the  
 20 barrellfill was operating and accepting drums  
 21 and burying them in the cells?  
 22 A. Yes.  
 23 Q. And when you -- were you the first  
 24 chemist that was hired by IWD Liquid?  
 25 A. That's correct.

Page 26

1 Q. And when you first moved over to  
 2 Tremont, did you have an office there?  
 3 A. Eventually. I was in the boiler  
 4 room where they had the coalescers and where --  
 5 the water from the oil/water separation.  
 6 Q. At some point was there a  
 7 laboratory on site?  
 8 A. Eventually they got one of B.G.  
 9 Danis' construction trailers and set it up out  
 10 beside the building and started wanting to set  
 11 up a lab where you could analyze things.  
 12 Q. And did you work in the lab?  
 13 A. Some.  
 14 Q. Where else did you work?  
 15 A. Mostly sorting the drums to make  
 16 sure what they said was in there.  
 17 Q. You mentioned sorting the drums  
 18 earlier at the Lagonda Avenue location. Were  
 19 those drums destined for disposal at the  
 20 Tremont barreldrum?  
 21 A. The ones that we didn't process.  
 22 Some of them, if it had TDI, which is toluene  
 23 diisocyanate, catalyst for polyol for making  
 24 urethane foam, they would kill it with water  
 25 and then it was a cyanide waste that we had to

Page 27

1 take up to Michigan, Bay City, Michigan to get  
 2 that treated with chlorine.  
 3 Q. What do you mean by kill it with  
 4 water?  
 5 A. It's a catalyst and when you add  
 6 water to it, then it's not reactive. It won't  
 7 metalize polyol anymore and it's not gross.  
 8 It's just a cyanide waste.  
 9 Q. So there were drums of TDI waiting  
 10 for disposal at Lagonda when you started?  
 11 A. There may or may not have been.  
 12 There wasn't a lot of drums on the Lagonda  
 13 site. Most of them were at Inland. Inland  
 14 used to just load all their drums up on a  
 15 roll-on and take them out to the landfill and  
 16 dump them. And that's what IWD Liquid Waste  
 17 was trying to provide a safer method for  
 18 getting rid of some of this stuff.  
 19 (Thereupon, Plaintiff's Exhibit 1 was  
 20 marked for purposes of identification.)  
 21 Q. Mr. Hill, handing you what has  
 22 just been marked as Deposition Exhibit 1 for  
 23 identification purposes, would you please take  
 24 a look at this document and tell me if you have  
 25 seen it before?

Page 28

1 A. Okay. Maybe -- maybe that was --  
 2 I worked part-time at the hospital for a while.  
 3 I started -- okay. I started part-time in '75.  
 4 Q. Now, let's go through this. This  
 5 was dated -- this document is dated November  
 6 30th, 1977, correct?  
 7 A. So I was still working there,  
 8 yeah.  
 9 Q. And this is addressed to you from  
 10 Ohio EPA?  
 11 A. Yeah, Joe Moore, I remember him.  
 12 Q. And it says Mr. Clyde Hill,  
 13 analytical chemist, IWD Chemical Disposal  
 14 Company, so does that refresh your recollection  
 15 as to the date that you worked or at least to  
 16 the time period that you worked at the Tremont  
 17 site in 1977?  
 18 A. Yeah. I was working part -- I  
 19 have forgotten how long I was working part-time  
 20 at the hospital before I started full-time.  
 21 Yeah, I think I remember talking to Joe about  
 22 this stuff.  
 23 Q. So this letter appears to be a  
 24 letter from Joe Moore of Ohio EPA?  
 25 A. Right.

Page 29

1 Q. That is communicating to you that  
 2 certain materials have been acceptable to be  
 3 disposed in the chemical landfill?  
 4 A. That's correct.  
 5 Q. And would that indicate the  
 6 barreldrum?  
 7 A. Yes.  
 8 Q. So would this letter have been a  
 9 response to a letter that you wrote him?  
 10 A. I'm not sure if I wrote him or  
 11 Jack wrote him.  
 12 Q. Based on the date of this letter,  
 13 when do you think you worked at the site as a  
 14 chemist, is there --  
 15 A. It was -- again -- I remember I  
 16 broke my kneecap when I started working  
 17 part-time at the hospital and that was June of  
 18 '75.  
 19 Q. And was the hospital before or  
 20 after you worked at IWD?  
 21 A. Both. I was working part-time at  
 22 the hospital to start with and then -- I was  
 23 doing electronic technician at the hospital  
 24 helping maintain all their monitors and stuff.  
 25 Q. Did you continue to work at the

Page 30

1 hospital when you started working at IWD?  
 2 A. I was working for IWD before I  
 3 started working at the hospital. I was working  
 4 there evenings and -- boy.  
 5 Q. Let me ask you this: We know that  
 6 you were working for IWD in 1977?  
 7 A. Yes.  
 8 Q. And you left before Chemical Waste  
 9 took over?  
 10 A. That's correct.  
 11 Q. How many months or years did you  
 12 leave before Chemical Waste took over? Was  
 13 it -- do you think it was less than six months  
 14 before Chemical Waste purchased the company?  
 15 A. Let's see. I left before they had  
 16 decided, but they were pretty sure that Waste  
 17 Management was interested in definitely buying  
 18 the company. I'm guessing that it must have  
 19 been roughly years that I worked part-time at  
 20 the hospital so probably '78. Let's see,  
 21 '85 --  
 22 Q. How about this, let me ask you  
 23 this question: You remember Nelson Wallis?  
 24 A. He had started, was doing -- he  
 25 was setting up the atomic absorption unit and

Page 31

1 had it pretty much running before I left.  
 2 Q. Was he there working at the same  
 3 time that you were there working?  
 4 A. Yes.  
 5 Q. If I represent to you that he  
 6 started in early 1979, then does that help  
 7 refresh your memory as to when you left?  
 8 A. That -- let's see. I left the  
 9 hospital in '85 and it was --  
 10 Q. Well, if you can't remember --  
 11 A. Well, it would probably be like  
 12 March or April of '79 then.  
 13 Q. That you left?  
 14 A. Yeah. It was before they had  
 15 taken over because it was IWD Liquid Waste. My  
 16 last paycheck, that's what --  
 17 Q. And going back to when you started  
 18 at the Tremont site, when you first started  
 19 reporting to work at that location, had there  
 20 already been any cells completed or do you  
 21 remember --  
 22 A. Oh, no.  
 23 Q. Do you remember what cell they  
 24 were on at that time?  
 25 A. When I started there was no cell.

Page 32

1 Q. So you were there from the very  
 2 first cell?  
 3 A. Yes.  
 4 Q. So at least we know you were there  
 5 from the beginning up until at least March or  
 6 April of '79?  
 7 A. Yes.  
 8 Q. And if I represent to you that the  
 9 first cell was completed in 1976 -- at the end  
 10 of 1976, does that sound about right?  
 11 A. That sounds right, yeah.  
 12 Q. So then that would mean that you  
 13 were there about a little over two years total.  
 14 Does that sound about right?  
 15 A. Two -- yeah. It wasn't -- two,  
 16 two and a half, something like that.  
 17 Q. So late '76 until early '79?  
 18 A. Yeah.  
 19 Q. You were there for almost the  
 20 entire operating period of the barrellfill then?  
 21 A. Well, they had -- they only had  
 22 three cells that had -- they had two cells open  
 23 and were -- yeah, they didn't have three cells  
 24 filled. I don't know how many cells they wound  
 25 up with.

Page 33

1 Q. You mean when you left or what  
 2 time period?  
 3 A. Yeah, when I left. There was like  
 4 only three cells that were open and one and  
 5 almost finished the second one before I left.  
 6 Q. When you say open, you mean  
 7 complete?  
 8 A. No. Open means it's a hole in the  
 9 ground with barrels sitting in it.  
 10 Q. Well, there must have been more  
 11 than three cells that were fully covered then,  
 12 complete and covered, am I correct?  
 13 A. I don't remember seeing any of  
 14 them covered.  
 15 Q. You mean they would fill a cell  
 16 and just leave it open once it was full?  
 17 A. Until they got all the polyol  
 18 poured around the drums.  
 19 Q. Now, we discussed that in our  
 20 phone conversation so let's talk a little bit  
 21 about that polyol. What do you remember about  
 22 polyol being placed in the barrellfill cells?  
 23 A. What they did, when they would  
 24 load a cell, they had a guy that was taking the  
 25 drums off the trailer and setting them down and

<p style="text-align: right;">Page 34</p> <p>1 then he would go back for another load of drums  2 and they had one guy that was running the  3 backhoe that had a framework on there with  4 angle iron and you would take the drums that  5 are going in the cell and make sure the number  6 that was on the drum and they would tip them  7 off and then the guy would pick it up and set  8 it down.  9 Q. Let me stop you right there.  10 You're motioning with your arms sort of like a  11 forklift. Are you saying they used a forklift?  12 A. No, it was a backhoe.  13 Q. To lift the drums from the yard  14 over to the cell?  15 A. Right, pick it up and set them  16 down in the hole and then tip it and they would  17 roll off in the correct location.  18 Q. So that the backhoe picked them up  19 horizontally and carried them over and rolled  20 them off in a horizontal direction.  21 A. Correct, all the drums are  22 horizontal.  23 Q. Was there a man actually in the  24 cell straightening the drums?  25 A. Sometimes.</p>	<p style="text-align: right;">Page 36</p> <p>1 change at any point?  2 A. I didn't see any change.  3 Q. So the whole time you were there  4 your recollection is that they were always  5 placed lying down in the cells?  6 A. Correct.  7 Q. And they were not stacked?  8 A. That's right, because they  9 wouldn't stack. You start stacking them up and  10 they would fall over. You got one drum sitting  11 this way tilted (indicating) and then you got  12 another one sitting on a dirt dod and it's  13 tilted the other way and you can't stack on top  14 of that, it falls over, so they wound up being  15 placed horizontally.  16 Q. Do you remember whether there was  17 more than one level of drums in any given cell?  18 A. Oh, yes. There was probably four  19 or five levels in there.  20 Q. And did that depend on the size of  21 the cell?  22 A. The cells they had open were of  23 the same dimension. I don't remember exactly  24 what that dimension was, but it was enough to  25 one layer -- let's see. Probably ten or eleven</p>
<p style="text-align: right;">Page 35</p> <p>1 Q. How else would they line the drums  2 up vertically?  3 A. They didn't.  4 Q. Oh, they left them horizontal?  5 A. Correct.  6 Q. Was that the standard procedure  7 for placing the barrels in the cells?  8 A. They tried to stack them but they  9 wouldn't stack. The bottom of the cell is not  10 perfectly flat. You're not stacking them up on  11 concrete. In fact, if you set two drums on top  12 of each other, the way it's made, the lips  13 won't let it sit, one the lid won't go inside  14 each other. Well, some tin cans you can't  15 stack up. Others they made the bottom smaller  16 and they'll stack. And they would fall over  17 and they were afraid they were going to bust,  18 so they left them horizontal.  19 Q. Was this the case the entire time  20 you were there or did that change at some point  21 as far as --  22 A. As far as I saw, that was it.  23 Q. Let me finish that. As far as  24 whether the drums went in stacked neatly or  25 whether they went in horizontally, did that</p>	<p style="text-align: right;">Page 37</p> <p>1 drums because a lot of times there was odd  2 shaped and you use a shorter drum, it wouldn't  3 make a full row or some dirt caved in and you  4 would have a vacant spot that would have held a  5 drum and then they would stack the next row on  6 top of it. And then while the forklift was  7 placing it down here, after you got a couple of  8 rows, then they would take a bung off and dump  9 over a drum with polyol and let it be pouring  10 in the other cell and then you would go back  11 when the backhoe came back for another load and  12 put two on that, so he was kind of going back  13 and forth adding the polyol once you got over  14 the bottom layer.  15 Q. So let me just make sure this is  16 clear for the record. Once the first layer was  17 in, then before the next layer was placed, bulk  18 polyol would be poured in?  19 A. Huh-uh.  20 Q. Why don't you correct me.  21 A. You would have one and two, maybe  22 by the third layer, otherwise, if you poured  23 polyol on there and you had to get down and  24 rearrange the drum because it had rolled off  25 between those and you had to push it over in</p>

Page 38

1 its own row where it belonged, then you would  
 2 be wading in polyol so they got it up to where  
 3 it was full or, you know, full enough that you  
 4 could walk around on the drums without stepping  
 5 in anything.  
 6 Q. So would they pour the polyol  
 7 along the edges so it wasn't actually on top of  
 8 the drum?  
 9 A. Oh, yeah, it would flow. Usually  
 10 get -- I imagine it came pretty much over.  
 11 Some of the polyol was almost set up and --  
 12 Q. Do you mean almost solidified?  
 13 A. It was real thick and wouldn't  
 14 flow very good.  
 15 Q. Was this done with the polyol from  
 16 the very first cell?  
 17 A. Yes.  
 18 Q. Was it done with every cell?  
 19 A. Two of them I know.  
 20 Q. Do you know which two?  
 21 A. The first two. In the northwest  
 22 corner was the first cell and the then the next  
 23 cell was right next to it. Here, I can show  
 24 you on that picture.  
 25 MS. WOLFE: Who don't we mark this as

Page 39

1 Exhibit 2.  
 2 (Thereupon, Plaintiff's Exhibit 2 was  
 3 marked for purposes of identification.)  
 4 Q. Handing you what has just been  
 5 marked as Exhibit 2, would you take this blue  
 6 pen or that green pen is just fine and  
 7 circle -- well, first of all, tell me what you  
 8 recognize.  
 9 A. Yes.  
 10 Q. What does this photograph depict?  
 11 A. This is the maintenance  
 12 (indicating) --  
 13 Q. The whole thing.  
 14 A. The whole thing is the IWD Liquid  
 15 Waste part of the landfill.  
 16 Q. Can you tell whether this photo --  
 17 and this is a photograph of a photo. Can you  
 18 tell whether this was taken while the  
 19 barrelfill was in operation or not?  
 20 A. Can't tell. This is the drum  
 21 storage area.  
 22 Q. Why don't you put a DR where you  
 23 see the drum storage area so we can see?  
 24 A. (Indicating.) And this is the  
 25 truck maintenance building (indicating).

Page 40

1 Q. Put a TR for truck maintenance  
 2 building.  
 3 A. And this is where the boiler room  
 4 and the water coalescing --  
 5 Q. Why don't you put a BR for boiler  
 6 room.  
 7 A. (Indicating.) And right here is  
 8 the lab (indicating).  
 9 Q. Why don't you just write lab  
 10 there. Was that a trailer?  
 11 A. Yes.  
 12 Q. So is it behind the boiler room  
 13 building?  
 14 A. That's correct.  
 15 Q. You can't really see it in that  
 16 picture?  
 17 A. No, you can't, because it was  
 18 beside the building and the building is kind of  
 19 hiding it. This is the oil/water separation  
 20 (indicating).  
 21 Q. Why don't you put oil slash water.  
 22 So the building right above the word oil/water  
 23 is that facility?  
 24 A. Yeah, that's the -- see, these are  
 25 the roll-ons that there was about six of them

Page 41

1 they processed the water. The waste would come  
 2 in here (indicating) and we would dump it in a  
 3 tank to get the sludge and rags and all that  
 4 stuff out of it and then we would pump the  
 5 oil/water into these process tanks.  
 6 Q. Let's save that for a little bit  
 7 later on because there's so many more things I  
 8 want to ask you about this polyol first. Can  
 9 you identify on this picture where the cells  
 10 were located?  
 11 A. Right up starting up here  
 12 (indicating), about approximately twenty feet  
 13 from the edge is where the first cell was.  
 14 Q. Why don't you put a one where you  
 15 think the first cell was.  
 16 A. (Indicating.)  
 17 Q. And then do you know what  
 18 direction they went from there on after the  
 19 first cell? I see you're putting another box  
 20 and that's got a two in it.  
 21 A. They started across like that  
 22 (indicating).  
 23 Q. So you're going from left to right  
 24 starting on that page?  
 25 A. Right. From west to east on that

Page 42

1 north end is where they started. Now, this  
 2 drum sorting area is where you would --  
 3 whenever there was enough drums to make it  
 4 worthwhile, then they would pick up that area  
 5 and transport them on this trailer here.  
 6 Q. Were you involved in -- I'm sorry.  
 7 A. They would put about twenty drums  
 8 on this trailer and then the forklift would  
 9 take them up here (indicating) and unload them  
 10 along --  
 11 Q. Why don't you put an arrow where  
 12 the truck starts and where it unloads.  
 13 A. Okay. They take the trailer in  
 14 here and load the drums on with the forklift,  
 15 take them up here (indicating).  
 16 Q. Just draw with your pen an arrow.  
 17 A. (Indicating.)  
 18 Q. So that's the direction where the  
 19 truck goes to unload the drums?  
 20 A. Right. The barrel trailer or  
 21 whatever.  
 22 Q. So the beginning of that arrow is  
 23 where the drum yard would be where they stored  
 24 the drums?  
 25 A. Right -- yeah, right in here

Page 44

1 sort it and quit mixing them up, then it's  
 2 yours, we're not going to touch it.  
 3 Q. Do you remember what generators  
 4 didn't do a good job sorting it?  
 5 A. Well, Inland at first. They had a  
 6 whole bunch of drums at the downtown main plant  
 7 and a few at the Vandalia plant that's just  
 8 sitting there. You got a drum and open it up.  
 9 Q. You told me on the phone you went  
 10 out there and actually had to go through each  
 11 drum?  
 12 A. Yeah. And it took almost three  
 13 weeks to sort out.  
 14 Q. Did you do that before the first  
 15 cell was dug?  
 16 A. Yes. Yes.  
 17 Q. So was that one of the first  
 18 things you did in connection with the Tremont  
 19 site?  
 20 A. Right.  
 21 Q. Did anyone go with you?  
 22 A. Usually the guy with the pumper  
 23 truck, and then we had another guy, I would get  
 24 some sorted out that was paint sludge, polyol  
 25 or something that wasn't going to handle bulk,

Page 43

1 (indicating). And they would sort them by what  
 2 they were.  
 3 Q. Why don't you put a circle around  
 4 where the drum yard was.  
 5 A. (Indicating.)  
 6 Q. And they would also do the sorting  
 7 within that area?  
 8 A. Right. When the truck, trailer,  
 9 truck, whatever they came in on, they would  
 10 come up here (indicating), and then we would  
 11 check to see what they were and put them in the  
 12 correct location so that -- but we had to check  
 13 every drum because if it's waste that means --  
 14 whatever I throw in there doesn't make any  
 15 difference and that was the hardest thing was  
 16 trying to get your customers to sort it because  
 17 then they give you a conglomeration of mess you  
 18 can't do anything with except incinerate the  
 19 whole drum and that's --  
 20 Q. Was that a big problem in the  
 21 beginning?  
 22 A. Oh, yeah.  
 23 Q. And then did it become less of a  
 24 problem later on?  
 25 A. Yeah. We told them if they didn't

Page 45

1 mainly we were going through and getting the  
 2 oil/water out of it because that was the  
 3 biggest amounts of waste and we would set the  
 4 other drums aside. And when I would get a  
 5 load, then the barrel truck would come down  
 6 there and they would load the drums on it and  
 7 take them out and put them in the storage area.  
 8 Q. Are you still talking about that  
 9 three week period in the beginning?  
 10 A. Yes. The drum truck wasn't there  
 11 every day but the bulk truck was. I would sort  
 12 and then when the drum truck had time from  
 13 doing his other runs, they would come down  
 14 there and I would have all the rolled water  
 15 over here stacked up and then they would take  
 16 them down because they had to operate the  
 17 forklift and then we would suck the oil/water  
 18 out.  
 19 Q. So those drums were at Inland?  
 20 A. Yeah.  
 21 Q. And after you sort them, were they  
 22 taken in the drums to the waste -- taken in the  
 23 drums to Tremont?  
 24 A. The waste that had like paint  
 25 sludge and polyol and TBI that had to stay in

Page 46

1 drums, yes, chlorinated solvent was another  
 2 one. They were mixing chlorinated solvents and  
 3 toluene and acetone, flammable and nonflammable  
 4 together so we couldn't treat that so it had to  
 5 go to Bay City and they made an expensive run,  
 6 and we finally got them to put the toluene and  
 7 acetone in separate drums so they could be  
 8 incinerated bulk but we had to work with them  
 9 to get them to sort out their waste to where it  
 10 could be handled efficiently.  
 11 Q. So which waste was pumped out of  
 12 drums at Inland into a tanker truck and hauled  
 13 back to Tremont?  
 14 A. The oil/water.  
 15 Q. Only the oil/water?  
 16 A. Right, at first. Because the  
 17 others, if it was a solvent they just threw it  
 18 in the same drum and you can't process  
 19 flammable solvents and chlorinated solvents the  
 20 same way.  
 21 Q. After you finished that three week  
 22 process of sorting and identifying all of that  
 23 waste, did they continue to -- did Inland  
 24 continue to mix their waste types or did they  
 25 stop doing that?

Page 47

1 A. They almost all -- because we have  
 2 got a difference of twenty dollars a drum or a  
 3 hundred and fifty dollars a drum and they  
 4 decided that it would be easier to retrain  
 5 their people to sort stuff out and then quit  
 6 just throwing it away in whatever drum was  
 7 handy and they eventually -- but occasionally  
 8 somebody would pour some acetone in a  
 9 chlorinated solvent drum or vice versa and then  
 10 the whole drum was messed up and you had to use  
 11 chlorinated solvent.  
 12 Q. Did you test every single drum  
 13 that was at Inland during that period?  
 14 A. We would do spot tests and then  
 15 for the most part knowing what they are,  
 16 acetone smells different than chlorinated  
 17 solvent. You can smell trichloroethane. It  
 18 smells a lot different than acetone or toluene.  
 19 Toluene smells different too.  
 20 Q. So you used your judgment to  
 21 determine based on the smell and appearance  
 22 what certain --  
 23 A. Right. And then spot checked to  
 24 make sure there wasn't a trace of something.  
 25 If I could smell any chlorinated solvent in

Page 48

1 there, Trichlor or 111 trichloroethane, if I  
 2 could smell any of that, then I called it  
 3 chlorinated solvent.  
 4 Q. So it might have had some portion  
 5 of a chlorinated solvent and something else  
 6 mixed together because you would consider it  
 7 all to be chlorinated solvent?  
 8 A. Right. That's the worst case.  
 9 Q. Describe the spot checking process  
 10 to me.  
 11 A. Okay. When we got back to the  
 12 lab, we would take a sample of some of them and  
 13 run a GC to see what else is in there.  
 14 Q. What's a GC?  
 15 A. Gas chromatograph. And you can  
 16 see your different solvent beads come in. It's  
 17 the same thing you see on CSI when they get the  
 18 little pieces. It's the same instrument and  
 19 you can identify your different solvents and as  
 20 long as it was pretty much what we thought it  
 21 was, there wasn't anything that would mess it  
 22 up and make it hard to process, wouldn't get  
 23 treated like that. A lot of times there would  
 24 be very much chlorinated but there's some and  
 25 the chlorinated solvent won't burn and if you

Page 49

1 pump that into an incinerator it would shut it  
 2 off, so it had to be disposed of as a  
 3 chlorinated solvent.  
 4 Q. What did you do with the  
 5 chlorinated solvent from Inland or from other  
 6 generators?  
 7 A. They went up to Bay City. The  
 8 cyanide waste and the chlorinated solvents  
 9 would go to Bay City, Michigan. Some of the  
 10 first ones that were mostly flammable went up  
 11 to Fremont to be injected in the deep wells and  
 12 then we were getting too much flammable  
 13 solvents in so they had to go to Bay City and  
 14 would be disposed of.  
 15 Q. Was there any waste disposed in  
 16 the drumfill and the barrelfill that contained  
 17 any chlorinated solvents?  
 18 A. Not that I know of.  
 19 Q. Was there any waste disposed of in  
 20 the barrelfill that contained any PCB's?  
 21 A. No.  
 22 Q. Did you ever come across any  
 23 wastes with PCB's that you had to determine  
 24 what to do?  
 25 A. Yeah. Trying to remember where we



Page 50

1 got that. I don't remember if it was DP&L or  
 2 somebody had some transformer oil and we sent  
 3 that to Bay City because it had PCB's.  
 4 Q. Getting back to your three weeks  
 5 that you spent at Inland at the beginning of  
 6 the barreldrum operation, was -- did you  
 7 continue to visit Inland after the barreldrum  
 8 got underway to examine their waste?  
 9 A. Most of the time after we caught  
 10 up they had -- the reason I went down there was  
 11 they had a whole parking lot full of drums  
 12 because IWD, Industrial Waste had cut them off  
 13 because they had been just loading all their  
 14 waste in a roll-on, take it out to the landfill  
 15 and just dump it.  
 16 Q. In the solid waste landfill?  
 17 A. Yes. And they ran over -- the  
 18 terracks (phonetic) that they push the dirt  
 19 around and level out the trash, ran over one of  
 20 these drums of acetone and toluene and it  
 21 caught on fire and burned up their hundred and  
 22 fifty thousand dollar terracks so they said no  
 23 more. So they were just stacking up their  
 24 waste until IWD Liquid Waste got set up where  
 25 they could handle it and start bringing the

Page 51

1 drums, but there were so many drums that it was  
 2 easier to sort them down there and pump the  
 3 ones that you could, because, oh, gosh, you get  
 4 about a hundred and twenty drums of oil and  
 5 water and we could put those all in a tank  
 6 truck and leave the drums there and let them  
 7 worry with cleaning them up and disposing of  
 8 them.  
 9 But the ones, the open-head drums  
 10 that they would shovel out, paint sludge from  
 11 the paint and spray booth had like a wall of  
 12 water coming down and overspray hits that and  
 13 goes down and then they have this big sump that  
 14 they shovel out and fill up the drum, and that  
 15 was kind of a slurry and they didn't want that  
 16 in the landfill, because if you dump that, then  
 17 you got this gooey mess that you're driving  
 18 through.  
 19 And the polyol, they didn't want  
 20 that in the landfill because it makes a big  
 21 slimy mess and it would get all over the  
 22 equipment and you couldn't walk around in  
 23 there. And that was the kind of stuff that was  
 24 started out trying to get rid of for them is  
 25 just things that are hard to handle in a

Page 52

1 landfill.  
 2 Q. Do you remember going out to any  
 3 other generators to examine waste?  
 4 A. I started going with the salesmen  
 5 to new customers to see what they had in the  
 6 way of waste stream and how they were  
 7 separating it and explaining to them that you  
 8 have got all these mixed drums that we can't do  
 9 anything with and you will have to sort this in  
 10 one drum, this in another drum, this in another  
 11 drum and label them and then we will take them.  
 12 Q. Was this also before the  
 13 barreldrum began operating or after it had  
 14 begun operating, if you remember?  
 15 A. Okay. This is -- I don't think  
 16 they were -- at first they weren't burying  
 17 drums just, you know, because we didn't have  
 18 enough to get a cell pretty full and if you  
 19 leave it open for months and months and months,  
 20 then it's going to get rainwater in there and  
 21 then you have got something that will leach and  
 22 so they would wait until they had enough drums  
 23 in the yard to get it pretty much full and then  
 24 they would start -- they would dig a cell out  
 25 and start burying drums so it wouldn't be

Page 53

1 sitting open.  
 2 Q. Do you remember how they  
 3 identified each cell?  
 4 A. Some kind of a numbering system.  
 5 Q. Do you remember there being  
 6 letters and numbers like A-1, A-2, A-3?  
 7 A. Okay, yeah, the numbers were going  
 8 across the north side on -- numbers run from  
 9 west to east and the letters run from north to  
 10 south. That's the way they said they were  
 11 going to do it anyway.  
 12 MS. WOLFE: Will you mark this?  
 13 THE WITNESS: I don't know if they  
 14 continued.  
 15 (Thereupon, Plaintiff's Exhibit 3 was  
 16 marked for purposes of identification.)  
 17 Q. Showing you what has just been  
 18 marked for identification purposes as Hill  
 19 Exhibit 3, would you take a look at that single  
 20 page document and tell me if you have seen it  
 21 before?  
 22 (Pause in proceedings.)  
 23 THE WITNESS: I haven't seen all  
 24 those.  
 25 Q. You have not seen it before,

Page 54

1 but --  
 2 A. No. No.  
 3 Q. I'll represent to you this is a  
 4 representative depiction of the location of  
 5 each cell at the barrellfill which is not to  
 6 scale but generally attempts to show where the  
 7 different rows are located.  
 8 A. Okay. It looks --  
 9 Q. You do recognize the layout based  
 10 on what this shows?  
 11 A. Yeah, it would be -- I can't  
 12 imagine those down here -- okay. Evidently  
 13 they decided to -- this, I'm pretty sure, is  
 14 probably the northwest corner (indicating).  
 15 Q. It doesn't actually say northwest  
 16 corner at the bottom of the drawing. It's hard  
 17 to read.  
 18 A. Okay.  
 19 Q. You're pointing at the corner  
 20 where A-1 is?  
 21 A. Yes, that's the first cell.  
 22 Q. A-1 was the first cell.  
 23 A. Yes, and B-1 was the second cell.  
 24 Q. I'm going to ask the court  
 25 reporter to mark another exhibit while you look

Page 55

1 at this.  
 2 A. This was first --  
 3 MS. WOLFE: Let's give the court  
 4 reporter a chance to mark this.  
 5 (Thereupon, Plaintiff's Exhibit 4 was  
 6 marked for purposes of identification.)  
 7 Q. Handing you what has just been  
 8 marked at Hill Exhibit 4, I'll represent that  
 9 this is the cell report for cell A-1. Would  
 10 you take a look at it and tell me if you have  
 11 seen this before?  
 12 A. It looks like -- yeah. This is a  
 13 report of the first -- yeah, it's the first  
 14 cell because I remember it had Inland drums in  
 15 it.  
 16 Q. What is the date that it says the  
 17 cell was completed?  
 18 A. Completed in December 14th of  
 19 1976.  
 20 Q. And it says it was started  
 21 November 5th, 1976?  
 22 A. Yes.  
 23 Q. Does that sound about right to you  
 24 based on what you recall?  
 25 A. Right. It didn't take two months

Page 56

1 to fill it because we had -- the drum yard was  
 2 full of all these drums. We had enough to  
 3 pretty much fill a cell with what we had on  
 4 hand.  
 5 Q. Well, if the first cell was begun  
 6 November 5, 1976, then can you estimate how  
 7 much time was spent prior to that collecting  
 8 drums so there would be enough for this cell?  
 9 If you don't know, that's okay.  
 10 A. I'm guessing it was probably over  
 11 a year that we were -- or close to a year.  
 12 Q. So you probably spent most of 1976  
 13 preparing for the first cell?  
 14 A. Yes. Yes. I'm not sure that they  
 15 had the permit to put drums in the ground  
 16 because they -- we were storing and sorting  
 17 drums and, man, there was a bunch of drums.  
 18 This yard was really full and they finally did  
 19 get the okay and then they dug that cell and  
 20 then we tried to get it full so we wouldn't  
 21 have a lot of rainwater in there because that  
 22 would be bad. If you have got rainwater, then  
 23 you have got something that will leach out. In  
 24 the paint sludge you got a little bit of water  
 25 that didn't drain away. It was mostly water

Page 57

1 and dry paint.  
 2 Q. Did you have any responsibility  
 3 for preparing these cell reports?  
 4 A. No, other than I see what you were  
 5 talking about that they coded it -- the guys  
 6 burying the drums couldn't spell the chemical  
 7 name so they gave them a sheet and down here we  
 8 sorted the drums and put this number on the  
 9 drum so they would know what it was when they  
 10 buried it and they were just keeping count and  
 11 they had to -- a similar, well, it was a big  
 12 piece of paper and they would --  
 13 Q. If you flip that over, I think you  
 14 might see the document you're talking about  
 15 which I think you're referring as to the barrel  
 16 log; is that correct?  
 17 A. Yes.  
 18 Q. You're looking at the third page  
 19 of the exhibit now?  
 20 A. Okay, yes, that's it. And they  
 21 were -- the one they were working with they did  
 22 like Roman numerals. They would put I, II,  
 23 III, IV, V, I, II, III, IV, V.  
 24 Q. Just a tick mark sometimes -- or  
 25 they actually would put a Roman numeral across

Page 58

1 the row of numbers?  
 2 A. Well, instead of fifteen of this  
 3 compound, they would go I, II, III, IV, V in  
 4 this box and after they got that they would  
 5 convert them to real numbers, but they was on a  
 6 clipboard up there and as they would put it in  
 7 they would mark it.  
 8 Q. How about if you look at the -- I  
 9 don't have any another copy of this so I'm  
 10 sorry I have to reach over, but if you look at  
 11 the third page --  
 12 MS. WOLFE: I'm sorry, I don't have  
 13 copies of this one, but we can copy it later.  
 14 Q. Does this look familiar?  
 15 A. Yeah. I --  
 16 Q. Do you know who filled this out?  
 17 This was the first cell.  
 18 A. Charlie Goings probably. He was  
 19 running the backhoe and -- who was helping him?  
 20 Q. Does Lester Slaughter ring a bell,  
 21 Butch Slaughter or one of Charlie's sons  
 22 perhaps?  
 23 A. Yeah, it was one of his sons was  
 24 helping. He was unloading the trucks down in  
 25 the barrel sorting area.

