1 UNITED STATES DISTRICT COURT

2 DISTRICT OF MINNESOTA

3 FOURTH DIVISION

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United States of America,
5 Plaintiff,
and
6 State of Minnesota, by its
Attorney General Warren Spannaus,
7 its Department of Health, and
its Pollution Control Agency,
8 Plaintiff-Intervenor,
vs.
9 Reilly Tar & Chemical Corporation;
Housing and Redevelopment authority Civil No.
10 of Saint Louis Park; Oak Park 4-80-469
Village Associates; Rustic Oaks
11 Condominium Incorporated; and
Philip's Investment Company,
12 Defendants.
and
13 City of Saint Louis Park,
Plaintiff-Intervenor,
14 vs.
Reilly Tar and Chemical Corporation,
15 Defendant.
and
16 City of Hopkins,
Plaintiff-Intervenor,
17 vs.
Reilly Tar & Chemical Corporation,
18 Defendant.

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The Deposition of CARL F. LESHER, taken
22 pursuant to Notice of Taking Deposition, taken before
Kirby A. Kennedy, a Notary Public in and for the County
23 of Washington, State of Minnesota, taken on the 11th,
12th and 13th days of October, 1982, at Indianapolis,
24 Indiana.

25

1 APPEARANCES

2 DAVID HIRD, ESQUIRE, United States Attorney, Department of Justice, 10th Street and Penn Avenue,
3 Washington, D.C. 20530.

4 ROBERT E. LEININGER, ESQUIRE, Enforcement Attorney, 230 South Dearborn Street, Chicago, Illinois
5 60604, appeared for and on behalf of the United States Enviromental Protection Agency, Region V, Plaintiff,
6 United States of America.

7 DENNIS M. COYNE, ESQUIRE, and STEPHEN SHAKMAN, ESQUIRE, Special Assistant Attorneys General,
8 1935 West County Road B2, Roseville, Minnesota 55113, appeared for and on behalf of Plaintiff-Intervenor,
9 State of Minnesota.

10 ALLEN HINDERAKER, ESQUIRE, of the law firm of POPHAM, HAIK, SCHNOBRICH, KAUFMAN and DOTY, LIMITED,
11 4344 IDS Center, Minneapolis, Minnesota 55402, appeared for and on behalf of Plaintiff-Intervenor,
12 City of Saint Louis Park.

13 EDWARD J. SCHWARTZBAUER, ESQUIRE, and BECKY COMSTOCK, ESQUIRE, of the law firm of DORSEY and
14 WHITNEY, 2200 First Bank Place, Minneapolis, Minnesota 55402, appeared for and on behalf of Defendant Reilly
15 Tar and Chemical Corporation.

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1 CARL F. LESHER,
2 a witness in the above-entitled
3 matter, after having been first
4 duly sworn, deposes and says as follows:
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6 CROSS-EXAMINATION
7 BY MR. SHAKMAN:
8 Q. Would you give your name and address for the
9 record?
10 A. Carl F. Lesher 4350 Swanson Drive,
11 Indianapolis 46208.
12 Q. Mr. Lesher is appearing here today pursuant
13 to a Notice of Deposition. As an aid to the Court
14 Reporter I would ask that you give audible answers, yes
15 and no, rather than nodding.
16 A. Yes.
17 Q. And when you first use an unusual name, if
18 you give him the spelling to help him out. At the
19 conclusion of the deposition after it's transcribed and
20 returned, you have an opportunity to read it and sign
21 it and make corrections at that time if you so desire.
22 On the board to my right and your left are two exhibits
23 and I encourage you to make use of those if you so
24 desire. One is marked R.T.C. Exhibit 3 and is an
25 aerial photograph of the plant site in Saint Louis Park

1 which I think we have dated around 1953. The other,
2 marked Minnesota Exhibit 9 with the mylar overlay, is a
3 more detailed drawing of the plant and the fixtures on
4 the plant used in Mr. Finch's deposition. I would
5 encourage you if there is a time when it's easier for
6 you to jot something down in the way of a drawing
7 rather than explain, please feel free to do that.
8 It is important that if you do not
9 understand one of my questions or you think it's
10 unclear to please say so and I will try and restate it
11 and clarify it. Should you want to take a recess or a
12 break please let us know and we will accommodate that.
13 I first wanted to ask about your
14 education and experience. Could you cover your formal
15 education briefly begining with high school and taking
16 it from there?
17 A. I attended Redford High School in Detroit,
18 Michigan. I have a Bachelor of Science degree in
19 chemical engineering from Rose Polytechnic Institute in
20 Terre Haute, Indiana. I have done graduate work in
21 production management and business administration at
22 Butler University in Indianapolis.
23 Q. Do you have a degree from Butler?
24 A. I do not. I had taken most of the technical
25 courses except for humanities.

1 Q. Are there honors or awards or special
2 recognitions you received in the course of your
3 education?
4 A. No.
5 Q. The work at Butler was in the management and
6 business administration areas primarily?
7 A. Yes, it was.
8 Q. Are there other courses outside of seminars
9 or one day conferences, other things beyond that that
10 you have taken?
11 A. There are a number of those. I would have
12 difficulty in enumerating them right now. I do have a
13 professional engineer's license from the State of
14 Indiana. I am a member of a number of associations and
15 societies connected with my work.
16 Q. Could you mention what some of those are?
17 A. American Institute of Chemical Engineers,
18 American Wood Preservers Association, American Wood
19 Preservers Institute, American Coke and Coal Chemicals
20 Institute.
21 Q. Are there other associations that Reilly Tar
22 Company participates in which you represent?
23 A. The company participates in a number such as
24 the Manufacturing Chemists Association.
25 Q. Have you had occasion to present papers or

1 give speeches to any of these associations?
2 A. I have made no formal presentations other
3 than I have been a member of or chaired a number of
4 subcommittees within those organizations, primarily the
5 American Wood Preservers Association where I am a
6 member of the P-2 committee on creosote oil and
7 preservative specifications. I am chairman of the tar
8 distillers manufacturing committee of the American Coke
9 and Coal Institute.
10 Q. Are there other committee positions you have
11 had in the past that you no longer have?
12 A. I don't recall at the present time.
13 Q. What is the general area of interest of the
14 P-2 committee you mentioned?
15 A. The specifications for preservatives such as
16 creosote oil solutions. That would be coal tar
17 creosote solutions.
18 Q. After you left Rose Institute did you then go
19 into full-time employment?
20 A. I began with Reilly Tar and Chemical
21 immediately on graduation.
22 Q. When would that have been?
23 A. January 1949.
24 (At this time State of Minnesota Deposition
25 Exhibit 72 was marked for identification by

1 the Court Reporter.)
2 BY MR. SHAKMAN:
3 Q. Mr. Lesher, you have been handed what has
4 been marked Minnesota Exhibit 72 entitled "Affidavit of
5 Carl F Lesher in Support of Motion to Dismiss." Do you
6 recall preparing this document in regard to this court
7 case that we are involved in?
8 A. I do recall having done so.
9 Q. I wanted to direct your attention to the top
10 of the second page where you list various capacities
11 for which you served Reilly Tar over the years and
12 could you use that as a starting point and describe
13 where and when you served in each of those positions
14 and briefly what it involved?
15 A. I began work with Reilly as a production
16 supervisor of the Maywood plant and was in that
17 position from 1949 through 1951. It involved
18 responsibility for the operation of a vinyl pyridine
19 plant. It was a synthetic or a process plant producing
20 vinyl pyridine from several other chemicals.
21 Q. What sort of chemicals are the raw materials
22 you used in this process?
23 A. Alpha picoline, caustic. The process
24 principally involved reactions. I am sorry,
25 formaldehyde was also a raw material.

1 Q. What are the uses of vinyl pyridine?
2 A. Principally in the production of latex used
3 in producing automobile tires.
4 Q. What was your next position after that first
5 two years?
6 A. I then was plant engineer of the Reilly Tar &
7 Chemical Maywood plant from 1951 through 1954 with
8 local responsibility for maintenance and minor projects,
9 construction projects.
10 Q. What were the activities at that plant during
11 your time in that position?
12 A. It was a wood preserving plant and a tar
13 distilling plant.
14 Q. May I ask if you have this listed on a sheet?
15 May we include that as one of our exhibits when you are
16 done with your testimony?
17 MR. SCHWARTZBAUER: Sure.
18 BY MR. SHAKMAN:
19 Q. Proceed with your next position then.
20 A. From 1954 to 1958 I was a project engineer in
21 the corporate engineering division. In that work I was
22 assigned projects at the various plants of Reilly Tar &
23 Chemical. Most of my work during that period was in
24 the design of a new still for distilling coal tar. It
25 also included miscellaneous projects at the plant.

1 Q. Was that the still that's been referred to as
2 the Lesher Still?
3 A. Yes.
4 Q. How widely is that still now used or has it
5 been used?
6 A. It is used in all of our tar distillation
7 plants.
8 Q. How large a group was that working on those
9 projects?
10 A. It varied during the period of time from
11 possibly four to six or eight.
12 Q. Is that still used outside the company,
13 available by license?
14 A. It is not used by other companies.
15 Q. And what would have been the year when that
16 still -- when you first had one operational and in use?
17 A. Either in 1955 or 1956.
18 Q. Would you continue with your next position?
19 A. In 1958 I was transferred to the main office
20 in the position of assistant to the production manager
21 and held that position from 1958 to 1963.
22 Q. And what responsibilities were involved with
23 that position?
24 A. I should have added that it was assistant to
25 the production manager of the refinery division. It

1 was a staff position traveling to and working with the
2 tar distillation plants on their operations, their
3 purchasing of coal tar, production scheduling and so
4 forth.
5 Q. Who did you work under in that position?
6 A. Doctor Frank Mootz.
7 Q. He was the production manager?
8 A. He was.
9 Q. Is Dr. Mootz still alive?
10 A. Yes, he is.
11 Q. Do you know his present place of residence?
12 A. It's in Southbend, but I do not know the
13 address.
14 Q. Was he also traveling to the other plants?
15 A. On occasion.
16 Q. What was your next position after assistant
17 to the production manager?
18 A. From 1963 to 1968 I was then the production
19 manager for the refinery division succeeding Doctor
20 Mootz.
21 Q. To whom did you report in that job?
22 A. Mr. Thomas J. Ryan, who was general manager
23 of the refinery division.
24 Q. Mr. Ryan held that position through '68?
25 A. That is right.

1 Q. After 1968 what was your --
2 A. From 1968 through 1977 I was then general
3 manager of the refinery division.
4 Q. And what were your responsibilities as
5 general manager?
6 A. Essentially total responsibilities for the
7 operation of the tar distillation plants.
8 Q. To whom did you report as general manager?
9 A. To the president of the corporation, which
10 was Mr. Ryan, who was succeeded by Mr. T. E. Reilly,
11 Junior.
12 Q. Do you recall when that change took place?
13 A. No, I do not.
14 Q. What other groups in the management of the
15 company board of directors, finance committee and such,
16 would you have as general manager been dealing with
17 from time to time?
18 A. Since 1977 I have been a member of the
19 finance committee, the salary committee, the executive
20 committee and since 19 -- for possibly three to four
21 years I have been a member of the board of directors.
22 Q. And your present title is vice-president
23 A. Vice-president and general manager of the
24 refinery division.
25 (At this time State of Minnesota Deposition

1 Exhibit 72 A was marked for identification by
2 the Court Reporter.)
3 BY MR. SHAKMAN:
4 Q. The Court Reporter has marked Exhibit 72 A.
5 I am showing it to you. That is the resume' you have
6 been using as you explained your different positions
7 with the company, is that right?
8 A. Yes.
9 Q. With the Coke and Coal Institute that was
10 mentioned here, what was the committee or subcommittee
11 work?
12 A. Tar Manufacturer's Committee. I have been
13 chairman of that for approximately five years.
14 Q. And what matters is that committee interested
15 in?
16 A. It is a group of the members or
17 representatives of tar manufacturers generally
18 associated to discuss and deal with safety and
19 environmental problems that arise in the manufacturing
20 plants.
21 Q. You mentioned tar manufacturers. Would you
22 explain the phrases tar manufacturing and tar
23 distilling? To you they are the same?
24 A. They are in this sense the same.
25 Q. And at what stage from your coking process

1 and your tar refining, what stage of that process does
2 tar manufacturing or tar distilling deal?
3 A. In this case it applies only to the
4 manufacturers who receive coal tar from a coke oven
5 plant and process it into pitch and oil.
6 Q. Are there other members of the Reilly Tar
7 company involved with that tar distiller's committee?
8 A. Not presently with that committee, no.
9 Q. Would there have been prior to your time on
10 the committee, are you aware of them?
11 A. Doctor Mootz probably would have been a
12 participant in that.
13 Q. What other associations or association
14 committees are presently represented by members of the
15 Reilly Tar Company -- have representation from the
16 company?
17 A. Probably only a few would be -- within my
18 knowledge. SOCMA Society of Chemical Manufacturers,
19 Drug Chemical and Allied Trades Councel, ASTM and I am
20 the company representative on ASTM as a member of the
21 committee on analytical methods for coal tar products.
22 Q. On the others that you mentioned, who from
23 the company would be participating?
24 A. Mr. P. C. Reilly, Mr. Robert Polack, Mr. T.
25 E. Reilly Junior, Mr. R. D. McNeeley.

1 Q. Could you spell that name?
2 A. M-c-N-e-e-l-e-y. And I would imagine that
3 our research people would be members of a number of
4 other groups such as the American Chemical Society.
5 Q. In the course of your work since 1949 what
6 are the occasions in which you would have been visiting
7 the plant at Saint Louis Park, Minnesota?
8 A. From the period of 1954 through its closing.
9 My visits during the 1954 to '58 period would have been
10 as a project engineer on particular problems at the
11 Saint Louis Park refinery.
12 Q. May I ask in that regard how many Lesher
13 Stills were used at Saint Louis Park?
14 A. I think that it was four.
15 Q. Then when you were assistant to production
16 manager and production manager what was --
17 A. I generally made from two to four visits per
18 year to each of our plants generally to discuss the tar
19 distilling operations with the plant manager.
20 Q. And in 1968 to the closing of that plant do
21 you recall visits during that time?
22 A. It would have been the same as prior.
23 Q. In the course of preparing for this
24 deposition are there materials that you have reviewed?
25 A. Yes.

1 Q. And do you have those with you here?
2 A. I do not.
3 MR. SHAKMAN: Could I make a request
4 that we be allowed to inspect the materials that he has
5 reviewed in preparation for his deposition?
6 MR. SCHWARTZBAUER: Well, he has
7 reviewed, I believe, the various documents that he has
8 authored or received and you already have copies of all
9 of those, they are among the Reilly memorandum which we
10 delivered to you in response to your production request.
11 MR. SHAKMAN: That is a large volume and
12 if there is a book available I would request that we be
13 given the opportunity to look at that book. I think
14 the materials that he particularly has seen out of that
15 large volume are ones that are relevant to our inquiry
16 to see what he has refreshed his memory with.
17 MR. SCHWARTZBAUER: Yes, but you can do
18 the work that we did just as well as we did. We simply
19 picked out from the documents that you already have,
20 the documents that he authored or received and any of
21 the the parties to this litigation are just as
22 competent to do that as we are.
23 MR. SHAKMAN: I don't want to make a
24 long argument on the record but I will continue that
25 request I think under Rule 612 of the Rules of Evidence

1 a witness uses to refresh himself. This is something
2 that we can look at and if you can identify those we
3 would like to have them. We can talk about that later.
4 MR. SCHWARTZBAUER: Okay.
5 ( At this time Minnesota Deposition Exhibit
6 73 was marked for identifaction by the Court
7 Reporter.)
8 BY MR. SHAKMAN:
9 Q. Mr. Lesher, you have been given what's been
10 marked as Minnesota Exhibit 73 entitled, "Statement of
11 the Case of Reilly Tar & Chemical Corporation" with the
12 caption of this lawsuit and signed by Mr. Schwartzbauer
13 dated February 16, 1982. Is this a document that you
14 are familiar with?
15 A. I believe I would have read it.
16 Q. Did you participate in its preparation?
17 A. I believe so.
18 Q. There is discussion -- these pages aren't
19 numbered, but the third page and onto the fourth,
20 discussion of PAH's, polynuclear aromatic hydrocarbons
21 and health risks of those chemicals. Is the area of
22 health risk associated with coal tar or coal tar oils,
23 creosote, coal tar derivatives, is that an area in
24 which you have some training and experience?
25 A. I would have been involved in this for some

1 period.

2 Q. You mentioned this tar distiller's committee

3 of the Coke and Coal Association. Are there other

4 groups you have worked with on those kinds of concerns?

5 A. I have been a member of the American Wood

6 Preservers Association, committee I believe it is E-5,

7 which was an association group of wood preservers, tar

8 distillers and there may have been some users involved.

9 The committee was organized and was involved in the

10 RPAR negotiations.

11 Q. Over what years were you involved with that?

12 A. I made an error, that was the American Wood

13 Preservers Institute rather than the --

14 Q. All right.

15 A. I am not familiar with the time period,

16 although I was involved on its organization and have

17 delegated that to Mr. William Justin about one to two

18 years ago.

19 Q. Roughly this is in the 1970's?

20 A. Yes.

21 Q. Would it be correct that that proceedings is

22 on-going?