Page 59

1 Q. Do you know if that was Shorty or  
 2 Rick?  
 3 A. I'm guessing it was Rick.  
 4 Q. Do you remember Shorty and Rick?  
 5 A. Yeah.  
 6 Q. Do you know whether Rick worked  
 7 with Charlie at the cells more than Shorty did?  
 8 A. Yeah, I think so.  
 9 Q. Do you know if Rick worked at the  
 10 cells the whole time that Charlie was there?  
 11 A. Pretty much. As I remember they  
 12 would get a -- you know, a rhythm going and he  
 13 was strong enough to keep the barrels and then  
 14 he would get on the backhoe and they would let  
 15 him down to scoot one over if it rolled off  
 16 cockeyed or something because a lot of times  
 17 the drums, when you pump them, they don't fall  
 18 in the slots, they roll across here and you got  
 19 to roll it back and to the slot where it  
 20 belonged, but I don't remember the X's. I  
 21 think this was not the original one. This was  
 22 a copy, I think, somebody filled out to make it  
 23 neat enough to turn in, I think, because I  
 24 don't remember the X's.  
 25 Q. What do you remember instead of

Page 60

1 X's?  
 2 A. Roman numerals.  
 3 Q. Do you know whether after the log  
 4 was initially filled out, whether it was  
 5 usually copied over to make it neater?  
 6 A. Well, this one was.  
 7 Q. You're referring to the third  
 8 page. That looks like a summary where somebody  
 9 totaled it up.  
 10 A. Right.  
 11 Q. And it looks like they totaled up  
 12 all the pages underneath?  
 13 A. Okay. And apparently this is just  
 14 one level and he's keeping track, but it  
 15 doesn't indicate which corner because he  
 16 started across there and then he would -- they  
 17 would start with one kind of waste and load a  
 18 whole row with it and then start with the next  
 19 row over and start loading until he got done  
 20 with the rest of it. But this looks like it  
 21 kind of made it -- the other one would get goo  
 22 from your gloves and stuff on it. But that's  
 23 what it looks like, he's indicating that -- but  
 24 I'm assuming that this is probably the  
 25 northwest corner (indicating).

Page 61

1 Q. You're marking on there NW?  
 2 A. This was the first -- the  
 3 northwest corner is the way that these were  
 4 laid out.  
 5 Q. So that was the northwest corner  
 6 of that particular cell?  
 7 A. Right.  
 8 Q. Were the cells square?  
 9 A. Yes. Yes, they were square.  
 10 Q. So this document was actually like  
 11 a map where the actual barrels were indicated  
 12 in the same position that they were laid in the  
 13 cell?  
 14 A. That's correct.  
 15 Q. Now, you had testified earlier  
 16 that polyol was poured in there around the  
 17 edges of the drums in the first two cells?  
 18 A. Now, wait. I think the second  
 19 cell they might have had some rusty paint  
 20 sludge drums that they took the lid off and  
 21 dumped because the drum had been setting around  
 22 and was rusting out and wasn't, you know,  
 23 couldn't do much with it.  
 24 Q. So they took the lid off and  
 25 poured the content of the drums directly into

Page 62

1 the cell?  
 2 A. Yes.  
 3 Q. And you think that was the second  
 4 cell that they filled?  
 5 A. That they wound up with paint  
 6 sludge in it because what was it, it was --  
 7 gosh. The plant up in Troy, they had a bunch  
 8 of drums that they had sitting out behind their  
 9 plant that they had been putting paint sludge  
 10 in.  
 11 Q. What company was that?  
 12 A. Gosh.  
 13 Q. Was it a big company or small  
 14 company?  
 15 A. It was a pretty good sized  
 16 building. It was across -- Copeland was on the  
 17 east side of the highway and it was off on --  
 18 back about a couple of blocks off of 75.  
 19 Trying to think. Stolle. Stolle Corporation.  
 20 Stolle. Stolle.  
 21 Q. Stolle?  
 22 A. Yeah. And they had a bunch of  
 23 paint sludge that they had cleaned out and put  
 24 in drums and just -- because we had looked at  
 25 them a year earlier and they didn't want to pay

Page 63

1 the price. They said well, we'll see somebody  
 2 else that will dispose of them cheaper and they  
 3 just set out there until they got rusty and  
 4 started leaking so --  
 5 Q. How many drums were there if you  
 6 can estimate? Was it more than --  
 7 A. I would say probably eighty drums  
 8 maybe because there was two truckloads that  
 9 they picked up, Stolle Corporation.  
 10 Q. And did all of those eighty drums  
 11 go into the same cell?  
 12 A. As far as I know.  
 13 Q. And your recollection of the rusty  
 14 drums were the lids were taken off, would that  
 15 have been all eighty or all of the rusty drums  
 16 or just some of them?  
 17 A. It was most of them because the  
 18 bottom of the drum, a lot of them when you  
 19 started to go like that (indicating), you  
 20 didn't have to take the lid off.  
 21 Q. It just fell apart?  
 22 A. That's right. And went down in  
 23 the cell.  
 24 Q. So they just let the contents pour  
 25 directly into the cell?

Page 64

1 A. Yeah.  
 2 Q. Do you know if that ever happened  
 3 at any other times with paint sludge?  
 4 A. I don't remember another batch  
 5 being that bad.  
 6 Q. I would like to figure out exactly  
 7 which cell it was based on the --  
 8 A. Okay. I didn't --  
 9 Q. -- photograph -- let me just  
 10 finish the question. Let me just ask you a  
 11 question and then you can answer it for me. We  
 12 agreed that the northwest corner of the diagram  
 13 which is Exhibit 3 is where you wrote the words  
 14 first cell with a little arrow here?  
 15 A. Yeah.  
 16 Q. And then we agreed that the corner  
 17 of the property that's at the northwest corner  
 18 is where you have the little one on Exhibit 2?  
 19 A. Um-hum. And the second --  
 20 Q. Then would you say the second  
 21 one --  
 22 A. Was right next to it.  
 23 Q. -- which is right next to it would  
 24 have been this one that I'm pointing to here  
 25 that has this as B-1 on the diagram?

Page 65

1 A. Correct.  
 2 Q. Let me put a little star there  
 3 where that one is. So it looks as though it  
 4 would have gone A-1, B-1, C-1, D-1, E-1?  
 5 A. That was the plan.  
 6 Q. Is that what you remember?  
 7 A. Yes.  
 8 Q. So this way (indicating). Okay.  
 9 So then that second cell where you recalled the  
 10 paint sludge from the rusty drums being dumped  
 11 in, would that have been B-1?  
 12 A. Correct. That's the one I  
 13 remember, yeah. They were going to try to bury  
 14 them, but the drums were collapsing and coming  
 15 apart.  
 16 MS. WOLFE: I'm going to have the  
 17 court reporter mark another exhibit and then we'll  
 18 continue.  
 19 (Thereupon, Plaintiff's Exhibit 5 was  
 20 marked for purposes of identification.)  
 21 Q. Handing you what has just been  
 22 marked as Hill Exhibit 5 for identification  
 23 purposes, would you please take a look at this  
 24 document which indicates that it is the cell  
 25 report for cell B-1?

Page 66

1 A. Yes.  
 2 Q. And you believe that was the  
 3 second cell to be --  
 4 A. Right.  
 5 Q. -- completed?  
 6 A. Yes.  
 7 Q. If you turn to -- let's see. The  
 8 fourth page of this stapled document, would you  
 9 look at the fourth page, Mr. Hill -- yeah, it's  
 10 the fifth page actually. On the upper  
 11 right-hand corner it says -- it has some words  
 12 handwritten in, do you see that, the upper  
 13 right? I think you might have gone one page  
 14 too far. Why don't you flip back a page.  
 15 There you go. The upper right-hand corner  
 16 looks like it says bulk, twenty-five thousand  
 17 and then it says something else that might be A  
 18 S H water. Do you know what that says?  
 19 A. Asbestos water.  
 20 Q. Is that asbestos water?  
 21 A. Yes, that's from Inland. When  
 22 they grind the brake shoes to size to make  
 23 brake pads on the shoes at Inland, they have a  
 24 scrubber that sprays water to filter all the  
 25 asbestos out of it and then it's asbestos water

Page 67

1 slurry. It's as dry as they can get it and we  
 2 would suck it up and then back the truck up and  
 3 blow that in. I forgot about the asbestos  
 4 water.  
 5 Q. So you have a specific  
 6 recollection of bulk asbestos water being  
 7 blown --  
 8 A. Yes.  
 9 Q. -- into the cells?  
 10 A. Right. They sucked it up with a  
 11 vacuum truck and then drove out there and  
 12 dumped the -- opened the valve on the back of  
 13 it and poured it in after the cell was full  
 14 enough that they would go down in between the  
 15 barrels.  
 16 Q. Did that happen on more than one  
 17 cell?  
 18 A. That's the only cell I remember  
 19 seeing.  
 20 Q. Do you remember it specifically  
 21 happening with respect to cell B-1?  
 22 A. Yes.  
 23 Q. And you don't think it was in any  
 24 other cells?  
 25 A. I didn't see any put in any other

Page 68

1 cells. That latex is -- now, that's some of  
 2 that paint sludge.  
 3 Q. And so where it says ten thousand  
 4 latex, that was the paint sludge we were  
 5 talking about earlier from the rusty cans --  
 6 rusty drums?  
 7 A. Part of it. And they might  
 8 possibly have put it from another customer. I  
 9 don't remember, but I do remember the paint  
 10 sludge from Stolle Corporation, latex paint  
 11 sludge.  
 12 Q. If it was eighty drums and they  
 13 were fifty-five gallon drums, that would be  
 14 forty-four hundred total gallons, so do you  
 15 know where the ten thousand that -- gallon  
 16 figure on this cell report would have come  
 17 from? You think there was something else in  
 18 there that was also latex?  
 19 A. Most of the latex glue that we got  
 20 from Inland was in drums. Okay? Now, see,  
 21 it's showing that these drums of latex glue and  
 22 asbestos water were in drums, but as best I  
 23 remember it was dumped in bulk, especially the  
 24 rusty drums from Stolle Corporation. They  
 25 weren't intact enough to bury in the drums and

Page 69

1 that was dumped around it. Now, the volume, I  
 2 don't know where that came from. But it was  
 3 dumped in after we had the cell almost full.  
 4 Q. The rusty paint drums that we were  
 5 talking about, do you think that that came from  
 6 any of the generators that are identified on  
 7 the front of the cell report for B-1?  
 8 A. No, I don't see it.  
 9 Q. If material was brought into the  
 10 site in a drum and then it was opened up and  
 11 poured into the cell, would the material be  
 12 recorded based on the number of drums on the  
 13 cell report, would it be included in the drum  
 14 total, if you know?  
 15 A. I don't recall. It kind of looks  
 16 like it may have been, but the volumes don't  
 17 match up.  
 18 Q. But you don't know whether the  
 19 bulk material identified on the fifth page is  
 20 some of the same material identified in this  
 21 total?  
 22 A. No, I don't. You would have to  
 23 count up the drums to get a total to see if it  
 24 matches up.  
 25 Q. Do you remember what kind of

Page 70

1 paperwork was used to keep track of bulk  
 2 material that came in in tankers?  
 3 A. Other than -- it would have had to  
 4 have been each driver would make a log of what  
 5 he had picked up from the customer and he'd  
 6 give that -- gosh, can't think of the kid's  
 7 name that was the accountant, but he would log  
 8 it down that he picked up so many gallons of  
 9 whatever from the customer and then they would  
 10 figure out, you know, he would look and see  
 11 what the charge was and write out the billing  
 12 and whatever was done with it, if it was sent  
 13 to Bay City or put in the drum storage area --  
 14 he had a spreadsheet that he listed what had  
 15 come in on this truckload and from what  
 16 customer.  
 17 Q. That was the accountant that kept  
 18 track of it?  
 19 A. Yes.  
 20 Q. He was an on-site accountant?  
 21 A. Yeah. He did -- he didn't do  
 22 the -- well, he filled out timecards on the  
 23 hourly people and turned them in to Danis which  
 24 cut the checks and he kept track of the stuff  
 25 to send in for billing to bill the customers.

Page 71

1 Q. Mr. Hill, do you want to take a  
 2 break for a few minutes? We've been going for  
 3 a while now.  
 4 A. Well, if you do, then I'll have to  
 5 leave shortly. I have got to be back in Xenia  
 6 about 4:00.  
 7 Q. I'm not sure we're going to be  
 8 done by then. But we won't take a break then.  
 9 We'll just keep going and see, but I can't  
 10 guarantee that we will be done.  
 11 So you said earlier that you  
 12 remember asbestos water being picked up from  
 13 Inland?  
 14 A. Right, or Vandalia.  
 15 Q. Do you remember any other  
 16 generators of asbestos water?  
 17 A. No, nobody else made -- it's just  
 18 the scrubber waste from -- it used to be dry  
 19 and they would just dump it in a landfill and  
 20 bury it, but that's pretty hazardous because it  
 21 will blow around and everything and so they  
 22 started using a water scrubber and then we  
 23 would pick up the slurry in covered roll-ons  
 24 and a vacuum truck. We would come up and open  
 25 up the hatch and suck it out and then take it

Page 72

1 down and we wouldn't pick it up until we were  
 2 ready to dump it because we didn't have any  
 3 place to store that stuff. Once you got it out  
 4 it would settle and then you couldn't pump it  
 5 or anything.  
 6 Q. So how many occasions do you  
 7 remember doing this? Was it a regular thing?  
 8 A. I'm not for sure how long it took  
 9 to fill up the hopper over there, depending on  
 10 what their production schedule is, how much  
 11 they were running, but it was -- it was like  
 12 every two or three weeks they would -- seems to  
 13 me, or two weeks to a month to get it full and  
 14 then we would pick it up when we had enough  
 15 drums in the cell to where they could just dump  
 16 it in without -- because if it floods up over  
 17 the top of the cell, you can't finish filling  
 18 it.  
 19 Q. Do you remember what size truck  
 20 was used to pick it up?  
 21 A. About a six thousand gallon  
 22 tanker, vacuum truck.  
 23 Q. Do you remember any other bulk  
 24 waste that was picked up in a tanker and then  
 25 brought directly to the site and poured into

Page 73

1 the cells like the asbestos water?  
 2 A. No, because they were putting the  
 3 polyol in drums.  
 4 Q. The polyol was never handled in  
 5 that fashion?  
 6 A. No, it was never bulk because it  
 7 would take them several days to fill drums.  
 8 When they are making the foam cushions, you  
 9 have polyol and TDI in the machine and at the  
 10 end of their shift whatever -- four or five  
 11 gallons of whatever it was got dumped out of  
 12 the machine into the drum. The TDI they would  
 13 put in a drum and rinse everything out and that  
 14 went in the drum and then the polyol.  
 15 Q. So when polyol was poured from the  
 16 drums into the cells in those early cells, how  
 17 many gallons would be treated in that fashion?  
 18 A. Gosh, there would be over two  
 19 hundred barrels.  
 20 Q. You mean empty barrels at the end  
 21 to dispose of?  
 22 A. Yeah, because they would have to  
 23 put them -- let's see. This is the pond  
 24 (indicating) just southeast of the drum storage  
 25 area and then they would wind up out in -- kind

Page 74

1 of south of the boiler room they would wind up  
 2 stacking all these drums, empty ones for  
 3 Cincinnati Barrel to pick up. They would take  
 4 most of the drums that they could clean up that  
 5 were -- check them over and if they didn't have  
 6 any holes or things that they could clean up,  
 7 they would take them back down to Cincinnati to  
 8 reprocess and the bad ones had to be smashed  
 9 and put in the landfill.  
 10 Q. In the barrelfill or in the solid  
 11 waste landfill?  
 12 A. I'm not sure. Because there was a  
 13 stack of them down there. I'm not sure if they  
 14 laid them on top or put them in the other  
 15 landfill. I really don't remember. There was  
 16 a whole bunch of empty drums when I left.  
 17 MS. WOLFE: I'm just going to take a  
 18 minute to ask the reporter to mark another  
 19 exhibit.  
 20 (Thereupon, Plaintiff's Exhibit 6 was  
 21 marked for purposes of identification.)  
 22 Q. I'm handing you what has just been  
 23 marked as Hill Exhibit 6 for identification  
 24 purposes and this is the solid report for cell  
 25 A-2. Have you seen this before?

Page 75

1 A. I'm not sure of that one.  
 2 Q. If you turn to the fourth page of  
 3 the exhibit, at the top right where it says  
 4 bulk sludges --  
 5 A. Must have gone too far again.  
 6 Q. Right there (indicating). Do you  
 7 see some handwriting there?  
 8 A. Yes.  
 9 Q. Where it says it looks like it  
 10 says ten thousand?  
 11 A. Ten thousand gallons.  
 12 Q. And if you continue to page  
 13 through in the same area, you will see it says  
 14 ten thousand dollars on the next page.  
 15 A. Yes.  
 16 Q. And then it says twelve.  
 17 A. Twelve thousand.  
 18 Q. And then it says ten thousand.  
 19 A. Ten thousand.  
 20 Q. Ten thousand, ten thousand and ten  
 21 thousand. So we have seven pages, six of them  
 22 say ten thousand and one of them says twelve  
 23 thousand.  
 24 A. Okay.  
 25 Q. Now, do you know what those

Page 76

1 figures indicate?  
 2 A. No.  
 3 Q. Do you remember any cell where  
 4 that amount of polyol was dumped in bulk in the  
 5 cell?  
 6 A. That's -- there wouldn't be any  
 7 room for drums. They couldn't have put ten  
 8 thousand gallons of sludge in each layer. It  
 9 would have filled up and spilled out. There's  
 10 not that much volume. I think we figured  
 11 somewhere between twenty and twenty-five  
 12 gallons should have pretty much filled it up.  
 13 If you had all the drums in there, you didn't  
 14 have enough volume to put a hundred thousand  
 15 gallons of sludge in there.  
 16 Q. You figured that the most bulk you  
 17 would put in between the drums was twenty  
 18 thousand to twenty-five thousand gallons, is  
 19 that what you're saying, if you know? You  
 20 don't have to guess.  
 21 A. Well, I would have to -- because  
 22 the first cell according to the log sheet, it  
 23 looked like there was about thirty thousand  
 24 gallons. No, that was the second cell. And it  
 25 was up -- it was up to at least the third or

Page 77

1 second from the top layer of drums, the best I  
 2 remember.  
 3 Q. You're talking about cell B-1 that  
 4 had one thousand nine hundred and eighty drums?  
 5 A. Yes.  
 6 Q. And if those were each fifty-five  
 7 gallon drums, then that's a hundred and eight  
 8 thousand nine hundred gallons, although they  
 9 are in drums so there's going to be some empty  
 10 space?  
 11 A. Yeah, around it, but the first  
 12 cells, there wasn't a lot of -- now, if they  
 13 didn't put as many drums and didn't get, you  
 14 know -- if they had more room around there and  
 15 didn't put as many drums in it, then you could  
 16 put more bulk.  
 17 Q. Do you remember with those early  
 18 cells whether the drums were packed tightly  
 19 together?  
 20 A. Pretty much.  
 21 Q. How much space would there be from  
 22 the end of the row of drums until the dirt wall  
 23 at the edge of the cell?  
 24 A. Okay. With the drum laying down  
 25 horizontal, the ends were maybe --

Page 78

1 Q. Half a foot, ten inches?  
 2 A. Yeah, maybe that much. It was  
 3 almost against the sides. We were trying to  
 4 get as many drums in there as we could and he  
 5 dug the cell to -- as close in dimension as he  
 6 could and tried to get the walls straight and  
 7 so there wasn't a lot of empty place to put  
 8 anything.  
 9 Q. But you remember being -- putting  
 10 polyol in the first two cells in that narrow  
 11 space?  
 12 A. Right.  
 13 Q. Between the drums and the wall?  
 14 A. Right. And it was up at least to  
 15 the third -- there's two layers of drums still  
 16 that weren't covered. We didn't run it up to  
 17 the top.  
 18 Q. How many drums do you think it  
 19 took to empty to fill the space that remained  
 20 in that cell after the drums were put in?  
 21 A. Let's see. Gosh, seemed to me  
 22 like it was over two hundred, two hundred  
 23 twenty drums of polyol.  
 24 (Pause in proceedings.)  
 25 THE WITNESS: But the cells that are

Page 79

1 filled up later, I don't know how close they got.  
 2 Q. So with regard to Exhibit 6, do  
 3 you think -- do you have any recollection of  
 4 ten thousand gallons of polyol or of any bulk  
 5 waste being put in each level of a cell that  
 6 had seven levels?  
 7 A. I tend to guess that -- because  
 8 they would fill the cell almost half full  
 9 before we ever added -- when I was there before  
 10 we added any bulk because otherwise you would  
 11 be, you know, walking in the stuff and you  
 12 couldn't handle any drums if they skidded  
 13 around because I'm not sure if they meant that  
 14 that's what they put in the cell or -- it just  
 15 doesn't make sense to have that much each  
 16 level. Now, if they came back later and did  
 17 it -- that's a lot of bulk.  
 18 Q. Were the cell logs usually  
 19 accurate?  
 20 A. At -- well, that's what I was  
 21 saying is what I remember seeing had smudges  
 22 and -- you know, when you're writing and you  
 23 get stuff on, goo on your hands, and this looks  
 24 to me like somebody went back to the office,  
 25 took his original copy and recopied it to make

Page 80

1 it legible.  
 2 Q. So you actually saw those  
 3 initial --  
 4 A. Yeah.  
 5 Q. -- logs and you saw that they were  
 6 smudged and dirty?  
 7 A. Right. And that's what I'm  
 8 wondering, you know, somebody made it legible  
 9 and clean because when you're out there rolling  
 10 drums off the stuff you get -- it was on a  
 11 clipboard and they would get dog-eared.  
 12 Q. Was it always the same person  
 13 unloading the drums that would mark down on the  
 14 clipboard the drum locations or was there ever  
 15 a different person doing it?  
 16 A. Okay. Charlie Goings started  
 17 doing that, but in running the backhoe he  
 18 couldn't verify -- you couldn't see the drum  
 19 and so the guy on the ground, I think it was  
 20 his son Rick that was helping him, would -- was  
 21 keeping the log and it was kept on a clipboard  
 22 and that's what I'm saying, he was marking them  
 23 but now this one looks kind of close, that it  
 24 wasn't identified other than the row, the layer  
 25 and it looks like -- see, something caved in

Page 81

1 and it looks like those drums weren't there.  
 2 Q. You're looking at level four for  
 3 Exhibit 6 which is cell A-2?  
 4 A. Right. And this probably -- well,  
 5 I don't know. That's a good question.  
 6 Q. So when you count the number of  
 7 horizontal marks across, is that actually the  
 8 number of drums in the row?  
 9 A. Well, should be, but if the hole  
 10 tapered, then this row would not exist and  
 11 maybe this row didn't exist because of cave-ins  
 12 or whatever (indicating).  
 13 Q. You mean maybe the first row would  
 14 have more drums in it than the subsequent  
 15 layers, the bottom layer would have the most  
 16 drums or the least?  
 17 A. The least.  
 18 Q. The least?  
 19 A. If you do a super good job of  
 20 square, then you would have the same number in  
 21 every cell, but if you have a cave-in and you  
 22 have already got drums, you can't go digging  
 23 because you will hit the drums and break them,  
 24 so there would be places that there really --  
 25 they were going to put drums but they couldn't



Page 82

1 because it wasn't big enough.  
 2 Q. Were there a lot of cave-ins?  
 3 A. If you weren't careful where you  
 4 unloaded the drums beside the cell, you would  
 5 sit them down too close and you would cave in  
 6 part of the wall.  
 7 Q. Now, did they use a dirt ramp to  
 8 drive into the cell?  
 9 A. No.  
 10 Q. Did that happen later on at that  
 11 time that you know of?  
 12 A. I didn't -- it was all set in  
 13 there with the backhoe with this angle iron  
 14 framework that holds two drums at a time.  
 15 Q. How deep were the cells?  
 16 A. Probably no more than twenty foot  
 17 because it's all that a backhoe could reach.  
 18 Q. So the backhoe had an arm that  
 19 could actually reach down twenty foot and lay  
 20 the drums down?  
 21 A. Right, fifteen, twenty foot, yeah.  
 22 Q. You don't remember any time that a  
 23 dirt ramp was used so they could drive the  
 24 backhoe into the cell?  
 25 A. No.

Page 83

1 Q. And throughout the time that you  
 2 worked there, did you always observe the  
 3 placement of drums in the cells?  
 4 A. I would on my rounds checking on  
 5 the oil process, what the customer -- what they  
 6 are picking up, drivers are picking up, making  
 7 sure whether to unload it and stuff, I would go  
 8 up there and see how they were coming, just  
 9 kind of make sure they were doing the safe way  
 10 and stuff, but I didn't -- there was nobody  
 11 except Charlie Goings and whoever was helping  
 12 were picking up the drums and unloading them.  
 13 Q. Do you remember any waste in  
 14 buckets being placed in the cells?  
 15 A. Occasionally we would get waste in  
 16 five gallon containers, but as far as I know  
 17 they didn't bury any of them.  
 18 Q. What did they do with them?  
 19 A. Usually you put them together in a  
 20 drum.  
 21 Q. Do you know whether the empty  
 22 buckets might have been thrown in the cells?  
 23 A. I have no idea. I don't recall  
 24 that.  
 25 Q. The five gallon bucket that you

Page 84

1 remember --  
 2 A. In fact, I don't remember them  
 3 burying anything out of five gallon buckets.  
 4 Q. Do you remember what came in those  
 5 five gallon buckets?  
 6 A. We got some that had grease, wax,  
 7 some paint, paint sludge, used paint, paint  
 8 sludge.  
 9 Q. Do you know where it came from?  
 10 A. Paint sludge mostly was Inland.  
 11 Worthington Cylinder had some paint sludge.  
 12 The Stolle Corporation had paint sludge. Those  
 13 were the bigger producers. Procter & Gamble a  
 14 lot of times would have like you were talking  
 15 about, toothpaste, shampoo, their test samples,  
 16 they would be thrown in a five gallon bucket  
 17 when the lab got done with them. They would  
 18 pull one out for quality control and check it  
 19 to do their test and then pitch it in a bucket  
 20 because we would usually dump them together  
 21 into a five gallon drum.  
 22 Q. Fifty-five gallon drum, you mean?  
 23 A. Yeah, fifty-five gallon drum from  
 24 a five gallon.  
 25 Q. Did that happen often that you

Page 85

1 would get that from Procter & Gamble?  
 2 A. I'm guessing every four to six  
 3 months they would send a state bed truck down  
 4 there from the testing lab. It wasn't a large  
 5 quantity. They would have fabric softener,  
 6 detergent, toothpaste, Crest, and shampoo.  
 7 Q. So would those buckets be filled  
 8 with a mixture of different miscellaneous  
 9 substances?  
 10 A. No, they pretty much sorted it  
 11 out.  
 12 Q. So there might be a bucket of  
 13 toothpaste samples?  
 14 A. Toothpaste samples, another bucket  
 15 of shampoo, another bucket of fabric softener,  
 16 another bucket of detergent.  
 17 Q. Is there any other generator that  
 18 would send over five gallon buckets that you  
 19 recall?  
 20 A. I don't remember anybody else.  
 21 Q. Do you remember any latex glue in  
 22 bulk being disposed of in the cells?  
 23 A. When Inland makes their seat  
 24 cushions, they will mold this piece and this  
 25 piece and then they put this latex glue to glue

Page 86

1 the rounded piece to the straight pieces to  
 2 make seats and that was normally in fifty-five  
 3 gallon drums.  
 4 Q. Do you remember ever emptying  
 5 drums of latex glue in the same way you emptied  
 6 drums of polyol into the cell?  
 7 A. I think so. I think so. It was  
 8 drummed over. I don't recall how many drums,  
 9 but it was several that were poured in I think  
 10 the first or second cell.  
 11 Q. First cell was A-2 -- or the first  
 12 cell was A-1 and the second B-2. B-1 was the  
 13 one where you said there was some paint from  
 14 the rusty drums?  
 15 A. Yeah, and they poured some glues.  
 16 Well, they say it was in drums.  
 17 Q. But this is the one we saw the  
 18 note in the corner that said ten thousand  
 19 latex?  
 20 A. That could have been -- I don't  
 21 know.  
 22 Q. You testified it could have been  
 23 the paint from the rusty drums, but now you're  
 24 saying it could have been glue?  
 25 A. Well, they poured some glue. Man,

Page 87

1 I couldn't swear if it was the first or second  
 2 cell. The latex from the paint was in the  
 3 second cell. I remember that. And they could  
 4 have poured latex glue in with it if the volume  
 5 adds up.  
 6 Q. What would you expect the volume  
 7 to have been from pouring latex glue in? What  
 8 do you remember that volume to be?  
 9 A. It wasn't two hundred drums. It  
 10 was less than that. Somewhere around a hundred  
 11 and fifty, a hundred and sixty, something like  
 12 that, drums that were down in the storage area  
 13 and they decided to put that in there.  
 14 Q. And you remember that as being one  
 15 of the early cells? Could it have been maybe  
 16 not one of the first few cells, but later on in  
 17 1977? Do you remember the time frame of that?  
 18 A. No. It was one of the earlier  
 19 cells.  
 20 Q. There was a cell in May of '77,  
 21 cell A-3, that had some latex glue but that was  
 22 identified as Roberts glue. Could that be what  
 23 you're thinking of?  
 24 A. Okay. That might have been, yeah.  
 25 Q. So you're not sure whether it was

Page 88

1 from Inland or not?  
 2 A. Inland and Roberts.  
 3 Q. It's okay if you don't remember.  
 4 A. But it was -- yeah, it was in  
 5 drums and it wasn't -- it was like a hundred  
 6 and fifty, a hundred and sixty, something like  
 7 that, drums. It wasn't a huge amount.  
 8 Q. Do you remember any bulk that  
 9 would have been listed on the cell report as in  
 10 tubs, tubs of some kind of bulk sludge? Do you  
 11 have any idea what tub would refer to?  
 12 A. I don't know if that's what they  
 13 are calling the -- it's like a thirty gallon --  
 14 it's about half a fifty-five gallon drum. Now,  
 15 we've got some of those, but I don't  
 16 remember -- I didn't know they buried any of  
 17 those because it would mess up your spacing.  
 18 Q. Where did those come from, those  
 19 smaller tubs that you're talking about?  
 20 A. It's just one customer.  
 21 Q. If I go through a list of  
 22 customers, do you think that would help you  
 23 remember?  
 24 A. It might.  
 25 Q. Well, let's give it a try. Can't

Page 89

1 hurt, right?  
 2 A. It's been a day or two.  
 3 Q. Well, if you don't remember,  
 4 that's perfectly fine. I don't want you to try  
 5 to --  
 6 A. Yeah, just some of the little  
 7 details.  
 8 Q. Well, do you remember -- I'll just  
 9 name the generator and you can tell me if you  
 10 remember what kind of waste they used to  
 11 generate. Okay?  
 12 A. Okay.  
 13 Q. Astro Container?  
 14 A. It was -- I think it was glue.  
 15 Q. Was it in bulk?  
 16 A. It wasn't a big one, I don't  
 17 think. It was a small quantity, just a few  
 18 drums, I believe.  
 19 Q. Do you remember waste from  
 20 Systech?  
 21 A. I think the waste from Systech  
 22 that we got was -- occasionally we went down  
 23 there when they would get overloaded with  
 24 pickle liquor or sulfuric acid that they would  
 25 dissolve to rust off iron from AK Steel or it

Page 90

1 was Armco at the time in Newport, Kentucky,  
 2 Inland Steel. We would get some of that  
 3 sometimes when Systech would get overloaded  
 4 with too much acid waste and they would use  
 5 that to split the oil and water. I think that  
 6 was mostly the only thing we got from Systech.  
 7 Q. Was there anything that you got  
 8 from Systech that went into the barreldfill?  
 9 A. Paint sludge when they were --  
 10 from their solvent reclamation process. They  
 11 distilled the solvents out of the paint sludge  
 12 and then we would water paint sludge. That's  
 13 the only thing I remember in barrels.  
 14 Q. Is that what would be referred to  
 15 as stillbottoms?  
 16 A. Yes, that's the sludge that come  
 17 out of the still.  
 18 Q. Did that ever come in barrels?  
 19 A. Yes.  
 20 Q. Do you remember it ever coming in  
 21 anything that would be recorded as a box on the  
 22 cell log?  
 23 A. I don't know, unless they figured  
 24 out -- later on figured out a way of driving it  
 25 out where they could get the mostly just dry

Page 91

1 sludge. It was little -- had some water in it,  
 2 but if they got -- if you do a real good job,  
 3 then you opened up the bottom of the still and  
 4 you get this big glob of goo out of there.  
 5 Q. Do you remember any other  
 6 generator of stillbottoms besides Systech?  
 7 A. No, I don't remember anybody else  
 8 reclaiming anything.  
 9 Q. Do you remember how often you  
 10 would get Systech stillbottoms?  
 11 A. No, because they would kind of  
 12 save it up until they had a bunch of it or  
 13 something. That way they cut their costs so  
 14 you made one trip and picked up the whole batch  
 15 out of there.  
 16 Q. So each time it was picked up from  
 17 Systech, about how much was in that load, if  
 18 you remember?  
 19 A. It was -- I can't remember if they  
 20 did it with the semi trailer truck or the small  
 21 state bed truck about half as big as I -- I  
 22 don't think it was a huge quantity. Came from  
 23 the Franklin plant where they had the still and  
 24 they would steam distill the sludge or solids,  
 25 waste solids, and you would get all the paint,

Page 92

1 the dried paint and everything. It was pretty  
 2 inert.  
 3 Q. Was there more than one occasion  
 4 when stillbottoms were picked up from Systech  
 5 and brought to Tremont?  
 6 A. I think so.  
 7 Q. You think it was more than five  
 8 times while you were there?  
 9 A. Oh, no.  
 10 Q. It was less than five times?  
 11 A. Yes.  
 12 Q. Do you think it was somewhere  
 13 between one and five times?  
 14 A. It may have been two because they  
 15 would -- like I say, they would save it until  
 16 they had pretty close to a truckfull because  
 17 your pick up and delivery charge was the same  
 18 whether you picked up one drum or fifteen so  
 19 they would wait until they had pretty much a  
 20 truckfull. I wasn't aware of it being in boxes  
 21 though.  
 22 Q. Do you know if it was ever picked  
 23 up in lugger boxes or in roll-off boxes?  
 24 A. I'm not aware of that. They  
 25 probably could. I think there was -- well,

Page 93

1 they would have had to dumped it out of a still  
 2 and poured it in there to get it in there.  
 3 Q. Did you ever go out to Systech to  
 4 pick up waste?  
 5 A. No.  
 6 Q. Do you know whether the waste, the  
 7 stillbottoms we're talking about, were dumped  
 8 into drums at Systech?  
 9 A. Yes, that's the way that I  
 10 remember it.  
 11 Q. You remember it --  
 12 A. You would get an open-head drum  
 13 that was sealed up.  
 14 Q. And what did the stillbottoms  
 15 consist of as far as their chemical component,  
 16 do you know?  
 17 A. Mostly dried paint. They would  
 18 cook it pretty good but if they put it in a  
 19 roll-on and kept the roll-on covered, it  
 20 probably would dry out to where it's not much  
 21 of a sludge.  
 22 Q. Do you know whether that was done?  
 23 A. No. You said that they were  
 24 putting in it roll-ons and that sounds like a  
 25 good process to let it finish drying.

Page 94

1 Q. So that would make sense to you if  
 2 they did do that?  
 3 A. Yes. Because it's primarily dried  
 4 paint or glue. Whatever they were using the  
 5 solvent for, it would be in there. There would  
 6 probably be some synthetic rubber if they were  
 7 reclaiming the toluene from Inland because they  
 8 used it to clean the neoprene off of motor  
 9 mounts and if they got a bad cast, they would  
 10 cut the neoprene off and soak it in the toluene  
 11 to get rid of all the rubber. And then once it  
 12 got pretty saturated, then they would dispose  
 13 of it. They called it neoprene solid and that  
 14 would be taken to Systech and it was cheaper  
 15 for them to recover it than for us to pay the  
 16 incinerator. So I think that they were -- that  
 17 neoprene solvent was taken to Systech for  
 18 recovery. They were talking about doing that  
 19 and I said that sounds like a good idea instead  
 20 of burning it, recover it and sell it back to  
 21 Inland. Tony Cowen was -- he was pretty much  
 22 running that solid recovery.  
 23 Q. At Systech?  
 24 A. Yes. He was pretty successful at  
 25 it. He had the solvent recovery plant in

Page 95

1 Beavercreek, Patterson and Grange Hall. I  
 2 called it a barrel factory but that's what it  
 3 was doing, recovering solvent.  
 4 Q. Do you know of any waste that was  
 5 hauled to Tremont in a lugger box or a roll-off  
 6 box for disposal in the cells?  
 7 A. If there was, it was in drums. I  
 8 don't recall anything bulk that way. Roll-ons,  
 9 you could stack drums up too high, you know, in  
 10 a big one and if the company had roll-ons, they  
 11 would do it for -- IWD Liquid Waste didn't have  
 12 any roll-on trucks so it had to be either an  
 13 IWD Solid Waste or somebody else would have had  
 14 to brought it in because they didn't have any  
 15 roll-on trucks, or at least when I was there  
 16 they didn't.  
 17 Q. I would like to ask you some  
 18 questions about the oil reclamation facility  
 19 that was at the Tremont site. What was your  
 20 responsibility as far as that process went?  
 21 A. To check the waste to make sure  
 22 that it was just oil/water.  
 23 Q. You mean the incoming waste?  
 24 A. Yes. Before they would pump it  
 25 into the process they would empty a truck

Page 96

1 into -- well, it was a modified roll-on that  
 2 was welded shut and then they would pump it,  
 3 but they would check it to see what was in  
 4 there and try to leave -- let the trash sit out  
 5 and make sure it was oil/water, not oil/water  
 6 solvent. If it was, then you had to pump it  
 7 back into the truck for incineration.  
 8 Q. Now, did it matter how much  
 9 solvent was in with it as far as whether it  
 10 would be acceptable or not acceptable?  
 11 A. Well, if it was less than I would  
 12 say four or five percent, if it was less than  
 13 that, or it was just a little solid in there,  
 14 then you could process -- if you had too much  
 15 solvent, then your oil/water split won't work.  
 16 Q. So some oil/water waste with small  
 17 amounts of solvent were processed at the site?  
 18 A. Yeah.  
 19 Q. And can you quantify the  
 20 proportion of the oil/water processing that had  
 21 some solvents in it versus the waste that  
 22 didn't have solvents in it? Let me ask it a  
 23 different way. Was it very rare that that  
 24 would happen?  
 25 A. Yeah. Occasionally you would get

Page 97

1 where somebody admits something else in there  
 2 but if you have got a chlorinated solvent in  
 3 there, it wouldn't all go away, you would still  
 4 have -- it would keep the oil in suspension and  
 5 it wouldn't work. You could try to split it  
 6 and it wouldn't split and some of the  
 7 synthetics, you know, it would come in and they  
 8 said it was oil/water, well, it was synthetic  
 9 oil, coolant that they used on the tools and it  
 10 wouldn't split so they would have to pump that  
 11 back out and haul it off for other disposal.  
 12 Q. Is that at percent levels of  
 13 chlorinated solvent?  
 14 A. It might have been. It could have  
 15 been acetone. If it's -- you can catch a  
 16 sample, they would bring it in to the lab and  
 17 we would check it to see if -- put some acid in  
 18 it and see -- do a jar test to see if it would  
 19 separate. And if it wouldn't, then we would  
 20 try to do another GC or some -- if you couldn't  
 21 identify the solvent by smell or whatever, you  
 22 could see it's going to have to be handled as  
 23 a -- well, a lot of the water that you  
 24 incinerate had almost the same BTU value as  
 25 just the solvent, there was so much of it in

Page 98

1 there, but most of the oil/water is from a  
 2 machining operation and it didn't have a lot of  
 3 solvent but the small generators were the  
 4 biggest problem because here's a fifty-five  
 5 gallon drum and I got this two gallons of  
 6 stuff -- oh, here we go.  
 7 Q. And they would just dump the  
 8 bucket or container, whatever it was, right  
 9 into the drum?  
 10 A. Where they were dumping all their  
 11 coolant from the tool machines and somebody had  
 12 this bucket of solvent that he was cleaning  
 13 something off and dump it in there.  
 14 Q. Now, when oil/water was picked up  
 15 from generators, were vacuum trucks used to  
 16 pick up oil/water?  
 17 A. Generally, yes.  
 18 Q. What other kind of trucks were  
 19 used?  
 20 A. If it was in fifty-five gallon  
 21 drums, they normally get pumped out, it would  
 22 be in a -- four thousand or six thousand gallon  
 23 vacuum truck. Or if there was a lot of it, it  
 24 would be done with a semi that had the pumper  
 25 on the back of it and it would be blown into a

Page 99

1 gravity bottom tank where all the stuff  
 2 would -- you just run it out into your holding  
 3 tank to see what it was.  
 4 Q. Now, if there were generators of  
 5 smaller volumes of oil/water or of coolant  
 6 waste or whatever with the end of their  
 7 manufacturing process like you were just  
 8 referring to, would that be picked up along  
 9 with other oil/water waste from other  
 10 generators and mixed together or were the  
 11 generators' wastes kept separate?  
 12 A. Normally it would be separate. I  
 13 can't think if they ever -- I think normally  
 14 they would just go to one generator and bring  
 15 it back to the plant.  
 16 Q. And once it was brought back to  
 17 the plant and it was processed, would oil/water  
 18 from different generators be mixed together in  
 19 the process?  
 20 A. After it was processed, yes. Not  
 21 usually during the process unless they were  
 22 real compatible because we had six tanks that  
 23 we could put one batch in there and get it --  
 24 if you start mixing things, then you wind up  
 25 with ten or fifteen thousand gallons of

Page 100

1 something you can't do something with. So  
 2 usually you would process one. If it went  
 3 fine, get it out of there, get the waste out of  
 4 there and then put something else in there.  
 5 You get in trouble when you start mixing things  
 6 and assuming that they are all compatible and  
 7 all this.  
 8 Q. So you processed each batch at a  
 9 time separately from the next batch?  
 10 A. Yes.  
 11 Q. And did you have to clean out the  
 12 tanks or the boxes in between each batch?  
 13 A. Well, John --  
 14 Q. Budding?  
 15 A. Yeah. He was the one that did  
 16 that.  
 17 Q. He cleaned out the tank?  
 18 A. Yeah, he ran the oil/water  
 19 separation. He was pretty conscientious and he  
 20 always -- if he smelled something funny, he'd  
 21 come and ask me what I thought it was before he  
 22 did something with it because these tanks up  
 23 here at thirty thousand gallons and you're  
 24 putting oil in there and if it doesn't smell  
 25 right or look right, then don't put it in there

Page 101

1 and ruin the whole thing so you made sure that  
 2 anything funny or unusual, he would usually  
 3 come down and ask me what I thought it was.  
 4 Q. What kind of funny or unusual  
 5 substances?  
 6 A. Oh, it would change colors.  
 7 Instead of being -- it would have a reddish  
 8 color to it or kind of -- it wouldn't look  
 9 like, you know, clear oil. Have a bluish color  
 10 if it was motor oil. Motor oil you had to  
 11 track with sodium hydroxide so you had to  
 12 process that different than you would cutting  
 13 oil. And the synthetics, that's something  
 14 else. They are -- organics are not really  
 15 boiled. It's a coolant.  
 16 Q. So after the oil and water were  
 17 separated and removed, was there something left  
 18 that was a waste product at the end of the  
 19 process?  
 20 A. Most of the time not. Most of  
 21 your sludge you get over here when you dump the  
 22 truck. Anything they picked up, trash,  
 23 whatever, would be in that preprocessing tank  
 24 and then you would suck off what you could and  
 25 then you shovel out the other stuff and put it

Page 102

1 in a drum.  
 2 Q. So you're talking about the first  
 3 tank that it would be pumped into from the  
 4 truck?  
 5 A. Right.  
 6 Q. You're calling that the  
 7 preprocessing tank?  
 8 A. Right, where you find out what you  
 9 got and then decide what to do with it.  
 10 Q. So that trash or that leftover  
 11 material, what did that consist of?  
 12 A. It was usually rags, gloves, just  
 13 trash. Grease. It would be kind of a gooey,  
 14 greasy mess, but it usually took several drums  
 15 before -- I mean, it would take quite a bit of  
 16 time before you finally got a drum full of it.  
 17 It was usually no more than three or four  
 18 gallons of sludge, junk, trash.  
 19 Q. And did you always put that in a  
 20 drum?  
 21 A. Usually.  
 22 Q. What else would you do with it  
 23 besides putting it in a drum?  
 24 A. They had a -- they finally started  
 25 putting it instead of a drum in a small like

Page 103

1 dumpster, you know, maybe a six yard -- four to  
 2 six yard dumpster because they could sit that  
 3 there instead of having to mess with drums.  
 4 Q. And then what did they do with the  
 5 dumpster when it was full?  
 6 A. I'm not real sure. They would  
 7 usually try to figure out is there anything  
 8 hazardous in there and that -- Wallis, that  
 9 was -- he was checking it for heavy metals and  
 10 stuff to see if there was any heavy metals with  
 11 the AA, anatomic absorption, and make sure that  
 12 there wasn't anything toxic in it. Run a GC  
 13 and map on it. Atomic absorption on it and  
 14 make sure there wasn't any heavy metals, and if  
 15 there wasn't -- I don't remember if they were  
 16 going to dump it or put it in drums, I really  
 17 don't remember, to bury that. I'm not sure.  
 18 Q. Did they ever bury it in the cells  
 19 without putting it in drums?  
 20 A. I don't remember. They either put  
 21 it in drums and buried it or -- may have.  
 22 Q. Either way, did it go into the  
 23 cells or do you think they took it somewhere  
 24 else? And we're still talking about the --  
 25 A. This oil, processing oil.

Page 104

1 Q. The trash from the  
 2 preprocessing --  
 3 A. Right.  
 4 Q. -- step.  
 5 A. I think it depended on what it  
 6 was. If there were heavy metals in it that  
 7 were soluble, then it had to be drummed up and  
 8 taken up to Bay City. They would have a  
 9 conveyor and they would lay the whole drum on  
 10 there and it (indicating), went to the  
 11 incinerator.  
 12 Q. At Tremont?  
 13 A. No. No.  
 14 Q. At Bay City?  
 15 A. Yeah, Bay City, Michigan. They  
 16 would incinerate just about anything.  
 17 Q. So moving on from the  
 18 preprocessing tank that we've discussed, after  
 19 the oil/water was fully separated and had gone  
 20 through all stages of that process until the  
 21 end, was there any by-product other than oil  
 22 and water that had to be disposed of at the end  
 23 of that process?  
 24 A. No. The -- well --  
 25 (Thereupon, the Court Reporter

Page 105

1 interrupted the proceedings.)  
 2 (Pause in proceedings.)  
 3 THE WITNESS: The -- we would have to  
 4 neutralize if we did an acid split where you added  
 5 sulfuric acid to it and then it separated your oil  
 6 emulsion and you would have this acid that you  
 7 would have to neutralize in the water, and if you  
 8 were processing motor oil, that was done in a  
 9 big -- one of the big tanks. You would heat it up  
 10 with sodium hydroxide in there and that would give  
 11 you -- you would separate the oil and it would  
 12 have some sludge in with the sodium hydroxide and  
 13 usually we would take the water from that process,  
 14 they would -- sodium hydroxide kind of sucks the  
 15 water out of the motor oil and then you can blend  
 16 them and neutralize it. And if there was any  
 17 solid in there that you didn't catch in the  
 18 preprocessing, that would go into the same hopper  
 19 and that was --  
 20 Q. Then what happened to those solids  
 21 that went into that hopper?  
 22 A. They would be tested for heavy  
 23 metals and any solids to see if it was inert  
 24 trash that you had or if there was anything --  
 25 any heavy metals in there, then it would have

Page 106

1 to be incinerated.  
 2 Q. Was it tested for PCB's?  
 3 A. Only the oil that we got that was  
 4 transformer oil was the only thing that we ever  
 5 checked on PCB's. When you run the GC for  
 6 chlorinated solvents, PCB's would tend to show  
 7 up a little later because it's a big heavy  
 8 molecule so it would come show up later but it  
 9 would show up as chlorinated solvents. If it  
 10 had a lot of them -- but the only one that  
 11 really had a lot of PCB's was the transformer  
 12 oil and they knew it was -- it was a PCB. It  
 13 was aerocore or something they called it and  
 14 it's chlorinated solvent so it's nonflammable.  
 15 Q. How long would it take to generate  
 16 enough of that sludge or solids in the hopper  
 17 to have to remove it from the hopper?  
 18 A. I would say it would take probably  
 19 four to six months before it would get full.  
 20 Q. Was that something that had to be  
 21 scraped out or could you pump it out?  
 22 A. No, you couldn't pump it out. You  
 23 had to dump it or pick it up and shovel it over  
 24 and take a hoe and scrape it into a drum.  
 25 Q. Did you assist with that or you

Page 107

1 just saw other people doing it?  
 2 A. Yeah, just saw them. They would  
 3 bring us a sample to test. About every so  
 4 often they would catch another sample and we  
 5 would check to see what was in the sludge and  
 6 if it looked like it was safe and inert then --  
 7 I thought they were burying them in the drums  
 8 but -- because I saw them raking it out. They  
 9 picked the hopper up with a forklift and then  
 10 tip it and take a hoe and --  
 11 Q. Scrape it into the cells?  
 12 A. No, into drums, fifty-five gallon  
 13 drums.  
 14 Q. Was there any by-product of the  
 15 oil -- oil separation process that was put in  
 16 the drums -- or in the cells of the barrelfill?  
 17 A. Not to my knowledge.  
 18 Q. But you didn't -- did you directly  
 19 work in that area of the site so that you would  
 20 have known if that has happening?  
 21 A. Probably would have seen them  
 22 taking it up there and dumping it, but I don't  
 23 recall seeing that dumped in there.  
 24 Q. Could they have pumped anything  
 25 out of that and then pumped it into the cells?

Page 108

1 A. Oh, boy. It was mostly trash,  
 2 very little water because they kept it covered  
 3 so it didn't get rainwater in it. And it  
 4 was -- there was probably some grease and oil  
 5 that was mixed in with the trash, but for the  
 6 most part it was just debris. You probably had  
 7 some oil stick to it but it wasn't other than  
 8 kind of greasy, gooey mess.  
 9 Q. Do you remember any other  
 10 generators of polyol besides Inland?  
 11 A. No. That was -- they were the  
 12 big sponge rubber thing. Now, there was some  
 13 other companies that fabricated things with  
 14 sponge rubber but it was mostly what we got  
 15 from them was adhesives where they cut it up  
 16 and glued it together and that's what they  
 17 cleaned out of their machines and stuff.  
 18 Q. Was there any cyanide waste  
 19 disposed of in that cell?  
 20 A. Oh, no, not that I know of.  
 21 Cyanide you had to haul to Preston to have it  
 22 chlorinated.  
 23 Q. Was there any waste that might  
 24 have contained any amounts of cyanide, even  
 25 trace amounts that was buried in the cells?

Page 109

1 A. If you would detect cyanide, if  
 2 any of the TDI or toluene diisocyanate, if  
 3 there was some of that that was mislabeled  
 4 polyol and got poured in there, that's the only  
 5 thing that I could think of.  
 6 Q. Do you recall that that happened  
 7 where you had TDI that was labeled as polyol?  
 8 A. At Systech, I do. Oh, man, it  
 9 made a big mess. It plugged up everything.  
 10 Q. You mean, was this waste generated  
 11 by Systech that you're referring to?  
 12 A. No, no, it was waste that Systech  
 13 took in.  
 14 Q. When you worked there?  
 15 A. Yes. They brought in -- they were  
 16 hauling or pumping TDI and cyanide waste into a  
 17 truck from Jones Chemical and they got a drum  
 18 of TDI pumped in with the polyol and, boy, it  
 19 went (indicating) and we had a trailer full of  
 20 Styrofoam or polyurethane foam that instead of  
 21 carbon dioxide contents it was hydrogen cyanide  
 22 and that was one big mess trying to dig that  
 23 out of that tank. Jones Chemical wanted the  
 24 truck back and it was full of urethane foam and  
 25 so that was the only incident I know. And it

Page 110

1 was labeled polyol and it was a load they got  
 2 the day before and they were going to add to it  
 3 so I didn't have a chance to check the drums to  
 4 make sure.  
 5 (Thereupon, the Court Reporter  
 6 interrupted the proceedings.)  
 7 Q. Do you remember any pallets being  
 8 put in the cells with the drums?  
 9 A. The first cell they did, they  
 10 tried to -- they put a layer of pallets on the  
 11 bottom trying to level it up so the drums would  
 12 sit level. They might have done it on the  
 13 second. And then they finally decided that  
 14 that wasn't a big help and then they roll over  
 15 in the crack between the two boards on the  
 16 pallet and then it doesn't roll anymore and  
 17 it's too hard to handle, so they were going to  
 18 quit putting the layer of pallets in the  
 19 bottom.  
 20 Q. Do you know how many drums would  
 21 fit on a pallet?  
 22 A. Four max if it's a full size  
 23 pallet. If it's small, then you only get  
 24 three.  
 25 Q. If the barrel log said that

Page 111

1 certain number of pallets were dumped in the  
 2 cells, what would that indicate to you? Why  
 3 would it be reported that way?  
 4 A. They were trying to stack them is  
 5 the only thing I could think of. They were  
 6 trying to make a flat surface so that you could  
 7 put four drums on a pallet, set another one and  
 8 if the drums are cockeyed or whatever, then you  
 9 could set another one on top but you will wind  
 10 with space between the pallets that you can't  
 11 put a drum. I don't know if they -- if you had  
 12 a -- if they did put a ramp in there then you  
 13 could put a forklift and then you could stack  
 14 them upon pallets but you would have to have  
 15 them on pallets.  
 16 Q. You think they only put pallets  
 17 down on the first couple cells and then they  
 18 abandoned that idea?  
 19 A. As far as I know because it was  
 20 too much of a hassle. It was taking too many  
 21 man-hours to try to get the drums in there.  
 22 Q. Did you in any way assist with the  
 23 operation at the cells or did you just observe  
 24 what was going on?  
 25 A. Well, I did some. I helped

Page 112

1 them -- the heavier drums I helped them roll  
 2 them over onto the frame on the backhoe.  
 3 Q. You mean in the yard?  
 4 A. Yeah. Well, at the cell we would  
 5 take them off with a forklift and set them down  
 6 on the ground and then you had to dump them  
 7 over and if it was sitting on the dirt like  
 8 this (indicating) and the frame is here,  
 9 sometimes it's more than what one guy could do  
 10 so if I was up there checking to see how they  
 11 were coming, I would help him roll them over  
 12 onto the backhoe to sit down in there to dump  
 13 them out.  
 14 Q. So it took actual men to get the  
 15 drums onto the backhoe?  
 16 A. Yes.  
 17 Q. To get them down in there?  
 18 A. Yes.  
 19 Q. Were you as a chemist at the site,  
 20 did you direct which cells or which drums were  
 21 going to go into which cells?  
 22 A. No.  
 23 Q. Did the --  
 24 A. We sorted them out by what they  
 25 were and these are drums that you can put in

Page 113

1 the cell and these are drums you can't that  
 2 we're going to have to haul off or process some  
 3 other way.  
 4 Q. So of all the drums that were set  
 5 aside to be put in the cells, did it matter  
 6 which drums went in a cell together or did the  
 7 guys just take the first drums they saw and  
 8 just put them right in the cell, whatever was  
 9 closest?  
 10 A. I'm guessing that that's probably  
 11 what happened. You would pull your trailer in  
 12 to there and these -- this row of drums and  
 13 this row of drums and this row of drums are to  
 14 be buried until they started loading until they  
 15 ran out of these and go to the next one and  
 16 start loading so they would have --  
 17 (Thereupon, the Court Reporter  
 18 interrupted the proceedings.)  
 19 MS. WOLFE: I'm just going to say for  
 20 the record that we're having some problems with  
 21 the court reporter's equipment. The computer  
 22 keeps shutting off and this has happened two or  
 23 three times already. We're attempting to finish  
 24 the deposition, although Mr. Hill's testimony has  
 25 been interrupted a few times. If necessary, he



Page 114

1 will repeat himself, but we will try to get to the  
 2 last few questions as long as the equipment is  
 3 working.  
 4 Q. You were just saying, Mr. Hill,  
 5 with how the drums were in the yard and they  
 6 would be taken to the cells?  
 7 A. Right. It's my guess that you  
 8 take the path of least resistance, so you come  
 9 in, get the first row, get them up there and  
 10 then go down and go to the next row or actually  
 11 there's probably two or four rows of one thing  
 12 and that's why the log has got different  
 13 things, depending on how many you have got  
 14 stacked up when you start burying them as to  
 15 how many you will have in that cell.  
 16 Q. So that's why the log shows  
 17 certain types of wastes grouped together in  
 18 rows?  
 19 A. Probably because that's where they  
 20 got them. If I was going down there I wouldn't  
 21 pick up one drum from here and then drive and  
 22 pick up a drum from here (indicating).  
 23 Q. You would try to take them in  
 24 groups you're saying?  
 25 A. Right. Because that's the easier.

Page 115

1 You got a forklift. You pick the drum up and  
 2 set it on a cart and go back and once you get  
 3 that, you move over and you start picking up  
 4 other drums and putting them on there.  
 5 Q. What type of drums do you remember  
 6 being put in cells as far as material?  
 7 A. Drums of paint sludge --  
 8 Q. Actually let me just interrupt  
 9 you. Maybe I wasn't clear enough. I mean  
 10 metal drums versus other types of drums. Do  
 11 you remember anything other than metal drums?  
 12 A. No, they were almost all two bung  
 13 steel drums and some of the paint sludge, if it  
 14 was too dry, was put in open-head drums that  
 15 had a seal, but it was pretty much tried to  
 16 make sure when you took it over to put it on  
 17 the forklift, the backhoe, we would make sure  
 18 that it wasn't leaking, and it was sealed good  
 19 and if it was, we would stand it back up and  
 20 tighten up the bungs so they were not leaking,  
 21 otherwise if you have to go down there and the  
 22 stuff is pouring out, it's a mess to make it  
 23 safe for the handler.  
 24 Q. Do you remember that happening on  
 25 occasion where the drums would be leaking after

Page 116

1 you put them in the cell?  
 2 A. No, they would leak when you  
 3 turned it over to put it on the backhoe and  
 4 then you would have to tighten it up to where  
 5 it was not leaking.  
 6 Q. So then did that mean waste would  
 7 collect in the backhoe that had to be washed  
 8 out or scooped out?  
 9 A. No, it was an angle iron frame and  
 10 there's nothing to catch it except whatever  
 11 leaked on the metal. There was no bottom to it  
 12 or anything. It was just angle iron and then  
 13 the drum was between the two pieces of angle  
 14 iron and it had a small angle iron lip so it  
 15 wouldn't roll off while you were lowering it  
 16 until you dumped it off.  
 17 Q. So anything that leaked would just  
 18 leak onto the ground, is that correct?  
 19 A. Yeah. Yeah. And usually it  
 20 wasn't very much because, like I say, tighten  
 21 the drum -- the problem is when you sample it,  
 22 whoever sampled the drum to bring it in, a lot  
 23 of times you would stick a clear plastic PVC  
 24 pipe and then put your thumb over it to bring  
 25 it up and drop it in a jar. And then you're

Page 117

1 supposed to tighten the drum back down tight  
 2 and that didn't always get done, so when you  
 3 turn it you will notice something leaking and  
 4 you tighten it up and it quit.  
 5 Q. What about drums that were sorted  
 6 in the yard to be sent off site that couldn't  
 7 be buried in the cells, was there ever any  
 8 leaking from those drums?  
 9 A. The only time I recall anything  
 10 ever spilling was when the guy putting the  
 11 forklift, setting the drums in there and he  
 12 backs out and turns --  
 13 Q. Hits the drums?  
 14 A. -- and hit a drum, and then we  
 15 would have a mess to clean up.  
 16 Q. Was that in the yard?  
 17 A. Yeah.  
 18 Q. How often did that happen?  
 19 A. I would say two or three times a  
 20 year.  
 21 Q. Do you remember what the  
 22 substances were that spilled?  
 23 A. One was -- was a paint thinner I  
 24 think of some sort, had acetone in it because  
 25 we had to shovel a bunch of dirt up to get that

Page 118

1 all in a fifty-five gallon drum?  
 2 Q. Did the entire drum spill on that  
 3 occasion?  
 4 A. Not the entire. He hit it about  
 5 this far off the ground (indicating) and it  
 6 shot out.  
 7 Q. You're indicating about six inches  
 8 off the ground?  
 9 A. Okay, yeah, about six inches off  
 10 the ground. When he was backing up the fork  
 11 hit the side of the drum and it come spraying  
 12 out and he jumped off the forklift, went over  
 13 and pushed it down so the hole was up and, I  
 14 don't know, maybe ten or fifteen gallons may  
 15 have sprayed out and he had to shovel up all  
 16 that dirt and put it in an open-head drum to  
 17 incinerate it.  
 18 Q. Does acetone contain solvents?  
 19 A. Acetone is a solvent.  
 20 Q. So that's not something you would  
 21 want to leave on the ground?  
 22 A. I had them shovel it up anyway  
 23 because we didn't know what else was in there.  
 24 It was paint thinner is what it was labeled and  
 25 it's mostly acetone and probably some alcohol,

Page 119

1 ethanol or methanol.  
 2 Q. Do you recall any of the other  
 3 occasions when the forklift would puncture  
 4 or -- puncture a drum or --  
 5 A. It happened occasionally when they  
 6 would get in a big hurry trying to -- usually  
 7 because the truck was there at 5:30 and they  
 8 are trying to get it unloaded where they can go  
 9 home is when they would generally -- two of  
 10 them were just about quitting time and so you  
 11 had a mess you had to clean up before you could  
 12 get home.  
 13 Q. How far would you estimate the  
 14 yard was from these cells in feet? Do you have  
 15 any idea of that?  
 16 A. The first cell, I would say it's  
 17 probably two or three hundred yards because it  
 18 was right off behind the pond and they had to  
 19 go clear up to the corner, but as they filled  
 20 the cells, it would get closer because they  
 21 were working their way back towards it.  
 22 Q. Do you remember where  
 23 approximately in the yard that acetone spill  
 24 happened? Why don't you take my blue pen on  
 25 Exhibit 2 and if you could mark it where you

Page 120

1 think that happened?  
 2 A. If I can remember where they  
 3 put -- the flammable solvents, he was not  
 4 messing with it. It was in a row and it was  
 5 just stored and it was probably -- it was in  
 6 the first or second section, probably in here  
 7 (indicating).  
 8 Q. Why don't you put an X. You're  
 9 marking a green X in the drum yard with a  
 10 circle around it where you think that happened?  
 11 A. Yeah, because the flammables would  
 12 have to be taken -- you can pull the tanker  
 13 truck in and get to them without having to get  
 14 way back into the yard so you could pull it up  
 15 and pump them or -- generally they would save  
 16 them in the drums until they got enough to make  
 17 a six thousand gallon tank load to Bay City or  
 18 Fremont. Fremont? Yeah.  
 19 Q. Do you know whether any dumping in  
 20 the barrefills took place at night?  
 21 A. If it did, it would be hard  
 22 because there were no lights. You would be  
 23 doing it with a flashlight and I wouldn't do it  
 24 standing over the hole in the dark.  
 25 Q. So you just recall it taking place

Page 121

1 during the day?  
 2 A. Right. Right. Because it would  
 3 be -- I mean, there's no light other than the  
 4 sun and if you're up there walking around this  
 5 hole -- I wouldn't want to mess with it.  
 6 Q. Was there any work that took place  
 7 at the site at night?  
 8 A. The only thing that would happen  
 9 at the site at night would be, say the guy  
 10 going to Bay City, he would take the drums up  
 11 there and dump them and then he would come  
 12 back, park the truck and get out and go home.  
 13 Q. So you would have trucks coming in  
 14 and out?  
 15 A. At night. That's the only thing  
 16 that happened at night was trucks. If they  
 17 were taking a load to Bay City, he usually  
 18 liked to go up there like 4:00 in the morning  
 19 so he can get up there without having to come  
 20 home at midnight.  
 21 Q. Was there any unloading or loading  
 22 of drums at night?  
 23 A. Well, the only reason that would  
 24 ever happen is if the trucks brought in a load  
 25 of drums and he had to go get some more the

Page 122

1 next day, they would usually have somebody come  
 2 back in and help him unload the truck so it  
 3 would be ready to go the next day, but most of  
 4 the time they had several trucks and so they  
 5 could just drop the trailer and pick up an  
 6 empty trailer and go on. But there was only  
 7 two flatbed trailers so they had to have one  
 8 unloading if they were going to use it the next  
 9 day, but most of the time the tank trucks and  
 10 stuff, if the driver came in with oil/water at  
 11 7:00, picked it up over in Indiana or  
 12 something, he would put it in the preprocessing  
 13 tank and then go park his truck so he would be  
 14 ready to go in the morning. But that's the  
 15 only activity I can recall at night.  
 16 MS. WOLFE: Let's just take a few  
 17 minutes off the record and then I'll come back on  
 18 and wrap it up.  
 19 (Pause in proceedings.)  
 20 Q. Mr. Hill, do you remember any  
 21 other process that might have taken place at  
 22 the site that would generate sludge that would  
 23 be dumped in the barreld cells?  
 24 A. I can't think of anything that  
 25 would be dumped.