23 A. Yes.

24 Q. Before you delegated it to Mr. Justin what

25 sort of information did you provide or information that

1 was presented to you on this committee?
2 A. There was a considerable amount of
3 information provided regarding epidemiology, the wood
4 preservative process itself, how plants were operated,
5 uses of wood, technical information on the
6 preservatives and things of this nature.
7 Q. And which of those various types of
8 information did you provide information or input on?
9 A. I would have been involved in reviewing and
10 preparing all of it, and I believe I particularly
11 authored a section on the location of the coal tar
12 refineries in the United States and the -- or rather an
13 estimate of the number of employees of each.
14 (At this time State of Minnesota Deposition
15 Exhibit 74 was marked for identification by
16 the Court Reporter.)
17 BY MR. SHAKMAN:
18 Q. Mr. Lesher, what has been marked as Exhibit
19 74 is entitled, "Memorandum for the Office of Pesticide
20 Programs, Environmental Protection Agency, Creosote and
21 Creosote Solutions, Wood Preservatives," prepared by
22 the Environmental Programs Task Group, Subcommittee
23 Number 5, American Wood Preservers Institute, dated
24 March 1977. I notice this is an incomplete copy but
25 this is the total pages that were available to me in

1 our files. Do you recognize this document from your
2 work with that group?
3 A. Yes, I do.
4 Q. And the subcommittee on the second page,
5 Subcommittee Number 5 on the second page of the
6 document mentions your name in this committee. Is this
7 that same committee to which you have been referring?
8 A. This is that same subcommittee to which I
9 have been referring.
10 Q. Is that what Mr. Justin is currently involved
11 with?
12 A. That is right.
13 Q. What is his present position with the company?
14 A. Safety and environmental director of the tar
15 refinery division.
16 Q. Has anyone else with the company participated
17 in this RPAR proceedings?
18 A. Not directly except that I would have
19 discussed a number of the points or questions with both
20 our engineering and research departments.
21 Q. As I look at the table of contents about four
22 or five pages in there is an assessment of acute
23 toxicities and assessment of chronic toxicity. Whom
24 might you have discussed that with within the company?
25 A. Probably with Mr. W. R. Roder.

1 Q. What is his area of expertise and his area of
2 employment?
3 A. He is within our research department working
4 primarily on coal tar research.
5 Q. Do you recall generally his comments or your
6 conversation with him?
7 A. No, I do not.
8 Q. Do you consider him conversant with the
9 health effects literature on acute toxicity and chronic
10 toxicity?
11 A. Yes.
12 Q. Do you know what his background and formal
13 education are that would be relevant to those areas?
14 A. No.
15 Q. Do you know how long he has been with the
16 company?
17 A. I would only guess at five to 10 years.
18 Q. Is there anyone else with the company during
19 that period, the last five to 10 years, knowledgeable
20 about these same kind of matters?
21 A. I would imagine that a number of people may
22 have read these papers or in their general reading of
23 the literature have some knowledge but I don't believe
24 particularly more so than myself or Mr. Roder or Mr.
25 Justin.

1 Q. Prior to say 1970, going back in your time
2 with the company, who with the company had concerns
3 with this area, industrial hygiene, health?
4 A. A number of people would have been involved,
5 probably Mr. H. R. Horner, Mr. R. J. Hennessey.
6 Q. May I ask, Mr. Hennessy's deposition we are
7 taking, if you tell us the person's present whereabouts
8 and if they are deceased if you know that?
9 A. Mr. Horner is located in Indianapolis.
10 Q. He is retired?
11 A. He was chief engineer and is retired.
12 Q. Mr. Hennessy. Do you know of anyone else?
13 A. Doctor Mootz, to whom I earlier referred.
14 Q. Are there people outside the company who
15 Reilly Tar consults with on matters in these areas?
16 A. You are referring to retained consultants?
17 Q. Let me limit it to retained consultants first.
18 A. No.
19 Q. Are there sources within the industry who you
20 go to?
21 A. We have certainly discussed it among the
22 other manufacturers and with the members of the
23 association, American Wood Preservers Association and
24 the AWPI.
25 Q. What is the distinction between those two

1 groups and what they do, the AWPI and the AWPA?
2 A. They are both an association of the producers
3 of preservatives and wood preservers and users. In
4 general the AWPA is involved in specifications of
5 preservatives, their uses, and I believe the
6 specifications for the final products, while the AWPI
7 is more concerned with marketing of wood preservatives.
8 Q. In this RPAR proceeding it was the AWPI as we
9 see from this Exhibit 74 that was involved. Was AWPA
10 involvement also?
11 A. Not as an association.
12 Q. Let me refer you to this Exhibit 74, the page
13 marked with two small ii's, it's about four pages into
14 it, it just has one short paragraph at the top. Will
15 you read through that paragraph? The last sentence
16 there says, "AWPI is prepared to discuss with
17 Environmental Protection Agency's as to what types of
18 chronic toxicity testing may be necessary and what
19 arrangements for such testing may be appropriate." Are
20 you aware of anything that may have developed out of
21 that suggestion?
22 A. Yes, there have been discussions and I
23 believe there currently are tests underway.
24 Q. Do you know if those tests or other work done
25 by the AWPI have so far reached any conclusions as to

1 whether coal tar or coal tar oils, creosote oil, does
2 not have mutagenic or carcinogenic properties?
3 A. No, I do not.
4 Q. Would Mr. Justin be monitoring progress?
5 A. Yes, he would.
6 Q. Apart from its involvement with AWPI, has
7 Reilly Tar submitted anything in this RPAR proceeding?
8 A. No, they have not.
9 Q. Do you recall how you came to be on that
10 committee, the E-5 committee?
11 A. There were discussions among the preservative
12 manufacturers as to who would be involved and I believe
13 I chose to represent Reilly Tar and Chemical. It was
14 the intent of the discussions that the -- in this case
15 the creosote oil producers, all be involved and
16 represented.
17 Q. Does this RPAR proceeding address at all
18 exposure to coal tar and creosote and coal tar
19 derivative products beyond that of people in the work
20 place? Are you aware of how broad the --
21 A. Very definitely it considered all exposure,
22 including the purchasers and users of creosoted
23 products.
24 Q. Do you know of any previous governmental
25 proceeding, be it federal, state or other level,

1 addressing those concerns, the same exposure concerns?
2 A. I am not particularly aware but I believe
3 there have been some state studies and perhaps
4 regulations.
5 Q. Do you recall any specific states that come
6 to mind?
7 A. No, I do not.
8 Q. Did the company ever have any input to any of
9 those as far as you know?
10 A. Not that I am aware of.
11 Q. Do you know about AWPI participation in those?
12 A. No, I do not.
13 Q. Let me go back to that Exhibit 73, that
14 statement of the case.
15 A. I am sorry I did not mark these as I should
16 have.
17 MR. SCHWARTZBAUER: That's this one.
18 BY MR. SHAKMAN:
19 Q. Would you take a moment going through this
20 document to see which areas you might have had input
21 into and which areas other people within the company
22 who you know provided input?
23 A. I am uncertain of your use of the word "input".
24 I don't believe I directly participated in writing any
25 of this other than perhaps in discussions and memoranda

1 to Mr. Schwartzbauer. I would over the years have
2 helped to or tried to give him the background
3 information. My involvement with this specific
4 document would have been possibly a review or merely a
5 reading of it before it's filing.
6 Q. Are there others with the company who would
7 have written part of this or provided the information
8 for it?
9 A. I don't know.
10 Q. On the third page, the paragraph that begins
11 in the middle of the page and continues towards the
12 bottom, directing your attention to where PAH's are
13 first mentioned, about six or seven lines from the
14 bottom, there is a statement there that, "Some PAH's
15 are suspect human carcinogens. The suspician is
16 usually derived from rodents by brushing it on the
17 animals skin." Do you have any knowledge of that kind
18 of testing?
19 A. Only from reading the allegations in the
20 literature.
21 Q. Is that something Mr. Roder would be
22 acquainted with?
23 A. No more so than I. I don't relate it.
24 Q. Do you share that view that the testing
25 that's been done is limited?

1 A. I do.
2 Q. Do you agree with the next sentence that
3 states, "If even one such test results with either a
4 benign or limited tumor, the substance is classified as
5 a suspect carcinogen"?
6 A. I believe that is the presents way that the
7 government interprets the results.
8 Q. And what agency do you have in mind? You
9 said "government".
10 A. OSHA or Environmental Protection Agency.
11 Q. Are you aware of the substantial and
12 respected scientific opinion as its quoted in the next
13 sentence, and I continue quoting, "that the PAH's in
14 coal tar and creosote oil may in fact be enhancing
15 natural defenses for cancer prevention"?
16 MR. SCHWARTZBAUER: Excuse me. Why
17 don't you take a minute to read that document, Carl. I
18 am not aware that the witness has read this document in
19 preparing for his deposition and so if you are going to
20 be asking him if he agrees or disagrees with specific
21 parts of it it would be a good idea for you to read it.
22 BY MR. SHAKMAN:
23 Q. My focus right now is on the paragraph I have
24 begun and continues into the middle of the next page.
25 I would be glad to have you read that.

1 MR. SCHWARTZBAUER: Why don't you start
2 reading with the "Reilly operated --".
3 MR. SHAKMAN: Should we take a couple
4 minute break here?
5 (At this time a brief recess was held.)
6 BY MR. SHAKMAN:
7 Q. You have had an opportunity to look at that
8 Exhibit 73 now?
9 A. Yes.
10 Q. I was referring to the bottom of the third
11 page of that. There is a sentence beginning on the
12 bottom of the third page carrying over to the top of
13 the fourth page discussing PAH's as enhance signal
14 defenses for cancer prevention. My question I will
15 rephrase is what information or knowledge do you have
16 of that scientific opinion?
17 A. Similarly to the previous sentence, I have
18 read this in the literature.
19 Q. Is there specific literature that you could
20 refer me to?
21 A. I do not recall the references at this time.
22 Q. Do you recall the context in which he might
23 have read that; for example, was it in material
24 prepared for RPAR response?
25 A. I would imagine that it was.

1 Q. Outside of of that RPAR proceeding, are there
2 other occasions where you have encountered literature
3 concerninq PAH's in cancer?
4 A. In textbooks and literature I would have run
5 across references to it, yes.
6 Q. Do you recall any courses, seminars, programs
7 you may have attended or read the proceedings of where
8 you came across it, apart again from the AWPA?
9 A. Not by name or occasion.
10 Q. Does your company library maintain
11 information on that?
12 A. Yes, we do.
13 Q. On that same page would you look down to the
14 last full paragraph beginninq, "The capability of the
15 instruments"? Have you read that paragraph?
16 A. I have not located the paragraph.
17 Q. It begins, "The capability."
18 A. Yes, I have road it.
19 Q. Instrumentation, if I recall correctly, is
20 one of the area that you spoke of you are doing the
21 committee work on?
22 A. Yes.
23 Q. There is a comment in the next sentence that
24 the liquid chromatography technique used by the
25 Minnesota State Department of Health is the most

1 primitive of various laboratory techniques presently
2 used. Do you agree with that statement?
3 A. Yes, I believe this.
4 Q. And what is the basis for that belief? Why
5 do you think that?
6 A. The results that I have seen on
7 reproducability and repeatability.
8 Q. Could you explain for the laymen those terms,
9 reduce built and repeatability?
10 A. Reproducability is an analysis on the same
11 sample by different laboratories and the term
12 reproducability is a statistical measure of the
13 comparison of those two results which are expected to
14 be the same. Repeatability then is the results on the
15 same sample within the same laboratory by the same
16 operator.
17 Q. And from what you have seen of the Department
18 of Health samples is it your conclusion they have
19 difficulties on both repeatability with other labs and
20 reproducability?
21 A. I believe so, yes.
22 Q. Do you think that is inherent in the
23 technique or do you think it's something --
24 A. It's a part of the technique in trying to
25 find such low levels.

1 Q. By "low levels" you have the parts per
2 trillion?
3 A. Yes.
4 Q. At what levels would you feel that you would
5 have confidence in that technique?
6 A. Parts per thousand and possibly narrowly into
7 the parts per million.
8 Q. Do you think the technique is valid beyond
9 parts per million for identifying compounds without
10 regard to quantifying them?
11 A. I am not certain of this.
12 Q. Are you aware of the techniques being used by
13 the contracting lab to Reilly Tar in samples recently
14 collected in Saint Louis Park?
15 MR. SCHWARTZBAUER: Excuse me. I object
16 to that on the grounds of work product and instruct the
17 witness not to answer.
18 BY MR. SHAKMAN:
19 Q. Are you aware of results of such testing?
20 MR. SCHWARTZBAUER: You can say yes or
21 no. Are you?
22 THE WITNESS: No.
23 BY MR. SHAKMAN:
24 Q. Do you know anyone in the company who would
25 be if you are not?

1 A. No.
2 Q. From your experience with analytical
3 techniques what would you believe would be the
4 recommended method for analyzing for concentrations in
5 the parts per billion -- parts per trillion range in
6 well water?
7 A. I am not aware of any that would be
8 satisfactorily accurate.
9 Q. I am sorry, I didn't catch the last part.
10 A. That would be satisfactorily accurate.
11 Q. Are there techniques that you feel are better
12 than the high performance liquid chromatography even if
13 not satisfactory to you?
14 A. No.
15 Q. Are you aware of literature on health risks
16 of the heterocyclic compounds where you might
17 substitute a nitrogen or a sulfur?
18 A. I have read references to this in the
19 literature.
20 Q. From your reading in this area do you believe
21 the statements made in here about the PAH's would also
22 be true of those heterocyclic compounds, that is, they
23 enhance natural defenses?
24 MR. SCHWARTZBAUER: Is that when you are
25 asking him about that one statement, Steve, otherwise

1 your question is quite general. I am not sure it's
2 specific enough for him to respond intelligently.
3 BY MR. SHAKMAN:
4 Q. Let me ask you what you recall generally of
5 that literature and then I will ask you specifically
6 about that.
7 A. Only that there have been references and
8 allegations that certain of the heterocyclics might be
9 suspected carcinogens or anti carcinogens.
10 Q. Can you recall, if not specifically, where
11 you read that the time frame there, where you have come
12 across that?
13 A. It would have been within the last two years
14 and I do not recall the compounds nor the reference.
15 Q. Do you know of anyone with the company who
16 might be more knowledgeable in heterocyclics and in
17 their health effects?
18 A. No, I do not.
19 Q. Within the company are there other people who
20 are familiar with analytic methodologies as well as
21 yourselves?
22 A. Yes.
23 Q. Who would you include in that group?
24 A. Most of the people in our research department.
25 Q. Is there a person in particular who you would

1 consider top on that?
2 A. Doctor Paul Rivers is in charge of our
3 research analytical department.
4 Q. Have you discussed with him the HPLC results
5 from Saint Louis Park?
6 A. Yes.
7 Q. And what were his views on that?
8 MR. SCHWARTZBAUER: Just a moment.
9 Steve, can you be more specific about that? I mean,
10 are you asking him about that sentence that you
11 previously asked?
12 MR. SHAKMAN: No, he said he discussed
13 this with Mr. Rivers and I asked him what views Mr.
14 Rivers had presented to him in a general sense.
15 MR. SCHWARTZBAUER: Well, it's my
16 understanding that they have discussed this case
17 amongst themselves several times and that that has been
18 partially in preparation for trial and given the
19 phraseology of your question right now I think it would
20 be impossible for him to sort out discussions that he
21 may have had with Paul Rivers in preparation for trial
22 or conversations that they may have had that are not in
23 preparation for trial and that's why I ask you to be
24 more specific otherwise I would have to object and I
25 don't want to stand in the way of your getting

1 information.
2 BY MR. SHAKMAN:
3 Q. Has Mr. Rivers commented on the accuracy of
4 the high performance liquid chromatography used?
5 A. Yes.
6 Q. And what were his views on that accuracy?
7 A. His views were in agreement with the
8 statements to which you have been recently referring,
9 that the repeatability and reproducability were quite
10 poor at these levels.
11 Q. And did he have recommendations for other
12 analytical techniques that would be more accurate?
13 MR. SCHWARTZBAUER: Carl, in answering
14 that, can you answer it without revealing discussions
15 that may have been had in connection with Reilly's
16 preparation of it's defense in this case?
17 THE WITNESS: No. All my recollection
18 involves outside consultants.
19 MR. SCHWARTZBAUER: Then I ask you not
20 to answer the question if it relates to work that
21 Reilly was doing in preparation for trial.
22 BY MR. SHAKMAN:
23 Q. Outside of preparation for trial, have you
24 discussed with Mr. Rivers analytical techniques that
25 are effective in the parts per billion and parts per

1 trillion range?

2 A. We have discussed whether he should purchase

3 the equipment to do the research and we have concluded

4 that it was not worthwhile for Reilly to do so.

5 Q. And what equipment would that have been, what

6 kind of equipment?

7 A. The GCMS.

8 Q. What do those initials stand for?

9 A. Gas chromatography mass spectometry I think.

10 Q. What would have been the benefits of that

11 equipment?

12 A. We would have done fundamental research and

13 become familiar with the method of analysis that

14 believed that the expected results would be too poor to

15 make it worthwhile from a --

16 Q. You say "results too poor" -- I am sorry, I

17 interrupted you. From the standpoint --

18 A. -- of accuracy.

19 Q. What are the applications to the company of

20 such equipment the company might have beyond the

21 specific question of the Saint Louis Park lawsuit?

22 MR. SCHWARTZBAUER: Would you repeat

23 that question?

24 (Whereupon the requested portion of the

25 record was read by the Court Reporter.)