Page 123

1 Q. Well, why don't we start with  
 2 whether you can think of any sludge that was  
 3 generated on site. I know we've talked about  
 4 the preprocess.  
 5 A. The oil process, yeah.  
 6 Q. How often were you over there at  
 7 the oil processing facility to see what was  
 8 done with that?  
 9 A. Generally two, maybe three times a  
 10 day. Just making rounds around to see what was  
 11 going on. I'm curious to know what they are  
 12 doing and stuff.  
 13 Q. Do you know whether there was any  
 14 point in time as the years went by that the  
 15 process of the oil separation changed in any  
 16 way where they started doing things differently  
 17 over there?  
 18 A. Not while I was there. They  
 19 didn't change anything.  
 20 Q. Are you aware of anything that  
 21 changed after you left?  
 22 A. No. I don't know what they were  
 23 doing or how long they stayed in business after  
 24 I left. I was glad to be inside and not have  
 25 to be working outside in the cold and hot.

Page 124

1 Q. So going back to the question of  
 2 where sludge might have been generated on site,  
 3 can you think of anything?  
 4 A. Not generated, but picked up. In  
 5 the garage we had some square pans that they  
 6 put underneath -- if you went to a generator  
 7 and sucked out a tank and it wound up that  
 8 after driving back to the plant it settled out,  
 9 this big round tank is flat on top and then the  
 10 sides, it's like a cone that funnels down and  
 11 that's where your valve is, and the sludge  
 12 would get down in there and then you can't get  
 13 anything out and so you would have to put a  
 14 hose in through the lid, suck all the liquid  
 15 out and then take the valve apart and dig the  
 16 goo or whatever out into a pan and then put it  
 17 in a drum.  
 18 Q. How often did those tanks have to  
 19 be cleaned out in that fashion?  
 20 A. If a driver was careful when he  
 21 was sucking it out of the generator's tank, he  
 22 could feel the -- and know and pull it up  
 23 higher.  
 24 Q. Feel the pull from the gunk at the  
 25 bottom starting to pull on the pump?

Page 125

1 A. Not the gunk in the bottom. The  
 2 stuff he's sucking out of the tank, if he's  
 3 getting a lot of -- well, it's like a vacuum  
 4 cleaner. If you have got this hose going  
 5 across there, as soon as it hits a piece of  
 6 paper or a carpet or something, it will clog it  
 7 up and it will (indicating) and it will feel  
 8 different. Then you pull it up and try to stay  
 9 away from that and leave it and try to make  
 10 sure you're just pulling liquid, then you don't  
 11 have that problem, but if you're not paying  
 12 attention you will wind up sucking some of the  
 13 rags and gloves and things.  
 14 Q. So solid materials would sometimes  
 15 collect in those tanks?  
 16 A. Right.  
 17 Q. You have to clean them out?  
 18 A. Right.  
 19 Q. And then what would happen to that  
 20 material that you cleaned out of the tanks?  
 21 A. It would usually -- if it was  
 22 oil/water, it would get taken up there and put  
 23 in with the sludge you would get that you blew  
 24 out of the truck and then tested before we did  
 25 something with it to see whether it was inert

Page 126

1 or not.  
 2 Q. Was it always tested?  
 3 A. As far as I know. They may or may  
 4 not have.  
 5 Q. Was that your job?  
 6 A. No.  
 7 Q. Whose job was it?  
 8 A. Well, okay, to test it, but I  
 9 would test. When it would get real full, they  
 10 would sample it and bring it down to the lab  
 11 and then we would check it. I don't -- they  
 12 were supposed to kind of sample it, you know,  
 13 not just this corner, but maybe this one and  
 14 the middle to try to see what all is there and  
 15 would generally check it for solvents and if it  
 16 was a good volatile solvent, but if it was --  
 17 it would usually evaporate if there's any of  
 18 that, but the grease and oily mess, that  
 19 usually stayed, but normally we didn't find  
 20 any -- I can't even be sure if we have ever  
 21 found any metals in it.  
 22 Q. We were talking earlier about when  
 23 you started at the Tremont site and we agreed  
 24 that it was somewhere in 1976.  
 25 A. Yeah.

Page 127

1 Q. Does that sound about right?  
 2 Well, you were there for --  
 3 A. I was there when I left -- when  
 4 did I leave? I was at the Lagonda site to  
 5 start with. That was when IWD first started,  
 6 that was their first site, and then they moved  
 7 up to Tremont City.  
 8 Q. And you testified earlier that the  
 9 first cell was dug in late '76 and it took  
 10 about a year prior to that to collect enough  
 11 drums for that cell?  
 12 A. Yeah.  
 13 Q. So --  
 14 A. It was nine months to a year.  
 15 Q. So would it be fair to say you  
 16 were probably at Tremont for that nine months  
 17 to a year before the first cell was built?  
 18 A. Probably, because we had moved the  
 19 operation up there before we even had the  
 20 permit to use the cell. That was still a  
 21 proposition that I don't know whether we were  
 22 doing environmental studies or something.  
 23 Q. When you started working out of  
 24 the Tremont location, was the oil separation  
 25 process already in operation?

Page 128

1 A. Yeah. In fact two of the tanks  
 2 that were -- we had two roll-ons at the Lagonda  
 3 site where we were processing oil/water and  
 4 they built two new ones and got the boiler  
 5 going. Then they moved the two process tanks  
 6 from Lagonda out there. They had IWD Solid  
 7 Waste pick them up and carry them out there for  
 8 us.  
 9 Q. Do you know exactly when the oil  
 10 separation process started at Tremont though,  
 11 was it -- do you remember if that had been  
 12 going on for a long time when you started there  
 13 or if it was a new process?  
 14 A. No, it was new out there, but it  
 15 was being done over on Lagonda site. They  
 16 had -- were processing oil/water at the Lagonda  
 17 site -- man, that was at least I would say four  
 18 months before we started out at Tremont. They  
 19 built the maintenance building and then they  
 20 started working on the pads to do the oil/water  
 21 process and that was -- while that was going on  
 22 they were keeping the trucks out there and  
 23 stuff and I was still over at the Lagonda until  
 24 they moved the oil/water process from there  
 25 because we were still doing the lab tests on it

Page 129

1 during the building. Then they moved the  
 2 process and John started going out there and  
 3 then they -- I was -- I had set up a lab on the  
 4 side of the boiler room building and where the  
 5 boiler and coalescer tanks were.  
 6 Q. Do you remember any bulk aluminum  
 7 hydroxide and carbonate sludge being disposed  
 8 of at the site?  
 9 A. Aluminum hydroxide and what?  
 10 Q. Carbonate sludge from --  
 11 A. Drackett in Urbana, right?  
 12 Q. I don't know about that. Is that  
 13 what you remember?  
 14 A. Yeah. That's the only place  
 15 that -- that was hard to pump because they  
 16 would let it sit in a tank and drain, drain,  
 17 drain, drain, and then want you to pump the  
 18 almost dry solids out of there. They made --  
 19 what was -- Drano, Windex. It was Drackett,  
 20 but they would throw all their waste and let it  
 21 settle out and then they would process the  
 22 water but they would leave all the sludge over  
 23 there. Had steel wool in it. Aluminum  
 24 hydroxide -- that's the only sludge stuff that  
 25 was like an organic sludge they had.

Page 130

1 Q. And was that disposed of in the  
 2 barrelfill?  
 3 A. Don't know.  
 4 Q. You don't know?  
 5 A. I know that they picked it up from  
 6 Drackett.  
 7 Q. How about from Kiser Aluminum, do  
 8 you remember that?  
 9 A. That was sodium hydroxide.  
 10 Q. Aluminum hydroxide?  
 11 A. Okay. You take sodium hydroxide  
 12 and you stick aluminum down it in, it comes out  
 13 shiny. Well, what it produces is aluminum  
 14 hydroxide. That's the sludge that settles out.  
 15 There was some of that and what they were doing  
 16 with it, it was a -- to neutralize the sulfuric  
 17 acid from the oil/water split. We were adding  
 18 it to that and -- okay, that would be another  
 19 where you wound up with a lot of sludge but it  
 20 wasn't a process -- the sulfuric acid was  
 21 loaded with iron oxide and the aluminum or the  
 22 sodium hydroxide was loaded with aluminum. In  
 23 fact, they got it in a tank car.  
 24 Q. Was that from Kiser Aluminum or  
 25 from Drackett that you're recalling now?

Page 131

1 A. Okay, Drackett was dry sludge and  
 2 they would add enough water to where they could  
 3 pump it.  
 4 Q. And let's just talk about the  
 5 Drackett material, the Drackett sludge. They  
 6 would pump it and then bring it to Tremont?  
 7 A. Yeah, and I think they transferred  
 8 it to fifty-five gallon drums and let it dry  
 9 out again and then I'm not sure where it was  
 10 disposed of.  
 11 Q. Do you know whether any of that  
 12 sludge was dumped in the cells in bulk?  
 13 A. I don't know for sure.  
 14 Q. What was the waste that you  
 15 remember from Kiser Aluminum?  
 16 A. Okay. When you neutralize the  
 17 sulfuric acid, all of a sudden all this rust  
 18 drops out of it and all the aluminum drops out  
 19 of the sulfuric acid and then you have got  
 20 water.  
 21 Q. So those are metals that drop out?  
 22 A. Right, they precipitate and you  
 23 got this solid sludge and you got a bunch of  
 24 it.  
 25 Q. And there was a lot of that

Page 132

1 sludge?  
 2 A. Yeah, so we didn't process any.  
 3 It was a good idea that you take a sulfuric  
 4 acid waste and use it and then you take this  
 5 sodium hydroxide waste, but when you put the  
 6 two together all this sludge is created, this  
 7 iron oxide, aluminum oxide, aluminum carbonate.  
 8 Q. Was that sludge disposed of at  
 9 Tremont?  
 10 A. I think they put it in fifty-five  
 11 gallon drums and I'm not sure where they hauled  
 12 it to. Might have gone to Bay City or  
 13 someplace else. Not real sure. It could have  
 14 been -- did it list it as being buried?  
 15 Q. Do you remember any copper chrome  
 16 carbonated sludge from Square D in Oxford?  
 17 A. Yeah. It was from their plating  
 18 waste where have they plating, they did chrome  
 19 plating for switchboxes and things and it was  
 20 mostly copper sulfate. That went up to Fremont  
 21 to be deep welled. It wasn't really a sludge  
 22 so much as it was a kind of a liquid, but they  
 23 were hauling it to up to Fremont for deep well  
 24 injection because it had heavy metals in it.  
 25 MS. WOLFE: Okay, Mr. Hill. I think

Page 133

1 that will do it for now. I don't have any other  
 2 questions for you right now. I don't know if any  
 3 of the other attorneys do.  
 4 MR. BROWN: I have some follow-up.  
 5 CROSS-EXAMINATION  
 6 BY MR. BROWN:  
 7 Q. Mr. Hill, I'm Dan Brown and I'm  
 8 here on behalf of Systech Environmental  
 9 Corporation and so my interests really are  
 10 geared toward some of the things that you said  
 11 regarding Systech, especially your previous  
 12 employment at Systech or Systems -- one of the  
 13 Systech companies, so I want to go back and see  
 14 if I can get the timeline a little bit better  
 15 on when you worked for Systech. You said you  
 16 worked for Systems Research Lab from '66 to  
 17 sometime in early '70s, is that right?  
 18 A. Right.  
 19 Q. And you told us that you were  
 20 working at the base on a couple different  
 21 contracts?  
 22 A. Right. I started July of '67 --  
 23 or -- '67, and I was with Systech --  
 24 Q. You were with SRL from July of '67  
 25 through --

Page 134

1 A. It was summer when I switched to  
 2 Systech. Do you know when Systech built their  
 3 building on Valley Road?  
 4 Q. You just tell me what you can tell  
 5 me.  
 6 A. Was that -- because right after I  
 7 started, they built that building.  
 8 Q. Right after you started with --  
 9 A. Systech. I switched from SRL to  
 10 Systech, they built the office building on  
 11 Valley Road. And I was -- they didn't have a  
 12 lab there so I was working out of the Franklin  
 13 plant. They had purchased the -- or leased the  
 14 old waste treatment plant in Muskegon, Michigan  
 15 and then shortly after that they had the waste  
 16 treatment plant in Hillard -- or no, the other  
 17 way around. They had the Hillard plant before  
 18 they had the Muskegon plant. And about the  
 19 time I left they had just been putting in the  
 20 solvent distillation, the solvent recovery  
 21 building, so whatever -- they would probably  
 22 know when those were. Tim Cates was the plant  
 23 manager at Franklin.  
 24 Q. Cates with a C or a K?  
 25 A. C, I believe. C A T E S.

Page 135

1 Q. So you were at Franklin the entire  
 2 time?  
 3 A. Except when Tony took me up to  
 4 Hillard to help them with the -- their  
 5 operation.  
 6 Q. And you meant Tony Cowen.  
 7 A. Cowen, right.  
 8 Q. Earlier I think right as the  
 9 computer was crashing you said that something  
 10 had happened and Tony -- and that's when you  
 11 stopped talking. So do you remember --  
 12 A. That was when Tony's son and his  
 13 friend were killed cleaning that trailer out.  
 14 Q. Were you working in Franklin when  
 15 that accident occurred?  
 16 A. Yes.  
 17 Q. Do you remember when that was?  
 18 You were working there at that time?  
 19 A. Yes.  
 20 Q. And were you trying to explain  
 21 something about the process that happened at  
 22 that time?  
 23 A. Right. They had mixed up a drum  
 24 of TDI that was labeled polyol and it got  
 25 pumped into the trailer so it reacted and made

Page 136

1 urethane foam, but instead of being bubbles of  
 2 carbon dioxide it was bubbles of hydrogen  
 3 cyanide because they had pumped cyanide waste  
 4 in there and were trying to add TDI to it but  
 5 that was a drum of polyol that was labeled TDI  
 6 and it wasn't so it got in there with the  
 7 catalyst and reacted.  
 8 Q. And that was a mislabeled drum  
 9 from Inland, you say?  
 10 A. All right.  
 11 Q. So that kind of explains what you  
 12 were trying to say about the one time that you  
 13 saw --  
 14 A. Right, a mix-up. That was labeled  
 15 wrong.  
 16 Q. Now, can you ballpark how many  
 17 months or years after that incident occurred  
 18 that you left Systech?  
 19 A. It was less than a year.  
 20 Q. And then you went right from  
 21 Systech to IWD Liquid?  
 22 A. IWD Liquid Waste, yes. And that  
 23 was within, I would say three or four months of  
 24 IWD Liquid Waste starting. Jack Wright was  
 25 driving the truck kind of with customers.

Page 137

1 Q. So you left Franklin and went to  
 2 IWD Liquid at the -- what was the name of the  
 3 street there, Lagonda location?  
 4 A. Yeah, it's close to Lagonda.  
 5 Q. Lagonda Road?  
 6 A. Lagonda Avenue, I believe. It  
 7 goes right by Robbins & Myers. We were on a  
 8 little side street there right next door to  
 9 Graff Hardware.  
 10 Q. So when you said that you left  
 11 near in time to when Systech started their  
 12 solvent recovery process, did you take part in  
 13 designing that process in any way?  
 14 A. No. Tony did all that.  
 15 Q. And you just kind of knew about it  
 16 because you worked there?  
 17 A. Right. Right.  
 18 Q. Did you work in the wastewater  
 19 treatment part of the Franklin facility?  
 20 A. Okay. Okay. What are you deeming  
 21 the wastewater treatment? Because Franklin had  
 22 a wastewater plant across the road from us and  
 23 a -- a solid waste. What we were doing was  
 24 processing the water from the waste and pumping  
 25 it over there. Now, that part is the Systech

Page 138

1 part, not the Franklin Municipal Waste.  
 2 Q. Right, I understand there were two  
 3 separate facilities.  
 4 A. Right.  
 5 Q. And do you remember a distinction  
 6 between a company called Systems Technology  
 7 Corporation as opposed to Systech?  
 8 A. Tom and Mel had an engineering  
 9 company where they did environmental  
 10 engineering stuff and Systech was the waste  
 11 treatment process I thought. Is that --  
 12 Q. Tom and Mel being -- do you know  
 13 either of their full names?  
 14 A. Tom Whitman and Mel is the  
 15 vice-president. Gosh, I didn't see him very  
 16 much. Tom was the one that pretty much -- Tom  
 17 and Tony Cowen. Tony had got together with Tom  
 18 and promoted the idea of processing the waste.  
 19 Q. Now, earlier you said something  
 20 about Tony Cowen and then you said something  
 21 about Beavercreek?  
 22 A. Okay, he --  
 23 Q. I just want to be clear. Was the  
 24 Beavercreek location you were talking about,  
 25 was that a Systech location or something else?

Page 139

1 A. No, absolutely not.  
 2 Q. Do you remember what that was?  
 3 A. It was Tony Cowen -- what did he  
 4 call it?  
 5 Q. Lammers Barrel Factory.  
 6 A. Yeah, and Lammers. They were  
 7 doing solvent recovery there.  
 8 Q. At Lammers?  
 9 A. Right.  
 10 Q. At Beavercreek?  
 11 A. Right.  
 12 Q. But that was not a Systech  
 13 facility?  
 14 A. Right. Had nothing to do with  
 15 Systech. When that blew up, then they started  
 16 talking to Systech about something --  
 17 Q. So his first connection with  
 18 Systech would have been after the Lammers  
 19 Barrel Factory fire?  
 20 A. Right. There wasn't any -- so he  
 21 was still trying to get in waste disposal or  
 22 solvents and so he worked out a deal with Tom  
 23 Whitman.  
 24 Q. Let me look at your Exhibit Number  
 25 3, Plaintiff's Exhibit Number 3 --

Page 140

1 A. Um-hum.  
 2 Q. -- and the Exhibit Number 2, if we  
 3 put these side-by-side, I just want to make  
 4 sure, are we looking at it the same way  
 5 (indicating)?  
 6 A. Exactly.  
 7 Q. And when I'm looking at  
 8 Plaintiff's Exhibit Number 2, kind of in the  
 9 upper left corner would have been the northwest  
 10 corner of the barrellfill site?  
 11 A. Right.  
 12 Q. All right. And then the same  
 13 thing on Plaintiff's Exhibit Number 3, at the  
 14 top left corner would be the northwest corner  
 15 of the site?  
 16 A. If you're calling this the top  
 17 (indicating).  
 18 Q. Top left.  
 19 A. Numbers are getting --  
 20 Q. But if I look at it this way  
 21 (indicating)?  
 22 A. Yes, that's exactly right.  
 23 Q. So cell number A-1 is in the  
 24 northwest corner, top left, as we look at it?  
 25 A. Right.

Page 141

1 Q. And it appears that the cells are  
 2 numbered one, two, three -- I'm sorry, A, B, C,  
 3 D and E going east along the north boundary of  
 4 the site, is that right?  
 5 A. That's correct.  
 6 Q. Any first question is why isn't  
 7 there an F cell here in the first row?  
 8 A. I don't know if those are lagoons.  
 9 When they dug it, instead of being clay it was  
 10 sand or something. I really don't know why  
 11 these are not just like this (indicating).  
 12 This was on the plan that Jack Wright had --  
 13 originally had straight across. None of this  
 14 stuff (indicating) that's funny shaped and  
 15 everything. It was all little squares.  
 16 Q. If you look at the aerial photo  
 17 and I think you had kind of outlined where you  
 18 thought the barrellfill was located. Go ahead  
 19 and put a square or a circle around the area  
 20 that you thought was the barrellfill.  
 21 A. It was supposed to come down and  
 22 then go across here (indicating) and go back up  
 23 kind of like that (indicating).  
 24 Q. So if the diagram as opposed to  
 25 the aerial photo depicts the same area that you

Page 142

1 had shown on the aerial photo, when you get to  
 2 cell E-1, you're not close to the woods or  
 3 anything so are you just saying that was not a  
 4 suitable location to put a couple more cells?  
 5 A. Apparently not. I don't know, I  
 6 wasn't there when they were digging it, but  
 7 they were starting up in here (indicating),  
 8 starting to get a lot of cave-ins and stuff,  
 9 the sides would fall in because it wasn't as  
 10 much -- this was all clay where they did the  
 11 PERC test (indicating), they took a fifty-five  
 12 gallon drum, filled it up full of water, had a  
 13 little graduated cylinder on it, filled it up  
 14 full of water and let it set there for a week  
 15 and seen how much soaked in so this was really  
 16 packed solid clay, but apparently there could  
 17 have been something out in here (indicating)  
 18 because it's a landfill and I don't know how  
 19 much backfill they put on top of it, but if it  
 20 didn't pass the PERC test, they were supposed  
 21 to test each cell to make sure that it's  
 22 still --  
 23 Q. All right. So on that first line  
 24 along the northern boundary, there's just the  
 25 five cells, A, B, C, D and E, and then they

Page 143

1 didn't continue to go to the east, at least  
 2 according to this diagram?  
 3 A. Yes.  
 4 Q. But on the second row, A, B, C, D,  
 5 E, F, G and H in the second row, right?  
 6 A. Um-hum. Right.  
 7 Q. How many of the cells were at the  
 8 site when you were there? How many had been  
 9 dug during the time that you worked there?  
 10 A. (Indicating.)  
 11 Q. Was all of the first row, A, B, C,  
 12 D and E-1, were they all dug while you were  
 13 there?  
 14 A. I don't think so. To the best of  
 15 my knowledge it was like four cells.  
 16 Q. Were they built in that order or  
 17 possibly --  
 18 A. These were done --  
 19 Q. Could A-2 could have been done  
 20 before, let's say C --  
 21 A. Okay, it could have. These two  
 22 and then it was either this one or this one  
 23 (indicating).  
 24 Q. When you say these two, I think  
 25 you said before that A-1 was clearly the first

Page 144

1 cell. So let's just assume A-1 was the first  
 2 cell.  
 3 A. Right.  
 4 Q. Was B-1 the second cell?  
 5 A. Yes.  
 6 Q. And was C-1 the third cell dug in  
 7 order chronologically?  
 8 A. I'm thinking that's correct and  
 9 then they come back here for some reason  
 10 (indicating). I don't remember if they were  
 11 having problems or something but they started  
 12 back over here (indicating).  
 13 Q. Over here being row two?  
 14 A. B-2.  
 15 Q. This would be A-2, I believe?  
 16 A. Okay, A-2, that's right. But they  
 17 didn't keep on with their plan of just doing  
 18 like that I don't think.  
 19 Q. My next question is if you look at  
 20 the diagram, some cells are much larger than  
 21 others, for example, A-1 is a little box. If  
 22 you look at the bottom of the diagram, there's  
 23 some huge cells.  
 24 A. I have no idea.  
 25 Q. So you're really only familiar

Page 145

1 with the cells --  
 2 A. The first five or six.  
 3 Q. The cells in the northwest corner  
 4 of the barreldfill?  
 5 A. That's correct. What they did  
 6 after that, I don't know.  
 7 Q. So let's just focus on those  
 8 because those are the only ones you know about.  
 9 What were the typical cell dimensions? Do you  
 10 know how deep they were, how wide they were and  
 11 how long they were?  
 12 A. They were no more than -- I'm  
 13 guessing probably somewhere between fifteen and  
 14 twenty feet because the backhoe would not go  
 15 any deeper.  
 16 Q. Fifteen to twenty feet deep?  
 17 A. Yeah, probably closer to fifteen.  
 18 Q. How wide and how long?  
 19 A. Probably seven or eight barrels  
 20 wide. That would be about twenty-four,  
 21 twenty-five feet and they were trying to make  
 22 them square but they had more drums in a row  
 23 because they were laying down sideways.  
 24 Q. So it would be seven or eight  
 25 drums wide which would be twenty-four to



Page 146

1 twenty-five feet and it would be a similar  
 2 length long because you're trying to make them  
 3 square, not rectangular?  
 4 A. Right. Drums two and a half foot  
 5 in diameter, something like that.  
 6 Q. When you said fifteen to twenty  
 7 feet deep, I noticed that some of the cells had  
 8 six or seven layers and one of them had up to  
 9 ten layers?  
 10 A. Yes. Eleven layers.  
 11 Q. So depending on how many layers  
 12 are in the cell report would tell you how deep  
 13 the hole was?  
 14 A. Yes. Yes, it would. Except you  
 15 have got a two and a half foot and then you sit  
 16 a drum -- they are side-by-side and then when  
 17 you sit this other one, if they scoot any, then  
 18 it's not a full two and a half foot. It may be  
 19 only two foot so a cell could hold more drums  
 20 depending on how they are arranged.  
 21 Q. And would the depth of the cell  
 22 depend on the soil that they were digging into?  
 23 A. No.  
 24 Q. What would determine the depth of  
 25 the --

Page 147

1 A. The depth of the hole was  
 2 determined how deep the backhoe could reach in  
 3 there and he went as deep as he could go.  
 4 Q. What would be the reason for one  
 5 cell only getting seven layers and another one  
 6 being eleven layers?  
 7 A. Let's say you're going down and  
 8 you hit some sand or debris or rock that you  
 9 can't move, these big rocks, and you have got a  
 10 rock sitting there, then you have to put the  
 11 drums around it, you can't --  
 12 Q. Can't go any deeper than what the  
 13 rocks at the bottom?  
 14 A. Right, rocks or sand or whatever  
 15 it was in there when they backfilled it.  
 16 Q. I was just curious. When we were  
 17 talking about levels, let's say there were  
 18 eleven levels in a cell. Is level one the  
 19 bottom cell or the top cell?  
 20 A. Should be the bottom.  
 21 Q. So level eleven would be the top?  
 22 A. Yes. That's the way they were  
 23 originally supposed to be. Because you put  
 24 them in and you write level one until you get  
 25 that full and then you start off the next

Page 148

1 level. And so the highest number would be at  
 2 the top. If that changed later on, I don't  
 3 know.  
 4 Q. You said earlier there really was  
 5 like one -- let me back up. You said earlier  
 6 that most of the operations happened during the  
 7 day?  
 8 A. Right.  
 9 Q. So in wintertime it gets dark at  
 10 5:30, 6:00, so there wouldn't be any second  
 11 shift or third shift operations out at the  
 12 site?  
 13 A. No. There was -- usually in the  
 14 wintertime there was a -- if you lost steam  
 15 pressure, then the steam return lines would  
 16 freeze up and everything so they did have kind  
 17 of like he was a maintenance man and he would  
 18 be in the boiler room and kind of, you know,  
 19 check periodically to make sure the boiler  
 20 didn't shut down because when it froze up, it  
 21 takes three days to dig up the pipes and get  
 22 them thawed out and everything. So they had  
 23 him there -- he come in about 4:30 to 5:00 and  
 24 stayed to around 12:00 or 1:00, something like  
 25 that, and periodically check on the weekend and

Page 149

1 stuff to make sure that it didn't freeze up.  
 2 And then when the weather would get nicer, then  
 3 he was back on the day shift, but they would  
 4 occasionally do that when it really got cold  
 5 because the boiler wouldn't take care of  
 6 itself. If it lost return and started freezing  
 7 up, it would shut down.  
 8 MR. BROWN: That's all the questions  
 9 I have.  
 10 FURTHER CROSS-EXAMINATION  
 11 BY MS. WOLFE:  
 12 Q. I just have a couple quick  
 13 questions for you, Mr. Hill, to clarify the  
 14 time frame when you were working at the site.  
 15 If we could measure it against when Nelson  
 16 Wallis was there, I just want to clarify  
 17 whether you were there working at the same time  
 18 that he was employed there or whether you left  
 19 before he became employed there.  
 20 A. No, he was working, I'm guessing  
 21 maybe two three or four months before I left.  
 22 Q. So if he was there -- if he began  
 23 in earlier 1979, then that would mean that you  
 24 were there until mid 1979?  
 25 A. Let's see. Yeah, May or June.

Page 150

1 Q. So whichever cells were dug during  
 2 the time frame from the beginning in '76  
 3 through May or June, '79, those were dug while  
 4 you were there?  
 5 A. Yeah. Yeah.  
 6 Q. And how much time did you spend  
 7 actually at the cells themselves observing what  
 8 was taking place there?  
 9 A. The first two or three, I was  
 10 there probably once or twice for maybe fifteen,  
 11 twenty minutes and then I got busier trying to  
 12 handle the samples were coming in too fast and  
 13 I would get up there -- oh, three or four times  
 14 a week. Once I saw how they were doing it and  
 15 it looked like it was all -- they were doing it  
 16 safe and everything, then I didn't bother to  
 17 walk way up there to see what they were doing.  
 18 Q. So as they progressed with more  
 19 and more rows of cells, you didn't always  
 20 observe the drum disposal every day?  
 21 A. No, not -- usually I tried to get  
 22 up there at least once a day or every other  
 23 day, depending on sometimes I was gone all day  
 24 with the salesmen to Gallipolis or Galion to  
 25 check on a new customer and then I would come

Page 151

1 back. What they did that day, I wasn't there  
 2 at the plant, I didn't know.  
 3 Q. So would you agree that the  
 4 operation of the barrellfill closed in late  
 5 1979? Does that sound about right if you know?  
 6 A. Well, I don't see how they got all  
 7 these big cells. I never saw a big cell.  
 8 Q. Well, I don't know how accurate  
 9 the dimensions are in what's represented on  
 10 that exhibit, Exhibit 2. I can't --  
 11 A. I don't remember --  
 12 Q. Exhibit 3 actually. I can't say  
 13 that those cells at the bottom are actually  
 14 that size --  
 15 A. Okay.  
 16 Q. -- in comparison with the top  
 17 cells.  
 18 A. Okay. Because I don't remember  
 19 anything being funny shaped like that and right  
 20 next to each other and stuff. They were like  
 21 this (indicating).  
 22 Q. So when you testified earlier that  
 23 you were only there for the first few cells, is  
 24 that because you don't recognize how these are  
 25 depicted in the diagram with respect to the

Page 152

1 bottom cells being so large?  
 2 A. Well, it could be because they  
 3 were all like this (indicating), a cell and  
 4 then they were separated by eight, ten feet  
 5 between cells and they had test wells PVC pipe  
 6 stuck down in the ground down to the bottom of  
 7 the cell and we periodically had samples if  
 8 there was anything in there.  
 9 MS. WOLFE: Okay. I have no further  
 10 questions. Thank you very much, Mr. Hill, and  
 11 that will be all for now. I just want to explain  
 12 since you don't have an attorney here to explain  
 13 this to you today, I want to explain to you what's  
 14 going to happen with the transcript of your  
 15 deposition. The court reporter who has been  
 16 taking down the deposition today will prepare a  
 17 written transcript and you can choose whether you  
 18 want to read that or whether you want to waive  
 19 that opportunity. If you choose to read the  
 20 transcript, the court reporter will send it to you  
 21 and you can read it over and you can make any  
 22 corrections that you feel are necessary in form or  
 23 substance and then you have to have it signed and  
 24 notarized and returned back to the court reporter.  
 25 Or if you don't think that's necessary and you

Page 153

1 don't want to read the transcript, you can waive  
 2 that right. It's completely up to you. But if  
 3 you choose not to read the transcript, then I  
 4 believe after thirty days the court reporter will  
 5 sign it on your behalf. So either way, if you  
 6 have it sent to you, then at least you get the  
 7 option of reading it. If you never send it back  
 8 then the court reporter will go ahead and do it  
 9 for you.  
 10 THE WITNESS: Probably because I can  
 11 dig up a resume and correct the dates that I've  
 12 given you with more exact dates because I had  
 13 dates of employment on my resume, but I haven't  
 14 used that in twenty some odd years.  
 15 MS. WOLFE: Well, if you make any  
 16 corrections to any part of the testimony that you  
 17 have given today, then the rules do require that  
 18 you give some kind of a reason why you're changing  
 19 what your testimony is.  
 20 THE WITNESS: It would be dates is  
 21 what --  
 22 MS. WOLFE: Okay. If you want to do  
 23 that, then you just prepare a list with what the  
 24 change is and what the error was and --  
 25 THE WITNESS: Put them together and

Page 154

1 send them back. Okay. Yeah.  
 2 (Thereupon, the deposition was  
 3 concluded at 5:08 p.m.)  
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Page 156

1 STATE OF OHIO )  
 2 COUNTY OF MONTGOMERY ) SS: CERTIFICATE  
 3 I, Mary Jo Stevens, a Notary Public within  
 4 and for the State of Ohio, duly commissioned and  
 5 qualified,  
 6 DO HEREBY CERTIFY that the above-named  
 7 CLYDE E. HILL, JR., was by me first duly sworn to  
 8 testify the truth, the whole truth and nothing but  
 9 the truth; that said testimony was reduced to  
 10 writing by me stenographically in the presence of  
 11 the witness and thereafter reduced to typewriting.  
 12 I FURTHER CERTIFY that I am not a relative  
 13 or Attorney of either party nor in any manner  
 14 interested in the event of this action.  
 15 IN WITNESS WHEREOF, I have hereunto set my  
 16 hand and seal of office at Dayton, Ohio, on  
 17 this \_\_\_\_ day of \_\_\_\_\_, 2005.  
 18  
 19  
 20 MARY JO STEVENS  
 21 NOTARY PUBLIC, STATE OF OHIO  
 22 My commission expires 9-10-2006  
 23  
 24  
 25

Page 155

1 I, CLYDE E. HILL, JR., do hereby certify  
 2 that the foregoing is a true and accurate  
 3 transcription of my testimony.  
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 8 Dated \_\_\_\_\_  
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<p><b>A</b></p> <p>AA 103:11  <b>abandoned</b> 111:18  <b>able</b> 7:15  <b>above-named</b> 156:6  <b>absolutely</b> 139:1  <b>absorption</b> 30:25  103:11,13  <b>acceptable</b> 29:2 96:10  96:10  <b>accepting</b> 25:20  <b>accident</b> 135:15  <b>accountant</b> 70:7,17,20  <b>accurate</b> 79:19 151:8  155:2  <b>acetone</b> 46:3,7 47:8,16  47:18 50:20 97:15  117:24 118:18,19,25  119:23  <b>acid</b> 22:17 89:24 90:4  97:17 105:4,5,6  130:17,20 131:17,19  132:4  <b>action</b> 156:14  <b>activation</b> 13:2  <b>activity</b> 122:15  <b>actual</b> 15:1 61:11  112:14  <b>add</b> 23:15 27:5 110:2  131:2 136:4  <b>added</b> 79:9,10 105:4  <b>adding</b> 37:13 130:17  <b>address</b> 9:18,22,25  <b>addressed</b> 28:9  <b>adds</b> 87:5  <b>adhesives</b> 108:15  <b>admits</b> 97:1  <b>Advanced</b> 11:9  <b>aerial</b> 141:16,25 142:1  <b>aerocore</b> 106:13  <b>afraid</b> 35:17  <b>afternoon</b> 4:10  <b>age</b> 4:2  <b>ago</b> 6:16,18  <b>agree</b> 24:24 151:3  <b>agreed</b> 7:9 64:12,16  126:23  <b>ahead</b> 141:18 153:8  <b>air</b> 11:22,23,25 12:1,8  12:9,10 21:5 23:12  <b>AK</b> 89:25  <b>al</b> 1:8  <b>alcohol</b> 118:25  <b>aluminum</b> 129:6,9,23  130:7,10,12,13,21,22  130:24 131:15,18</p>	<p>132:7,7  <b>amount</b> 76:4 88:7  <b>amounts</b> 45:3 96:17  108:24,25  <b>analysis</b> 11:11 13:2  <b>analytical</b> 28:13  <b>analyze</b> 26:11  <b>anatomic</b> 103:11  <b>angle</b> 34:4 82:13 116:9  116:12,13,14  <b>answer</b> 7:7,8,18 64:11  <b>answers</b> 7:1  <b>anybody</b> 6:14 85:20  91:7  <b>any more</b> 27:7 110:16  <b>any way</b> 53:11 118:22  <b>apart</b> 63:21 65:15  124:15  <b>apparently</b> 60:13 142:5  142:16  <b>appearance</b> 47:21  <b>APPEARANCES</b> 3:1  <b>appears</b> 28:23 141:1  <b>application</b> 16:19  <b>applied</b> 6:20  <b>apply</b> 6:22  <b>approximately</b> 41:12  119:23  <b>April</b> 12:3 14:5 31:12  32:6  <b>area</b> 11:8 21:16 39:21  39:23 42:2,4 43:7  45:7 58:25 70:13  73:25 75:13 87:12  107:19 141:19,25  <b>arm</b> 82:18  <b>Armco</b> 90:1  <b>arms</b> 34:10  <b>arranged</b> 146:20  <b>arrow</b> 42:11,16,22  64:14  <b>asbestos</b> 66:19,20,25  66:25 67:3,6 68:22  71:12,16 73:1  <b>aside</b> 45:4 113:5  <b>asking</b> 16:21 17:8,9  22:5  <b>aspects</b> 16:25 19:25  <b>assigned</b> 12:13  <b>assist</b> 106:25 111:22  <b>associate</b> 12:24  <b>assume</b> 7:19 144:1  <b>assuming</b> 60:24 100:6  <b>Astro</b> 89:13  <b>atomic</b> 30:25 103:13  <b>attempting</b> 113:23</p>	<p><b>attempts</b> 54:6  <b>attention</b> 125:12  <b>attorney</b> 3:4,10,15 4:12  8:16 152:12 156:13  <b>attorneys</b> 133:3  <b>August</b> 10:6  <b>available</b> 8:1  <b>Avenue</b> 3:11 26:18  137:6  <b>aware</b> 92:20,24 123:20  <b>A-1</b> 53:6 54:20,22 55:9  65:4 86:12 140:23  143:25 144:1,21  <b>A-2</b> 53:6 74:25 81:3  86:11 143:19 144:15  144:16  <b>A-3</b> 53:6 87:21</p> <hr/> <p><b>B</b></p> <p><b>B</b> 141:2 142:25 143:4  143:11  <b>back</b> 12:8,10,12,13  21:5,9 22:4,12 31:17  34:1 37:10,11,12  46:13 48:11 50:4  59:19 62:18 66:14  67:2,12 71:5 74:7  79:16,24 94:20 96:7  97:11 98:25 99:15,16  109:24 115:2,19  117:1 119:21 120:14  121:12 122:2,17  124:1,8 133:13  141:22 144:9,12  148:5 149:3 151:1  152:24 153:7 154:1  <b>backfill</b> 142:19  <b>backfilled</b> 17:6 147:15  <b>backhoe</b> 34:3,12,18  37:11 58:19 59:14  80:17 82:13,17,18,24  112:2,12,15 115:17  116:3,7 145:14 147:2  <b>backing</b> 118:10  <b>backs</b> 117:12  <b>backtrack</b> 23:21  <b>bad</b> 56:22 64:5 74:8  94:9  <b>ballpark</b> 136:16  <b>barrel</b> 19:20 42:20  45:5 57:15 58:25  74:3 95:2 110:25  139:5,19  <b>barrelfill</b> 5:12 16:20  17:18 23:25 24:7,18  25:20 26:20 29:6</p>	<p>32:20 33:22 39:19  49:16,20 50:6,7  52:13 54:5 74:10  90:8 107:16 122:23  130:2 140:10 141:18  141:20 145:4 151:4  <b>barrelfills</b> 120:20  <b>barrels</b> 33:9 35:7 59:13  61:11 67:15 73:19,20  90:13,18 145:19  <b>base</b> 12:8,9 133:20  <b>based</b> 8:21 29:12 47:21  54:9 55:24 64:7  69:12  <b>batch</b> 64:4 91:14 99:23  100:8,9,12  <b>Bay</b> 27:1 46:5 49:7,9  49:13 50:3 70:13  104:8,14,15 120:17  121:10,17 132:12  <b>beads</b> 48:16  <b>Beavercreek</b> 95:1  138:21,24 139:10  <b>bed</b> 85:3 91:21  <b>began</b> 24:18,22 52:13  149:22  <b>beginning</b> 32:5 42:22  43:21 45:9 50:5  150:2  <b>begun</b> 52:14 56:5  <b>behalf</b> 3:2,7,13 133:8  153:5  <b>believe</b> 19:20 66:2  89:18 134:25 137:6  144:15 153:4  <b>bell</b> 58:20  <b>belonged</b> 38:1 59:20  <b>best</b> 14:6 68:22 77:1  143:14  <b>better</b> 133:14  <b>big</b> 21:11 23:18 43:20  51:13,20 57:11 62:13  82:1 89:16 91:4,21  95:10 105:9,9 106:7  108:12 109:9,22  110:14 119:6 124:9  147:9 151:7,7  <b>bigger</b> 84:13  <b>biggest</b> 45:3 98:4  <b>bill</b> 70:25  <b>billing</b> 70:11,25  <b>biodegradable</b> 18:13  <b>biodegrade</b> 18:18  <b>birth</b> 10:5  <b>bit</b> 6:2 23:21 33:20  41:6 56:24 102:15</p>	<p>133:14  <b>blend</b> 105:15  <b>blew</b> 125:23 139:15  <b>blocks</b> 62:18  <b>blow</b> 67:3 71:21  <b>blower</b> 21:5  <b>blown</b> 67:7 98:25  <b>blue</b> 39:5 119:24  <b>bluish</b> 101:9  <b>boards</b> 110:15  <b>boiled</b> 101:15  <b>boiler</b> 19:3 26:3 40:3,5  40:12 74:1 128:4  129:4,5 148:18,19  149:5  <b>booth</b> 51:11  <b>bother</b> 150:16  <b>bottom</b> 35:9,15 37:14  54:16 63:18 81:15  91:3 99:1 110:11,19  116:11 124:25 125:1  144:22 147:13,19,20  151:13 152:1,6  <b>bought</b> 9:1  <b>boundary</b> 141:3 142:24  <b>box</b> 41:19 58:4 90:21  95:5,6 144:21  <b>boxes</b> 92:20,23,23  100:12  <b>boy</b> 30:4 108:1 109:18  <b>BR</b> 40:5  <b>brake</b> 66:22,23  <b>break</b> 7:22 71:2,8  81:23  <b>breast</b> 4:18  <b>bring</b> 97:16 99:14  107:3 116:22,24  126:10 131:6  <b>bringing</b> 16:4,7 50:25  <b>broke</b> 29:16  <b>brought</b> 13:17 19:3  69:9 72:25 92:5  95:14 99:16 109:15  121:24  <b>Brown</b> 2:3 3:14,15  133:4,6,7 149:8  <b>BS</b> 11:5  <b>BTU</b> 97:24  <b>bubbles</b> 136:1,2  <b>bucket</b> 83:25 84:16,19  85:12,14,15,16 98:8  98:12  <b>buckets</b> 83:14,22 84:3  84:5 85:7,18  <b>Budding</b> 100:14  <b>build</b> 15:23</p>
--	---	---	--	--

<p><b>building</b> 3:11 15:9,23 26:10 39:25 40:2,13 40:18,18,22 62:16 128:19 129:1,4 134:3 134:7,10,21</p> <p><b>built</b> 15:9 20:13 127:17 128:4,19 134:2,7,10 143:16</p> <p><b>bulk</b> 18:5 23:2 37:17 44:25 45:11 46:8 66:16 67:6 68:23 69:19 70:1 72:23 73:6 75:4 76:4,16 77:16 79:4,10,17 85:22 88:8,10 89:15 95:8 129:6 131:12</p> <p><b>bunch</b> 44:6 56:17 62:7 62:22 74:16 91:12 117:25 131:23</p> <p><b>bung</b> 37:8 115:12</p> <p><b>bungs</b> 115:20</p> <p><b>buried</b> 57:10 88:16 103:21 108:25 113:14 117:7 132:14</p> <p><b>burn</b> 48:25</p> <p><b>burned</b> 50:21</p> <p><b>burning</b> 94:20</p> <p><b>bury</b> 19:10 65:13 68:25 71:20 83:17 103:17 103:18</p> <p><b>burying</b> 25:21 52:16,25 57:6 84:3 107:7 114:14</p> <p><b>busier</b> 150:11</p> <p><b>business</b> 123:23</p> <p><b>bust</b> 35:17</p> <p><b>Butch</b> 58:21</p> <p><b>buying</b> 30:17</p> <p><b>by-product</b> 104:21 107:14</p> <p><b>B-1</b> 54:23 64:25 65:4 65:11,25 67:21 69:7 77:3 86:12 144:4</p> <p><b>B-2</b> 86:12 144:14</p> <p><b>B.G</b> 26:8</p> <p style="text-align:center"><b>C</b></p> <p><b>C</b> 134:24,25,25 141:2 142:25 143:4,11,20</p> <p><b>cab</b> 21:5</p> <p><b>call</b> 139:4</p> <p><b>called</b> 1:12 48:2 94:13 95:2 106:13 138:6</p> <p><b>calling</b> 88:13 102:6 140:16</p> <p><b>cans</b> 35:14 68:5</p>	<p><b>car</b> 130:23</p> <p><b>carbon</b> 109:21 136:2</p> <p><b>carbonate</b> 129:7,10 132:7</p> <p><b>carbonated</b> 132:16</p> <p><b>care</b> 149:5</p> <p><b>careful</b> 82:3 124:20</p> <p><b>carpet</b> 125:6</p> <p><b>carried</b> 34:19</p> <p><b>carry</b> 128:7</p> <p><b>cart</b> 115:2</p> <p><b>case</b> 1:6 4:13 8:18 35:19 48:8</p> <p><b>cast</b> 94:9</p> <p><b>catalyst</b> 26:23 27:5 136:7</p> <p><b>catch</b> 97:15 105:17 107:4 116:10</p> <p><b>Cates</b> 134:22,24</p> <p><b>caught</b> 50:9,21</p> <p><b>cautioned</b> 4:3</p> <p><b>cave</b> 82:5</p> <p><b>caved</b> 37:3 80:25</p> <p><b>cave-in</b> 81:21</p> <p><b>cave-ins</b> 81:11 82:2 142:8</p> <p><b>cell</b> 31:23,25 32:2,9 33:15,24 34:5,14,24 35:9 36:17,21 37:10 38:16,18,22,23 41:13 41:15,19 44:15 52:18 52:24 53:3 54:5,21 54:22,23 55:9,9,14 55:17 56:3,5,8,13,19 57:3 58:17 61:6,13 61:19 62:1,4 63:11 63:23,25 64:7,14 65:9,24,25 66:3 67:13,17,18,21 68:16 69:3,7,11,13 72:15 72:17 74:24 76:3,5 76:22,24 77:3,23 78:5,20 79:5,8,14,18 81:3,21 82:4,8,24 86:6,10,11,12 87:2,3 87:20,21 88:9 90:22 108:19 110:9 112:4 113:1,6,8 114:15 116:1 119:16 127:9 127:11,17,20 140:23 141:7 142:2,21 144:1 144:2,4,6 145:9 146:12,19,21 147:5 147:18,19,19 151:7 152:3,7</p> <p><b>cells</b> 5:15,19 17:4,20,23</p>	<p>25:21 31:20 32:22,22 32:23,24 33:4,11,22 35:7 36:5,22 41:9 59:7,10 61:8,17 67:9 67:24 68:1 73:1,16 73:16 77:12,18 78:10 78:25 82:15 83:3,14 83:22 85:22 87:15,16 87:19 95:6 103:18,23 107:11,16,25 108:25 110:8 111:2,17,23 112:20,21 113:5 114:6 115:6 117:7 119:14,20 122:23 131:12 141:1 142:4 142:25 143:7,15 144:20,23 145:1,3 146:7 150:1,7,19 151:7,13,17,23 152:1 152:5</p> <p><b>Central</b> 10:9,17,19,20</p> <p><b>certain</b> 29:2 47:22 111:1 114:17</p> <p><b>CERTIFICATE</b> 156:2</p> <p><b>certified</b> 4:4</p> <p><b>certify</b> 155:1 156:6,12</p> <p><b>chance</b> 55:4 110:3</p> <p><b>change</b> 35:20 36:1,2 101:6 123:19 153:24</p> <p><b>changed</b> 123:15,21 148:2</p> <p><b>changing</b> 153:18</p> <p><b>charge</b> 70:11 92:17</p> <p><b>Charlie</b> 58:18 59:7,10 80:16 83:11</p> <p><b>Charlie's</b> 58:21</p> <p><b>cheaper</b> 63:2 94:14</p> <p><b>check</b> 4:22 43:11,12 74:5 84:18 95:21 96:3 97:17 107:5 110:3 126:11,15 148:19,25 150:25</p> <p><b>checked</b> 47:23 106:5</p> <p><b>checking</b> 48:9 83:4 103:9 112:10</p> <p><b>checks</b> 70:24</p> <p><b>chemical</b> 8:18 9:5,12 28:13 29:3 30:8,12 30:14 57:6 93:15 109:17,23</p> <p><b>chemist</b> 15:11,13,19 25:24 28:13 29:14 112:19</p> <p><b>chemistry</b> 11:5,9,20</p> <p><b>chlorinated</b> 18:16,17 46:1,2,19 47:9,11,16</p>	<p>47:25 48:3,5,7,24,25 49:3,5,8,17 97:2,13 106:6,9,14 108:22</p> <p><b>chlorine</b> 27:2</p> <p><b>choose</b> 152:17,19 153:3</p> <p><b>chromatograph</b> 48:15</p> <p><b>chrome</b> 132:15,18</p> <p><b>chronologically</b> 144:7</p> <p><b>Cincinnati</b> 19:19 74:3 74:7</p> <p><b>circle</b> 39:7 43:3 120:10 141:19</p> <p><b>City</b> 10:10 12:11 27:1 46:5 49:7,9,13 50:3 70:13 104:8,14,15 120:17 121:10,17 127:7 132:12</p> <p><b>Civil</b> 1:13</p> <p><b>clarify</b> 149:13,16</p> <p><b>Clark</b> 5:4 17:19</p> <p><b>clay</b> 141:9 142:10,16</p> <p><b>clean</b> 20:22 21:21 74:4 74:6 80:9 94:8 100:11 117:15 119:11 125:17</p> <p><b>cleaned</b> 62:23 100:17 108:17 124:19 125:20</p> <p><b>cleaner</b> 20:25 125:4</p> <p><b>cleaning</b> 51:7 98:12 135:13</p> <p><b>clear</b> 19:23 37:16 101:9 115:9 116:23 119:19 138:23</p> <p><b>clearly</b> 143:25</p> <p><b>Cleveland</b> 3:6,12</p> <p><b>clipboard</b> 58:6 80:11 80:14,21</p> <p><b>clod</b> 36:12</p> <p><b>clog</b> 125:6</p> <p><b>close</b> 56:11 78:5 79:1 80:23 82:5 92:16 137:4 142:2</p> <p><b>closed</b> 24:24 151:4</p> <p><b>closer</b> 119:20 145:17</p> <p><b>closest</b> 113:9</p> <p><b>Clyde</b> 1:11 4:1,9 28:12 155:1 156:7</p> <p><b>coalescer</b> 129:5</p> <p><b>coalescers</b> 26:4</p> <p><b>coalescing</b> 40:4</p> <p><b>cockeyed</b> 59:16 111:8</p> <p><b>coded</b> 57:5</p> <p><b>coffee</b> 8:1</p> <p><b>cold</b> 18:9 123:25 149:4</p> <p><b>collapse</b> 21:17</p>	<p><b>collapsing</b> 65:14</p> <p><b>collect</b> 116:7 125:15 127:10</p> <p><b>collecting</b> 56:7</p> <p><b>college</b> 10:11,16,19 12:11</p> <p><b>color</b> 101:8,9</p> <p><b>colors</b> 101:6</p> <p><b>come</b> 16:1 18:12 41:1 43:10 45:5,13 48:16 49:22 68:16 70:15 71:24 88:18 90:16,18 97:7 100:21 101:3 106:8 114:8 118:11 121:11,19 122:1,17 141:21 144:9 148:23 150:25</p> <p><b>comes</b> 130:12</p> <p><b>coming</b> 4:25 16:9,11 51:12 65:14 83:8 90:20 112:11 121:13 150:12</p> <p><b>commission</b> 156:20</p> <p><b>commissioned</b> 156:4</p> <p><b>communicating</b> 29:1</p> <p><b>companies</b> 108:13 133:13</p> <p><b>company</b> 9:1 15:1 16:1 28:14 30:14,18 62:11 62:13,14 95:10 138:6 138:9</p> <p><b>comparison</b> 151:16</p> <p><b>compatible</b> 99:22 100:6</p> <p><b>complete</b> 7:8 33:7,12</p> <p><b>completed</b> 5:21 31:20 32:9 55:17,18 66:5</p> <p><b>completely</b> 153:2</p> <p><b>component</b> 93:15</p> <p><b>compound</b> 58:3</p> <p><b>computer</b> 113:21 135:9</p> <p><b>concluded</b> 154:3</p> <p><b>concrete</b> 35:11</p> <p><b>CONDUCTED</b> 2:1</p> <p><b>cone</b> 124:10</p> <p><b>conglomeration</b> 43:17</p> <p><b>connection</b> 5:2 6:9 44:18 139:17</p> <p><b>conscientious</b> 100:19</p> <p><b>consider</b> 16:11 48:6</p> <p><b>consist</b> 93:15 102:11</p> <p><b>construction</b> 26:9</p> <p><b>consult</b> 17:1</p> <p><b>consulting</b> 17:12</p> <p><b>contain</b> 118:18</p> <p><b>contained</b> 49:16,20</p>
---	--	---	--	--

<p>108:24  <b>container</b> 22:10 89:13  98:8  <b>containers</b> 83:16  <b>content</b> 61:25  <b>contents</b> 63:24 109:21  <b>continue</b> 29:25 46:23  46:24 50:7 65:18  75:12 143:1  <b>continued</b> 53:14  <b>contract</b> 13:2,3,4  <b>contracts</b> 13:9 14:13  133:21  <b>control</b> 84:18  <b>conversation</b> 33:20  <b>convert</b> 58:5  <b>conveyor</b> 104:9  <b>cook</b> 93:18  <b>coolant</b> 97:9 98:11 99:5  101:15  <b>Copeland</b> 62:16  <b>copied</b> 60:5  <b>copies</b> 58:13  <b>copper</b> 132:15,20  <b>copy</b> 58:9,13 59:22  79:25  <b>corner</b> 38:22 54:14,16  54:19 60:15,25 61:3  61:5 64:12,16,17  66:11,15 86:18  119:19 126:13 140:9  140:10,14,14,24  145:3  <b>Corporation</b> 62:19  63:9 68:10,24 84:12  133:9 138:7  <b>correct</b> 20:12 22:22  25:25 28:6 29:4  30:10 33:12 34:17,21  35:5 36:6 37:20  40:14 43:12 57:16  61:14 65:1,12 116:18  141:5 144:8 145:5  153:11  <b>corrections</b> 152:22  153:16  <b>costs</b> 91:13  <b>counsel</b> 8:10  <b>count</b> 57:10 69:23 81:6  <b>County</b> 5:4 17:19  156:2  <b>couple</b> 13:24 37:7  62:18 111:17 133:20  142:4 149:12  <b>courses</b> 11:1,7  <b>court</b> 1:1 7:1,6 22:6</p>	<p>54:24 55:3 65:17  104:25 110:5 113:17  113:21 152:15,20,24  153:4,8  <b>Courtenay</b> 3:10  <b>Courthouse</b> 1:16  <b>covered</b> 33:11,12,14  71:23 78:16 93:19  108:2  <b>Cowen</b> 94:21 135:6,7  138:17,20 139:3  <b>crack</b> 110:15  <b>crashing</b> 135:9  <b>created</b> 132:6  <b>Crest</b> 85:6  <b>cross-examination</b>  1:13 4:5 133:5  149:10  <b>CSI</b> 48:17  <b>curious</b> 123:11 147:16  <b>current</b> 9:18  <b>cushions</b> 73:8 85:24  <b>customer</b> 68:8 70:5,9  70:16 83:5 88:20  150:25  <b>customers</b> 43:16 52:5  70:25 88:22 136:25  <b>cut</b> 50:12 70:24 91:13  94:10 108:15  <b>cutting</b> 19:17 101:12  <b>cyanide</b> 26:25 27:8  49:8 108:18,21,24  109:1,16,21 136:3,3  <b>cylinder</b> 84:11 142:13  <b>C-1</b> 65:4 144:6</p> <p style="text-align:center"><b>D</b></p> <p><b>D</b> 24:12 132:16 141:3  142:25 143:4,12  <b>Dan</b> 133:7  <b>Daniel</b> 3:15  <b>Danis</b> 26:9 70:23  <b>dark</b> 120:24 148:9  <b>date</b> 10:4 14:24 28:15  29:12 55:16  <b>dated</b> 28:5,5 155:8  <b>dates</b> 8:22 153:11,12  153:13,20  <b>day</b> 1:18 45:11 89:2  110:2 121:1 122:1,3  122:9 123:10 148:7  149:3 150:20,22,23  150:23 151:1 156:17  <b>days</b> 73:7 148:21 153:4  <b>Dayton</b> 1:17 156:16  <b>deal</b> 139:22</p>	<p><b>debris</b> 108:6 147:8  <b>December</b> 1:18 55:18  <b>decide</b> 102:9  <b>decided</b> 30:16 47:4  54:13 87:13 110:13  <b>deeming</b> 137:20  <b>deep</b> 49:11 82:15  132:21,23 145:10,16  146:7,12 147:2,3  <b>deeper</b> 145:15 147:12  <b>defendant</b> 3:7,13 8:17  <b>Defendants</b> 1:9  <b>define</b> 24:1  <b>definitely</b> 30:17  <b>degree</b> 11:3 12:19  <b>degrees</b> 11:12,15  <b>delivery</b> 92:17  <b>depend</b> 36:20 146:22  <b>depended</b> 104:5  <b>depending</b> 22:14 72:9  114:13 146:11,20  150:23  <b>depict</b> 39:10  <b>depicted</b> 151:25  <b>depiction</b> 54:4  <b>depicts</b> 141:25  <b>deposition</b> 1:11 4:14  5:2 6:5,21 8:5,8  27:22 113:24 152:15  152:16 154:2  <b>depth</b> 146:21,24 147:1  <b>Describe</b> 48:9  <b>describing</b> 22:19,23  <b>designing</b> 13:4 137:13  <b>destined</b> 26:19  <b>details</b> 89:7  <b>detect</b> 109:1  <b>detergent</b> 85:6,16  146:24  <b>determine</b> 47:21 49:23  146:24  <b>determined</b> 8:23 147:2  <b>device</b> 13:5  <b>diagram</b> 64:12,25  141:24 143:2 144:20  144:22 151:25  <b>diameter</b> 146:5  <b>difference</b> 43:15 47:2  <b>different</b> 47:16,18,19  48:16,19 54:7 80:15  85:8 96:23 99:18  101:12 114:12 125:8  133:20  <b>differently</b> 123:16  <b>difficult</b> 7:11  <b>dig</b> 52:24 109:22  124:15 148:21</p>	<p>153:11  <b>digging</b> 81:22 142:6  146:22  <b>diisocyanate</b> 26:23  109:2  <b>dimension</b> 36:23,24  78:5  <b>dimensions</b> 145:9  151:9  <b>dioxide</b> 109:21 136:2  <b>direct</b> 112:20  <b>direction</b> 34:20 41:18  42:18  <b>directly</b> 61:25 63:25  72:25 107:18  <b>dirt</b> 36:12 37:3 50:18  77:22 82:7,23 112:7  117:25 118:16  <b>dirty</b> 80:6  <b>discharged</b> 12:14,15,22  <b>discuss</b> 23:24 24:6,17  <b>discussed</b> 33:19 104:18  <b>discussing</b> 24:4  <b>discussion</b> 9:14  <b>disliked</b> 6:14  <b>disposal</b> 26:19 27:10  28:13 95:6 97:11  139:21 150:20  <b>dispose</b> 18:15 63:2  73:21 94:12  <b>disposed</b> 29:3 49:2,14  49:15,19 85:22  104:22 108:19 129:7  130:1 131:10 132:8  <b>disposing</b> 16:17 51:7  <b>dissolve</b> 18:18 89:25  <b>distill</b> 91:24  <b>distillation</b> 134:20  <b>distilled</b> 90:11  <b>distinction</b> 138:5  <b>DISTRICT</b> 1:1,2  <b>division</b> 13:8  <b>document</b> 27:24 28:5  53:20 57:14 61:10  65:24 66:8  <b>documents</b> 8:4  <b>dog-eared</b> 80:11  <b>doing</b> 5:23,24 13:2 19:1  20:2 24:20 29:23  30:24 45:13 46:25  72:7 80:15,17 83:9  94:18 95:3 107:1  120:23 123:12,16,23  127:22 128:25  130:15 137:23 139:7  144:17 150:14,15,17</p>	<p><b>dollar</b> 50:22  <b>dollars</b> 47:2,3 75:14  <b>door</b> 137:8  <b>downtown</b> 44:6  <b>DP&amp;L</b> 50:1  <b>DR</b> 39:22  <b>Drackett</b> 129:11,19  130:6,25 131:1,5,5  <b>drain</b> 56:25 129:16,16  129:17,17  <b>Drano</b> 129:19  <b>draw</b> 42:16  <b>drawing</b> 54:16  <b>dried</b> 92:1 93:17 94:3  <b>drive</b> 9:19 82:8,23  114:21  <b>driver</b> 70:4 122:10  124:20  <b>drivers</b> 83:6  <b>driving</b> 51:17 90:24  124:8 136:25  <b>drop</b> 116:25 122:5  131:21  <b>drops</b> 131:18,18  <b>drove</b> 67:11  <b>drum</b> 25:12,17 34:6  36:10 37:2,5,9,24  38:8 39:20,23 42:2  42:23 43:4,13,19  44:8,11 45:10,12  46:18 47:2,3,6,9,10  47:12 51:14 52:10,10  52:11 56:1 57:9  61:21 63:18 69:10,13  70:13 73:12,13,14,24  77:24 80:14,18 83:20  84:21,22,23 88:14  92:18 93:12 98:5,9  102:1,16,20,23,25  104:9 106:24 109:17  111:11 114:21,22  115:1 116:13,21,22  117:1,14 118:1,2,11  118:16 119:4 120:9  124:17 135:23 136:5  136:8 142:12 146:16  150:20  <b>drumfill</b> 49:16  <b>drummed</b> 86:8 104:7  <b>drums</b> 5:23 17:5,6 19:8  19:11,19 20:19 21:13  25:20 26:15,17,19  27:9,12,14 33:18,25  34:1,4,13,21,24 35:1  35:11,24 36:17 37:1  38:4 42:3,7,14,19,24</p>
--	--	--	--	--