1 A. None.
2 Q. Has the company had GCMS analysis done for it
3 on any occasion?
4 MR. SCHWARTZBAUER: Well, I think either
5 there is or shortly will be no mystery about the fact
6 that Reilly is having a good C mass spec done for it in
7 connection with this lawsuit but I really don't know
8 whether the witness is or is not familiar with that,
9 Steve; but in answering the question why don't you just
10 limit yourself to any GCMS work that would have been
11 done extraneous to this lawsuit.
12 MR. SHAKMAN: You would include any work
13 that would have been done for this lawsuit?
14 MR. SCHWARTZBAUER: Yes.
15 A. I don't recall any such work out side this
16 lawsuit.
17 Q. Are you acquainted with other companies in
18 the coking and coal tar distilling industry who are
19 involved with using GCMS for analytical work on
20 environmental problems?
21 A. Would you restate the question, please?
22 Q. Why don't we just read it back once and if
23 it's still a problem I will try to restate at
24 this time.
25 (Whereupon the requested portion of the

1 record was read by the Court Reporter.)
2 A. Yes.
3 Q. What companies would that be and what
4 problems?
5 A. It would have been the Koppers Company at
6 their Saint Paul site.
7 Q. And have you reviewed results from those
8 analysis done by Koppers?
9 A. I have read the results.
10 Q. Do you know in what range of concentrations
11 they were hoping to get acceptable results?
12 A. I do not recall.
13 Q. Do you recall having any opinion as to the
14 accuracy of those results?
15 A. Only in the sense that the repeatability was
16 very poor.
17 Q. Who at Koppers did you get the results from?
18 A. I do not recall.
19 Q. Do you recall discussing the Koppers problem
20 in Saint Paul with someone at Koppers?
21 A. Yes.
22 Q. Who would that have been?
23 A. Mr. Lawrence Nagle.
24 Q. Could you spell that one?
25 A. N-a-q-l-e.

1 Q. Do you recall what you discussed with Mr.
2 Nagle?
3 A. No.
4 Q. Do you know the percentage of PAH's generally
5 found in raw coal tar?
6 A. No.
7 Q. Or in the coal tar neutral oil?
8 A. Not very specific, no.
9 Q. From your work with the company, particularly
10 in the refinery area, what are some of the work place
11 and occupational exposures that have caused adverse
12 health effects over the years?
13 A. I am not aware of any.
14 Q. My question may have been ambiguous. Over
15 the years of your experience what type of problems has
16 the company encountered with employees being exposed to
17 coal tar products, their fumes and the like?
18 A. I am not aware of any adverse health effects
19 that our employees may have encountered as a result of
20 exposure to coal tar products other than possibly a
21 spill where they would get burned or be sprayed in the
22 eye or something of that nature. By health effects I
23 meant long-term health effects.
24 Q. What about short-term reactions?
25 A. Nothing beyond the individual accidents where

1 they would be sprayed or burned or something of that
2 nature.
3 (At this time State of Minnesota Deposition
4 Exhibit 75 was marked for identification by
5 the Court Reporter.)
6 BY MR. SHAKMAN:
7 Q. Mr. Lesher, you have been given what has been
8 marked as Exhibit 75 on the letterhead of Reilly Tar &
9 Chemical Corporation from Mr. P. E. White to Mr. R. J.
10 Boyle on October 5, 1966 with your name listed on the
11 copies. Would you take a moment to look at that?
12 A. I have read it.
13 Q. Do you recognize this as the internal
14 correspondence of the company?
15 A. I do.
16 Q. And at that time what would have been the
17 positions of Mr. Boyle and Mr. White?
18 A. Mr. Boyle was secretary of the corporation
19 and had responsibility for insurance. Mr. White was
20 plant engineer of the Saint Louis Park refinery --
21 plant.
22 Q. Would he have particular responsibilities for
23 the refining operation?
24 A. I am sorry, I correct myself. I believe Mr.
25 White's position was superintendent of the tar refinery

1 department of the Saint Louis Park refinery.
2 Q. Do you know his whereabouts today?
3 A. At which point he would have had
4 responsibility, yes. No, I do not.
5 Q. Could you direct your attention to the very
6 bottom of the first page after the word "discussion"?
7 The sentence that begins, and I quote, "The job is not
8 complete yet as Armstrong is having a very difficult
9 time finding a man who can take the hot creosote oil
10 vapors." End of quotation. From reviewing the memo do
11 you have any knowledge of this particular incident at
12 the Saint Louis Park plant? Do you know what Mr. White
13 would have been referring to by "hot creosote oil
14 vapors"?
15 A. The tank was hot, which would have caused
16 strong creosote oil vapors to be evolved and anyone
17 would find these objectionable and possibly on
18 continued exposure they would have gotten an irritation.
19 Q. What kind of irritation?
20 A. Rash, very light burn.
21 Q. Would there be a problem likely to develop
22 from inhalation of these?
23 A. What do you mean by "problem"?
24 Q. Health problem, anything like a headache,
25 nausea?

1 A. No, I am not aware of any long-term effects.
2 Q. Are you aware of literature on health effects
3 of inhaling vapors such as these? Is that something
4 you have looked at?
5 A. I am aware of such literature.
6 Q. And is that literature that you have read all
7 consistent with the opinion you have just previously
8 stated?
9 A. The literature I have read refers to probably
10 both sides, some indicates that there are health
11 effects and some indicates that there are not.
12 Q. And in the literature indicating health
13 effects, do you recall what kind of health effects they
14 suggested?
15 A. I think the suggestion or allegation was that
16 it contributed to emphysema.
17 Q. Are there other people in the company who
18 considered those kind of health effect allegations
19 besides yourself?
20 A. I would imagine everyone has considered them,
21 yes.
22 Q. Are there people who are particularly
23 responsible for reviewing that kind of literature and
24 keeping up to date on it?
25 A. At the present time Mr. Justin has this

1 responsibility within the refinery division.
2 Q. If I may backtrack a minute here. Paul
3 Rivers, who you mentioned previously, what is his
4 background and training?
5 A. He has a doctorate in one of the chemical
6 branches.
7 Q. Do you know his prior work prior to being
8 with Reilly Tar?
9 A. No, I do not.
10 Q. How long has he been with the company?
11 A. More than five years, probably less than 20.
12 Q. And do you know if he had any input into
13 those comments and analytical techniques in that
14 Exhibit 73, the statement of the case?
15 A. I do not know.
16 Q. Is there someone with the company who would
17 know more than you would about that statement of the
18 case, know more about the substance?
19 A. Yes, Mr. Robert Polack would be more familiar
20 with the preparation of that statement.
21 Q. Besides Mr. Justin, are there other people
22 who work with Mr. Justin who would be knowledgeable of
23 that health effects literature we were speaking of a
24 moment ago?
25 A. He probably would have discussed it with Mr.

1 Roder and would have exchanged information with his
2 counterpart in the chemical division.
3 Q. Mr. Justin's counterpart you are speaking of?
4 A. Yes.
5 Q. Who would that individual be?
6 A. It has been varying, I am not certain of the
7 person with that responsibility at the present time,
8 although most likely it would have been, Mr. Kim
9 Bennett.
10 Q. Two s's, two t's?
11 A. I believe so.
12 Q. You mentioned at the outset that you visited
13 as production manager and assistant production manager
14 many of the Reilly Tar facilities. Were you visiting
15 only facilities that were in the refining side of it?
16 A. In the context in which I used the word I
17 made regular visits to the tar refining plants and only
18 a very occasional visit to a plant which only preserved
19 wood.
20 Q. I have a listing of a number of plants here.
21 The first one I have is Granite City. Could you tell
22 me what operations they had there and over what years
23 they had those operations?
24 A. The plant was purchased by Reilly Tar &
25 Chemical in the early 1930's and it was principally a

1 tar refinery and we added a plant to produce coal tar
2 enamel in the mid 1970's.
3 Q. What is a coal tar enamel, how is that used?
4 A. It is a coating for underground pipes such as
5 long distance gas and oil and coal and carbon dioxide
6 lines.
7 Q. That's not a product that was ever made at
8 Saint Louis Park, was it?
9 A. No.
10 Q. At Granite City what has been the type of
11 waste water treatment and disposal system that they
12 have used?
13 MR. SCHWARTZBAUER: Just a minute. Can
14 you enlighten me as to how that is relevant to the
15 subject matter?
16 MR. SHAKMAN: Well, I think what Reilly
17 Tar has done with waste water treatment and disposal at
18 other plants can be relevant to what they did or did
19 not do at their Saint Louis Park plant.
20 MR. SCHWARTZBAUER: Well, it depends I
21 suppose.
22 MR. SHAKMAN: I would be willing to
23 confine it to pre 1972.
24 MR. SCHWARTZBAUER: Is that what you are
25 asking him about, pre 1972.

1 BY MR. SHAKMAN:

2 Q. I will confine the question. Let me break it

3 down to two periods of time prior to 1960 and between

4 1960 and 1972, what you know of waste water treatment

5 and disposal at Granite City.

6 MR. SCHWARTZBAUER: If you can answer it

7 do the best you can.

8 A. Prior to 1960 it was merely ponded and

9 allowed to evaporate and the same would apply to

10 1960 -- 1972; although in the mid 1970's we put in

11 tanks to do a preliminary separation of any oil that

12 may have been contained and would separate by settling

13 or standing.

14 Q. The evaporation ponds did not connect into

15 streams, they were contained in ponds?

16 A. That is right.

17 Q. Do you know if that plant used ground water

18 as a water supply?

19 A. I don't believe they did.

20 Q. They have municipal supplies?

21 A. Yes.

22 Q. I would like to ask you the same question in

23 regard to Lima. Is that Lima, Ohio?

24 A. Yes, that's Lima, Ohio, and I am not at all

25 familiar with that plant.

1 Q. Let me go back to the same question. I
2 wasn't clear in the series of questions what they did
3 there?
4 A. It was a wood preserving plant in Lima.
5 Q. When was it in operation?
6 A. I am not sure of the date of construction but
7 it was operated in the '60's and '70's -- early '70's.
8 Q. And are you aware of their waste water
9 treatment and disposal system?
10 A. By hearsay, I believe they went the into the
11 city sewer.
12 Q. And do you know if they drew on ground water?
13 A. No, I do not.
14 Q. The next plant I have listed is Maywood. Why
15 don't I ask first where they are and what they have
16 been doing and over what years?
17 A. It's located in the southwest part of the
18 Indianapolis, it was constructed, I believe,
19 approximately 1920's. They were a tar refinery and
20 wood preserving plant until the early to mid '70's.
21 Q. What happened then? What did they do in the
22 early to mid 70's?
23 A. We closed the plant down because of shortages
24 of raw material.
25 Q. What type of materials?

A. Principally coal tar.

Q. I have seen references to Minnesota Street, is that an independent plant from the Maywood?

A. In general we refer to the Minnesota Street plant, which is our chemical plant, north of Minnesota on Tibbs Avenue.

Q. Let me put Minnesota Street on the back burner and ask you if Maywood, in those periods of time before 1960 and after 1960 to 1972, what kind of waste water treatment and disposal system they had?

A. Prior to the '50's the waste water went into Eagle Creek. Sometime in in the late 1950s or 1960's we constructed an API separator and its effluent also went to Eagle Creek. I think in the late '60's or 1970's we began to go into the city sewers.

Q. Prior to the API separator were there any other treatment mechanisms employed there?

A. It was, I believe, a straw filter or -- I am not aware or familiar with it.

Q. And do you know if they used ground water as a water supply?

A. Early in the '40's and '50's we had wells for water.

Q. Process water was always municipal supplied?

A. No, I believe probably that same water, early

1 in the life of the plant, was used for cooling water.
2 Q. At the Minnesota Street plant, what were the
3 operations there and when?
4 A. It's the site of our research laboratories
5 and in the early 1950s we began expanding our synthetic
6 chemical operations primarily the synthesizing of
7 pyridine and it's derivatives.
8 Q. Is that what it continues to be, it's a
9 synthetic chemical plant?
10 A. Yes.
11 Q. And do you know what the waste water
12 treatment disposal system is there?
13 A. Currently it goes into the city sewers.
14 Q. Do you know if ground water has ever been a
15 water supply at that operation?
16 A. It likely was at one time. There are wells
17 there or a well.
18 Q. Before the city sewer connection, what was
19 the waste water disposal there?
20 A. Where?
21 Q. At Minnesota Street.
22 A. I am not sure that the connection to the city
23 sewer was not made when the production of chemicals was
24 begun.
25 Q. The next plant I have is the Lone Star plant.

1 Can you give us the location and the activities
2 conducted at that facility?
3 A. It's in the northeast corner of Texas just
4 north of Longview and adjacent to the Lone Star Steel
5 plant. Its principal product is coal tar enamel.
6 Q. It is not involved in wood treating at all?
7 A. No, it is not.
8 Q. Has it been in the past?
9 A. No, it never was. It was constructed by
10 Reilly in the early 1950s.
11 Q. And do you know their waste water disposal
12 and treatment system?
13 A. They go through a settling pond and thence
14 into an adjacent lake.
15 Q. The next plant I wanted to ask about is the
16 Ironton plant. Where is that plant located and what do
17 they do there?
18 A. It's located in Utah, approximately 50 miles
19 south of Salt Lake City and it is a tar refinery.
20 Q. Do you know when it was constructed?
21 A. In, I believe, the late 1920's or early '30's.
22 Q. Is it still in operation?
23 A. Yes.
24 Q. And do you know what their waste water
25 disposal and treatment system is?

A. They went directly into an adjacent stream until the late 1970's when we constructed an evaporating pond.

Q. Do you know if they utilized ground water?

A. They did for some time and over the last five years had gradually switched to city water.

Q. The next plant I wanted to ask you about was Chattanooga, what their operations were and over what time period?

A. It was purchased by Reilly I believe in the 1930's, it was a small coal tar refinery.

Q. And it's been used as a refinery since the '30's?

A. It was sold in, I believe, the mid 1970's.

Q. Are you aware wier of the waste water treatment and disposal system there?

A. It went into, I believe, the stream is called Chattanooga Creek. In the early 1970's we constructed a bioxidation pond.

Q. That was operational before you sold the plant?

A. Yes.

Q. Do you know if they utilized ground water as a water supply?

A. I don't believe so.

1 Q. The next plant I wanted to ask about was
2 Fairmont, its operations and time frame?
3 A. It was, I believe, purchased by Reilly in
4 the '30's. It too was only a coal tar refinery and was
5 sold in the early 1970's.
6 Q. Where is that located?
7 A. The name starts with a C, between Morgantown
8 and --
9 Q. West Virginia?
10 A. I am sorry.
11 Q. That's in West Virginia?
12 A. It's in West Virginia, yes.
13 Q. Do you know where their waste water was
14 disposed?
15 A. I believe into a ditch and I don't know its
16 ultimate destination.
17 Q. Do you know if they utilized ground water?
18 A. I don't believe they did.
19 Q. Mobile is the next plant I would like to ask
20 about.
21 A. It's on the west side of Mobile, Alabama and
22 was a wood preserving plant.
23 Q. The years of operation?
24 A. It would have been in the 20's, plus or minus
25 ten years, until the early 1970's when it was sold.

1 Q. The waste disposal and treatment system there?
2 A. I don't believe there was any treatment
3 system. I think the water ran off into the bay.
4 Q. Do you know if they utilized ground water?
5 A. I don't believe so.
6 Q. What were the operations and when were they
7 carried on at the Cleveland plant?
8 A. It was a tar refinery built by Reilly in the
9 early 1930's.
10 Q. Does it continue to operate?
11 A. It is a continuing plant.
12 Q. And what waste water treatment and disposal
13 practices have been used there?
14 A. There was no treatment in the early period,
15 it ran off into the adjacent river. A settling pond or
16 tank was built in the '70's and prior to that there had
17 been a straw filter and small API separator used and I
18 believe also in the '70's we did again go into the city
19 sewer.
20 Q. Do you know when the straw filter and
21 separator came into use?
22 A. I am not certain exactly. I would guess in
23 the '60's.
24 Q. Do you know if they utilized ground water as
25 a water supply?

1 A. They did not.
2 Q. What were the operations and when were they
3 conducted at the Norfolk plant?
4 A. That was their wood preserving plant. I do
5 not recall too much of it's history nor practices.
6 Q. It operating now?
7 A. It was closed and sold in the 1970's.
8 Q. You aren't aware of their ground water or,
9 excuse me, their waste water?
10 A. No, I am not.
11 Q. What was the Decatur facility? Where was
12 that located and what was done with it?
13 A. I do not recall.
14 Q. Are you at all aware of it?
15 A. I do not believe that it was a major
16 operating plant.
17 Q. Do you know what state it was in?
18 A. Illinois.
19 Q. Superior. What were the facilities at
20 Superior?
21 A. I know nothing about Superior.
22 Q. Renton?
23 A. It was a coal tar refinery located east of
24 Seatle on the lake adjacent to Seatle. I believe that
25 it was purchased in the early '30's and was closed in

1 the 1970's.

2 Q. Are you aware of their waste water treatment

3 disposal practices?

4 A. The water was discharged into the adjacent

5 lake.

6 Q. Do you know what treatment they used?

7 A. No treatment.

8 Q. Do you know if they used ground water?

9 A. I don't believe they did.

10 Q. Is Propo the same as Ironton?

11 A. Yes.

12 Q. Florence, what was that?

13 A. Florence was merely a tie storage yard.

14 Q. What state was that in?

15 A. It would have been Alabama.

16 Q. Newark. What was Newark?

17 A. It was a coal tar refinery located on the

18 river adjacent to Newark in New Jersey, I believe

19 purchased in the '30's and sold in the mid '50's. I am

20 unfamiliar with the treatment and the water sources.