<p>44:6 45:4,6,19,22,23 46:1,7,12 50:11,20 51:1,1,4,6,9 52:8,17 52:22,25 55:14 56:2 56:8,15,17,17 57:6,8 59:17 61:17,20,25 62:8,24 63:5,7,10,14 63:15 65:10,14 68:6 68:12,13,20,21,22,24 68:25 69:4,12,23 72:15 73:3,7,16 74:2 74:4,16 76:7,13,17 77:1,4,7,9,13,15,18 77:22 78:4,13,15,18 78:20,23 79:12 80:10 80:13 81:1,8,14,16 81:22,23,25 82:4,14 82:20 83:3,12 86:3,5 86:6,8,14,16,23 87:9 87:12 88:5,7 89:18 93:8 95:7,9 98:21 102:14 103:3,16,19 103:21 107:7,12,13 107:16 110:3,8,11,20 111:7,8,21 112:1,15 112:20,25 113:1,4,6 113:7,12,13,13 114:5 115:4,5,7,10,10,11 115:13,14,25 117:5,8 117:11,13 120:16 121:10,22,25 127:11 131:8 132:11 145:22 145:25 146:4,19 147:11 <b>dry</b> 57:1 67:1 71:18 90:25 93:20 115:14 129:18 131:1,8 <b>drying</b> 93:25 <b>dug</b> 44:15 56:19 78:5 127:9 141:9 143:9,12 144:6 150:1,3 <b>duly</b> 4:3 156:4,7 <b>dump</b> 21:13 27:16 37:8 41:2 50:15 51:16 71:19 72:2,15 84:20 98:7,13 101:21 103:16 106:23 112:6 112:12 121:11 <b>dumped</b> 19:18 61:21 65:10 67:12 68:23 69:1,3 73:11 76:4 93:1,7 107:23 111:1 116:16 122:23,25 131:12 <b>dumping</b> 16:9 98:10 107:22 120:19</p>	<p><b>dump</b> 21:8 <b>dumpster</b> 103:1,2,5 <b>dynamics</b> 13:6 <b>D-1</b> 65:4</p> <p style="text-align: center;"><b>E</b></p> <p><b>E</b> 1:11 4:1 24:12 134:25 141:3 142:25 143:5 155:1 156:7 <b>earlier</b> 24:25 26:18 61:15 62:25 68:5 71:11 87:18 126:22 127:8 135:8 138:19 148:4,5 149:23 151:22 <b>early</b> 31:6 32:17 73:16 77:17 87:15 133:17 <b>easier</b> 7:5 22:6 47:4 51:2 114:25 <b>east</b> 3:5 41:25 53:9 62:17 141:3 143:1 <b>edge</b> 41:13 77:23 <b>edges</b> 38:7 61:17 <b>Edmund</b> 12:11 <b>efficiently</b> 46:10 <b>eight</b> 15:7 20:11 77:7 145:19,24 152:4 <b>eighty</b> 63:7,10,15 68:12 77:4 <b>either</b> 95:12 103:20,22 138:13 143:22 153:5 156:13 <b>electronic</b> 11:23,24 12:25 29:23 <b>eleven</b> 36:25 146:10 147:6,18,21 <b>Ellis</b> 3:9 <b>employed</b> 9:4 13:12 149:18,19 <b>employee</b> 13:14 <b>employees</b> 6:11 8:20 <b>employment</b> 8:22 25:1 133:12 153:13 <b>emptied</b> 86:5 <b>empty</b> 73:20 74:2,16 77:9 78:7,19 83:21 95:25 122:6 <b>emptying</b> 86:4 <b>emulsion</b> 19:18 105:6 <b>ends</b> 77:25 <b>engineer</b> 12:24,25 <b>engineering</b> 11:25 138:8,10 <b>entire</b> 32:20 35:19 118:2,4 135:1 <b>environmental</b> 127:22</p>	<p>133:8 138:9 <b>EPA</b> 17:18,18 24:6,8 28:10,24 <b>equipment</b> 20:6 51:22 113:21 114:2 <b>Erievue</b> 3:5 <b>error</b> 153:24 <b>especially</b> 68:23 133:11 <b>estimate</b> 20:9 56:6 63:6 119:13 <b>et</b> 1:8 <b>ethanol</b> 119:1 <b>Euclid</b> 3:11 <b>evaporate</b> 126:17 <b>evenings</b> 30:4 <b>event</b> 156:14 <b>eventually</b> 15:18,21 19:10 26:3,8 47:7 <b>Evidently</b> 54:12 <b>Ewing</b> 4:9 <b>exact</b> 153:12 <b>exactly</b> 36:23 64:6 128:9 140:6,22 <b>EXAMINATIONS</b> 2:1 <b>examine</b> 50:8 52:3 <b>examined</b> 4:4 <b>example</b> 144:21 <b>exhibit</b> 2:7,10,13,16,19 2:22 27:19,22 39:1,2 39:5 53:15,19 54:25 55:5,8 57:19 64:13 64:18 65:17,19,22 74:19,20,23 75:3 79:2 81:3 119:25 139:24,25 140:2,8,13 151:10,10,12 <b>EXHIBITS</b> 2:6 <b>exist</b> 81:10,11 <b>existence</b> 16:2 <b>expand</b> 16:16 <b>expect</b> 87:6 <b>expensive</b> 46:5 <b>expires</b> 156:20 <b>explain</b> 135:20 152:11 152:12,13 <b>explaining</b> 52:7 <b>explains</b> 136:11 <b>E-1</b> 65:4 142:2 143:12</p> <p style="text-align: center;"><b>F</b></p> <p><b>F</b> 141:7 143:5 <b>fabric</b> 85:5,15 <b>fabricated</b> 108:13 <b>facilities</b> 138:3 <b>facility</b> 20:6 22:11 40:23 95:18 123:7</p>	<p>137:19 139:13 <b>fact</b> 35:11 84:2 128:1 130:23 <b>factory</b> 95:2 139:5,19 <b>fair</b> 127:15 <b>fairly</b> 14:19 <b>fall</b> 35:16 36:10 59:17 142:9 <b>falls</b> 36:14 <b>familiar</b> 24:13 58:14 144:25 <b>fan</b> 7:11 <b>far</b> 9:8 35:21,22,23 63:12 66:14 75:5 83:16 93:15 95:20 96:9 111:19 115:6 118:5 119:13 126:3 <b>fashion</b> 73:5,17 124:19 <b>fast</b> 150:12 <b>feasible</b> 17:7,16 <b>feel</b> 124:22,24 125:7 152:22 <b>feet</b> 41:12 119:14 145:14,16,21 146:1,7 152:4 <b>fell</b> 63:21 <b>fields</b> 11:19,21 <b>fifteen</b> 58:2 82:21 92:18 99:25 118:14 145:13,16,17 146:6 150:10 <b>fifth</b> 66:10 69:19 <b>fifty</b> 47:3 50:22 87:11 88:6 <b>fifty-five</b> 68:13 77:6 84:22,23 86:2 88:14 98:4,20 107:12 118:1 131:8 132:10 142:11 <b>figure</b> 21:1 64:6 68:16 70:10 103:7 <b>figured</b> 17:15 76:10,16 90:23,24 <b>figures</b> 76:1 <b>fill</b> 33:15 51:14 56:1,3 72:9 73:7 78:19 79:8 <b>filled</b> 5:16 32:24 58:16 59:22 60:4 62:4 70:22 76:9,12 79:1 85:7 119:19 142:12 142:13 <b>filling</b> 5:16 72:17 <b>filter</b> 66:24 <b>final</b> 12:9 <b>finally</b> 5:22 46:6 56:18 102:16,24 110:13 <b>find</b> 102:8 126:19</p>	<p><b>finding</b> 6:13 19:14 <b>fine</b> 39:6 89:4 100:3 <b>finish</b> 22:5 35:23 64:10 72:17 93:25 113:23 <b>finished</b> 33:5 46:21 <b>fire</b> 50:21 139:19 <b>first</b> 4:2 6:2 12:5 14:23 15:3,15 23:21 25:23 26:1 31:18 32:2,9 37:16 38:16,21,22 39:7 41:8,13,15,19 44:5,14,17 46:16 49:10 52:16 54:21,22 55:2,13,13 56:5,13 58:17 61:2,17 64:14 76:22 77:11 78:10 81:13 86:10,11,11 87:1,16 102:2 110:9 111:17 113:7 114:9 119:16 120:6 127:5,6 127:9,17 139:17 141:6,7 142:23 143:11,25 144:1 145:2 150:9 151:23 156:7 <b>fit</b> 110:21 <b>five</b> 14:8,10 36:19 73:10 83:16,25 84:3 84:5,16,21,24 85:18 92:7,10,13 96:12 142:25 145:2 <b>flammable</b> 46:3,19 49:10,12 120:3 <b>flammables</b> 120:11 <b>flashlight</b> 120:23 <b>flat</b> 35:10 111:6 124:9 <b>flatbed</b> 122:7 <b>flight</b> 13:6 <b>flip</b> 57:13 66:14 <b>floods</b> 72:16 <b>flow</b> 38:9,14 <b>foam</b> 26:24 73:8 109:20,24 136:1 <b>focus</b> 24:21 145:7 <b>follows</b> 4:4 <b>follow-up</b> 133:4 <b>foot</b> 78:1 82:16,19,21 146:4,15,18,19 <b>Force</b> 11:22,23,25 12:2 12:9,10 <b>foregoing</b> 155:2 <b>foreign</b> 13:7 <b>forgot</b> 67:3 <b>forgotten</b> 28:19 <b>fork</b> 118:10 <b>forklift</b> 34:11,11 37:6</p>
---	--	---	---	--

42:8,14 45:17 107:9 111:13 112:5 115:1 115:17 117:11 118:12 119:3 <b>form</b> 152:22 <b>former</b> 8:19 <b>forth</b> 37:13 <b>forty-four</b> 68:14 <b>found</b> 21:14 126:21 <b>four</b> 16:4 18:22 21:12 23:6 36:18 73:10 81:2 85:2 96:12 98:22 102:17 103:1 106:19 110:22 111:7 114:11 128:17 136:23 143:15 149:21 150:13 <b>fourth</b> 66:8,9 75:2 <b>frame</b> 24:22 25:4 87:17 112:2,8 116:9 149:14 150:2 <b>framework</b> 34:3 82:14 <b>Franklin</b> 16:5 91:23 134:12,23 135:1,14 137:1,19,21 138:1 <b>freeze</b> 148:16 149:1 <b>freezing</b> 149:6 <b>Fremont</b> 49:11 120:18 120:18 132:20,23 <b>Friday</b> 1:17 <b>friend</b> 135:13 <b>front</b> 69:7 <b>Frost</b> 3:14 <b>froze</b> 148:20 <b>Fuji</b> 12:7 <b>full</b> 4:7 33:16 37:3 38:3 38:3 50:11 52:18,23 56:2,18,20 67:13 69:3 72:13 79:8 102:16 103:5 106:19 109:19,24 110:22 126:9 138:13 142:12 142:14 146:18 147:25 <b>fully</b> 33:11 104:19 <b>full-time</b> 28:20 <b>funnels</b> 124:10 <b>funny</b> 100:20 101:2,4 141:14 151:19 <b>further</b> 8:25 149:10 152:9 156:12  <b>G</b> <b>G</b> 3:4 24:12 143:5 <b>Galion</b> 150:24 <b>Gallipolis</b> 150:24	<b>gallon</b> 20:20 21:8,10 22:3 23:4,6 68:13,15 72:21 77:7 83:16,25 84:3,5,16,21,22,23 84:24 85:18 86:3 88:13,14 98:5,20,22 107:12 118:1 120:17 131:8 132:11 142:12 <b>gallons</b> 68:14 70:8 73:11,17 75:11 76:8 76:12,15,18,24 77:8 79:4 98:5 99:25 100:23 102:18 118:14 <b>Gamble</b> 84:13 85:1 <b>garage</b> 18:4 20:14 124:5 <b>Gas</b> 48:15 <b>GC</b> 48:13,14 97:20 103:12 106:5 <b>geared</b> 133:10 <b>Gedart</b> 24:11 <b>generally</b> 54:6 98:17 119:9 120:15 123:9 126:15 <b>generate</b> 89:11 106:15 122:22 <b>generated</b> 109:10 123:3 124:2,4 <b>generator</b> 85:17 89:9 91:6 99:14 124:6 <b>generators</b> 22:9 44:3 49:6 52:3 69:6 71:16 98:3,15 99:4,10,11 99:18 108:10 <b>generator's</b> 22:10 124:21 <b>getting</b> 16:7 22:14,15 23:8,23 27:18 45:1 49:12 50:4 125:3 140:19 147:5 <b>give</b> 6:24 7:7,8 43:17 55:3 70:6 88:25 105:10 153:18 <b>given</b> 36:17 153:12,17 <b>glad</b> 123:24 <b>glob</b> 91:4 <b>gloves</b> 60:22 102:12 125:13 <b>glue</b> 68:19,21 85:21,25 85:25 86:5,24,25 87:4,7,21,22 89:14 94:4 <b>glued</b> 108:16 <b>glues</b> 86:15 <b>go</b> 6:3,22 10:7,11,16,24	11:18 14:17 22:8 23:12 28:4 34:1 35:13 37:10 44:10,21 46:5 49:9,13 58:3 63:11,19 66:15 67:14 81:22 83:7 88:21 93:3 97:3 98:6 99:14 103:22 105:18 112:21 113:15 114:10,10 115:2,21 119:8,19 121:12,18 121:25 122:3,6,13,14 133:13 141:18,22,22 143:1 145:14 147:3 147:12 153:8 <b>goes</b> 42:19 51:13 137:7 <b>going</b> 6:1,3,22 9:15 15:18,23 16:16 19:9 19:21 31:17 34:5 35:17 37:12 41:23 44:2,25 45:1 52:2,4 52:20 53:7,11 54:24 59:12 65:13,16 71:2 71:7,9 74:17 77:9 81:25 97:22 103:16 110:2,17 111:24 112:21 113:2,19 114:20 121:10 122:8 123:11 124:1 125:4 128:5,12,21 129:2 141:3 147:7 152:14 <b>Goings</b> 58:18 80:16 83:11 <b>goo</b> 60:21 79:23 91:4 124:16 <b>good</b> 4:10 18:19 21:22 38:14 44:4 62:15 81:5,19 91:2 93:18 93:25 94:19 115:18 126:16 132:3 <b>goody</b> 51:17 102:13 108:8 <b>gosh</b> 51:3 62:7,12 70:6 73:18 78:21 138:15 <b>government</b> 14:12 <b>graduate</b> 10:13,22 <b>graduated</b> 10:18,20 142:13 <b>Graff</b> 137:9 <b>Grange</b> 95:1 <b>gravity</b> 99:1 <b>grease</b> 84:6 102:13 108:4 126:18 <b>greasy</b> 102:14 108:8 <b>green</b> 39:6 120:9 <b>Greene</b> 5:10 6:10	<b>grind</b> 66:22 <b>gross</b> 27:7 <b>ground</b> 33:9 56:15 80:19 112:6 116:18 118:5,8,10,21 152:6 <b>grouped</b> 114:17 <b>groups</b> 114:24 <b>guarantee</b> 71:10 <b>guess</b> 5:5 14:15 76:20 79:7 114:7 <b>guessing</b> 17:25 30:18 56:10 59:3 85:2 113:10 145:13 149:20 <b>gunk</b> 124:24 125:1 <b>guy</b> 33:24 34:2,7 44:22 44:23 80:19 112:9 117:10 121:9 <b>guys</b> 57:5 113:7  <b>H</b> <b>H</b> 4:9 66:18 143:5 <b>half</b> 14:14,17 32:16 78:1 79:8 88:14 91:21 146:4,15,18 <b>Hall</b> 95:1 <b>hand</b> 5:24 56:4 156:16 <b>handing</b> 27:21 39:4 55:7 65:21 74:22 <b>handle</b> 18:6 44:25 50:25 51:25 79:12 110:17 150:12 <b>handled</b> 23:2 46:10 73:4 97:22 <b>handler</b> 115:23 <b>hands</b> 79:23 <b>handwriting</b> 75:7 <b>handwritten</b> 66:12 <b>handy</b> 47:7 <b>happen</b> 67:16 82:10 84:25 96:24 117:18 121:8,24 125:19 152:14 <b>happened</b> 20:10 64:2 105:20 109:6 113:11 113:22 119:5,24 120:1,10 121:16 135:10,21 148:6 <b>happening</b> 67:21 107:20 115:24 <b>hard</b> 48:22 51:25 54:16 110:17 120:21 129:15 <b>hardest</b> 43:15 <b>hardware</b> 19:1 137:9 <b>hassle</b> 111:20	<b>hatch</b> 71:25 <b>haul</b> 20:21 97:11 108:21 113:2 <b>hauled</b> 46:12 95:5 132:11 <b>hauling</b> 109:16 132:23 <b>Haverfield</b> 3:3 <b>hazardous</b> 71:20 103:8 <b>head</b> 7:2,5 <b>hear</b> 7:3,12 <b>heat</b> 19:4 105:9 <b>heavier</b> 112:1 <b>heavy</b> 103:9,10,14 104:6 105:22,25 106:7 132:24 <b>held</b> 5:25 37:4 <b>help</b> 8:2 31:6 88:22 110:14 112:11 122:2 135:4 <b>helped</b> 111:25 112:1 <b>helping</b> 29:24 58:19,24 80:20 83:11 <b>hereinafter</b> 4:3 <b>hereunto</b> 156:15 <b>hiding</b> 40:19 <b>high</b> 10:7,9,13 95:9 <b>higher</b> 124:23 <b>highest</b> 148:1 <b>highway</b> 62:17 <b>Hill</b> 1:11 4:1,9,10 7:10 10:4,8 27:21 28:12 53:18 55:8 65:22 66:9 71:1 74:23 114:4 122:20 132:25 133:7 149:13 152:10 155:1 156:7 <b>Hillard</b> 134:16,17 135:4 <b>Hill's</b> 113:24 <b>Hine</b> 1:16 <b>hired</b> 15:2,10,15,17,25 19:13 25:24 <b>history</b> 25:1 <b>hit</b> 81:23 117:14 118:4 118:11 147:8 <b>hits</b> 51:12 117:13 125:5 <b>hoe</b> 106:24 107:10 <b>hold</b> 21:15 146:19 <b>holding</b> 99:2 <b>holds</b> 82:14 <b>hole</b> 33:8 34:16 81:9 118:13 120:24 121:5 146:13 147:1 <b>holes</b> 74:6 <b>home</b> 119:9,12 121:12 121:20
---	---	--	--	--



<p>hook 22:13  hope 19:10  hopefully 7:15  hopper 72:9 105:18,21  106:16,17 107:9  horizontal 34:20,22  35:4,18 77:25 81:7  horizontally 34:19  35:25 36:15  hose 124:14 125:4  hospital 5:10 6:11,12  6:15 25:2 28:2,20  29:17,19,22,23 30:1  30:3,20 31:9  hot 123:25  hourly 70:23  huge 88:7 91:22 144:23  Huh-uh 37:19  hundred 21:8,10 22:2  23:4 47:3 50:21 51:4  68:14 73:19 76:14  77:4,7,8 78:22,22  87:9,10,11 88:5,6  119:17  Huntington 3:11  hurry 119:6  hurt 89:1  hydrogen 109:21 136:2  hydroxide 101:11  105:10,12,14 129:7,9  129:24 130:9,10,11  130:14,22 132:5</p> <hr/> <p style="text-align:center"><b>I</b></p> <p>idea 24:14 83:23 88:11  94:19 111:18 119:15  132:3 138:18 144:24  identification 2:9,12,15  2:18,21,24 27:20,23  39:3 53:16,18 55:6  65:20,22 74:21,23  identified 53:3 69:6,19  69:20 80:24 87:22  identify 41:9 48:19  97:21  identifying 46:22  II 57:22,23 58:3  III 57:23,23 58:3  imagine 38:10 54:12  important 6:24  inches 78:1 118:7,9  incident 109:25 136:17  incinerate 43:18 97:24  104:16 118:17  incinerated 46:8 106:1  incineration 96:7</p>	<p>incinerator 49:1 94:16  104:11  included 69:13  incoming 95:23  Indiana 122:11  indicate 9:10 29:5  60:15 76:1 111:2  indicated 61:11  indicates 65:24  indicating 36:11 39:12  39:24,25 40:7,8,20  41:2,12,16,22 42:9  42:15,17 43:1,5,10  54:14 60:23,25 63:19  65:8 73:24 75:6  81:12 104:10 109:19  112:8 114:22 118:5,7  120:7 125:7 140:5,17  140:21 141:11,14,22  141:23 142:7,11,17  143:10,23 144:10,12  151:21 152:3  Industrial 9:6 25:14  50:12  inert 92:2 105:23 107:6  125:25  initial 80:3  initially 60:4  injected 49:11  injection 132:24  injury 6:10  Inland 27:13,13 44:5  45:19 46:12,23 47:13  49:5 50:5,7 55:14  66:21,23 68:20 71:13  84:10 85:23 88:1,2  90:2 94:7,21 108:10  136:9  inside 35:13 123:24  institutions 11:16  instrument 48:18  instrumental 11:10  intact 68:25  interested 30:17  156:14  interests 133:9  interrupt 115:8  interrupted 105:1  110:6 113:18,25  involved 11:20 16:18  23:23 24:5,16 42:6  iron 22:16 34:4 82:13  89:25 116:9,12,14,14  130:21 132:7  Isotech 14:8,9  issued 17:18</p>	<p>issues 17:13  IV 57:23,23 58:3  Iwakuni 12:7  IWD 8:20 9:6 14:3,4,18  14:20 15:4,16,25  16:3 17:8 25:3,13,16  25:19,24 27:16 28:13  29:20 30:1,2,6 31:15  39:14 50:12,24 95:11  95:13 127:5 128:6  136:21,22,24 137:2</p> <hr/> <p style="text-align:center"><b>J</b></p> <p>Jack 16:6 17:10 24:2  29:11 136:24 141:12  Jalics 3:10 7:10 8:24  9:8,11 25:7  Japan 12:7,8  jar 97:18 116:25  Jo 1:14 156:3,19  job 44:4 81:19 91:2  126:5,7  Joe 28:11,21,24  John 24:11 100:13  129:2  Jones 109:17,23  Jr 1:11 4:1,9 155:1  156:7  judgment 47:20  July 133:22,24  jumped 118:12  June 12:3,15 25:3  29:17 149:25 150:3  junk 102:18</p> <hr/> <p style="text-align:center"><b>K</b></p> <p>K 134:24  keep 59:13 70:1 71:9  97:4 144:17  keeping 57:10 60:14  80:21 128:22  keeps 113:22  Keesler 12:6  Kentucky 90:1  kept 23:9 70:17,24  80:21 93:19 99:11  108:2  kid's 70:6  kill 26:24 27:3  killed 135:13  kind 22:14 23:16 37:12  40:18 51:15,23 53:4  60:17,21 69:15,25  73:25 80:23 83:9  88:10 89:10 91:11  98:18 101:4,8 102:13</p>	<p>105:14 108:8 126:12  132:22 136:11,25  137:15 140:8 141:17  141:23 148:16,18  153:18  Kiser 130:7,24 131:15  kneecap 29:16  knew 6:13 106:12  137:15  know 7:23 9:8 16:21  17:17 18:21 20:15  23:17 24:11 30:5  32:4,24 38:3,19,20  41:17 49:18 52:17  53:13 56:9 57:9  58:16 59:1,6,9,12  60:3 61:22 63:12  64:2 66:18 68:15  69:2,14,18 70:10  75:25 76:19 77:14  79:1,11,22 80:8 81:5  82:11 83:16,21 84:9  86:21 88:12,16 90:23  92:22 93:6,16,22  95:4,9 97:7 101:9  103:1 108:20 109:25  110:20 111:11,19  118:14,23 120:19  123:3,11,13,22  124:22 126:3,12  127:21 128:9 129:12  130:3,4,5 131:11,13  133:2 134:2,22  138:12 141:8,10  142:5,18 145:6,8,10  148:3,18 151:2,5,8  knowing 47:15  knowledge 107:17  143:15  known 107:20</p> <hr/> <p style="text-align:center"><b>L</b></p> <p>L 4:9,9  lab 12:24 13:6,18,21  14:2 26:11,12 40:8,9  48:12 84:17 85:4  97:16 126:10 128:25  129:3 133:16 134:12  label 52:11  labeled 109:7 110:1  118:24 135:24 136:5  136:14  laboratory 26:7  Labs 13:10  Lackland 12:5  Lagonda 14:22,22 15:2</p>	<p>15:6 18:24,25 19:6  19:12 20:1,3 26:18  27:10,12 127:4 128:2  128:6,15,16,23 137:3  137:4,5,6  lagoons 141:8  laid 61:4,12 74:14  Lammers 139:5,6,8,18  landfill 5:4 25:11,15,15  27:15 29:3 39:15  50:14,16 51:16,20  52:1 71:19 74:9,11  74:15 142:18  large 17:12 18:6 85:4  152:1  larger 23:3,4 144:20  late 5:3,6,7 14:1,2  32:17 127:9 151:4  latex 68:1,4,10,18,19  68:21 85:21,25 86:5  86:19 87:2,4,7,21  Law 3:4,10,15  lawful 4:2  lay 82:19 104:9  layer 36:25 37:14,16  37:17,22 76:8 77:1  80:24 81:15 110:10  110:18  layers 78:15 81:15  146:8,9,10,11 147:5  147:6  laying 77:24 145:23  layout 54:9  leach 52:21 56:23  leak 116:2,18  leaked 116:11,17  leaking 63:4 115:18,20  115:25 116:5 117:3,8  leased 134:13  leave 13:20 30:12  33:16 51:6 52:19  71:5 96:4 118:21  125:9 127:4 129:22  left 5:10,17 9:2 13:17  25:3 30:8,15 31:1,7,8  31:13 33:1,3,5 35:4  35:18 41:23 74:16  101:17 123:21,24  127:3 134:19 136:18  137:1,10 140:9,14,18  140:24 149:18,21  leftover 102:10  legal 16:23  legible 80:1,8  length 146:2  Leslie 3:4 4:11</p>
---	---	--	---	--

<p><b>Lester</b> 58:20  <b>letter</b> 28:23,24 29:8,9 29:12  <b>letters</b> 53:6,9  <b>let's</b> 11:1 28:4 30:15,20 31:8 33:20 36:25 41:6 55:3 66:7 73:23 78:21 88:25 122:16 131:4 143:20 144:1 145:7 147:7,17 149:25  <b>level</b> 36:17 50:19 60:14 79:5,16 81:2 110:11 110:12 147:18,21,24 148:1  <b>levels</b> 36:19 79:6 97:12 147:17,18  <b>lid</b> 35:13 61:20,24 63:20 124:14  <b>lids</b> 63:14  <b>lift</b> 34:13  <b>light</b> 121:3  <b>lights</b> 120:22  <b>liked</b> 121:18  <b>line</b> 35:1 142:23  <b>lines</b> 148:15  <b>lip</b> 116:14  <b>lips</b> 35:12  <b>liquid</b> 9:6,7 14:18 15:4 15:16 16:1,3 17:9 18:7 25:16,17,19,24 27:16 31:15 39:14 50:24 95:11 124:14 125:10 132:22 136:21,22,24 137:2  <b>liquor</b> 89:24  <b>list</b> 88:21 132:14 153:23  <b>listed</b> 70:14 88:9  <b>little</b> 6:2 19:22 23:21 32:13 33:20 41:6 48:18 56:24 64:14,18 65:2 89:6 91:1 96:13 106:7 108:2 133:14 137:8 141:15 142:13 144:21  <b>live</b> 9:25 10:2  <b>lived</b> 9:21  <b>living</b> 9:24  <b>LLC</b> 3:14  <b>LLP</b> 3:3,9  <b>load</b> 27:14 33:24 34:1 37:11 42:14 45:5,6 60:17 91:17 110:1 120:17 121:17,24  <b>loaded</b> 18:11 130:21,22</p>	<p><b>loading</b> 50:13 60:19 113:14,16 121:21  <b>located</b> 41:10 54:7 141:18  <b>location</b> 15:6,21 26:18 31:19 34:17 43:12 54:4 127:24 137:3 138:24,25 142:4  <b>locations</b> 80:14  <b>log</b> 57:16 60:3 70:4,7 76:22 80:21 90:22 110:25 114:12,16  <b>logs</b> 79:18 80:5  <b>long</b> 6:16 9:21,24 15:5 28:19 48:20 72:8 106:15 114:2 123:23 128:12 145:11,18 146:2  <b>look</b> 27:24 53:19 54:25 55:10 58:8,10,14 65:23 66:9 70:10 100:25 101:8 139:24 140:20,24 141:16 144:19,22  <b>looked</b> 16:23 62:24 76:23 107:6 150:15  <b>looking</b> 57:18 81:2 140:4,7  <b>looks</b> 24:14 54:8 55:12 60:8,11,20,23 65:3 66:16 69:15 75:9 79:23 80:23,25 81:1  <b>lost</b> 148:14 149:6  <b>lot</b> 18:11 23:13 27:12 37:1 47:18 48:23 50:11 56:21 59:16 63:18 77:12 78:7 79:17 82:2 84:14 97:23 98:2,23 106:10 106:11 116:22 125:3 130:19 131:25 142:8  <b>lowering</b> 116:15  <b>lugger</b> 92:23 95:5  <b>lying</b> 36:5</p> <hr/> <p style="text-align: center;"><b>M</b></p> <p><b>machine</b> 73:9,12  <b>machines</b> 19:17 98:11 108:17  <b>machining</b> 98:2  <b>main</b> 3:16 44:6  <b>maintain</b> 29:24  <b>maintenance</b> 39:11,25 40:1 128:19 148:17  <b>making</b> 7:11 26:23 73:8 83:6 123:10</p>	<p><b>man</b> 34:23 56:17 86:25 109:8 128:17 148:17  <b>Management</b> 1:7 3:7 8:17,18,19 9:4,5,11 9:12 25:4,5 30:17  <b>manager</b> 134:23  <b>manner</b> 156:13  <b>manufacturing</b> 99:7  <b>man-hours</b> 111:21  <b>map</b> 61:11 103:13  <b>March</b> 31:12 32:5  <b>mark</b> 38:25 53:12 54:25 55:4 57:24 58:7 65:17 74:18 80:13 119:25  <b>marked</b> 2:6,8,11,14,17 2:20,23 27:20,22 39:3,5 53:16,18 55:6 55:8 65:20,22 74:21 74:23  <b>marking</b> 61:1 80:22 120:9  <b>marks</b> 81:7  <b>Mary</b> 1:14 156:3,19  <b>match</b> 69:17  <b>matches</b> 69:24  <b>material</b> 69:9,11,19,20 70:2 102:11 115:6 125:20 131:5  <b>materials</b> 29:2 125:14  <b>math</b> 11:6  <b>matter</b> 96:8 113:5  <b>matters</b> 6:4  <b>max</b> 110:22  <b>mean</b> 14:9,9 18:18 24:1 27:3 32:12 33:1,6,15 38:12 73:20 81:13 84:22 95:23 102:15 109:10 112:3 115:9 116:6 121:3 149:23  <b>means</b> 7:19 33:8 43:13  <b>meant</b> 79:13 135:6  <b>measure</b> 149:15  <b>measuring</b> 13:5 23:16  <b>meeting</b> 24:1,6,10  <b>meetings</b> 23:24 24:16  <b>Mel</b> 138:8,12,14  <b>Memorial</b> 5:10 6:11  <b>memory</b> 9:14 31:7  <b>men</b> 112:14  <b>mentioned</b> 26:17  <b>mess</b> 43:17 48:21 51:17 51:21 88:17 102:14 103:3 108:8 109:9,22 115:22 117:15 119:11 121:5 126:18</p>	<p><b>messed</b> 47:10  <b>messes</b> 21:19  <b>messing</b> 120:4  <b>met</b> 24:8,9  <b>metal</b> 115:10,11 116:11  <b>metalize</b> 27:7  <b>metals</b> 103:9,10,14 104:6 105:23,25 126:21 131:21 132:24  <b>methanol</b> 119:1  <b>method</b> 27:17  <b>Michigan</b> 27:1,1 49:9 104:15 134:14  <b>mid</b> 149:24  <b>middle</b> 126:14  <b>Middletown</b> 3:17  <b>midnight</b> 121:20  <b>minor</b> 11:5  <b>minute</b> 13:22 74:18  <b>minutes</b> 23:20 71:2 122:17 150:11  <b>miscellaneous</b> 85:8  <b>misabeled</b> 109:3 136:8  <b>mix</b> 46:24  <b>mixed</b> 48:6 52:8 99:10 99:18 108:5 135:23  <b>mixing</b> 44:1 46:2 99:24 100:5  <b>mixture</b> 85:8  <b>mix-up</b> 136:14  <b>models</b> 13:5  <b>modified</b> 96:1  <b>mold</b> 85:24  <b>molecule</b> 106:8  <b>monitors</b> 29:24  <b>MONTGOMERY</b> 156:2  <b>month</b> 72:13  <b>months</b> 12:13 15:7 16:4 18:22 20:11 30:11,13 52:19,19,19 55:25 85:3 106:19 127:14 127:16 128:18 136:17,23 149:21  <b>Moore</b> 28:11,24  <b>morning</b> 121:18 122:14  <b>motioning</b> 34:10  <b>motor</b> 94:8 101:10,10 105:8,15  <b>mounted</b> 22:12  <b>mounts</b> 94:9  <b>move</b> 19:6 20:10 115:3 147:9  <b>moved</b> 14:23,24 18:23 19:2,24 20:1,18 26:1</p>	<p>127:6,18 128:5,24 129:1  <b>moving</b> 104:17  <b>Municipal</b> 138:1  <b>Muskegon</b> 134:14,18  <b>Myers</b> 137:7</p> <hr/> <p style="text-align: center;"><b>N</b></p> <p><b>name</b> 4:8,8,10 15:2 24:13 57:7 70:7 89:9 137:2  <b>names</b> 138:13  <b>narrow</b> 78:10  <b>near</b> 137:11  <b>neat</b> 59:23  <b>neater</b> 60:5  <b>neatly</b> 35:24  <b>necessary</b> 113:25 152:22,25  <b>need</b> 7:22 17:2,3  <b>negotiating</b> 9:2  <b>Nelson</b> 30:23 149:15  <b>neoprene</b> 94:8,10,13,17  <b>neutralize</b> 105:4,7,16 130:16 131:16  <b>neutron</b> 13:2  <b>never</b> 9:4 24:9 73:4,6 151:7 153:7  <b>new</b> 52:5 128:4,13,14 150:25  <b>Newport</b> 90:1  <b>nicer</b> 149:2  <b>night</b> 120:20 121:7,9 121:15,16,22 122:15  <b>nine</b> 77:4,8 127:14,16  <b>Ninth</b> 3:5  <b>nodding</b> 7:2,4  <b>nonflammable</b> 46:3 106:14  <b>normally</b> 86:2 98:21 99:12,13 126:19  <b>north</b> 3:16 42:1 53:8,9 141:3  <b>northern</b> 142:24  <b>northwest</b> 38:21 54:14 54:15 60:25 61:3,5 64:12,17 140:9,14,24 145:3  <b>notarized</b> 152:24  <b>Notary</b> 1:15 156:3,20  <b>note</b> 86:18  <b>notice</b> 117:3  <b>noticed</b> 146:7  <b>November</b> 28:5 55:21 56:6  <b>number</b> 34:5 57:8</p>
--	--	---	---	---