21 Q. Was that gone before you began visiting

22 refineries as part of your --

23 A. Yes.

24 Q. Chicago?

25 A. It was located just, I think, southeast of

1 the downtown area on one of the rivers or canals. It
2 was a coal tar refinery. I believe that it was
3 purchased in the early 1930's and was sold in the early
4 '60's.
5 Q. And are you aware of its waste water
6 treatment and disposal?
7 A. Waste water was discharged into the adjacent
8 river.
9 Q. Do you know their treatment?
10 A. I don't believe that it was treated.
11 Q. Do you know if they utilized ground water?
12 A. I don't believe they did.
13 Q. Have I covered all of the refining and wood
14 treating operations of the Reilly Tar & Chemical
15 Corporation?
16 A. We at one period in I believe the 1940's
17 built and operated at a plant at Bell, West Virginia
18 for only a few years.
19 Q. Is that Bell in the State of West Virginia?
20 A. Yes.
21 Q. It was refining?
22 A. It was a refinery.
23 Q. What was the disposition of that plant?
24 A. I am not familiar with the effluent
25 disposition and the water source.

1 Q. What became of the plant, was it closed or
2 sold?
3 A. It was closed and sold. We operated a plant
4 at Dover, Ohio, for I don't believe a very long period.
5 It was closed and sold I know in the mid 1950s. I
6 don't know its effluent treatment or water source.
7 Q. Any others come to mind. We have omitted
8 Saint Louis Park but apart from that --
9 A. Not that I can recall.
10 Q. From plants that were engaged in refining and
11 wood treating, are you able to estimate the volumes of
12 their waste water flow, average volumes, say over the
13 pre 1960 period, from the 1960/'72 period?
14 A. No.
15 Q. Who with the company would likely have that
16 kind of information or be generally knowledgeable about
17 it for all the plants?
18 A. Possibly Mr. R. J. Hennessy.
19 Q. Would Mr. Horner, as Mr. Hennessy's
20 predecessor, be involved with those matters?
21 A. He would have been involved, yes, but he has
22 been retired for some period of time.
23 Q. I noted that in addition to Saint Louis Park
24 there were a number of other plants; Norfolk, Mobile,
25 Chattanooga, Renton and Fairmont that seemed to be also

closed at about the same time?

A. Yes.

Q. What was the basis for that decision to get out of that type of business?

A. Would you restate the question, please?

Q. There were a number of plants that were all sold or closed at approximately the same time?

A. Yes.

Q. My observation was, correct me if I am wrong, they were refining plants at least they had some refining, is that a correct observation?

A. I think the plants you named were principally wood preserving and the company decided to go out of the wood preserving business. There were several small tar refineries closed in order to concentrate and centralize due to decreasing supplies of coal tar locally.

(At this time State of Minnesota Deposition Exhibit 76 was marked for identification by the Court Reporter.)

BY MR. SHAKMAN:

Q. Mr. Lesher, you have been given what has been marked as Minnesota Exhibit 76, a memo from you to Mr. J. A Spychalski?

A. He was superintendent at our Maywood Tar

1 Refinery.
2 Q. You recognize this as a memo you sent to him?
3 A. I do.
4 Q. And in it you are requesting that he advise
5 the Saint Louis Park plant of their sampling and
6 analytical methods?
7 A. That is right.
8 Q. Do you know when they began sampling and
9 analysis at Maywood and what they were looking for?
10 A. I do not know the exact dates and would
11 assume they were analyzing oil and phenol in the
12 effluent to the creek.
13 Q. Was there someone at that time in August of '69
14 who was in the company headquarters here with
15 responsibility for analytical methods?
16 MR. SCHWARTZBAUER: You asked him about
17 here at Indianapolis.
18 MR. SHAKMAN: With the companies home
19 office.
20 (Whereupon the requested portion of the
21 record was read by the Court Reporter.)
22 MR. SCHWARTZBAUER: Analytical methods
23 in connection with what?
24 MR. SHAKMAN: Analytical methods
25 concerning waste water, water pollution concerns.

1 A. There was no one in the company headquarters
2 with that responsibility.
3 Q. And I will now expand the question to in the
4 company generally?
5 MR. POLACK: We will get there sooner or
6 later.
7 A. Mr. T. E. Courtney at the Reilly Laboratories
8 would have been most involved with such analytical
9 methods.
10 Q. Those are the laboratories you were going to
11 mention were at Minnesota Street?
12 A. That is right.
13 Q. And what was Mr. Courtney's tenure with the
14 company or is his tenure if he is still here?
15 A. I believe 1930 plus or minus ten years until
16 he retired in the '70's.
17 Q. Do you know his present whereabouts?
18 A. Indianapolis.
19 Q. And what were his responsibilities in regard
20 to analyzing analytical methods used in waste at that
21 time?
22 A. He merely would have been the in-house person
23 most knowledgeable on such analytical methods.
24 Q. The next document, the one that was marked
25 Minnesota 56, which was dated August, 1969, Mr. Finch

1 had earlier identified, that appears to be a similar
2 request to Chattanooga determining their methods with
3 determining phenols to Saint Louis Park, is that right?
4 A. That is right. I would have asked several of
5 the plants to send their methods.
6 Q. Do you know what occasioned those requests at
7 that time, August of 1969?
8 A. I would assume investigation and discussion
9 with the Pollution Control Agency occasioned this.
10 Q. Do you know if prior to 1969 there had been
11 any regular intervals of waste water analysis done at
12 Saint Louis Park?
13 A. I don't believe there was any regular
14 scheduled testing.
15 MR. HINDERAKER: I couldn't hear the
16 answer to that question.
17 (Whereupon the requested portion of the
18 record was read by the Court Reporter.)
19 MR. HINDERAKER: Thank you.
20 BY MR. SHAKMAN:
21 Q. Who decided if there should be such testing
22 at a given Reilly facility?
23 A. The the plant manager.
24 Q. Was there any policy from the company lab or
25 the company management giving guidance to the plant

1 manager when they should test their waste water streams?
2 A. Not to my knowledge.
3 Q. Would you recall why Maywood and Chattanooga
4 were doing this type of analysis?
5 A. I believe in response to local regulatory
6 agencies.
7 (At this time State of Minnesota Deposition
8 Exhibit 77 was marked for identification by
9 the Court Reporter.)
10 BY MR. SHAKMAN:
11 Q. Mr. Lesher, you have been given what has been
12 marked as Minnesota Exhibit 77 which is on the Reilly
13 Tar & Chemical Corporation letterhead and appears to be
14 a letter from you to Mr. T. J. Ryan dated July 6, 1970.
15 Does that appear to be your memorandum?
16 A. Yes.
17 Q. And in this memorandum in the second sentence
18 you state, "As indicated by Mr. Justin's comments on
19 justifications, I had been promoting for sometime, the
20 need for accumulating historical and current
21 information on levels of effluent quality at Saint
22 Louis Park. We urgently need more and your regular
23 information." Do you recall why you have been
24 promoting the accumulation of this information?
25 A. I would imagine in response to the

1 investigations and interests by the Pollution Control
2 Agency in our effluent.
3 Q. This is dated 1970. Do you recall how far
4 back you had been urging that kind of information?
5 A. I do not recall.
6 Q. To whom had you been making these suggestions
7 of promoting this approach?
8 A. I would assume Mr. Finch and Mr. Justin.
9 Q. And at that time in 1970 what was your
10 position?
11 A. General manager.
12 MR. SCHWARTZBAUER: Do you have the
13 resume'?
14 MR. SHAKMAN: I am looking here from '68
15 to '78.
16 (At this time a discussion was held off the
17 record.)
18 BY MR. SHAKMAN:
19 Q. Were you in a position that you could have
20 instructed that that equipment be purchased and used at
21 Saint Louis Park?
22 A. Yes, I could have.
23 Q. And do you recall why you did not so instruct
24 if you thought it was needed?
25 A. That's not quite my style of management. I

1 try to convince the person there was a need and
2 encourage them to do it.
3 Q. Do you recall as between Mr. Justin and Mr.
4 Finch who needed the most convincing?
5 A. No.
6 Q. I note the last line of the exhibit says that
7 you recommend approval by the finance committee. What
8 would have been the role of the finance committee in
9 what I believe it indicates is a purchase of a $390
10 piece of equipment?
11 A. I am not now sure of the level of
12 expenditures that the plant manager could make without
13 authorization at that time. Probably everything over
14 $250 had to be formalized and I request to the finance
15 committee partially to keep track for accounting
16 purposes the expenditure and it's allocation.
17 Q. Was that $250 limit, or whatever it may have
18 been, a limit that all company --
19 A. Yes, it would have been universal.
20 Q. Saint Louis Park was treated no differently?
21 A. No differently.
22 Q. Would you note the PS written at the bottom?
23 Is that written in your writing?
24 A. It is.
25 Q. In which you state, "It can be moved and used

1 at another location if Saint Louis Park becomes a
2 problem." What would you mean "if Saint Louis Park
3 because a problem"?
4 A. I do not recall the date but at this time I
5 would assume there had been threats of condemnation by
6 the city or negotiations for the sale to the city.
7 Q. What was the purpose of the laboratory
8 colorimeter discussed in this exhibit?
9 A. The colorimeter was used in an analytical
10 method to measure levels of phenol.
11 Q. Was it something you decided solely on your
12 own knowledge and experience that that's what they
13 needed?
14 A. Yes.
15 Q. Earlier we had discussed traces of PAH's and
16 PPT. Do you view your education, training, and
17 experience as such that when it comes to deciding on
18 what piece of equipment is best for doing those kinds
19 of analysis that you could rely again on your own
20 knowledge and experience in that area to determine what
21 is the superior analytical technique?
22 A. These levels are entirely new and recent. I
23 am not necessarily expert today in these levels of
24 measurements of PAH.
25 Q. What do you mean when you say "necessarily

1 expert"?
2 A. I would consider levels of PPT on the
3 threshold of technology and entirely in the area of
4 experimental analysis.
5 Q. What is the work that you have done that
6 leads you to make that opinion that it's on the --
7 A. I have done no personal work. I think that
8 it is only in recent years that anyone has tried or
9 been able to run analysis of PPT.
10 Q. Well, you are aware that it is a new field.
11 What have you read or studied that leads you to your
12 statement that you can't have confidence in PPT?
13 A. From my reading of literature and observation
14 of the reports and analysis that I have seen on the
15 Saint Louis Park problem such as the repeatability and
16 reproducability problem that we had discussed earlier.
17 Q. This then is something that you did not have
18 prior knowledge and reading in before you addressed it
19 in the Saint Louis Park context, is that correct?
20 A. It was on or about the same period in time.
21 Q. You had said you weren't necessarily
22 qualified to render an opinion as to the efficacy as to
23 the PPB or PPT methods of analysis. Do you feel you
24 are qualified when you are in the areas of parts per
25 hudreds and parts per thousand?

1 A. To the extent that I had been involved in the
2 different analytical methods for phenol, had observed
3 the different methods, had discussed them with the
4 people in our research department and concluded that
5 the colorimetric method seemed to be the most accurate
6 at that period in time.
7 Q. Have you observed and worked with the GCMS
8 method in a laboratory situation?
9 A. I have not worked with it.
10 Q. And you haven't observed it?
11 A. No.
12 Q. If you were considering purchase of the GCMS
13 for the company's use would you rely on your opinion to
14 make that decision?
15 A. No, I wouldn't. I would consult with our
16 research personnel, including Doctor Rivers
17 (At this time State of Minnesota Deposition
18 Exhibit 78 was marked for identification by
19 the Court Reporter.)
20 BY MR. SHAKMAN:
21 Q. You have been given what's been marked as
22 Minnesota Exhibit 78, which is addressed from you to
23 Mr. P. E. White and dated September 19, 1968. Do you
24 recognize this as your memorandum in the course of
25 Reilly Tar business?

1 A. Yes, I do.
2 Q. Mentioned in here in the first paragraph is a
3 Burn-zol incinerator. What is that incinerator and how
4 was it considered at this time?
5 A. I had forgotten this reference to a Burn-zol
6 incinerator at Saint Louis Park, although I have more
7 recently gotten a lot more information on it in as much
8 as we did buy one for our Granite City refinery in 1978
9 and have tried for three years to make it operate and
10 last month abandoned the effort.
11 Q. Sounds like you are probably very well versed
12 on the Burn-zol. What was the application in Saint
13 Louis Park that it was being considered for?
14 A. I would assume that we were considering
15 drawing vapors from the receiving pans to incinerate
16 them.
17 Q. That would be a fuel reduction measure?
18 A. Yes, reduction.
19 Q. In the next paragraph you state, about six
20 lines down, that you looked into a pure flame
21 evaporator at Chattanooga for water cut from their
22 stills. Water cut, that would be the same as the wet
23 cut that you discussed in your affidavit in this case?
24 A. Yes.
25 Q. And what was the technology of the pure flame

1 evaporator?
2 A. I was referring to a calculation that I had
3 made where we would inject that wet cut directly into
4 the fire tube outlet from the still to evaporate it.
5 Q. Fire tube outlet, is that a heat source
6 within the refining process?
7 A. Yes, it is part of the still that is used to
8 distil the coal tar.
9 Q. So this would be making an extra use of that
10 heat?
11 A. Yes.
12 Q. And you go on to mention cost considerations.
13 Do you recall what the cost and benefits of this
14 decision were?
15 A. No, I do not.
16 Q. Do you recall anything more than that
17 sentence that included --
18 A. Only from the sentence I would conclude that
19 the added fuel must have been very significant.
20 Q. Have you ever used that pure flame evaporator
21 at any of the other plants?
22 A. No, I have not.
23 Q. Do you recall it having come into
24 consideration other than in this instance?
25 A. Only in that instance. We have subsequently

1 installed fans and piping systems to inject the vapors
2 from the still receiving pans directly into the boilers.
3 Q. Was that ever done at Saint Louis Park?
4 A. No.
5 Q. Where was it done?
6 A. At Granite City and I believe at Cleveland.
7 But two different things were being discussed. This
8 letter is referring, or the Chattanooga problem is
9 referring to the wet cut and the problem we were
10 discussing at Saint Louis Park were the fumes from the
11 receiving pans and I think that we subsequently
12 installed a scrubber for those.
13 Q. The scrubber where? I didn't follow you.
14 A. The receiving pan, a suction was applied to
15 it and the vapors were piped into a scrubber.
16 Q. The Burn-zol incinerator part of this memo
17 deals with those vapors, is that what you are
18 discussing?
19 A. Yes. The scrubber would have been a solution
20 to the problem instead of the Burn-zol incinerator.
21 Q. And your recollection is that that was
22 installed at Saint Louis Park?
23 A. Yes.
24 Q. This morning you mentioned that the Ironton
25 facility, there was an evaporation pan. How did that

1 function?
2 A. The temperatures and the amount of sunshine
3 at Provo are considerably higher than at our other
4 plants. We merely installed an approximately five foot
5 deep by approximately 100 by 200 foot pan and the wet
6 cut from the stills is piped to the pan and the level
7 stays within the bounds of the pan.
8 Q. Is there any heat source other than the
9 natural heat of the sun?
10 A. No.
11 Q. Is it elevated off the ground?
12 A. No.
13 Q. Do you know what volume it handles?
14 A. I don't recollect.
15 Q. Do you know who with the company would know
16 that?
17 A. The plant manager would have records.
18 Q. Anyone in your Reilly lab?
19 A. I doubt it.
20 Q. What material would have been used in
21 constructing that pad?
22 A. Plain steel
23 (At this time State of Minnesota Deposition
24 Exhibit 79 was marked for identification by
25 the Court Reporter.)

1 BY MR. SHAKMAN:

2 Q. Have you looked then through the document

3 marked 79 which appears to be a July 27, 1938 memo from

4 W. J. McLellan to C. B. Edwards on Republic Creosoting

5 letterhead?

6 A. I have.

7 Q. Could you identify who Mr. Edwards and Mr.

8 McClullen are?

9 A. Mr. C. B. Edwards at that time was probably

10 either director of research or executive vice-president

11 of the company. Mr. McLellan I am not sure.

12 Q. Would you think he was someone employed at

13 Saint Louis Park?

14 A. Oh, yes, very definitely he was an employee

15 at Saint Louis Park, but I am not certain if he was

16 manager or superintendent.

17 Q. And do you know Mr. Edwards, whether he is

18 presently alive and if so where he is?

19 A. He is living and in a nursing home outside of

20 Indianapolis.

21 Q. Would you turn to the last page of that

22 memorandum? The last few paragraphs discuss

23 considerable correspondence on the subject of waste

24 material and drainage and the next to the last one says,

25 "In 1929 we gave some consideration to installing

1 settling basins similar to those at Mobile and
2 Maywood." Earlier today you also used the term API
3 separator in regard to Maywood. Could you distinguish
4 for us how those two operate? If you would like to
5 give us a sketch there that could be helpful we won't
6 put it in a frame.
7 (At this time a discussion was held off the
8 record.)
9 A. The intent is a pan with baffles, one to hold
10 back a lighter than water material and a lower baffle
11 to hold back a heavier than water material such that
12 the lighter material can be pumped off as well as the
13 lower which would have separated some of the separable
14 oils out of the effluent.
15 Q. And --
16 A. This would be the theory of operation of both
17 the settling basin and API separator. The designation
18 of the API separator is that it is, I believe, normal
19 sized as to rate capacity and theory of operation by
20 the American Petroleum Institute.
21 Q. Do you know when the American Petroleum
22 Institute first began giving such specifications?
23 A. I am not certain but I believe it was
24 probably in the '40's or '50's that they published
25 their first papers on it.

1 Q. So looking back to correspondence from the
2 1930's, it would be surprising to see a reference to an
3 API separator?
4 A. Yes.
5 Q. The next sentence after Maywood says, "This
6 system will remove free materials but will not remove
7 any materials soluable in water." What would be the
8 technologies available, and my reference is to the time
9 frame before 1972 back to 1920's for removing the
10 materials that are soluable in water and emulsion?
11 A. I am not that familiar with technology at
12 that time but I would imagine that it would involve
13 redistillation or absorption in some way.
14 Q. Are there chemical additives and floculation
15 methods that accomplish that?
16 A. I don't believe at this period in time that
17 they were very well developed.
18 Q. Do you know at what period they were
19 regularly available?
20 A. No, I do not.
21 Q. Could you make an estimate? Were they
22 available ten years ago?
23 A. I would guess in the '50's to '60's.
24 Q. Do you have any knowledge of what Mr.
25 McClullen is referencing to in terms of consideration

1 to installing settling basins? In your review of the
2 documents have you encountered any information on what
3 the Saint Louis Park plant was considering in the
4 period prior to the 1941 installation of settling
5 basins?
6 A. No, I do not.
7 Q. Do you know how far back the ones that Mobile
8 and Maywood go? Do they go to the time the plants were
9 open?
10 A. I am unfamiliar and was surprised to see this
11 reference.
12 Q. Would you know what the construction would
13 have been in settling basins in the 20's, '30's, into
14 World War 2, in that time frame?
15 A. I would assume that we would have used
16 creosoted wood to build a rectangular tank with baffles
17 installed and the appropriate piping to remove the
18 lighter than water and heavier than water materials.
19 Q. In your off the record discussion you showed
20 one for catching the lighter materials on top and
21 heavier on the bottom?
22 A. Yes.
23 Q. In that illustrative would there be a number
24 of baffles or would one be sufficient to achieve the
25 separation?

1 A. I would assume that one would have been
2 adequate.
3 Q. And the material would have been captured so
4 long as it did not rise, the heavier material rise
5 above the bottom baffle or the light material fill up
6 below the top baffle?
7 A. That is correct.
8 Q. You mentioned at Maywood a separator coming
9 in in the '50's. That would have a done away with the
10 settling basin, it would have been a more modern --
11 A. Yes, this was a concrete formally designed
12 API separator.
13 Q. The principle of operation, if I understood
14 you, would be the same though?
15 A. Generally similar.
16 Q. Do you know at Mobile if the old basin was
17 ever replaced with a more modern separator?
18 A. I am not familiar with that.
19 (At this time State of Minnesota Deposition
20 Exhibits 80 and 81 were marked for
21 identification by the Court Reporter.)
22 BY MR. SHAKMAN:
23 Q. You have been given Exhibits 80 and 81.
24 Exhibit 80 is a memo from C. B. Edwards to H. R. Horner
25 dated July 13, 1951; and 81 a memo of July 25, 1951

1 from Mr. Horner to A. E. Larkin, both on Reilly Tar &
2 Chemical Corporation letterhead. Do you recognize
3 these as internal correspondence of the company?
4 A. Yes, sir.
5 Q. You just identified Mr. Horner in these two
6 memos in 1951, perhaps you have told us this already,
7 but what would have been his capacity with the company
8 at that time?
9 A. He would have been chief engineer.
10 Q. Mr. Larkin would have been plant manager out
11 in Saint Louis Park?
12 A. I believe so.
13 Q. Now, I would ask you to look at Number 81
14 first while we are on the subject of a settling pond.
15 In the second paragraph, in there Mr. Horner says to
16 Mr. Larkin that the major difference between the two
17 ponds, the one in Saint Louis Park and the one at
18 Maywood, is that Maywood has a mechanical means of
19 removing the sludge. Could you explain what that
20 mechanical means of removing sludge would be?
21 A. I believe this would have been a conveyor
22 type arrangement dragging a blade along the bottom up a
23 slope to remove the sludge from the bottom.
24 Q. And how often would something that like that
25 have been done at Maywood?

1 A. I am not sure of the times.
2 Q. And what would be the advantage of that
3 method over the one you were earlier describing where
4 you simply have gravity to carry the sludge down?
5 A. The drawing I put on the board considered
6 that the oil would be low in viscosity and pumpable.
7 Any solids that settled out would remain on the bottom
8 and would have to be removed by shovel or clam type
9 bucket.
10 Q. Could you estimate percentage wise the
11 material which falls on the bottom which would be able
12 to drain out and which would have to be dug out as you
13 described it?
14 A. I can make no estimate of quantities.
15 Q. Would you know soneone in your lab who might
16 be more familiar with that or a prior person in your
17 lab?
18 A. I do not.
19 Q. Exhibit 81 goes on on that first page in the
20 bottom of the fourth paragraph, the fifth and the sixth
21 lines to discuss a straw filter which apparently was in
22 use at Maywood. Were you acquainted with how Maywood
23 used that filter?
24 A. The straw filters, which were in common use
25 in the company at that time, were rectangular in shape

1 holding straw that was placed in the stream of effluent
2 such that all the effluent went through it and
3 contacted as much as possible of the straw.
4 Q. And what was the function that served?
5 A. The oils were absorbed onto the surface of
6 the straw and cleaned up the effluent.
7 Q. Would those be free oils or would that also
8 catch emulsified material too?
9 A. Generally free. It would not catch any -- I
10 don't think it would catch any soluable dissolved oil.
11 Q. Mr. Horner next notes in the next to the last
12 paragraph that the cleaning of the straw becomes a
13 major problem if an excess amount of oil might be
14 handled and the straw might have to be replaced at
15 least once a day. Are you aware if some of the
16 facilities had to change their straw daily?
17 A. No, I am not.
18 Q. Do you know how often it was customarily
19 changed?
20 A. No, I do not.
21 Q. Would you know that from Maywood?
22 A. No, I do not.
23 Q. Do you recall seeing such filters in use when
24 you visited the refineries in the '50's?
25 A. Yes.

1 Q. Apart from Maywood where did you see them?
2 A. In the 1950s I saw them at Chattanooga,
3 Fairmount, Cleveland, and I think that that is all that
4 I saw.
5 Q. How was it determined when the straw should
6 be changed?
7 A. Visual, dirtiness.
8 Q. Simply that they were black?
9 A. Yes.
10 Q. Do you know if any testing was done to
11 determine if that visual rule for changing them
12 optimized the removal of the oil material?
13 A. No, it did not.
14 Q. Let's go back to Number 8 now. I recall from
15 your affidavit at Page 2 that -- excuse me, at Page 3
16 you mentioned in 1940 -- '41 a Woodlawn settling tank
17 was constructed near the sewage treatment facilities.
18 The memo, Exhibit 80, is attaching a letter, which we
19 do not have, from Mr. Larkin regarding contamination of
20 our drainage water for design of a settling basin
21 similar to one at Indianapolis. Would you know why Mr.
22 Larkin would be asking for design of a settling basin
23 similar to one in Indianapolis when it appears that
24 there was one put in in Saint Louis Park 10 years prior
25 to that?

A. No, unless he was seeking an improved basin with more or better baffles.

Q. Mr. Edwards also says there that he assumes Saint Louis Park would not require nearly so large a settling basin as we have here. "Here" would mean the Maywood plant?

A. Yes.

Q. Do you know what that assumption would be based on, the differences between the two plants?

A. No, unless it considered plant throughput.

Q. The volume of waste water?

A. Yes.

Q. And that would be --

A. And quantity of production.

Q. Maywood had a greater production than Saint Louis Park?

A. Maywood had a much larger tar refinery and I think one more cylinder than the Saint Louis Park.

Q. That's treating cylinder?

A. Yes.

(At this time a discussion was held off the record.)

BY MR. SHAKMAN:

Q. Were the processes at Maywood and Saint Louis Park in 1951 essentially the same?

1 A. Yes.
2 Q. Over the years was it always true that the
3 from the one production was proportionally greater than
4 the Saint Louis Park?
5 A. That was true so far as the tar refinery was
6 concerned and I am not familiar with its relative
7 throughput of the wood preserving operation.
8 Q. Would the majority of the materials to be
9 separated out in the settling basin at any plant that
10 had both treating and refining, would the majority of
11 the materials to be settled out come from the treating
12 part of the operation, from the refining part?
13 MR. SCHWARTZBAUER: I am sorry, what are
14 you asking?
15 MR. SHAKMAN: Let's strike that and I
16 will start again.
17 BY MR. SHAKMAN:
18 Q. At a plant that had both refining and wood
19 treating and was using a settling basin, would the
20 materials settled out in that basin come primarily from
21 the worn or the other operation?
22 A. I would think it would be for both.
23 Q. Would you estimate the proportions greater in
24 one or the other, drawing on your knowledge that they
25 enclose two plants, Maywood and Saint Louis Park?

1 A. That would depend entirely on the relative
2 throughput in each of the processes.
3 Q. Would you have such basins in the plants you
4 described earlier today where they were doing only wood
5 treating?
6 A. The Mobile plant's settling basin reference
7 was to a plant that only did wood preserving.
8 (At this time State of Minnesota Deposition
9 Exhibit 82 was marked for identification by
10 the Court Reporter.)
11 BY MR. SHAKMAN:
12 Q. What's been marked as Exhibit 82 before you
13 appears to be an October 5, 1963 memo from R. J.
14 Hennessy to R. J. Boyle. Do you recognize that as
15 Reilly Tar internal correspondence?
16 A. Yes, I do.
17 Q. And the other memo previously marked as
18 Exhibit 48 is from Mr. Boyle to Mr. Finch at Saint
19 Louis Park on August 4, 1965. Both of these mention
20 the Cleveland plant and I would ask you to direct your
21 attention to the last paragraph of Exhibit 82 which Mr.
22 Hennessy is writing to Mr. Boyle says that, "It may be
23 necessary to build a small concrete basin similar to
24 Cleveland's but built high enough to prevent flooding
25 like Maywoods. Water from the plant would be pumped

1 through the settling basin. A concrete basin should
2 have a hopper bottom such as the installation at
3 Cleveland." In reviewing this memo and your knowledge
4 of the Saint Louis Park basin and Maywood could you
5 explain what the problem was that Mr. Hennessy was
6 trying to address and what the solution that was
7 apparently accomplished at Cleveland was?
8 A. We had installed a concrete API basin at
9 Cleveland which had a sloping bottom and gave a
10 supposedly better hopper capacity for collecting and
11 removing heavy oils. My interpretation of the problem
12 that he is addressing at Saint Louis Park was the
13 extreme flooding of water across our property into the
14 settling basin and upsetting the delivery.
15 Q. Let me try and break that down into two. One
16 problem would be flooding as is mentioned in the fifth
17 paragraph down, if you look down about five sentences,
18 Mr. P. C. Reilly has suggested that we divert water
19 being dumped on to plant property. Do you follow that
20 point?
21 A. I do.
22 Q. Let us focus for a minute on that. Were you
23 aware at that time or later times of that suggestion to
24 the problem of flooding that purportedly was dumped by
25 the village onto the plant property? Are you aware

1 that there was such a problem?
2 A. I was very aware of the problem.
3 Q. And in here a solution is outlined. Do you
4 know what consideration was given to that solution to
5 divert water?
6 A. I do not know the discussion and conclusion
7 on that suggestion. I do not recall such a trench
8 having been installed.
9 Q. Are you aware of other Reilly facilities
10 where water diversion as suggested in this memo was
11 accomplished?
12 A. We had not had this problem elsewhere.
13 Q. Did you have it at sometime after 1963
14 anywhere else?
15 A. No, not to my knowledge.
16 Q. Then in the final paragraph of that page, the
17 final paragraph on the first page of Exhibit 82, Mr.
18 Hennessy is writing that, "If, after the work is
19 completed, our own runoff water continues to flood our
20 wooden settling basin, stirs up the oil, and washes it
21 downstream from our plant, it may be necessary to build
22 a small concrete basin similar to Cleveland's; but
23 built high to prevent flooding like Maywood's". Can
24 you shed some light on the advantage of the concrete
25 basin similar to Cleveland's in what I presume to be a

1 wooden basin at Saint Louis Park?

2 A. I think with the status of technology that he

3 was merely concluding that at that point in time, if

4 any basin were installed, it would be concrete in

5 preference to wood; that the concrete basin would, of

6 course, and should be stronger, more rigid and tighter

7 than a wood basin. I read Mr. Hennessy's comments that

8 if the rain runoff water from our own plant still upset

9 the wood settling basin that any new basin, whether it

10 be wood or concrete, be so installed that it were

11 essentially above ground and that the plant's effluent

12 water be pumped into it to prevent this flooding and

13 upsetting.

14 Q. You had seen both of the basins at Saint

15 Louis Park and at Maywood?

16 A. Yes. The Maywood basin, it was and is built

17 such that its top is probably five to six feet above

18 the surrounding ground surface.

19 Q. How was it at Saint Louis Park?

20 A. Very close to ground level.

21 Q. So part of the separator would be beneath

22 ground at Saint Louis Park?

23 A. The majority of the separator itself was

24 below ground level with the sides extending just a few

25 inches above ground level.

1 Q. Was it diked or otherwise protected from
2 surface water?
3 A. At Saint Louis Park?
4 Q. Saint Louis Park.
5 A. There was not enough height for any diking.
6 Q. I am sorry, I don't follow you. By diking I
7 just meant gather earth up around it to divert water
8 away.
9 A. At Saint Louis Park the ground level was
10 right there. To do any diking you would have had to
11 have higher sides to permit diking.
12 Q. Had Maywood's been designed with a flooding
13 concern in mind?
14 A. I don't know.
15 Q. Is there or was there a flooding problem at
16 Maywood?
17 A. During the period that I was there there was
18 not the flooding problem, no.
19 Q. Do you recall either from memory or from
20 looking over the files when the flooding problem at
21 Saint Louis Park was first raised by the people at that
22 facility?
23 A. No, I did not know it existed during all my
24 visits to the plant.
25 Q. The hopper bottom is described as similar to

1 what we would see on a grain loading railroad car
2 similar to a cone?
3 A. Yes.
4 Q. When you have that type of bottom does it
5 require mechanical means for removing the heavier
6 materials that settle?
7 A. It does not necessarily require it, no.
8 Q. One further question that's from the 2nd
9 exhibit, Exhibit 48, in the last paragraph Mr. Boyle
10 stated, "The problem with contaminant has been pretty
11 well solved at our Cleveland plant and presumably could
12 be solved at Saint Louis Park." Do you know what
13 problem or what solution he was addressing?
14 A. I would assume that he was addressing the
15 phenol content of the effluent.
16 Q. And how did that arise at Cleveland?
17 A. Could you expand upon that a little bit,
18 please?
19 Q. You mentioned the phenol content of the
20 effluent. Do you recall who raise that at the
21 Cleveland plant?
22 A. The State regulatory agency had measured and
23 found excessive levels of phenol.
24 Q. Do you recall what levels they were finding?
25 A. Probably in the 20 to 50 parts per million.

1 Q. And that was in the discharge that had gone
2 through a settling basin?
3 A. No, that would have been before going through
4 the settling basin and Mr. Boyle is referring to the
5 installation of the settling basin which brought the
6 levels down to on the order of one part per million.
7 Q. Do you know what a figure for phenol
8 concentration in the wet cut would be, a representative
9 figure?
10 A. Pure wet cut would probably be 1,000 parts
11 per million plus or minus 500.
12 Q. Was the separator installed at Cleveland, is
13 that what you described as the API separator built with
14 concrete?
15 A. Yes.
16 Q. Does that continue in use?
17 A. Yes.
18 Q. Would Mr. Hennessy have been the person
19 involved in the design of that?
20 A. Yes.
21 Q. Anyone else with him?
22 A. I don't recall.
23 Q. Within your refinery division were there
24 particular people who you gave responsibility for
25 looking at waste water questions company-wide?

1 A. Only since the mid '70's when Mr. Justin was
2 given that responsibility.
3 Q. Before you get into that let me just ask one
4 more on the topic we were just concluding. Prior to
5 Mr. Justin having this responsibility where would the
6 responsibility for waste water have been divided
7 amongst the various company operations?
8 A. It would have been shared between myself and
9 Mr. Hennessy and the plant manager of the individual
10 plant.
11 Q. Did refinery managers or supervisors also
12 have a role in that too?
13 A. By plant manager I meant the refinery and/or
14 the treating plant manager.
15 Q. I see. I was trying to distinguish in my
16 mind in Saint Louis Park the difference between the
17 positions Mr. Finch and Mr. Justin had there?
18 A. We had always considered the plant manager of
19 the sight to have the ultimate responsibility and that
20 he would delegate different things to in this case his
21 two superintendents, Mr. Justin or Mr. Flaw.
22 (At this time a discussion was held off the
23 record.)
24 BY MR. SHAKMAN:
25 Q. In your time with positions in the refinery

1 division as assistant, what work did you do in the
2 waste water area?
3 A. Would you repeat that, please?
4 Q. In your time with the refinery division as
5 manager -- I have got this copy that not was good
6 enough to make us, as general manager and production
7 manager and assistant to production manager, I follow
8 your resume' roughly from the late '50's to the late '70'
9 What was your personal involvement in the waste water
10 disposal area?
11 A. Prior to 1958 while I was in the engineering
12 department I may have been assigned specific projects,
13 probably not in too many cases, involving waste water
14 handling or control. Subsequent to that I probably
15 would have been involved in the discussions that may
16 have arisen on any problems of that nature and I would
17 have discussed them with the respective plant manager
18 and/or Mr. Hennessy or Mr. Horner.
19 Q. Did you participate in any industry or trade
20 groups that had committees looking at this problem?
21 A. I don't remember the specific cases but I
22 would have -- I know listened to occasional papers at
23 meetings such as the AWPA where there were some
24 inferences made. I did not attend any particular
25 seminars that I recall.