<p>69:12 81:6,8,20 111:1 139:24,25 140:2,8,13,23 148:1 <b>numbered</b> 141:2 <b>numbering</b> 53:4 <b>numbers</b> 53:6,7,8 58:1 58:5 140:19 <b>numeral</b> 57:25 <b>numerals</b> 57:22 60:2 NW 61:1</p> <p style="text-align: center;"><b>O</b></p> <p><b>observe</b> 83:2 111:23 150:20 <b>observing</b> 150:7 <b>occasion</b> 92:3 115:25 118:3 <b>occasionally</b> 47:7 83:15 89:22 96:25 119:5 149:4 <b>occasions</b> 72:6 119:3 <b>occurred</b> 135:15 136:17 <b>October</b> 9:23 <b>odd</b> 37:1 153:14 <b>offer</b> 8:23 <b>office</b> 26:2 79:24 134:10 156:16 <b>Offutt</b> 12:8,12,14 <b>oh</b> 25:13 31:22 35:4 36:18 38:9 43:22 51:3 92:9 98:6 101:6 108:1,20 109:8 150:13 <b>Ohio</b> 1:2,15,17 3:6,12 3:17 9:19 16:5 17:18 24:6,8 28:10,24 156:1,4,16,20 <b>oil</b> 18:8 20:2 22:25 40:21 50:2 51:4 83:5 90:5 95:18 97:4,9 100:24 101:9,10,10 101:13,16 103:25,25 104:21 105:5,8,11,15 106:3,4,12 107:15,15 108:4,7 123:5,7,15 127:24 128:9 <b>oily</b> 126:18 <b>oil/water</b> 16:8 18:5,8 18:20 19:2,16,16 22:16,24 26:5 40:19 40:22 41:5 45:2,17 46:14,15 95:22 96:5 96:5,15,16,20 97:8 98:1,14,16 99:5,9,17 100:18 104:19</p>	<p>122:10 125:22 128:3 128:16,20,24 130:17 <b>okay</b> 7:17,20 8:3 25:8 28:1,3 42:13 48:11 52:15 53:7 54:8,12 54:18 56:9,19 57:20 60:13 64:8 65:8 68:20 75:24 77:24 80:16 87:24 88:3 89:11,12 118:9 126:8 130:11,18 131:1,16 132:25 137:20,20 138:22 143:21 144:16 151:15,18 152:9 153:22 154:1 <b>Oklahoma</b> 10:10,10,21 12:11 <b>old</b> 16:4 134:14 <b>once</b> 22:20 33:16 37:13 37:16 72:3 94:11 99:16 115:2 150:10 150:14,22 <b>ones</b> 8:20 19:15,16 26:21 49:10 51:3,9 74:2,8 128:4 145:8 <b>on-site</b> 70:20 <b>open</b> 5:15,19 32:22 33:4,6,8,16 36:22 44:8 52:19 53:1 71:24 <b>opened</b> 67:12 69:10 91:3 <b>open-head</b> 51:9 93:12 115:14 118:16 <b>operate</b> 45:16 <b>operating</b> 25:20 32:20 52:13,14 <b>operation</b> 5:12 16:14 19:24,25 22:20 23:22 24:18 25:17 39:19 50:6 98:2 111:23 127:19,25 135:5 151:4 <b>operations</b> 148:6,11 <b>opportunity</b> 8:13,15 152:19 <b>opposed</b> 138:7 141:24 <b>option</b> 153:7 <b>order</b> 143:16 144:7 <b>organic</b> 11:9 129:25 <b>organics</b> 18:11,16,17 101:14 <b>original</b> 59:21 79:25 <b>originally</b> 141:13 147:23 <b>outlined</b> 141:17</p>	<p><b>outside</b> 123:25 <b>overloaded</b> 89:23 90:3 <b>overspray</b> 51:12 <b>Oxford</b> 132:16 <b>oxide</b> 130:21 132:7,7</p> <p style="text-align: center;"><b>P</b></p> <p><b>packed</b> 77:18 142:16 <b>pads</b> 66:23 128:20 <b>page</b> 2:1 6:23 41:24 53:20 57:18 58:11 60:8 66:8,9,10,13,14 69:19 75:2,12,14 <b>pages</b> 60:12 75:21 <b>paint</b> 19:8,15 44:24 45:24 51:10,11 56:24 57:1 61:19 62:5,9,23 64:3 65:10 68:2,4,9 68:10 69:4 84:7,7,7,7 84:10,11,12 86:13,23 87:2 90:9,11,12 91:25 92:1 93:17 94:4 115:7,13 117:23 118:24 <b>pallet</b> 110:16,21,23 111:7 <b>pallets</b> 110:7,10,18 111:1,10,14,15,16 <b>pan</b> 124:16 <b>pans</b> 124:5 <b>paper</b> 57:12 125:6 <b>paperwork</b> 5:21 70:1 <b>park</b> 121:12 122:13 <b>parking</b> 50:11 <b>part</b> 13:23 19:14 28:18 39:15 47:15 68:7 82:6 108:6 137:12,19 137:25 138:1 153:16 <b>partial</b> 13:5 <b>particular</b> 61:6 <b>party</b> 156:13 <b>part-time</b> 28:2,3,19 29:17,21 30:19 <b>pass</b> 142:20 <b>path</b> 114:8 <b>Patterson</b> 95:1 <b>Pause</b> 53:22 78:24 105:2 122:19 <b>pay</b> 62:25 94:15 <b>paycheck</b> 31:16 <b>paying</b> 125:11 <b>PCB</b> 106:12 <b>PCB's</b> 49:20,23 50:3 106:2,5,6,11 <b>pen</b> 39:6,6 42:16 119:24</p>	<p><b>people</b> 17:9 24:8 47:5 70:23 107:1 <b>PERC</b> 142:11,20 <b>percent</b> 96:12 97:12 <b>perfectly</b> 35:10 89:4 <b>period</b> 28:16 32:20 33:2 45:9 47:13 <b>periodically</b> 148:19,25 152:7 <b>permit</b> 16:19 17:17,22 56:15 127:20 <b>permits</b> 5:25 15:22 <b>person</b> 80:12,15 <b>phone</b> 33:20 44:9 <b>phonetic</b> 50:18 <b>photo</b> 39:16,17 141:16 141:25 142:1 <b>photograph</b> 39:10,17 64:9 <b>physics</b> 11:6 <b>pick</b> 22:9 23:14 34:7,15 42:4 71:23 72:1,14 72:20 74:3 92:17 93:4 98:16 106:23 114:21,22 115:1 122:5 128:7 <b>picked</b> 34:18 63:9 70:5 70:8 71:12 72:24 91:14,16 92:4,18,22 98:14 99:8 101:22 107:9 122:11 124:4 130:5 <b>picking</b> 16:8 21:25 22:17 23:17 83:6,6 83:12 115:3 <b>pickle</b> 89:24 <b>picture</b> 38:24 40:16 41:9 <b>piece</b> 57:12 85:24,25 86:1 125:5 <b>pieces</b> 48:18 86:1 116:13 <b>piling</b> 23:9 <b>pipe</b> 116:24 152:5 <b>pipes</b> 148:21 <b>pitch</b> 84:19 <b>place</b> 19:5 21:24 22:24 72:3 78:7 120:20,25 121:6 122:21 129:14 150:8 <b>placed</b> 33:22 36:5,15 37:17 83:14 <b>placement</b> 83:3 <b>places</b> 81:24 <b>placing</b> 35:7 37:7 <b>plaintiff</b> 1:5,12 3:2</p>	<p>4:12 <b>Plaintiff's</b> 2:7,10,13,16 2:19,22 27:19 39:2 53:15 55:5 65:19 74:20 139:25 140:8 140:13 <b>plan</b> 15:16 16:22,25 23:24 65:5 141:12 144:17 <b>plans</b> 16:10,13 <b>plant</b> 14:22 16:6 17:23 18:1,2,4 22:25 44:6,7 62:7,9 91:23 94:25 99:15,17 124:8 134:13,14,16,17,18 134:22 137:22 151:2 <b>plastic</b> 116:23 <b>plating</b> 132:17,18,19 <b>played</b> 17:12 <b>Plaza</b> 1:16 <b>please</b> 4:7 7:14,22 9:17 27:23 65:23 <b>plugged</b> 109:9 <b>pocket</b> 4:18 <b>point</b> 12:18 15:12 26:6 35:20 36:1 123:14 <b>pointing</b> 54:19 64:24 <b>polyol</b> 17:6 19:9 26:23 27:7 33:17,21,22 37:9,13,18,23 38:2,6 38:11,15 41:8 44:24 45:25 51:19 61:16 73:3,4,9,14,15 76:4 78:10,23 79:4 86:6 108:10 109:4,7,18 110:1 135:24 136:5 <b>polyurethane</b> 109:20 <b>pond</b> 73:23 119:18 <b>portion</b> 48:4 <b>position</b> 61:12 <b>possibly</b> 68:8 143:17 <b>postgraduate</b> 10:24 <b>pour</b> 38:6 47:8 63:24 <b>poured</b> 33:18 37:18,22 61:16,25 67:13 69:11 72:25 73:15 86:9,15 86:25 87:4 93:2 109:4 <b>pouring</b> 37:9 87:7 115:22 <b>precipitate</b> 131:22 <b>preliminary</b> 6:4 <b>prepare</b> 8:5,7 9:14 152:16 153:23 <b>preparing</b> 56:13 57:3 <b>preprocess</b> 123:4</p>
---	---	---	--	--

<p><b>preprocessing</b> 101:23 102:7 104:2,18 105:18 122:12</p> <p><b>presence</b> 156:10</p> <p><b>pressure</b> 148:15</p> <p><b>Preston</b> 108:21</p> <p><b>pretty</b> 21:22 30:16 31:1 38:10 48:20 52:18,23 54:13 56:3 59:11 62:15 71:20 76:12 77:20 85:10 92:1,16 92:19 93:18 94:12,21 94:24 100:19 115:15 138:16</p> <p><b>previous</b> 133:11</p> <p><b>price</b> 63:1</p> <p><b>primarily</b> 17:10 94:3</p> <p><b>primary</b> 8:17</p> <p><b>prior</b> 56:7 127:10</p> <p><b>probably</b> 6:21 8:15 16:3 20:13 30:20 31:11 36:18,25 54:14 56:10,12 58:18 60:24 63:7 81:4 82:16 92:25 93:20 94:6 106:18 107:21 108:4 108:6 113:10 114:11 114:19 118:25 119:17 120:5,6 127:16,18 134:21 145:13,17,19 150:10 153:10</p> <p><b>problem</b> 18:10 19:14 43:20,24 98:4 116:21 125:11</p> <p><b>problems</b> 113:20 144:11</p> <p><b>procedure</b> 1:14 35:6</p> <p><b>proceedings</b> 53:22 78:24 105:1,2 110:6 113:18 122:19</p> <p><b>process</b> 18:21 20:2 21:23 22:19,23 26:21 41:5 46:18,22 48:9 48:22 83:5 90:10 93:25 95:20,25 96:14 99:7,19,21 100:2 101:12,19 104:20,23 105:13 107:15 113:2 122:21 123:5,15 127:25 128:5,10,13 128:21,24 129:2,21 130:20 132:2 135:21 137:12,13 138:11</p> <p><b>processed</b> 18:7 41:1 96:17 99:17,20 100:8</p>	<p><b>processes</b> 16:19</p> <p><b>processing</b> 96:20 103:25 105:8 123:7 128:3,16 137:24 138:18</p> <p><b>Procter</b> 84:13 85:1</p> <p><b>producers</b> 84:13</p> <p><b>produces</b> 130:13</p> <p><b>product</b> 101:18</p> <p><b>production</b> 72:10</p> <p><b>progressed</b> 150:18</p> <p><b>projects</b> 13:7</p> <p><b>promoted</b> 138:18</p> <p><b>property</b> 64:17</p> <p><b>proportion</b> 96:20</p> <p><b>proposed</b> 23:24 24:7</p> <p><b>proposition</b> 127:21</p> <p><b>provide</b> 27:17</p> <p><b>Public</b> 1:15 156:3,20</p> <p><b>pull</b> 20:24 21:18 23:7 84:18 113:11 120:12 120:14 124:22,24,25 125:8</p> <p><b>pulling</b> 4:17 125:10</p> <p><b>pump</b> 20:19 23:12,13 41:4 49:1 51:2 59:17 72:4 95:24 96:2,6 97:10 106:21,22 120:15 124:25 129:15,17 131:3,6</p> <p><b>pumped</b> 19:16 46:11 98:21 102:3 107:24 107:25 109:18 135:25 136:3</p> <p><b>pumper</b> 44:22 98:24</p> <p><b>pumping</b> 109:16 137:24</p> <p><b>puncture</b> 119:3,4</p> <p><b>purchased</b> 30:14 134:13</p> <p><b>purpose</b> 15:17</p> <p><b>purposes</b> 2:8,11,14,17 2:20,23 27:20,23 39:3 53:16,18 55:6 65:20,23 74:21,24</p> <p><b>pursuant</b> 1:13</p> <p><b>push</b> 21:7 37:25 50:18</p> <p><b>pushed</b> 118:13</p> <p><b>put</b> 17:3,5 20:19 21:4 22:16 37:12 39:22 40:1,5,21 41:14 42:7 42:11 43:3,11 45:7 46:6 51:5 56:15 57:8 57:22,25 58:6 62:23 65:2 67:25 68:8 70:13 73:13,23 74:9</p>	<p>74:14 76:7,14,17 77:13,15,16 78:7,20 79:5,14 81:25 83:19 85:25 87:13 93:18 97:17 99:23 100:4,25 101:25 102:19 103:16,20 107:15 110:8,10 111:7,11,12 111:13,16 112:25 113:5,8 115:6,14,16 116:1,3,24 118:16 120:3,8 122:12 124:6 124:13,16 125:22 132:5,10 140:3 141:19 142:4,19 147:10,23 153:25</p> <p><b>putting</b> 23:18 41:19 62:9 73:2 78:9 93:24 100:24 102:23,25 103:19 110:18 115:4 117:10 134:19</p> <p><b>PVC</b> 116:23 152:5</p> <p><b>p.m</b> 1:18 154:3</p> <hr/> <p><b>Q</b></p> <p><b>qualified</b> 156:5</p> <p><b>quality</b> 84:18</p> <p><b>quantify</b> 96:19</p> <p><b>quantity</b> 85:5 89:17 91:22</p> <p><b>question</b> 7:7,9,14,18,20 22:5 30:23 64:10,11 81:5 124:1 141:6 144:19</p> <p><b>questions</b> 6:25 19:22 23:20 95:18 114:2 133:2 149:8,13 152:10</p> <p><b>quick</b> 149:12</p> <p><b>quit</b> 14:13 44:1 47:5 110:18 117:4</p> <p><b>quite</b> 5:25 6:18 102:15</p> <p><b>quitting</b> 119:10</p> <hr/> <p><b>R</b></p> <p><b>R</b> 24:12</p> <p><b>rags</b> 20:23 41:3 102:12 125:13</p> <p><b>rainwater</b> 52:20 56:21 56:22 108:3</p> <p><b>raking</b> 107:8</p> <p><b>ramp</b> 82:7,23 111:12</p> <p><b>ran</b> 50:17,19 100:18 113:15</p> <p><b>rare</b> 96:23</p> <p><b>reach</b> 58:10 82:17,19</p>	<p>147:2</p> <p><b>reacted</b> 135:25 136:7</p> <p><b>reactive</b> 27:6</p> <p><b>read</b> 54:17 152:18,19 152:21 153:1,3</p> <p><b>reading</b> 153:7</p> <p><b>ready</b> 72:2 122:3,14</p> <p><b>real</b> 38:13 58:5 91:2 99:22 103:6 126:9 132:13</p> <p><b>realize</b> 24:19</p> <p><b>really</b> 40:15 56:18 74:15 81:24 101:14 103:16 106:11 132:21 133:9 141:10 142:15 144:25 148:4 149:4</p> <p><b>rearrange</b> 37:24</p> <p><b>reason</b> 50:10 121:23 144:9 147:4 153:18</p> <p><b>recall</b> 55:24 69:15 83:23 85:19 86:8 95:8 107:23 109:6 117:9 119:2 120:25 122:15</p> <p><b>recalled</b> 65:9</p> <p><b>recalling</b> 130:25</p> <p><b>receive</b> 4:16,20 11:12 11:15</p> <p><b>received</b> 4:22 12:18</p> <p><b>reclaiming</b> 91:8 94:7</p> <p><b>reclamation</b> 90:10 95:18</p> <p><b>recognize</b> 39:8 54:9 151:24</p> <p><b>recollection</b> 28:14 36:4 63:13 67:6 79:3</p> <p><b>recopied</b> 79:25</p> <p><b>record</b> 4:8 37:16 113:20 122:17</p> <p><b>recorded</b> 69:12 90:21</p> <p><b>records</b> 9:9 24:23</p> <p><b>recover</b> 94:15,20</p> <p><b>recovered</b> 18:9</p> <p><b>recovering</b> 95:3</p> <p><b>recovery</b> 22:25 94:18 94:22,25 134:20 137:12 139:7</p> <p><b>rectangular</b> 146:3</p> <p><b>reddish</b> 101:7</p> <p><b>reduced</b> 156:9,11</p> <p><b>refer</b> 18:1 19:24 88:11</p> <p><b>referred</b> 90:14</p> <p><b>referring</b> 57:15 60:7 99:8 109:11</p> <p><b>refresh</b> 9:13 28:14 31:7</p>	<p><b>regard</b> 79:2</p> <p><b>regarding</b> 133:11</p> <p><b>regular</b> 72:7</p> <p><b>related</b> 16:13</p> <p><b>relative</b> 156:12</p> <p><b>remained</b> 78:19</p> <p><b>remember</b> 14:6 28:11 28:21 29:15 30:23 31:10,21,23 33:13,21 36:16,23 44:3 49:25 50:1 52:2,14 53:2,5 55:14 59:4,11,20,24 59:25 64:4 65:6,13 67:18,20 68:9,9,23 69:25 71:12,15 72:7 72:19,23 74:15 76:3 77:2,17 78:9 79:21 82:22 83:13 84:1,2,4 85:20,21 86:4 87:3,8 87:14,17 88:3,8,16 88:23 89:3,8,10,19 90:13,20 91:5,7,9,18 91:19 93:10,11 103:15,17,20 108:9 110:7 115:5,11,24 117:21 119:22 120:2 122:20 128:11 129:6 129:13 130:8 131:15 132:15 135:11,17 138:5 139:2 144:10 151:11,18</p> <p><b>remove</b> 106:17</p> <p><b>removed</b> 101:17</p> <p><b>repeat</b> 114:1</p> <p><b>rephrase</b> 7:14</p> <p><b>report</b> 55:9,13 65:25 68:16 69:7,13 74:24 88:9 146:12</p> <p><b>reported</b> 111:3</p> <p><b>reporter</b> 7:1,6 22:7 54:25 55:4 65:17 74:18 104:25 110:5 113:17 152:15,20,24 153:4,8</p> <p><b>reporter's</b> 113:21</p> <p><b>reporting</b> 31:19</p> <p><b>reports</b> 57:3</p> <p><b>represent</b> 31:5 32:8 54:3 55:8</p> <p><b>representation</b> 8:24</p> <p><b>representative</b> 54:4</p> <p><b>represented</b> 8:10 9:3 151:9</p> <p><b>representing</b> 8:16,19</p> <p><b>represents</b> 9:11</p> <p><b>reprocess</b> 74:8</p>
--	---	---	--	---

<p><b>require</b> 153:17  <b>RESA</b> 1:4  <b>Research</b> 12:24 13:10  13:18,21 14:2,11  133:16  <b>resistance</b> 114:8  <b>respect</b> 22:24 67:21  151:25  <b>response</b> 29:9  <b>responses</b> 6:25  <b>responsibility</b> 57:2  95:20  <b>rest</b> 60:20  <b>resume</b> 153:11,13  <b>retrain</b> 47:4  <b>return</b> 148:15 149:6  <b>returned</b> 152:24  <b>reverse</b> 21:7,13  <b>review</b> 8:4  <b>rhythm</b> 59:12  <b>Rick</b> 59:2,3,4,6,9 80:20  <b>rid</b> 27:18 51:24 94:11  <b>right</b> 7:4 8:14 12:17  14:12 20:4,8 28:25  32:10,11,14 34:9,15  36:8 38:23 40:7,22  41:11,23,25 42:20,25  42:25 43:8 44:20  46:16 47:23 48:8  55:23,25 60:10 61:7  63:22 64:22,23 66:4  66:13 67:10 71:14  75:3,6 78:12,14 80:7  81:4 82:21 89:1 98:8  100:25,25 102:5,8  104:3 113:8 114:7,25  119:18 121:2,2  125:16,18 127:1  129:11 131:22 133:2  133:17,18,22 134:6,8  135:7,8,23 136:10,14  136:20 137:7,8,17,17  138:2,4 139:9,11,14  139:20 140:11,12,22  140:25 141:4 142:23  143:5,6 144:3,16  146:4 147:14 148:8  151:5,19 153:2  <b>right-hand</b> 66:11,15  <b>ring</b> 58:20  <b>rinse</b> 73:13  <b>road</b> 134:3,11 137:5,22  <b>Robbins</b> 137:7  <b>Roberts</b> 87:22 88:2  <b>rock</b> 147:8,10  <b>rocks</b> 147:9,13,14</p>	<p><b>role</b> 17:12  <b>roll</b> 34:17 59:18,19  110:14,16 112:1,11  116:15  <b>rolled</b> 34:19 37:24  45:14 59:15  <b>rolling</b> 80:9  <b>roll-off</b> 92:23 95:5  <b>roll-on</b> 27:15 50:14  93:19,19 95:12,15  96:1  <b>roll-ons</b> 40:25 71:23  93:24 95:8,10 128:2  <b>Roman</b> 57:22,25 60:2  <b>room</b> 8:1 26:4 40:3,6  40:12 74:1 76:7  77:14 129:4 148:18  <b>roughly</b> 30:19  <b>round</b> 124:9  <b>rounded</b> 86:1  <b>rounds</b> 83:4 123:10  <b>row</b> 37:3,5 38:1 58:1  60:18,19 77:22 80:24  81:8,10,11,13 113:12  113:13,13 114:9,10  120:4 141:7 143:4,5  143:11 144:13  145:22  <b>rows</b> 37:8 54:7 114:11  114:18 150:19  <b>rubber</b> 94:6,11 108:12  108:14  <b>ruin</b> 101:1  <b>rules</b> 1:13 6:20,21  153:17  <b>run</b> 17:14,14 46:5  48:13 53:8,9 78:16  99:2 103:12 106:5  <b>running</b> 22:21 25:15  31:1 34:2 58:19  72:11 80:17 94:22  <b>runs</b> 45:13  <b>rust</b> 89:25 131:17  <b>rusting</b> 61:22  <b>rusty</b> 61:19 63:3,13,15  65:10 68:5,6,24 69:4  86:14,23</p> <p style="text-align:center"><b>S</b></p> <p><b>S</b> 66:18 134:25  <b>safe</b> 83:9 107:6 115:23  150:16  <b>safer</b> 27:17  <b>salaried</b> 13:14  <b>salesmen</b> 52:4 150:24  <b>sample</b> 48:12 97:16</p>	<p>107:3,4 116:21  126:10,12  <b>sampled</b> 116:22  <b>samples</b> 84:15 85:13,14  150:12 152:7  <b>sand</b> 141:10 147:8,14  <b>sanitary</b> 25:11,15  <b>saturated</b> 94:12  <b>save</b> 41:6 91:12 92:15  120:15  <b>saw</b> 35:22 80:2,5 86:17  107:1,2,8 113:7  136:13 150:14 151:7  <b>saying</b> 34:11 76:19  79:21 80:22 86:24  114:4,24 142:3  <b>says</b> 28:12 55:16,20  66:11,16,17,18 68:3  75:3,9,10,13,16,18  75:22  <b>scale</b> 54:6  <b>schedule</b> 72:10  <b>school</b> 10:7,9,14,25  11:23,24 12:6  <b>scientific</b> 11:20  <b>scooped</b> 116:8  <b>scoot</b> 59:15 146:17  <b>scrape</b> 106:24 107:11  <b>scraped</b> 106:21  <b>scrubber</b> 66:24 71:18  71:22  <b>seal</b> 115:15 156:16  <b>sealed</b> 17:4 93:13  115:18  <b>seat</b> 85:23  <b>seats</b> 86:2  <b>second</b> 1:17 5:16 33:5  54:23 61:18 62:3  64:19,20 65:9 66:3  76:24 77:1 86:10,12  87:1,3 110:13 120:6  143:4,5 144:4 148:10  <b>section</b> 120:6  <b>see</b> 4:17 7:2,4 11:1  17:16 30:15,20 31:8  36:2,25 39:23,23  40:15,24 41:19 43:11  48:13,16,17 52:5  57:4,14 63:1 66:7,12  67:25 68:20 69:8,23  70:10 71:9 73:23  75:7,13 78:21 80:18  80:25 83:8 96:3  97:17,18,18,22 99:3  103:10 105:23 107:5  112:10 123:7,10</p>	<p>125:25 126:14  133:13 138:15  149:25 150:17 151:6  <b>seeing</b> 33:13 67:19  79:21 107:23  <b>seen</b> 27:25 53:20,23,25  55:11 74:25 107:21  142:15  <b>sell</b> 94:20  <b>semester</b> 12:9,11  <b>semi</b> 23:9 91:20 98:24  <b>send</b> 70:25 85:3,18  152:20 153:7 154:1  <b>sense</b> 79:15 94:1  <b>sent</b> 12:10 50:2 70:12  117:6 153:6  <b>separate</b> 19:4 46:7  97:19 99:11,12  105:11 138:3  <b>separated</b> 101:17  104:19 105:5 152:4  <b>separately</b> 100:9  <b>separating</b> 52:7  <b>separation</b> 18:5,20  20:2 26:5 40:19  100:19 107:15  123:15 127:24  128:10  <b>separations</b> 19:2  <b>set</b> 18:6 19:3 26:9,10  34:7,15 35:11 38:11  45:3 50:24 63:3  82:12 111:7,9 112:5  113:4 115:2 129:3  142:14 156:15  <b>setting</b> 30:25 33:25  61:21 117:11  <b>settle</b> 72:4 129:21  <b>settled</b> 124:8  <b>settles</b> 130:14  <b>seven</b> 75:21 79:6  145:19,24 146:8  147:5  <b>shampoo</b> 84:15 85:6,15  <b>shaped</b> 37:2 141:14  151:19  <b>sheet</b> 57:7 76:22  <b>shift</b> 73:10 148:11,11  149:3  <b>shifted</b> 14:13  <b>shiny</b> 130:13  <b>shoes</b> 66:22,23  <b>shorter</b> 37:2  <b>shortly</b> 71:5 134:15  <b>Shorty</b> 59:1,4,7  <b>shot</b> 6:12 118:6</p>	<p><b>shovel</b> 51:10,14 101:25  106:23 117:25  118:15,22  <b>show</b> 9:9 24:23 38:23  54:6 106:6,8,9  <b>showing</b> 53:17 68:21  <b>shown</b> 142:1  <b>shows</b> 54:10 114:16  <b>shut</b> 49:1 96:2 148:20  149:7  <b>shutting</b> 113:22  <b>side</b> 18:25 53:8 62:17  118:11 129:4 137:8  <b>sides</b> 78:3 124:10 142:9  <b>sideways</b> 145:23  <b>side-by-side</b> 140:3  146:16  <b>sign</b> 153:5  <b>signed</b> 152:23  <b>similar</b> 57:11 146:1  <b>single</b> 47:12 53:19  <b>sit</b> 35:13 82:5 96:4  103:2 110:12 112:12  129:16 146:15,17  <b>site</b> 5:4,13 15:8,13,24  18:21,24 19:6,7,12  20:3,7 23:25 25:11  26:7 27:13 28:17  29:13 31:18 44:19  69:10 72:25 95:19  96:17 107:19 112:19  117:6 121:7,9 122:22  123:3 124:2 126:23  127:4,6 128:3,15,17  129:8 140:10,15  141:4 143:8 148:12  149:14  <b>sitting</b> 33:9 36:10,12  44:8 53:1 62:8 112:7  147:10  <b>six</b> 12:13 15:7 20:11,20  30:13 40:25 72:21  75:21 85:2 98:22  99:22 103:1,2 106:19  118:7,9 120:17 145:2  146:8  <b>sixty</b> 87:11 88:6  <b>size</b> 36:20 66:22 72:19  110:22 151:14  <b>sized</b> 62:15  <b>skidded</b> 79:12  <b>slash</b> 40:21  <b>Slaughter</b> 58:20,21  <b>slimy</b> 51:21  <b>slot</b> 59:19  <b>slots</b> 59:18</p>
--	--	---	---	--