1 Q. Who else in the company over that span, '58
2 to '78, might have been attending seminars and keeping
3 abreast of waste water matters?
4 A. If you include the date of 1978, Mr. Justin,
5 Mr. Hennessy, and perhaps some of the other engineers
6 would have attended such seminars.
7 Q. When you mention engineers, is there a
8 specific unit within the company that you have in mind?
9 A. There is an engineering department presently
10 consisting of six to 10 engineers who work on specific
11 projects. You might bare in mind also that seminars on
12 waste water are a relatively recent event. There were
13 a few such things in the earlier days.
14 Q. Does the name of Mr. Kelly, initial D. D.
15 Kelly?
16 A. Dan Kelly.
17 Q. Is he someone familiar with you?
18 A. Was a staff assistant to the general manager
19 of the treating division, stationed out of Indianapolis.
20 Q. During what years would that be?
21 A. I think in the '60's and not very far into
22 the '70's.
23 Q. Do you know where he is today?
24 A. Deceased.
25 Q. Let me direct you to this handwritten exhibit

1 that was previously identified as Minnesota Exhibit 6
2 and I think Ms. Comstock has identified it in
3 correspondence to us as the writing of Mr. Boyle.
4 MS. COMSTOCK: That's correct.
5 BY MR. SHAKMAN:
6 Q. This appears to be an annotation of a
7 premeeting, before a meeting, with the Minnesota
8 Pollution Control Board concerning sewer at Saint Louis
9 Park. Item 1 C, as I read the script says, "A heavy
10 oil water mixture or sludge bypassed from API separator
11 to cone bottom tank, settle and decant - water on top -
12 oil will be pumped to treating tanks 1 and 3 - water
13 will be pumped to API settling basin." My first
14 question to the reference is API separator. At this
15 time was there an API separator in Saint Louis Park,
16 and by this time, the date on the top 9-22-70, or is
17 that something that was in the planning stage that Mr.
18 Boyle was outlining?
19 A. None had been installed and the API separator
20 would have been a part of this overall design.
21 Q. He mentioned a cone bottom tank. What would
22 be the nature of that tank? Is that something that you
23 are acquainted with?
24 A. It would be a vertical tank with a cone
25 bottom to permit a better separation by gravity.

1 Q. And were such tanks used elsewhere by the
2 company?
3 A. Yes.
4 Q. Where at?
5 A. At almost all the refineries for one purpose
6 or another. Saint Louis Park had them for the tar
7 extraction by products area.
8 Q. That was back in what period, '30's, '40's?
9 A. '30's and '40's.
10 Q. So the same tank would have applications both
11 with byproducts and --
12 A. That type of tank would be used wherever you
13 wanted to make a gravity separation of the two
14 components.
15 Q. Do you know if at that time that it was some
16 other type of tank in Saint Louis Park serving this
17 purpose of settling and decanting other than the
18 settling basin that's already been discussed?
19 A. I do not know what tank was assigned to that
20 purpose.
21 Q. That is --
22 A. But since they did have a settling basin the
23 oils from it would have had to have have been pumped
24 somewhere.
25 Q. But you don't recall seeing such a tank in

1 your trip to Saint Louis Park learning this is the tank
2 in which the heavier materials from the settling basin
3 are stored?
4 A. Not that that tank is used for that purpose,
5 no. You should bare in mind that the heavy oil or the
6 upper light oil cut could have been pumped to any tank
7 containing creosote oil as such.
8 Q. Generally what was done with it, redistilled?
9 A. Depending upon its cleanliness, it would have
10 been redistilled or if it were not too unusual it would
11 have been used directly in treating, could have been.
12 Q. The lighter part or both parts?
13 A. Both parts. Either.
14 Q. With Mr. Finch we saw mention of a petroleum
15 creosote mixture. Would there be a petroleum fraction
16 also appearing in this settling basin of the plant
17 separation?
18 A. A considerable amount of treatment done at
19 Saint Louis Park was with a 50/50 petroleum creosote
20 mixture. So I would imagine anything carried over or
21 getting into the water would be a mixture of both.
22 Q. Would your statement about how you would
23 handle and use these lighter and heaviers be any
24 different where you would have petroleum creosote
25 versus what when you have just creosote?

1 A. In as much as the quantities involved from
2 the basement would be relatively low, no.
3 Q. You simply mixed them back in?
4 A. Yes.
5 Q. You mentioned that at Chattanooga, I believe
6 this morning, you had biooxidation process. Was
7 biodegradation of effluent ever considered at Saint
8 Louis Park?
9 A. Not at that time. I had read in one of the
10 journals or papers in the late '60's or early '70's
11 that someone had tried this biodegradation and that in
12 that case it worked so we concluded to try it on a test
13 basis at the Chattanooga plant.
14 Q. Could you describe the process you set up
15 there at Chattanooga?
16 A. It was essentially a large rectangular tank
17 two to three feet deep and on the order of 50 feet wide
18 by 100 feet long with the effluent from the plant being
19 fed into it. It contained a floating pump which
20 circulated the water over a pile of limestone and
21 phenol eating bacteria built up and accumulated with
22 time and so long as it wasn't shocked it did reduce the
23 phenol content of the water.
24 Q. Were there shocks that rendered it ineffective?
25 A. Not very often, no.

1 Q. If that happened what would you do to get it
2 working again?
3 A. Keep pumping and they would grow normally.
4 We did not at that time use any strains of bacteria
5 which are now commercially available.
6 Q. Is this process dependant on oxygen being
7 available?
8 A. I think it is, yes.
9 Q. As you are aware the marsh indicated in this
10 R.T.C. Exhibit 3 on either side of Highway 7 south of
11 the Reilly plant was a receiving area of flow from the
12 Reilly plant, that's correct, is it not?
13 A. I have only seen reference to that in
14 correspondence and I personally had never toured that
15 area.
16 Q. If you would assume that that area did have
17 materials that came off the plant and build up there,
18 would you believe that natural processes in the marsh
19 would breakdown coal tar wastes which may have arrived
20 there?
21 A. Yes, I would.
22 Q. And once your materials have built up, to
23 what depth would those processes no longer work?
24 A. I do not know.
25 (At this time State of Minnesota Deposition

1 Exhibit 83 was marked for identification by
2 the Court Reporter.)
3 BY MR. SHAKMAN:
4 Q. I have given you what has been marked as
5 Minnesota Exhibit 83, three pages of a publication of
6 the Bureau of National Affairs in Washington, D.C. The
7 exerpt being materials from 40 Coded Federal
8 Regulations 261.32 and 261.33, and tucked into the text
9 of this material are references to when this appeared
10 in the Federal Register in the years 1980 and '81. Are
11 these regulations that you are acquainted with?
12 A. I have seen them.
13 Q. Who at the company, if anyone, would have
14 been involved in commenting or participating in their
15 regulation making process that lead to these rules?
16 A. No one.
17 Q. Did the company participate in any trade
18 association comments on these regulations?
19 A. I believe that the AWPI commented on these.
20 Q. Anyone at Reilly review or submit suggestions
21 on the AWPI comments?
22 A. I do not believe so.
23 Q. On the first page of Exhibit 83 with the
24 Section 261.32, "Hazardous Waste from Specific Sources"
25 at the top, I would like to direct your attention to

1 the first hazardous waste listed there under the Number
2 K001 "bottom sediment sludge from the treatment of
3 wastewaters from wood preserving processes that use
4 cresote and/or or pentachlorophenol." Would this
5 description of that hazardous waste have described the
6 material accumulated at Saint Louis Park in the
7 separating basin during the time that plant was in
8 operation?
9 MR. SCHWARTZBAUER: I object to that on
10 the grounds of no foundation and calls for a conclusion.
11 You can answer it if you know.
12 A. Now I would have to hear the question again.
13 BY MR. SHAKMAN:
14 Q. Are you acquainted with what collected in the
15 separating basin at the Saint Louis Park facility when
16 that facility and that basin were operating?
17 A. I believe so.
18 Q. And you described a floc that rose to the top
19 of the water and one that settled to the bottom, is
20 that correct?
21 A. Yes.
22 Q. Is that material that settled to the bottom
23 essentially material that would have been under this
24 classification K001?
25 MR. SCHWARTZBAUER: I have the same

1 objection.

2 A. I would need to look further at the footnotes

3 and fine print before specifically commenting and the

4 definition of terms.

5 Q. Could I direct your attention to the third

6 page there where there is an " Appendix VII, Vasis for

7 Listing Hazardous Waste" and follow down in the left

8 column about halfway K001 appears again and after it is

9 hazardous constituents are listed. I might ask you to

10 look through those hazardous constituents and state

11 whether any of those would have been constituents of

12 the sludge found in the bottom of the settling basin at

13 Saint Louis Park.

14 MR. SCHWARTZBAUER: Objection, no

15 foundation. If you can answer it go ahead.

16 A. At what percentage?

17 Q. Just if they would have been present?

18 A. I don't know.

19 Q. I direct your attention back to the first

20 page to hazardous waste number K035, that's about two

21 thirds of the way down, it states, "Wastewater

22 treatment sludges generated in the production of

23 creosote".

24 A. I can't find it.

25 MR. POLACK: It's under "Pesticides" and

1 it's going to be about halfway down that group.
2 BY MR. SHAKMAN:
3 Q. I would ask would you found such wastewater
4 treatment sludges generated in the production of
5 creosote in the sludge in the Saint Louis Park settling
6 basin?
7 A. I would need to read the fine print and
8 definition of all these terms.
9 Q. Let me direct you back to the back page again
10 where K035 is listed in that middle column of the three
11 and list the number of constituents begining with "creoso
12 Do you see that location?
13 A. I do.
14 Q. Take a moment to read that list. Would any
15 of those substances listed after K035 be constituents
16 of materials in the settling basin in Saint Louis Park?
17 A. I don't know.
18 Q. You wouldn't know then when creosote was
19 found in that settling basin?
20 A. As such, no.
21 Q. No, you wouldn't know; or, no, you don't
22 think it would be found there?
23 A. I don't believe that creosote was tested for
24 and found.
25 (At this time a discussion was held off the

record.)

BY MR. SHAKMAN:

Q. Would you want to add any more to your answer?

A. No, I don't believe so.

Q. Apart from any tests that were done on that water would your opinion from your knowledge of the process be that creosote would end up there?

A. I don't know -- I do not know the tests that were run on those materials.

Q. I am saying apart from the tests that were run would you have an opinion from your knowledge of the refinery process what materials were carried into that basin, what you would find, and what you would find would include creosote?

A. It possibly could, yes.

Q. In the refining of the coal tar would you find the constituents listed under K035 as materials coming off in one cut or another of the coal tar distillation, creosote for example, would that be in your coal tar distillation, a product?

A. That question is bad.

MR. SCHWARTZBAUER: Well, I was having trouble with it but I was hoping you weren't. I am having difficulty understanding the question.

MR. SHAKMAN: The question is is

1 creosote the something that would have been a product
2 of the coal tar distillation process at this facility.
3 MR. SCHWARTZBAUER: The question that
4 you asked used the words "coming off" and I was having
5 difficulty figuring out coming off where, but I think
6 you asked him a new question now. Do you want to
7 reread that?
8 (At this time a discussion was held off the
9 record.)
10 MR. SHAKMAN: On the record.
11 MR. SCHWARTZBAUER: Just put on the
12 record what you just said off the record, Carl.
13 THE WITNESS: Creosote in itself is not
14 a direct product from a distillation of coal tar,
15 creosote is a blend and mixture of several of the oils
16 or oil cuts generated during the distillation of tar.
17 Q. Is there an industry definition you look to
18 in making that statement?
19 A. Most creosote is blended to meet the
20 specifications of the American Wood Preservers
21 specification P-2.
22 Q. Would these other substances listed here,
23 chrysene, napthalene, fluoranthene and so forth, you
24 have the list in front of you, would any of those have
25 been end products at one time or another at the Saint

1 Louis Park operation?

2 MR. SCHWARTZBAUER: Which list?

3 MR. SHAKMAN: The list under K035 on the

4 third page of Exhibit 83.

5 BY MR. SHAKMAN:

6 Q. Were those things produced?

7 A. These specific chemicals were not produced at

8 the Saint Louis Park refinery.

9 MR. HINDERAKER: I am sorry, I did not

10 hear that.

11 THE WITNESS: These specific chemicals

12 were not produced at the Saint Louis Park refinery.

13 MR. HINDERAKER: And you are referring

14 to the chemicals under K035?

15 THE WITNESS: Except for creosote.

16 BY MR. SHAKMAN:

17 Q. Were they constituents of products produced,

18 any of them?

19 A. They may have been.

20 Q. Are there ones in particular that may have

21 been or others which you think may not have been?

22 A. To my knowledge there may have been

23 naphthalene present, but the others are in very small,

24 if any, quantities.

25 Q. Would any of the oils that you described as

1 being blended to be creosote or any of the naphthalene,
2 would amounts of that have appeared in the wet cut in
3 the refining process?
4 A. I am sorry, would you state the question
5 again, please?
6 Q. Would any of those constituent oils that you
7 mentioned that went into making up creosote,
8 naphthalene that may have been a product, would any of
9 those have appeared in the wet cut?
10 A. I would think it less likely.
11 Q. What would be the coal tar constituents that
12 would appear in the wet cut?
13 A. Coal tar charged to the stills contains some
14 water. The wet cut is that water which is present
15 which distills off first which may carry over some of
16 the lighter boiling part of the coal tar. By lighter
17 boiling I am referring to the benzene, toulene, a
18 little of which is present in coal tar, but then the
19 next boiling level above that.
20 Q. What temperature would that next boiling
21 level be?
22 A. The water, of course, boils at 100 degrees
23 centigrade and the end of the wet cut was probably at
24 about 120 to 130 degrees centigrade.
25 Q. And what constituent?

1 A. Naphthalene boils at for instance 217 d.
2 There are many many unknown constituents of coal tar.
3 Q. Is it your believe that many of those
4 constituents with the lower boiling points would get
5 off with the wet cut?
6 A. The wet cut would contain some of the lower
7 boiling constituents of coal tar, yes. These would be
8 the phenols possibly and materials that might analyze
9 as oils.
10 Q. Has the company done analysis of wet cut to
11 look for any of the chemicals listed under K001 or K035
12 to your knowledge?
13 A. Yes, by wet chemistry methods.
14 Q. What are those and what are their
15 capabilities?
16 A. By wet chemistry they are analyzing for
17 levels in the 100th of a percent or greater.
18 Q. That's a part per what?
19 A. It would be more likely a 10th of a percent.
20 At levels of a 10th of a percent. I don't believe we
21 found any of these.
22 Q. When was that done and where?
23 A. Probably on several occasions over the years.
24 Q. Including the still at Saint Louis Park?
25 A. I don't know.

1 (At this time a recess was held.)
2 MR. SHAKMAN: Back on the record.
3 BY MR. SHAKMAN:
4 Q. Before moving on to the new exhibit I want to
5 review a couple things of what we just covered. When
6 you said "may have been creosote in the settling basin,"
7 what is your basis for believing that it may have been
8 there?
9 A. This still gets into the terminology of the
10 word creosote, but the oils from the distillation could
11 have been there from this plant flooding, ground water
12 carryover or pipe leaks.
13 Q. But those oils would not have been there from
14 the wet cut?
15 A. I think it unlikely that the heavier oils
16 used to make up creosote would have been in the wet cut.
17 Q. When did the American Wood Preservers
18 Association adopt the P-2 specification?
19 A. It is very old. I would guess in the 20's
20 and it has evolved and been changed over the years at
21 intervals.
22 Q. You would have used that at Saint Louis Park
23 then?
24 A. Yes.
25 Q. I will ask you to look at what had previously

1 been marked as Minnesota Exhibit 22. A memo dated
2 March 28, 1967 from F.J. Mootz to T. E. Reilly and it's
3 correct that you are copied on this?
4 A. Yes.
5 Q. Have you had a chance to read it over?
6 A. Yes, I have.
7 Q. It discusses cleaning of the settling basin,
8 does it not?
9 A. It does.
10 Q. Would you look at the third paragraph where
11 it states that, "The pond has not been cleaned in 20
12 years, and it now has limited capacity because of the
13 six to eight feet of sludge in the bottom. I have
14 given them authority to proceed to remove the sludge
15 engaging a hauler to dispose of it in the dump. The
16 nearest dump that could be used for this type of
17 material is about 30 miles away, but they found one to
18 take it." Do you have recollections of this specific
19 effort to clean the settling basin?
20 A. I believe so.
21 Q. Do you know why they had to go 30 miles to
22 find a dump?
23 A. Only from the standpoint of the character of
24 the material and the receiver looking at it that would
25 accept it.