<p><b>sludge</b> 19:8,15 21:2 41:3 44:24 45:25 51:10 56:24 61:20 62:6,9,23 64:3 65:10 68:2,4,10,11 76:8,15 84:7,8,10,11,12 88:10 90:9,11,12,16 91:1,24 93:21 101:21 102:18 105:12 106:16 107:5 115:7 115:13 122:22 123:2 124:2,11 125:23 129:7,10,22,24,25 130:14,19 131:1,5,12 131:23 132:1,6,8,16 132:21</p> <p><b>sludges</b> 75:4</p> <p><b>slurries</b> 23:14</p> <p><b>slurry</b> 51:15 67:1 71:23</p> <p><b>small</b> 21:17,20,24 22:2 23:12 62:13 89:17 91:20 96:16 98:3 102:25 110:23 116:14</p> <p><b>smaller</b> 35:15 88:19 99:5</p> <p><b>smashed</b> 74:8</p> <p><b>smell</b> 18:14 47:17,21 47:25 48:2 97:21 100:24</p> <p><b>smelled</b> 100:20</p> <p><b>smells</b> 47:16,18,19</p> <p><b>smudged</b> 80:6</p> <p><b>smudges</b> 79:21</p> <p><b>soak</b> 94:10</p> <p><b>soaked</b> 142:15</p> <p><b>sodium</b> 101:11 105:10 105:12,14 130:9,11 130:22 132:5</p> <p><b>softener</b> 85:5,15</p> <p><b>soil</b> 146:22</p> <p><b>sold</b> 19:19</p> <p><b>solid</b> 50:16 74:10,24 94:13,22 95:13 96:13 105:17 125:14 128:6 131:23 137:23 142:16</p> <p><b>solidified</b> 38:12</p> <p><b>solids</b> 91:24,25 105:20 105:23 106:16 129:18</p> <p><b>soluble</b> 104:7</p> <p><b>solvent</b> 46:1,17 47:9,11 47:17,25 48:3,5,7,16 48:25 49:3,5 90:10 94:5,17,25 95:3 96:6</p>	<p>96:9,15,17 97:2,13 97:21,25 98:3,12 106:14 118:19 126:16 134:20,20 137:12 139:7</p> <p><b>solvents</b> 46:2,19,19 48:19 49:8,13,17 90:11 96:21,22 106:6 106:9 118:18 120:3 126:15 139:22</p> <p><b>somebody</b> 47:8 50:2 59:22 60:8 63:1 79:24 80:8 95:13 97:1 98:11 122:1</p> <p><b>someplace</b> 132:13</p> <p><b>son</b> 80:20 135:12</p> <p><b>sons</b> 58:21,23</p> <p><b>soon</b> 125:5</p> <p><b>sorry</b> 7:10 42:6 58:10 58:12 141:2</p> <p><b>sort</b> 34:10 43:1,16 44:1 44:13 45:11,21 46:9 47:5 51:2 52:9 117:24</p> <p><b>sorted</b> 44:24 57:8 85:10 112:24 117:5</p> <p><b>sorting</b> 26:15,17 42:2 43:6 44:4 46:22 56:16 58:25</p> <p><b>sound</b> 32:10,14 55:23 127:1 151:5</p> <p><b>sounds</b> 24:13 25:3 32:11 93:24 94:19</p> <p><b>south</b> 53:10 74:1</p> <p><b>southeast</b> 73:24</p> <p><b>SOUTHERN</b> 1:2</p> <p><b>space</b> 77:10,21 78:11 78:19 111:10</p> <p><b>spacing</b> 88:17</p> <p><b>specific</b> 67:5</p> <p><b>specifically</b> 67:20</p> <p><b>spell</b> 4:8 57:6</p> <p><b>spend</b> 150:6</p> <p><b>spent</b> 50:5 56:7,12</p> <p><b>spill</b> 118:2 119:23</p> <p><b>spilled</b> 76:9 117:22</p> <p><b>spilling</b> 117:10</p> <p><b>split</b> 18:8 90:5 96:15 97:5,6,10 105:4 130:17</p> <p><b>spoken</b> 4:11</p> <p><b>sponge</b> 108:12,14</p> <p><b>spot</b> 37:4 47:14,23 48:9</p> <p><b>spray</b> 18:9 51:11</p> <p><b>sprayed</b> 118:15</p> <p><b>spraying</b> 118:11</p>	<p><b>sprays</b> 66:24</p> <p><b>spreadsheet</b> 70:14</p> <p><b>square</b> 61:8,9 81:20 124:5 132:16 141:19 145:22 146:3</p> <p><b>squares</b> 141:15</p> <p><b>SRL</b> 13:1 14:9 133:24 134:9</p> <p><b>SS</b> 156:2</p> <p><b>stack</b> 35:8,9,15,16 36:9 36:13 37:5 74:13 95:9 111:4,13</p> <p><b>stacked</b> 35:24 36:7 45:15 114:14</p> <p><b>stacking</b> 35:10 36:9 50:23 74:2</p> <p><b>stages</b> 104:20</p> <p><b>stainless</b> 22:15,18</p> <p><b>stand</b> 115:19</p> <p><b>standard</b> 35:6</p> <p><b>standing</b> 120:24</p> <p><b>stapled</b> 66:8</p> <p><b>star</b> 55:2</p> <p><b>start</b> 5:24 16:16 29:22 36:9 50:25 52:24,25 60:17,18,19 99:24 100:5 113:16 114:14 115:3 123:1 127:5 147:25</p> <p><b>started</b> 5:20,23 6:3 10:17 13:1 14:20,23 15:3 16:8 20:11 23:7 24:23 25:2 26:10 27:10 28:3,3,20 29:16 30:1,3,24 31:6 31:17,18,25 41:21 42:1 51:24 52:4 55:20 60:16 63:4,19 71:22 80:16 102:24 113:14 123:16 126:23 127:5,23 128:10,12,18,20 129:2 133:22 134:7,8 137:11 139:15 144:11 149:6</p> <p><b>starting</b> 41:11,24 124:25 136:24 142:7 142:8</p> <p><b>starts</b> 42:12</p> <p><b>state</b> 1:15 4:7 9:17 10:17,19 11:2,7,13 85:3 91:21 156:1,4 156:20</p> <p><b>STATES</b> 1:1</p> <p><b>stationed</b> 12:4</p> <p><b>stay</b> 45:25 125:8</p>	<p><b>stayed</b> 123:23 126:19 148:24</p> <p><b>steam</b> 91:24 148:14,15</p> <p><b>steel</b> 22:15,18 89:25 90:2 115:13 129:23</p> <p><b>stenographically</b> 156:10</p> <p><b>step</b> 104:4</p> <p><b>stepping</b> 38:4</p> <p><b>Stevens</b> 1:14 156:3,19</p> <p><b>stick</b> 108:7 116:23 130:12</p> <p><b>stillbottoms</b> 90:15 91:6 91:10 92:4 93:7,14</p> <p><b>Stolle</b> 62:19,19,20,20 62:21 63:9 68:10,24 84:12</p> <p><b>stop</b> 34:9 46:25</p> <p><b>stopped</b> 135:11</p> <p><b>storage</b> 18:6 39:21,23 45:7 70:13 73:24 87:12</p> <p><b>store</b> 19:1 72:3</p> <p><b>stored</b> 19:11 42:23 120:5</p> <p><b>storing</b> 19:8 20:14 56:16</p> <p><b>straight</b> 78:6 86:1 141:13</p> <p><b>straightening</b> 34:24</p> <p><b>stream</b> 52:6</p> <p><b>street</b> 1:17 3:5,16 18:25 137:3,8</p> <p><b>strong</b> 59:13</p> <p><b>stuck</b> 152:6</p> <p><b>studies</b> 127:22</p> <p><b>stuff</b> 16:9 19:9 20:23 23:8 27:18 28:22 29:24 41:4 47:5 51:23 60:22 70:24 72:3 79:11,23 80:10 83:7,10 98:6 99:1 101:25 103:10 108:17 115:22 122:10 123:12 125:2 128:23 129:24 138:10 141:14 142:8 149:1 151:20</p> <p><b>Styrofoam</b> 109:20</p> <p><b>subpoena</b> 4:16,20</p> <p><b>subsequent</b> 81:14</p> <p><b>substance</b> 152:23</p> <p><b>substances</b> 85:9 101:5 117:22</p> <p><b>successful</b> 94:24</p> <p><b>suck</b> 20:25 22:9 23:10</p>	<p>23:15 45:17 67:2 71:25 101:24 124:14</p> <p><b>sucked</b> 67:10 124:7</p> <p><b>sucking</b> 124:21 125:2 125:12</p> <p><b>sucks</b> 21:6 105:14</p> <p><b>suction</b> 20:23</p> <p><b>sudden</b> 131:17</p> <p><b>suitable</b> 142:4</p> <p><b>Suite</b> 3:6,16</p> <p><b>sulfate</b> 132:20</p> <p><b>sulfuric</b> 89:24 105:5 130:16,20 131:17,19 132:3</p> <p><b>summary</b> 60:8</p> <p><b>summer</b> 134:1</p> <p><b>sump</b> 51:13</p> <p><b>sun</b> 121:4</p> <p><b>super</b> 81:19</p> <p><b>Superfund</b> 5:4</p> <p><b>supposed</b> 117:1 126:12 141:21 142:20 147:23</p> <p><b>sure</b> 6:23 8:20 14:19 17:4 25:18 26:16 29:10 30:16 34:5 37:15 47:24 54:13 56:14 71:7 72:8 74:12,13 75:1 79:13 83:7,9 87:25 95:21 96:5 101:1 103:6,11 103:14,17 110:4 115:16,17 125:10 126:20 131:9,13 132:11,13 140:4 142:21 148:19 149:1</p> <p><b>surface</b> 21:16 111:6</p> <p><b>suspension</b> 97:4</p> <p><b>swear</b> 87:1</p> <p><b>switchboxes</b> 132:19</p> <p><b>switched</b> 134:1,9</p> <p><b>sworn</b> 4:3 156:7</p> <p><b>synthetic</b> 94:6 97:8</p> <p><b>synthetics</b> 97:7 101:13</p> <p><b>Systech</b> 3:13 13:24 14:1,14 16:5 24:17 89:20,21 90:3,6,8 91:6,10,17 92:4 93:3 93:8 94:14,17,23 109:8,11,12 133:8,11 133:12,13,15,23 134:2,2,9,10 136:18 136:21 137:11,25 138:7,10,25 139:12 139:15,16,18</p> <p><b>system</b> 13:10 53:4</p>
--	---	--	--	---

<p><b>Systems</b> 12:23 13:18,20 14:2,10 133:12,16 138:6</p> <p><b>T</b></p> <p><b>T</b> 24:12 134:25</p> <p><b>take</b> 7:1 21:23 27:1,15 27:23 34:4 37:8 39:5 42:9,13,15 45:7,15 48:12 50:14 52:11 53:19 55:10,25 63:20 65:23 71:1,8,25 73:7 74:3,7,17 102:15 105:13 106:15,18,24 107:10 112:5 113:7 114:8,23 119:24 121:10 122:16 124:15 130:11 132:3 132:4 137:12 149:5</p> <p><b>taken</b> 1:14 6:5 31:15 39:18 45:22,22 63:14 94:14,17 104:8 114:6 120:12 122:21 125:22</p> <p><b>takes</b> 148:21</p> <p><b>talk</b> 6:1 8:7 33:20 131:4</p> <p><b>talked</b> 15:20 24:9 123:3</p> <p><b>talking</b> 18:2 21:3 22:7 25:8 28:21 45:8 57:5 57:14 68:5 69:5 77:3 84:14 88:19 93:7 94:18 102:2 103:24 126:22 135:11 138:24 139:16 147:17</p> <p><b>tank</b> 20:16 21:6,9,10 21:11,18,21,24 22:3 22:8,15 23:4,6,11,12 41:3 51:5 99:1,3 100:17 101:23 102:3 102:7 104:18 109:23 120:17 122:9,13 124:7,9,21 125:2 129:16 130:23</p> <p><b>tanker</b> 22:16 23:18 46:12 72:22,24 120:12</p> <p><b>tankers</b> 70:2</p> <p><b>tanks</b> 18:6 20:19 23:3 41:5 99:22 100:12,22 105:9 124:18 125:15 125:20 128:1,5 129:5</p> <p><b>tapered</b> 81:10</p> <p><b>TBI</b> 45:25</p>	<p><b>TDI</b> 26:22 27:9 73:9,12 109:2,7,16,18 135:24 136:4,5</p> <p><b>TDY</b> 12:9</p> <p><b>tech</b> 11:23,23 12:6</p> <p><b>technician</b> 29:23</p> <p><b>technology</b> 13:8 138:6</p> <p><b>tell</b> 7:14 27:24 39:7,16 39:18,20 53:20 55:10 89:9 134:4,4 146:12</p> <p><b>telling</b> 4:16</p> <p><b>temporary</b> 15:21</p> <p><b>ten</b> 13:13,16 36:25 68:3 68:15 75:10,11,14,18 75:19,20,20,20,22 76:7 78:1 79:4 86:18 99:25 118:14 146:9 152:4</p> <p><b>tend</b> 79:7 106:6</p> <p><b>tends</b> 21:17</p> <p><b>terracks</b> 50:18,22</p> <p><b>test</b> 17:3 47:12 84:15 84:19 97:18 107:3 126:8,9 142:11,20,21 152:5</p> <p><b>tested</b> 105:22 106:2 125:24 126:2</p> <p><b>testified</b> 61:15 86:22 127:8 151:22</p> <p><b>testify</b> 156:8</p> <p><b>testimony</b> 24:25 113:24 153:16,19 155:3 156:9</p> <p><b>testing</b> 85:4</p> <p><b>tests</b> 17:2 47:14 128:25</p> <p><b>thank</b> 4:25 152:10</p> <p><b>thawed</b> 148:22</p> <p><b>thick</b> 38:13</p> <p><b>thing</b> 6:24 39:13,14 43:15 48:17 72:7 90:6,13 101:1 106:4 108:12 109:5 111:5 114:11 121:8,15 140:13</p> <p><b>things</b> 16:16 24:4 26:11 41:7 44:18 51:25 74:6 99:24 100:5 108:13 114:13 123:16 125:13 132:19 133:10</p> <p><b>think</b> 5:18,21 7:11 8:15 8:21 15:5 17:19 28:21 29:13 30:13 41:15 52:15 57:13,15 59:8,21,22,23 61:18 62:3,19 66:13 67:23</p>	<p>68:17 69:5 70:6 76:10 78:18 79:3 80:19 86:7,7,9 88:22 89:14,17,21 90:5 91:22 92:6,7,12,25 94:16 99:13,13 103:23 104:5 109:5 111:5,16 117:24 120:1,10 122:24 123:2 124:3 131:7 132:10,25 135:8 141:17 143:14,24 144:18 152:25</p> <p><b>thinking</b> 87:23 144:8</p> <p><b>thinner</b> 117:23 118:24</p> <p><b>third</b> 37:22 57:18 58:11 60:7 76:25 78:15 144:6 148:11</p> <p><b>thirsty</b> 7:25</p> <p><b>thirty</b> 76:23 88:13 100:23 153:4</p> <p><b>Thompson</b> 1:16</p> <p><b>thought</b> 16:22 17:16 48:20 100:21 101:3 107:7 138:11 141:18 141:20</p> <p><b>thousand</b> 20:20 23:6 50:22 66:16 68:3,15 72:21 75:10,11,14,17 75:18,19,20,20,21,22 75:23 76:8,14,18,18 76:23 77:4,8 79:4 86:18 98:22,22 99:25 100:23 120:17</p> <p><b>three</b> 5:15,19 16:4 18:22 21:12 23:5 32:22,23 33:4,11 44:12 45:9 46:21 50:4 72:12 102:17 110:24 113:23 117:19 119:17 123:9 136:23 141:2 148:21 149:21 150:9,13</p> <p><b>threw</b> 46:17</p> <p><b>throw</b> 20:23 43:14 129:20</p> <p><b>throwing</b> 47:6</p> <p><b>thrown</b> 83:22 84:16</p> <p><b>thumb</b> 116:24</p> <p><b>tick</b> 57:24</p> <p><b>tight</b> 117:1</p> <p><b>tighten</b> 115:20 116:4 116:20 117:1,4</p> <p><b>tightly</b> 77:18</p> <p><b>tilted</b> 36:11,13</p> <p><b>Tim</b> 134:22</p>	<p><b>time</b> 5:12 8:2 9:2,24 12:21 13:25 19:12 20:9 23:22 24:21 25:4,19 28:16 31:3 31:24 33:2 35:19 36:3 45:12 50:9 56:7 59:10 82:11,14,22 83:1 87:17 90:1 91:16 100:9 101:20 102:16 117:9 119:10 122:4,9 123:14 128:12 134:19 135:2 135:18,22 136:12 137:11 143:9 149:14 149:17 150:2,6</p> <p><b>timecards</b> 70:22</p> <p><b>timeline</b> 133:14</p> <p><b>times</b> 23:13 37:1 48:23 59:16 64:3 84:14 92:8,10,13 113:23,25 116:23 117:19 123:9 150:13</p> <p><b>tin</b> 35:14</p> <p><b>tip</b> 34:6,16 107:10</p> <p><b>today</b> 4:14,17,25 8:5,8 8:11 9:15 152:13,16 153:17</p> <p><b>Todd</b> 3:14</p> <p><b>told</b> 8:16 16:10 43:25 44:9 133:19</p> <p><b>toluene</b> 26:22 46:3,6 47:18,19 50:20 94:7 94:10 109:2</p> <p><b>Tom</b> 138:8,12,14,16,16 138:17 139:22</p> <p><b>Tony</b> 94:21 135:3,6,10 137:14 138:17,17,20 139:3</p> <p><b>Tony's</b> 135:12</p> <p><b>tool</b> 98:11</p> <p><b>tools</b> 97:9</p> <p><b>toothpaste</b> 84:15 85:6 85:13,14</p> <p><b>top</b> 35:11 36:13 37:6 38:7 72:17 74:14 75:3 77:1 78:17 111:9 124:9 140:14 140:16,18,24 142:19 147:19,21 148:2 151:16</p> <p><b>total</b> 14:10 32:13 68:14 69:14,21,23</p> <p><b>totaled</b> 60:9,11</p> <p><b>touch</b> 44:2</p> <p><b>Tower</b> 3:5</p> <p><b>toxic</b> 103:12</p>	<p><b>TR</b> 40:1</p> <p><b>trace</b> 47:24 108:25</p> <p><b>track</b> 60:14 70:1,18,24 101:11</p> <p><b>tractor</b> 22:13,13</p> <p><b>trailer</b> 20:20 21:4,7,9 21:15 22:3,8 23:11 33:25 40:10 42:5,8 42:13,20 43:8 91:20 109:19 113:11 122:5 122:6 135:13,25</p> <p><b>trailers</b> 26:9 122:7</p> <p><b>training</b> 11:19</p> <p><b>transcript</b> 152:14,17 152:20 153:1,3</p> <p><b>transcription</b> 155:3</p> <p><b>transfer</b> 21:20</p> <p><b>transferred</b> 12:7 20:5 131:7</p> <p><b>transformer</b> 50:2 106:4,11</p> <p><b>translucent</b> 13:5</p> <p><b>transport</b> 42:5</p> <p><b>trash</b> 50:19 96:4 101:22 102:10,13,18 104:1 105:24 108:1,5</p> <p><b>treat</b> 18:9,13 46:4</p> <p><b>treated</b> 27:2 48:23 73:17</p> <p><b>treating</b> 16:16</p> <p><b>treatment</b> 134:14,16 137:19,21 138:11</p> <p><b>Tremont</b> 5:3 14:24 15:8,13,18,24 16:14 16:15,19 18:3,21 19:6,25 20:1,7,10 22:20,25 23:22,25 24:17,22 25:10 26:2 26:20 28:16 31:18 44:18 45:23 46:13 92:5 95:5,19 104:12 126:23 127:7,16,24 128:10,18 131:6 132:9</p> <p><b>Trichlor</b> 48:1</p> <p><b>trichloroethane</b> 47:17 48:1</p> <p><b>tried</b> 35:8 56:20 78:6 110:10 115:15 150:21</p> <p><b>trip</b> 91:14</p> <p><b>trouble</b> 100:5</p> <p><b>Troy</b> 62:7</p> <p><b>truck</b> 21:2 23:6 39:25 40:1 42:12,19 43:8,9 44:23 45:5,10,11,12</p>
---	--	---	---	--

<p>46:12 51:6 67:2,11 71:24 72:19,22 85:3 91:20,21 95:25 96:7 98:23 101:22 102:4 109:17,24 119:7 120:13 121:12 122:2 122:13 125:24 136:25 <b>truckfull</b> 92:16,20 <b>truckload</b> 70:15 <b>truckloads</b> 63:8 <b>trucks</b> 18:5 20:14,15 20:16,17,17 23:5 58:24 95:12,15 98:15 98:18 121:13,16,24 122:4,9 128:22 <b>true</b> 155:2 <b>truth</b> 156:8,8,9 <b>try</b> 65:13 88:25 89:4 96:4 97:5,20 103:7 111:21 114:1,23 125:8,9 126:14 <b>trying</b> 24:21 27:17 43:16 49:25 51:24 62:19 78:3 109:22 110:11 111:4,6 119:6 119:8 135:20 136:4 136:12 139:21 145:21 146:2 150:11 <b>tub</b> 88:11 <b>tubs</b> 88:10,10,19 <b>Tucker</b> 3:9 <b>turn</b> 59:23 66:7 75:2 117:3 <b>turned</b> 70:23 116:3 <b>turns</b> 8:21 117:12 <b>twelve</b> 75:16,17,22 <b>twenty</b> 41:12 42:7 47:2 51:4 76:11,17 78:23 82:16,19,21 145:14 145:16 146:6 150:11 153:14 <b>twenty-five</b> 66:16 76:11,18 145:21 146:1 <b>twenty-four</b> 145:20,25 <b>twice</b> 150:10 <b>two</b> 21:8,10 22:2 23:4 32:13,15,15,16,22 35:11 37:12,21 38:19 38:20,21 41:20 55:25 61:17 63:8 72:12,13 73:18 78:10,15,22,22 82:14 87:9 89:2 92:14 98:5 110:15 113:22 114:11</p>	<p>115:12 116:13 117:19 119:9,17 122:7 123:9 128:1,2 128:4,5 132:6 138:2 141:2 143:21,24 144:13 146:4,15,18 146:19 149:21 150:9 <b>type</b> 115:5 <b>types</b> 46:24 114:17 115:10 <b>typewriting</b> 156:11 <b>typical</b> 145:9</p> <hr/> <p style="text-align: center;"><b>U</b></p> <p><b>Um-hum</b> 64:19 140:1 143:6 <b>undergraduate</b> 11:3 12:19 <b>underneath</b> 60:12 124:6 <b>understand</b> 4:13 5:1 7:13,16 138:2 <b>understood</b> 7:19 <b>underway</b> 23:23 50:8 <b>unit</b> 30:25 <b>UNITED</b> 1:1 <b>University</b> 10:18,20 <b>unload</b> 42:9,19 83:7 122:2 <b>unloaded</b> 82:4 119:8 <b>unloading</b> 58:24 80:13 83:12 121:21 122:8 <b>unloads</b> 42:12 <b>unusual</b> 101:2,4 <b>upper</b> 66:10,12,15 140:9 <b>Urbana</b> 129:11 <b>urethane</b> 26:24 109:24 136:1 <b>use</b> 22:17 37:2 47:10 82:7 90:4 122:8 127:20 132:4 <b>usually</b> 20:18,24 38:9 44:22 60:5 79:18 83:19 84:20 99:21 100:2 101:2 102:12 102:14,17,21 103:7 105:13 116:19 119:6 121:17 122:1 125:21 126:17,19 148:13 150:21</p> <hr/> <p style="text-align: center;"><b>V</b></p> <p><b>V</b> 57:23,23 58:3 <b>vacant</b> 37:4 <b>vacuum</b> 20:15,16,17,18</p>	<p>20:25 21:4,15,24 67:11 71:24 72:22 98:15,23 125:3 <b>vacuuming</b> 21:3 <b>Valley</b> 134:3,11 <b>value</b> 97:24 <b>valve</b> 21:7 67:12 124:11,15 <b>Vandalia</b> 44:7 71:14 <b>vehicle</b> 22:7 <b>verbal</b> 6:24 <b>verify</b> 80:18 <b>versa</b> 47:9 <b>versus</b> 96:21 115:10 <b>vertically</b> 35:2 <b>vice</b> 47:9 <b>vice-president</b> 138:15 <b>Vietnam</b> 12:13 <b>visit</b> 50:7 <b>volatile</b> 126:16 <b>volume</b> 23:17 69:1 76:10,14 87:4,6,8 <b>volumes</b> 18:7 69:16 99:5 <b>vs</b> 1:6</p> <hr/> <p style="text-align: center;"><b>W</b></p> <p><b>wading</b> 38:2 <b>wait</b> 7:6,8 12:25 13:22 52:22 61:18 92:19 <b>waiting</b> 27:9 <b>waive</b> 152:18 153:1 <b>walk</b> 38:4 51:22 150:17 <b>walking</b> 79:11 121:4 <b>wall</b> 51:11 77:22 78:13 82:6 <b>Wallis</b> 30:23 103:8 149:16 <b>walls</b> 78:6 <b>Walter</b> 3:3 <b>want</b> 19:23,23 21:17 23:21 41:8 51:15,19 62:25 71:1 89:4 118:21 121:5 129:17 133:13 138:23 140:3 149:16 152:11,13,18 152:18 153:1,22 <b>wanted</b> 16:24 109:23 <b>wanting</b> 26:10 <b>wants</b> 8:24 <b>washed</b> 116:7 <b>wasn't</b> 5:5 8:20 25:5 27:12 32:15 38:7 44:25 45:10 47:24 48:21 61:22 77:12 78:7 80:24 82:1 85:4</p>	<p>87:9 88:5,7 89:16 92:20 103:12,14,15 108:7 110:14 115:9 115:18 116:20 130:20 132:21 136:6 139:20 142:6,9 151:1 <b>waste</b> 1:7 3:7 8:16,18 8:18 9:4,5,7,7,11,12 14:18 15:4 16:1,3,5,7 16:8,17 18:7,8 19:17 20:18,22 22:1,9,14 22:17,24 23:2,11,17 25:4,5,14,14,16,17 26:25 27:8,16 30:8 30:12,14,16 31:15 39:15 41:1 43:13 45:3,22,24 46:9,11 46:23,24 49:8,15,19 50:8,12,14,16,24,24 52:3,6 60:17 71:18 72:24 74:11 79:5 83:13,15 89:10,19,21 90:4 91:25 93:4,6 95:4,11,13,21,23 96:16,21 99:6,9 100:3 101:18 108:18 108:23 109:10,12,16 116:6 128:7 129:20 131:14 132:4,5,18 134:14,15 136:3,22 136:24 137:23,24 138:1,10,18 139:21 <b>wastes</b> 49:23 99:11 114:17 <b>wastewater</b> 137:18,21 137:22 <b>water</b> 8:1 18:10,11 19:4 23:15 26:5,24 27:4,6 40:4,21 41:1 45:14 51:5,12 56:24 56:25 66:18,19,20,24 66:25 67:4,6 68:22 71:12,16,22 73:1 90:5,12 91:1 97:23 101:16 104:22 105:7 105:13,15 108:2 129:22 131:2,20 137:24 142:12,14 <b>wax</b> 84:6 <b>way</b> 6:25 7:15 23:16 35:12 36:11,13 46:20 52:6 53:10 61:3 65:8 83:9 86:5 90:24 91:13 93:9 95:8 96:23 103:22 111:3 111:22 113:3 119:21</p>	<p>120:14 123:16 134:17 137:13 140:4 140:20 147:22 150:17 153:5 <b>weather</b> 149:2 <b>week</b> 45:9 46:21 142:14 150:14 <b>weekend</b> 148:25 <b>weeks</b> 44:13 50:4 72:12 72:13 <b>welded</b> 96:2 <b>welled</b> 132:21 <b>wells</b> 49:11 152:5 <b>went</b> 5:10 10:9 11:22 12:5,6,12,23 14:13 15:8 22:20,25 35:24 35:25 41:18 44:9 49:7,10 50:10 63:22 73:14 79:24 89:22 90:8 95:20 100:2 104:10 105:21 109:19 113:6 118:12 123:14 124:6 132:20 136:20 137:1 147:3 <b>weren't</b> 52:16 68:25 78:16 81:1 82:3 <b>west</b> 1:16 3:9 41:25 53:9 <b>we'll</b> 63:1 65:17 71:9 <b>we're</b> 6:1 9:15 44:2 71:7 93:7 103:24 113:2,20,23 <b>wastes</b> 49:23 99:11 <b>we've</b> 71:2 88:15 104:18 123:3 <b>WHEREOF</b> 156:15 <b>whichever</b> 150:1 <b>Whitman</b> 138:14 139:23 <b>wide</b> 145:10,18,20,25 <b>wife</b> 10:3 <b>wind</b> 73:25 74:1 99:24 111:9 125:12 <b>Windex</b> 129:19 <b>wintertime</b> 148:9,14 <b>witness</b> 1:11 4:2 25:8 53:13,23 78:25 105:3 153:10,20,25 156:11 156:15 <b>Wolfe</b> 2:2,4 3:4 4:6,11 38:25 53:12 55:3 58:12 65:16 74:17 113:19 122:16 132:25 149:11 152:9 153:15,22 <b>wondering</b> 80:8 <b>woods</b> 142:2</p>
--	--	--	---	---



<p><b>wool</b> 129:23  <b>word</b> 40:22  <b>words</b> 64:13 66:11  <b>work</b> 5:2 12:23 14:4,14  16:12 21:22 24:22  25:11,13 26:12,14  29:25 31:19 46:8  96:15 97:5 107:19  121:6 137:18  <b>worked</b> 6:12 14:3 15:2  15:5 25:10,16 28:2  28:15,16 29:13,20  30:19 59:6,9 83:2  109:14 133:15,16  137:16 139:22 143:9  <b>working</b> 13:7,24 14:1,2  25:19 28:7,18,19  29:16,21 30:1,2,3,3,6  31:2,3 57:21 114:3  119:21 123:25  127:23 128:20  133:20 134:12  135:14,18 149:14,17  149:20  <b>worry</b> 51:7  <b>worst</b> 48:8  <b>Worthington</b> 84:11  <b>worthwhile</b> 42:4  <b>wouldn't</b> 18:12,17 35:9  36:9 37:2 38:13  48:22 52:25 56:20  72:1 76:6 97:3,5,6,10  97:19 101:8 114:20  116:15 120:23 121:5  148:10 149:5  <b>wound</b> 18:10 32:24  36:14 62:5 124:7  130:19  <b>wrap</b> 122:18  <b>Wright</b> 11:2,7,13 16:6  17:10 24:2 136:24  141:12  <b>Wright-Patt</b> 13:3,6,8  <b>write</b> 40:9 70:11  147:24  <b>writing</b> 79:22 156:10  <b>written</b> 152:17  <b>wrong</b> 136:15  <b>wrote</b> 29:9,10,11 64:13  <b>Wyoming</b> 9:19</p> <hr/> <p style="text-align: center;"><b>X</b></p> <p><b>X</b> 120:8,9  <b>Xenia</b> 9:19 71:5  <b>X's</b> 59:20,24 60:1</p>	<p style="text-align: center;"><b>Y</b></p> <p><b>Y</b> 3:10  <b>yard</b> 34:13 42:23 43:4  52:23 56:1,18 103:1  103:2 112:3 114:5  117:6,16 119:14,23  120:9,14  <b>yards</b> 119:17  <b>yeah</b> 5:14 12:25 16:15  25:2 28:8,11,18,21  31:14 32:11,15,18,23  33:3 38:9 40:24  42:25 43:22,25 44:12  45:20 49:25 53:7  54:11 55:12,13 58:15  58:23 59:5,8 62:22  64:1,15 65:13 66:9  70:21 73:22 77:11  78:2 80:4 82:21  84:23 86:15 87:24  88:4 89:6 96:18,25  100:15,18 104:15  107:2 112:4 116:19  116:19 117:17 118:9  120:11,18 123:5  126:25 127:12 128:1  129:14 131:7 132:2  132:17 137:4 139:6  145:17 149:25 150:5  150:5 154:1  <b>year</b> 5:18 10:22 13:1  14:14,16 56:11,11  62:25 117:20 127:10  127:14,17 136:19  <b>years</b> 12:1 13:13,16,24  14:8,10 30:11,19  32:13 123:14 136:17  153:14</p> <hr/> <p style="text-align: center;"><b>1</b></p> <p><b>1</b> 2:7 27:19,22  <b>1:00</b> 148:24  <b>1:04-CV-013</b> 1:6  <b>1:21</b> 1:18  <b>10</b> 1:16  <b>111</b> 48:1  <b>1150</b> 3:11  <b>12:00</b> 148:24  <b>1301</b> 3:5  <b>133</b> 2:3  <b>14th</b> 55:18  <b>149</b> 2:4  <b>16th</b> 1:17  <b>1965</b> 10:23  <b>1969</b> 9:23  <b>1973</b> 14:20</p>	<p><b>1976</b> 32:9,10 55:19,21  56:6,12 126:24  <b>1977</b> 28:6,17 30:6  87:17  <b>1979</b> 31:6 149:23,24  151:5</p> <hr/> <p style="text-align: center;"><b>2</b></p> <p><b>2</b> 2:10 39:1,2,5 64:18  119:25 140:2,8  151:10  <b>200</b> 3:16  <b>2000</b> 1:16  <b>2005</b> 1:18 156:17  <b>27</b> 2:7  <b>2770</b> 9:19</p> <hr/> <p style="text-align: center;"><b>3</b></p> <p><b>3</b> 2:13 53:15,19 64:13  139:25,25 140:13  151:12  <b>30th</b> 28:6  <b>300</b> 3:16  <b>3500</b> 3:6  <b>39</b> 2:10 10:6</p> <hr/> <p style="text-align: center;"><b>4</b></p> <p><b>4</b> 2:2,16 55:5,8  <b>4:00</b> 71:6 121:18  <b>4:30</b> 148:23  <b>44114-1821</b> 3:6  <b>44115-1475</b> 3:12  <b>45042-1919</b> 3:17  <b>45385</b> 9:20</p> <hr/> <p style="text-align: center;"><b>5</b></p> <p><b>5</b> 2:19 10:6 56:6 65:19  65:22  <b>5th</b> 55:21  <b>5:00</b> 148:23  <b>5:08</b> 154:3  <b>5:30</b> 119:7 148:10  <b>53</b> 2:13  <b>55</b> 2:16</p> <hr/> <p style="text-align: center;"><b>6</b></p> <p><b>6</b> 2:22 74:20,23 79:2  81:3  <b>6:00</b> 148:10  <b>60s</b> 14:3  <b>62</b> 12:3  <b>65</b> 2:19  <b>66</b> 133:16  <b>67</b> 12:3,16 133:22,23  133:24</p> <hr/> <p style="text-align: center;"><b>7</b></p>	<p><b>7:00</b> 122:11  <b>70s</b> 5:3,6,8 13:23 14:1  133:17  <b>73</b> 5:22,22 14:5,21  <b>74</b> 2:22 5:20,22 14:21  17:25  <b>75</b> 5:9 14:6 25:3 28:3  29:18 62:18  <b>76</b> 24:24 32:17 127:9  150:2  <b>77</b> 87:20  <b>78</b> 6:17 30:20  <b>79</b> 24:24 31:12 32:6,17  150:3</p> <hr/> <p style="text-align: center;"><b>8</b></p> <p><b>85</b> 30:21 31:9</p> <hr/> <p style="text-align: center;"><b>9</b></p> <p><b>9-10-2006</b> 156:20  <b>925</b> 3:11  <b>97</b> 13:17</p>	
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