1 Q. And what would have been the appearance and
2 character of it?
3 A. A slightly gray greeny dark material.
4 Q. Do you know if in fact it was cleaned out and
5 removed to a dump?
6 A. Not firsthand.
7 Q. What do you recollect of it?
8 A. I think I understood that it was cleaned and
9 hauled to a dump, yes.
10 Q. And what do you base that on?
11 A. Hearsay.
12 Q. From whom?
13 A. Or a faint recollection of conversations with
14 Mr. Finch.
15 Q. In the Answers to Interrogatories filed by
16 the company there is discussion of a board of directors,
17 executive committee and a finance committee. What is
18 and was the role of the finance committee and at what
19 point in time did that begin to function?
20 A. Subsequent to Mr. P. C. Reilly, Senior's
21 death in the early '50's, Mr. Edwards was president and
22 then or shortly thereafter a finance committee was
23 established and functioned thereafter.
24 Q. What was the purpose of the committee?
25 A. To review and approve work order requests and

1 to generally follow and control financial aspects of
2 the company's operations.
3 Q. What kind or magnitude of expenditure would
4 come before the finance committee?
5 A. In the 1960's and early '70's I believe that
6 it was anything above $250.
7 Q. Was there a high scale limit where they
8 needed to go to the board of directors?
9 A. At the present time we do have a limit of on
10 the order of $100,000 that goes to the executive
11 committee. At that time I do not know the level.
12 Q. What was the membership in that committee
13 after the senior Mr. Reilly died in the '50's and in
14 the '60's?
15 A. I believe in the late '60's that the members
16 would have been Mr. P. C. Reilly, Mr. T. E. Reilly,
17 Senior, Mr. T. J. Ryan, and perhaps Mr. R. E. McAdams.
18 Q. What were Mr. Ryan and Mr. McAdams positions
19 in the company at that time?
20 A. Mr. Ryan, after 1963, was general manager of
21 the refinery division and after 1968 he was president.
22 Prior to 1963 he was treasurer. May I correct myself?
23 Ryan was treasurer from 1974 to '76. He was executive
24 vice-president from '74 to '76. He was a
25 vice-president from '70 to '74, and he was president

1 from '76 to '81.
2 Q. Before '70 what was the position that he held?
3 A. He would have been general manager of the
4 refinery from 1963 to 1968.
5 Q. And Mr. McAdams?
6 A. He was a vice-president from 1977 to date.
7 He was a secretary from 1974 to date, and he was a
8 treasurer from 1976 to 1981.
9 Q. Your knowledge of his position in the '60's
10 then, if I followed you, that was after the '60's?
11 A. I am not sure of his formal title then,
12 assistant treasurer, probably.
13 Q. And he is presently a director?
14 A. Yes, he is.
15 Q. When did the executive committee come into
16 existence?
17 A. I believe at about the same time.
18 Q. '50's?
19 A. Mid to late '50's.
20 Q. And what was its function?
21 A. To oversee the finance committee, the members
22 of both being the same.
23 Q. You mentioned it handled certain expenditures?
24 A. It has evolved over the years that its
25 membership is fewer people than the finance committee

1 and it does now and has for some time approved larger
2 expenditures and major and significant changes.
3 Q. What are the general divisions of the
4 company's business? You had mentioned to us the
5 synthetic chemicals at Minnesota Street. Could you
6 give just a brief synopsis?
7 A. We have a chemical division and a tar
8 refinery division.
9 Q. And are there officers for each of those
10 divisions, a head officer for each division?
11 A. Yes.
12 Q. And you would be that for the --
13 A. I am vice-president and general manager of
14 the tar division and Mr. R. D. McNeeley is the general
15 manager of the chemical division.
16 Q. Where does the engineering and lab sections
17 fit into the company's structure?
18 A. The research department and engineering
19 department report to the president.
20 Q. Are there any other units in the company that
21 don't come under either the chemical, the refinery or
22 the two you just mentioned?
23 A. The data processing reports to the treasurer
24 and I think that's -- the plant in Europe, in Belgium,
25 although it's a part of the chemical division and does

1 work closely with Mr. McNeeley, does report directly to
2 the president.
3 Q. Is the present authority of plant manager
4 still limited in the financial limit as you earlier
5 describe or did that come off at some point?
6 A. I am not sure that there is a specific number
7 in place today within the chemical division. It's
8 fairly large, on the order of several thousand dollars
9 within the refinery division, and merely to know what's
10 going on and for allocations you have a limit of $500.
11 Q. Where is the responsibility for compliance
12 with government regulation reposed in the company?
13 A. With everyone but it's the primary
14 responsibility of the plant manager or the person at
15 the site.
16 Q. Who has the job of seeing what the
17 regulations are and citing what needs to be done with
18 regard to that?
19 A. Each division has its own person. Within the
20 refinery division I depend upon Mr. Justin to follow
21 and keep us apprised as well as the plant manager on
22 the local level of the -- any new and changing
23 governmental regulation.
24 Q. Was it your testimony that before Mr. Justin
25 had this role that went into the engineer's area as

1 well, that responsibility?
2 A. I don't understand your question.
3 Q. Before Mr. Justin had that responsibility in
4 the refinery division?
5 A. It was myself and the plant manager and the
6 engineering department.
7 Q. Who has that responsibility that's equivalent
8 to Mr. Justin's on the chemical division side?
9 A. I think its Ms. Bennett.
10 Q. That you mentioned before.
11 Q. We earlier discussed the statement of the
12 case in your affidavit. Have you had other
13 participation and other pleadings filed in this case or
14 in the case that is pending in the State court?
15 A. I have been aware of and have followed other
16 actions, yes, activities. Is that your question?
17 Q. Have you reviewed the pleadings or
18 participated in the preparation of answers?
19 A. I have reviewed the pleadings and I don't
20 believe too often had a direct hand in the preparation
21 of them.
22 Q. Is there anyone in the company who has?
23 A. Mr. Polack would have been more involved than
24 I.
25 (At this time a discussion was held off the

1 record.)
2 BY MR. SHAKMAN:
3 Q. Have you had a chance to look through what
4 has been marked as Minnesota Exhibit 10?
5 A. I have.
6 Q. It's a memo of February 5, 1971 from R. J.
7 Boyle to H. L. Finch concerning U. S. Army Waste
8 Materials Permit under the Federal Refuse Act. Do you
9 recall at the time of the preparation and the
10 circumstances of the preparation of this?
11 A. I do.
12 Q. Were you involved in preparing this?
13 A. Only in the sense of reviewing it. At the
14 time it was being prepared and submitted Mr. Hennessy
15 was given the responsibility of collecting and
16 returning the forms.
17 Q. Would you turn to Page 3, Item Number 9 it
18 states, "Name and address of State Agency presently
19 authorizing discharge of waste material to waters of
20 the State (Attach photocopy of authorization)." The
21 response is, "State of Minnesota Pollution Control
22 Agency, 717 Delaware State Southeast, Minneapolis
23 Minnesota 55440." Are you aware of what that
24 authorization was?
25 A. Not specifically, no.

1 Q. Did you see at any time any document that
2 purported to be such an authorization?
3 A. No, I did not.
4 Q. Do you know of any facts that support any
5 statement there was such an authorization for Saint
6 Louis Park?
7 A. No, I do not.
8 Q. You had earlier mentioned that there were
9 several people responsible for regulatory compliance.
10 In the case of the Saint Louis Park plant for the years
11 1945 to 1960, who would have been responsible for
12 knowing whether a permit was needed for a disposal
13 system there?
14 A. We would have depended upon the local people,
15 the plant manager and/or superintendent.
16 Q. And to your knowledge did they or anyone else
17 advise you that Minnesota Statutes 115.07, Subdivision
18 11 required a permit for a disposal system?
19 A. Not to my knowledge.
20 Q. For the period going up to 1972 would the
21 same personnel have had that responsibility, 60 up to '72
22 A. Yes.
23 Q. And at any time did they advise you that in
24 1964 on a regulation entitled Minnesota Regulation
25 WPC4B required a storage permit?

1 A. No, they did not.
2 Q. Did they or anyone with the company ever
3 consult legal counsel on what environmental permits
4 were required in the State of Minnesota?
5 A. Not to my knowledge.
6 Q. And you are talking about the company up to
7 1972. Who had responsibilities for obtaining and
8 reviewing insurance coverage?
9 A. It would have been Mr. R. J. Boyle. The
10 question was from '72?
11 Q. From your time with the company up to '72,
12 yes?
13 A. It would have been Mr. R. J. Boyle.
14 Q. Throughout that period?
15 A. Yes.
16 Q. In the statement of the case, which we
17 earlier marked as Exhibit 73, the first page inquires
18 the name of the insurance carriers involved. The
19 answer is "none". Are you familiar with what inquiry
20 went into making that determination?
21 A. No, I am not.
22 Q. Do you know who with the company now would be
23 most familiar with general liability insurance that
24 pertained to the Saint Louis Park facility?
25 A. Either Mr. Polack or Mr. McAdams.

1 (At this time State of Minnesota Deposition
2 Exhibit 84 was marked for identification by
3 the Court Reporter.)
4 BY MR. SHAKMAN:
5 Q. Have you had a chance to look at what has
6 been marked as Minnesota Exhibit 84?
7 A. I have.
8 Q. This appears to be dated March 13, the date
9 isn't clear, 1970 on Aetna Life and Casualty letterhead
10 and to be a Semi-annual Inspection Report at the Saint
11 Louis Park plant from the insurance company. Does that
12 appear to be correct?
13 A. That appears to be correct.
14 Q. Do you recognize Aetna as an insurer who
15 provided coverage for you for that facility?
16 A. I am familiar with the name.
17 Q. Do you know the names on the top column John
18 Reed, engineering, or Herman Wolff, agent?
19 A. I don't know John Reed. I have heard the
20 name Herman Wolff as an Insurance Agency in
21 Indianapolis.
22 Q. Do you recall the fire at the boring and
23 adzing mill as referenced in the second paragraph as
24 happening on October 16, 1969?
25 A. No, not specifically.

1 Q. Do you recall what the references is to
2 safety control on the refinery units that's mentioned
3 in that same paragraph?
4 A. The question was -- would you repeat the
5 question, please?
6 Q. In the third paragraph that's referenced,
7 "Action taken with regard to safety controls in the
8 refinery units."
9 A. Yes.
10 Q. And your name is mentioned in that regard.
11 Do you recall that?
12 A. I do.
13 Q. What did that concern?
14 A. Our stills consisted of a horizontal
15 cylindrical vessel with an eight to twelve inch
16 diameter tube running in one end, turning before it
17 went out and coming back out the same end. A gas
18 burner was installed on the end and the fire or heat
19 went through the tube and back out and up a pipe which
20 vented to the atmosphere above the roof. The insurance
21 company in many cases at many of our refineries had
22 wanted electric I controls on the gas burner to
23 automatically shut it down if and when the gas was cut
24 off. In developing the still, I had so designed it and
25 had tested it, by exploding gas in the tube and did not

1 feel that there was any problem nor that the electric
2 eyes were wanted at that time.
3 Q. No action was taken in that regard then, is
4 that correct?
5 A. No.
6 Q. To return for one more moment to the
7 pleadings in this case in the answer of the Reilly Tar
8 Company it references that the matter was settled with
9 the State of Minnesota. Are you generally acquainted
10 with that claim?
11 A. Only in general.
12 Q. Are you aware of any written agreement that
13 would embody such a settlement?
14 A. No.
15 Q. Are you aware of a verbal understanding to
16 that effect?
17 A. I was so told at the time.
18 Q. Do you recall who told you and what they --
19 A. Mr. Ryan.
20 Q. And --
21 A. That we had reached agreement with the State,
22 the property was sold, and that there was a hold
23 harmless clause incorporated in the sale.
24 Q. Do you recall what the agreement he said was
25 reached with the State was?

1 A. No, I do not.
2 Q. Was there anyone else who discussed that
3 information with you?
4 A. Not directly, that I recall.
5 Q. Were you involved with the terms of that sale?
6 A. I was not involved in the any of the
7 negotiations.
8 Q. Were you involved with meetings with State
9 officials at that time in regard to the Saint Louis
10 Park site?
11 A. Not that I recall.
12 Q. Let me ask you, going back to Exhibit 84, to
13 look at the last paragraph. The second sentence in
14 that paragraph after it says, "They have improved
15 housekeeping," the third sentence says, "Maintenance
16 and work that involves substantial amounts of money are
17 suffering. The management is cooperative but is
18 handicapped by a tight financial budget, however, this
19 is not a good risk as it now exists. It is an old and
20 probably inefficient operation." Would you agree with
21 that characterization?
22 A. It was an old plant, yes. There was not
23 justification to entirely rebuild the plant.
24 Q. Did you agree that it was handicapped by a
25 tight financial budget?

1 A. That is what I meant by my last comment in
2 that major rebuilding or renovation was probably
3 unjustified.
4 Q. In that regard was it different from a number
5 of other facilities in that it was old?
6 A. It was probably one of the oldest plants that
7 we had.
8 Q. And in that regard are you speaking of both
9 the refining and the treating sides of it?
10 A. Yes.
11 Q. Have you had an opportunity to look at what's
12 been marked as Minnesota Exhibit 2?
13 A. I have.
14 Q. And you recognize it as a memorandum you
15 authored to Mr. Finch on May 21 of 1970?
16 A. I do.
17 Q. And your position at the time as general
18 manager of refinery, did you have a duty to evaluate
19 that plant's operations?
20 A. Yes.
21 Q. Did you prepare written evaluations on it for
22 the company or anyone in the company?
23 A. Nothing written, no.
24 Q. Did you also evaluate the work of the plant
25 manager or the superintendent of the refinery?

1 A. Yes.
2 Q. Did that go into a personnel file?
3 A. No formal written evaluation was made.
4 Q. Do you recall what the occasion was for the
5 tour of the Ironton refinery referenced in this exhibit?
6 A. We had held a plant manager's meeting in the
7 Ironton refinery where Mr. Finch and the other refinery
8 plant managers attended.
9 Q. How old was that refinery?
10 A. Probably built in the late 20's or early '30's.
11 Q. Was it in better condition that the Saint
12 Louis Park refinery?
13 A. Yes.
14 Q. Was that true throughout your time from the
15 1950's when you began visiting?
16 A. Yes.
17 Q. In what ways was it a better facility?
18 A. It was kept cleaner, well painted, spills and
19 leaks were cleaned up, visually it was a much cleaner
20 looking operation.
21 Q. Does that reflect that the management of
22 Saint Louis Park was not doing the job that you
23 expected of him?
24 A. Not totally in that both the manager and the
25 employees were involved. In this case I was trying to

1 convince, encourage and push Mr. Finch to do the same
2 to his employees to keep their work place cleaner.
3 Q. Was it in your mind a matter of housekeeping
4 changes rather than changes in your basic operating
5 equipment?
6 A. In most cases, yes.
7 Q. But there were the equipment matters involved
8 and the reason that Saint Louis Park wasn't in as good
9 a shape?
10 A. In the sense that they didn't repack their
11 valves or their pumps, tighten the leaking joint or
12 something like that, yes.
13 Q. But not questions of major capital
14 improvement then?
15 A. No major process changes were involved, no.
16 Q. Was this the first occasion you had taken Mr.
17 Finch to task for the conditions you found in the Saint
18 Louis Park operation?
19 A. No.
20 Q. Do you recall when that first became a
21 concern to you?
22 A. My first visit on every trip I discussed and
23 tried to encourage and push them towards better
24 housekeeping.
25 Q. Were there methods in handling spills and

1 leaks at Ironton that were more effective than those at
2 Saint Louis Park?
3 A. In the sense that the employees probably
4 tried harder to avoid them. If they were minor they
5 cleaned them up themselves, the larger ones the
6 management took the time and effort to clean them up
7 promptly.
8 Q. Were conditions of climate such as to make
9 Saint Louis Park a harder plant to run?
10 A. Yes, this did make it more difficult with the
11 severe winters that they encountered.
12 Q. How particularly did that impact it?
13 A. I would find it hard to put a specific
14 measure on it. Part of the problem was the weather,
15 yes, but not necessarily a major part.
16 Q. At Ironton was there disposal of coal tar
17 waste materials as took place in the north part of the
18 site at Saint Louis Park, on site disposal?
19 A. I would imagine so.
20 Q. Do you know when that ceased to be the
21 practice at Ironton?
22 A. No, I do not.
23 Q. Do you know if it has ceased to be the
24 practice?
25 A. No, I do not.

1 Q. Do you know when that ceased to be done at
2 Saint Louis Park?
3 A. No, I do not.
4 Q. Did you ever request that that be ceased?
5 A. I don't believe so.
6 (At this time a discussion was held off the
7 record.)
8 BY MR. SHAKMAN:
9 Q. What you have been given has previously been
10 marked as Minnesota Exhibit 3, which is an incomplete
11 document beginning on Page 4.
12 A. Okay.
13 Q. This was a document produced by the company
14 but we don't have what appears to be Pages 1, 2 and 3.
15 Are you able to identify anything other than from what
16 you have read?
17 A. It's a summary that I wrote after a meeting
18 here in Indianapolis on the Saint Louis Park plant. We
19 held such meetings with each plant manager during that
20 year.
21 Q. Are you able to place a date on it from the
22 graph on the back?
23 A. No, I am not. It would have been probably
24 1962 in as much as the numbers that are referred to are
25 for the years 1961.

1 Q. Do you make any sense of the last page, which
2 has the year '62 and '63 at the bottom and it appears
3 to be a graph showing a profit-sales ratio?
4 A. It's the right half of the preceding page.
5 Q. And as I look at it it looks like nothing is
6 plotted beyond '61?
7 A. That's right. We left that blank for the
8 participants to put the numbers in for the following
9 two years when they became available in those years.
10 Q. Who was this directed to, this particular
11 memo here?
12 A. It's more minutes of the meeting for all
13 participants.
14 Q. Do you think you might have the rest of it
15 somewhere?
16 A. I have no idea.
17 Q. Do you recall if it addressed anything other
18 than Saint Louis Park, that operation?
19 A. No, this would have been limited to the Saint
20 Louis Park plant itself and primarily the refinery
21 operation.
22 Q. Would you look at the section at the bottom
23 of what's marked Page 4, the first page of the exhibit
24 that is headed Roman Numeral III in waste water and
25 take a moment to read that first paragraph?

1 A. Okay.
2 Q. Do you believe the facts generally in the
3 memo are correct as of the time you wrote them?
4 A. With the exception of Page 5, that the
5 problem is entirely due to the pump or the tile.
6 Q. Where is that on Page 5?
7 A. It's about the third or fourth line.
8 Q. And in what way do you think that was not a
9 correct statement?
10 A. I would expect that the original design did
11 not contemplate the very significant amount of water
12 coming onto the property from the adjacent property.
13 Q. When you referred to the refinery was laid
14 out or the original design, what time frame of
15 reference did you have there?
16 A. It would have been designed in the teens.
17 Q. In nineteen --
18 A. I think the plant was built in 1917 or 1918.
19 I believe that the refinery was built and in operation
20 then or shortly thereafter.
21 Q. But there was no intention at that time to
22 have a settling basin, was there, the first sentence of
23 that section says, "The water was laid out to go into a
24 settling basin with runoff bypassing the basin." That
25 wasn't the intention in 1917, was it?

A. I don't know. I would expect it would have been some type of basin.

Q. Are you aware of any specific thing stating that?

A. No.

Q. We have some other documents that we will get into. When it mentions pumping off the runoff in about two days, where would that runoff be, where would it occumulate, where would you pump it to?

A. On my visits to the plant the runoff was standing six to twelve inches deep in the refinery area and it would have gone down the trenches to the basin and at one point, before or after the basin, had been pumped into the ditch I would imagine.

Q. Are you saying that the design envisioned then that there would be water collected in the refinery area and standing there?

A. No, I think the water from the Saint Louis Park City did not begin until the '40's or early '50's.

Q. So it was envisioned initially that you would have to do some pumping?

A. This would indicate, yes.

Q. Had you observed this water flowing naturally to the ditch bypassing the basin?

A. Yes.

1 Q. Could you describe on this Exhibit 9 where
2 that flow went that you had seen?
3 A. It's been so long now. I think the water was
4 coming along -- was going around like this.
5 Q. That's the surface flow you are indicating
6 from the direction of the refinery towards the settling
7 basin?
8 A. It did not pour out in the wood preserving
9 area too much. I was familiar with the office area,
10 the treating cylinder area, and the refining area. My
11 recall on the water was that there was generally six to
12 twelve inches of water right in this area in here.
13 Q. Your memo mentions the water flowing
14 generally to the ditch and bypassing the basin?
15 A. That water then was flowing around the sump
16 into this ditch.
17 Q. Where the dotted line is going through the
18 word "settling basins", you recall that as a ditch area?
19 A. That I belive was a ditch, yes, that dotted
20 line.
21 Q. Where was the tile that went from the
22 settling basin?
23 A. I don't know. That may well have been the
24 tile.
25 Q. You do recall there was also a ditch on the

1 site?

2 A. I am uncertain now.

3 Q. Do you recall there being a ditch on the

4 property or at the edge of the property?

5 A. I do not now recall specifically looking at a

6 ditch up in the tie area.

7 Q. Do you recall the area that you described as

8 dirty and black with dirt and tar, where that would be?

9 A. I do recall the ditch on Walker Street and I

10 believe that is what I was referring to.

11 Q. And that would be along the south edge or the

12 bottom of this Exhibit 9?

13 A. South, yes.

14 Q. Do you recall following that ditch across

15 Walker Street and seeing where it went?

16 A. I recall the incident but I don't recall the

17 conclusion.

18 Q. Could you take --

19 A. I don't recall following it much beyond

20 Walker Street, the other side of Walker Street.

21 Q. Could you take a look back at Exhibit 8-2 the

22 memo of October 25, 1963. Could you read through those

23 first four paragraphs? They concern a complaint from

24 Mr. Goldblatt.

25 A. All right.

1 Q. Were you acquainted with that complaint?
2 A. Not with that complaint, no.
3 Q. In that Mr. Hennessy states that the oils
4 have left a residue which colors the land black and
5 Herb Finch says it's his understanding that the land
6 was colored black when Mr. Goldblatt purchased it
7 somewhere around 1950. Are you aware generally that
8 the area to the south of Highway 7 had been stained
9 black for some time?
10 A. I do not recall having been on the south side
11 of Highway 7.
12 Q. Do you recall it being discussed when you
13 were out at the plant?
14 A. No, I do not.
15 Q. And do you recall from the south side of
16 Walker Street north of 7 the appearance there at all?
17 A. Standing on Walker Street looking south I do
18 recall that it would have been black, yes.
19 Q. And would that be from materials that had
20 come from the plant through the ditch?
21 A. I do not know.
22 Q. Any reason to believe that it wouldn't be
23 that?
24 A. I would want to look at it again or as it was
25 then to answer that question.

1 Q. Do you recall other places that could have
2 been the source of that material?
3 A. Only that I have seen those industries there
4 and I don't recall their operations.
5 Q. Could you look back at Exhibit 79 addressed
6 from Mr. McLellan to Mr. Edwards. They were sampling a
7 ditch in that exhibit. Would you believe that ditch is
8 where the tile was later put in?
9 A. I am not sure.
10 Q. On the last page there is reference to, "A
11 sample of heavy material taken from the bottom of the
12 ditch showing the presence of tarry material. It
13 extends three to four inches into the bed of the ditch."
14 Would that be similar to what you saw when you viewed
15 the ditch going to Walker and under Walker Street?
16 A. Yes.
17 Q. Would this material have been carried down
18 the ditch at times of heavy flows or times of certain
19 chemical conditions in the ditch?
20 A. I would imagine it accumulated over the years.
21 Q. Accumulate where?
22 A. In the ditch, beside the ditch.
23 Q. Could it be carried on by heavy flow coming
24 through there?
25 A. The material I saw was fairly dry and heavy

1 so that I would not imagine that it would be picked up
2 and moved.
3 (At this time State of Minnesota Deposition
4 Exhibit 85 was marked for identification by
5 the Court Reporter.)
6 BY MR. SHAKMAN:
7 Q. Have you read Exhibit 85, which is an October
8 12, 1983 memo from H. L. Danz to T. E. Courtney?
9 A. I have.
10 Q. Do you recognize that as internal
11 correspondence of the company?
12 A. Yes.
13 Q. I think you identified Mr. Courtney for us
14 before. Who is H. L. Danz?
15 A. Mr. Danz was the plant superintendent under
16 Mr. Holstrom and subsequently Mr. Finch and Mr. Danz
17 preceded Mr. White.
18 Q. As plant superintendent. Is that refining or
19 treating?
20 A. As refinery plant superintendent.
21 Q. Do you know his tenure with the company?
22 A. He retired at the time Mr. White was moved to
23 Saint Louis Park and I would guess it was in the '60's
24 that he retired.
25 Q. He mentions in the last paragraph here a weir

1 that's built and to be installed in the drainage ditch.
2 Are you aware of a weir being put in at that time or
3 any other time?
4 A. I am not familiar with this weir.
5 Q. Do you know if any measurements were made of
6 the flow in the ditch at Saint Louis Park?
7 A. No, I do not.
8 Q. Was that customary at your plants to put a
9 weir in to measure flow where you were discharging an
10 effluent?
11 A. Where we were interested in the flow a weir
12 could have been the common method of measurements.
13 Q. There is also mention in the fifth paragraph
14 there of the swamp area and a black color on the weedy
15 matter. Do you have any reason to believe that that
16 material he is describing is anything other than
17 discharge from the Reilly plant?
18 A. No.
19 Q. The next two paragraphs describe an operation
20 of springing carbolates and Benzole tank. Were these
21 operations that were part of the byproduct business?
22 A. The springing of carbolates was a part of the
23 byproduct. The Benzole tank I think refers to what we
24 have subsequently and today called the wet cut.
25 Q. So a Benzole tank would have been a tank for

1 storing that cut?
2 A. Yes.
3 Q. And the Benzole would be what constituents?
4 Chemically what would you expect in that?
5 A. Very light low boiling oils.
6 Q. Is that term one that's still used? Is that
7 an antiquated term?
8 A. The term Benzole is an antiquated term. This
9 is the only time and place that I have ever heard
10 reference to it since the early 1800's in Europe.
11 Q. You recognize from the operation though what
12 it is there they are talking about?
13 A. Yes.
14 Q. Would that oil -- can we call it an oil
15 element of the wet cut, is that a better way to
16 describe it?
17 A. Yes.
18 Q. Would that include naphthalene?
19 A. It may include a very small amount. The
20 majority of the naphthalene would be in the following
21 cut.
22 Q. It could include some though?
23 A. From the manner in which we run our stills
24 and from the tests that I have inspected the quantity
25 of naphthalene would be very minor.

1 Q. What is --
2 A. At or below 1 to 2 percent.
3 Q. Would it have phenol?
4 A. Yes, it would contain phenol. Yes.
5 Q. Toluene?
6 A. I am sorry. Back to the phenol, the water
7 cut would contain dissolved phenol, the phenol as such
8 would be in the following cut.
9 Q. In what proportions might you find dissolved
10 phenol?
11 A. This was the number I gave you in answer to
12 your previous question, that there might be 500 and
13 1,500 parts per million.
14 Q. Would you go back to toluene then and say if
15 you expect that to be there?
16 A. The coal tars that we have purchased in my
17 tenure with the company have had very insignificant
18 quantities of toluene or benzene it having been removed
19 by the steel company.
20 Q. Are you acquainted with the coal tar sources
21 in Saint Louis Park sufficiently so that you could --
22 A. I have read of list of old town gas plants.
23 Q. Water gas?
24 A. Water gas, so that they could have contained
25 some of the lighter compounds and I really do not know

1 the percentages.
2 Q. Are there other organic compounds that might
3 have been in that Benzole from the distillation?
4 A. I don't understand your Benzole.
5 Q. Well, by Benzole I was referring to the
6 material referenced in Mr. Hennessy's letter. Could we
7 have substituted for Benzole --
8 A. Wet cut.
9 Q. Wet cut.
10 A. Your question now is what?
11 Q. Are there some other coal tar compounds that
12 you haven't discussed now that would be in there?
13 A. I would imagine there are trace quantities of
14 a number of lower boiling chemical compounds.
15 Q. You are speaking of small amounts in terms of
16 1 percent or 2 percent, you are speaking of they are
17 commercially recoverable quantities in there, is that
18 correct?
19 A. Yes.
20 Q. When it comes to trace amounts could there be
21 trace amounts of other coal tar compounds?
22 A. I would assume so, yes.
23 Q. Let me ask you on Mr. Courtney's memo there,
24 Exhibit 85, what the operation was referenced in --
25 well, it's the third paragraph from the bottom where he

1 mentioned springing carbolates?
2 A. This light oil cut following the wet cut
3 contains naphthalene and the phenols and creosote. A
4 caustic solution is added to this, agitated, it is
5 allowed to settle, produces two layers, the lower layer
6 is the sodium cresylic formed by the reaction of the
7 caustic and the coal tar acid. It is left in the tank
8 after the upper layer is drained off. It then is
9 treated with sulfuric acid which flows the coal tar
10 acids, the phenols, the creosote and xylols, producing
11 two layers, one of which is the sulfite water to which
12 he refers and the other the acids.
13 Q. And these acids were the commercial products?
14 A. They were commercial products which in the
15 case of Saint Louis Park would have been shipped to one
16 of the other plans to be recovered.
17 Q. Do you know what volume it would have been
18 for this production at that time?
19 A. From what I have heard and seen I do not
20 believe that the quantities of coal tar acids recovered
21 at Saint Louis Park are more than minor. I think they
22 found that it was inefficient and too costly to
23 transfer the material.
24 Q. Let me go back to Minnesota 3 and ask a
25 couple questions there and finish up with that today.

1 That was the incomplete memorandum, '61. On that first
2 page just above the heading "Waste Water" at the bottom
3 there is discussion of the water bill, do you see that?
4 A. I see that now.
5 Q. Was there a separates meter for city water
6 for the boiler?
7 A. The preceding paragraph notes that there are
8 two separate meters.
9 Q. Was water from the well at that time also
10 used for plant purposes?
11 A. I am not certain of the time frame on use of
12 the plant water.
13 MR. SHAKMAN: How about stopping there
14 for today.
15 (At this time the deposition recessed and
16 reconvened October 12, 1982 commencing at
17 9:30.)
18 BY MR. SHAKMAN:
19 Q. Good morning Mr. Lesher.
20 A. Good morning.
21 Q. This is a continuation of your deposition
22 that began yesterday, October 11th, and I remind you
23 that you continue to be under the oath you gave
24 yesterday. Are there any additions or corrections you
25 would like to make to anything you testified to

1 yesterday?

2 A. Only that the city in West Virginia to which

3 I referred as the location of our Fairmont plant, it

4 was between Morgantown and Clarksberg.

5 Q. Yesterday we were discussing an exhibit that

6 was marked as Minnesota 3, that was an incomplete

7 memorandum that you had authored. Do you know if you

8 or Mr. Polack were able to locate the other pages from

9 that in the document collection the company has?

10 MR. SCHWARTZBAUER: We were not. We

11 looked for it last night and we found the original from

12 which your copy was made but the original also lacks

13 the first pages.

14 MR. SHAKMAN: Thank you.

15 BY MR. SHAKMAN:

16 Q. I had a further question on the first page of

17 that Exhibit 3. If you look down to the last paragraph

18 before the heading "Waste Water", the last sentence in

19 that paragraph reads, "The fuel consumption in the

20 boilers is approximately equivalent to the steam meter

21 readings considering inefficiencies so that the water

22 meter seems to be out of line by 100,000 gallons

23 unaccounted for." Do you recall over what period of

24 time that 100,000 gallons was unaccounted for?

25 A. No, I do not.

1 Q. Do you know how you came to that conclusion
2 that there was 100,000 gallons unaccounted for?
3 A. No, other than that these are the minutes or
4 a summary of discussions at the meeting and I would
5 assume that it was discussed at that meeting.
6 Q. Would you know where the water might have
7 gone if it was unaccounted for
8 A. No, I do not.
9 Q. From your knowledge of that plant operation
10 would you have an opinion as to where might have been
11 the source of water loss?
12 A. I would only imagine that the first place to
13 look would be the accuracy of the water meter.
14 Q. Do you recall if that was ever done, if there
15 was a foul up?
16 A. No, I do not recall.
17 Q. And I think I touched on this at the end of
18 the day yesterday where it says, "The boiler was run on
19 city water that was metered." Was it your recollection
20 that there was a meter exclusively used for the city
21 water used in the boiler?
22 A. I do not recall exactly.
23 Q. If this were the early '60's, I think '61 was
24 the date you put on it, would the refinery
25 superintendent have been Mr. Danz at that time?

A. I believe so but I am not absolutely certain.

Q. A further question on the wet cut. What percentage of the wet cut was water?

A. The manner of operation of the still is to sample the stream and to change cuts when the water content decreases to approximately 50 percent or less, which generally results in a 90 to 95 percent water content of the wet cut.

Q. So if I understood you, it starts out at virtually 100 percent water and then the water content decreases to 50 percent?

A. That is correct.

Q. And that would be as true of Saint Louis Park as of other refineries, no reason for it to be any different, is there?

A. No reason for it to be different.

Q. In the coal tar purchase for Saint Louis Park what would be the percentage of water typically found?

A. I do not recall the exact water content of the incoming tar to Saint Louis Park, but in general it is based upon 2 percent water and during that period of time generally it generally varied little from the standard of 2 percent.

Q. Were there differences of that 2 percent in tar from other sources, for example, you mentioned

1 water gas tar yesterday?
2 A. There would be no difference due to the
3 source.
4 Q. You have had a chance to read what has been
5 marked as Minnesota 11?
6 A. I have.
7 Q. This was a previous exhibit, it's a memo of
8 February 16, 1971 from Mr. Finch to Mr. Hennessy, you
9 were included as a copyee, weren't you?
10 A. Yes.
11 Q. And it concerns, at the time it was written
12 in 1971, sources of water contamination at the Saint
13 Louis Park facility, does it not?
14 A. Yes.
15 Q. I would like your view in addition to what
16 Mr. Finch has in here, your view as to what were the
17 sources of coal tar contaminants or contaminated waste
18 water from refining operations. Confine yourself to
19 refining operations at Saint Louis Park other than the
20 wet cut that was earlier discussed. I would ask you to
21 address yourself over the whole period of time that you
22 have knowledge of that facility.
23 A. In addition to those listed in this
24 memorandum?
25 Q. Would you touch on those listed as to whether

1 you agree or not agree. He does with some that are
2 from the treating operation. I want to get a focus on
3 refining and by that I mean including the delivery to
4 the refining and the transportation of the refined
5 product.
6 A. There may have been some leakage and spills
7 in all of the transfers of material within the refinery
8 operation from pumps, valves or occasional minor pipe
9 breakage. The memorandum refers to the separation of
10 the water layer from the tar cistern and this similarly
11 may have occurred on any of the other tar or oil tanks.
12 Q. Would that be both water from rain and water
13 that was in the tar as it came?
14 A. No, the majority of the tanks, as I recall,
15 did have tops so that there should have been little
16 rain water leakage into the tank itself.
17 Q. Could you go ahead with the listing that you
18 were making before I interrupted that question?
19 A. Those leakages, the separation of water from
20 materials in tanks and the wet cut, I believe are the
21 majority of the sources of water which had been in
22 contact with materials.
23 Q. What would be contained in the boiler blow
24 down referenced in C of Mr. Finch's memo?
25 A. Those would be the solids settled in the

1 boiler drum which when blown down they primarily would
2 be the carbonates and hardness contained in the water.
3 Q. Mr. Hennessy mentions or, excuse me, Mr.
4 Finch in this exhibit mentions drippings from creosoted
5 materials at the loading dock. Would you see drippings
6 from creosoted material at the loading dock or anywhere
7 else on the site as a contributor to contaminated water
8 flow?
9 A. When I did examine the areas where this had
10 occurred I found very little penetration of material
11 into the surface or soil.
12 Q. And what does that suggest to you about
13 whether that material would be in the water flowing
14 from the site?
15 A. That it probably was not a significant source
16 of contamination in itself.
17 Q. When you mentioned the transfers of material
18 or occasional leaks you said that these may have been.
19 Do you have knowledge that there actually were such
20 incidents where coal tar product was lost?
21 A. I have no specific recollection of individual
22 incidents.
23 Q. Do you have a general recollection that there
24 were such incidents at Saint Louis Park?
25 A. Yes. It is difficult to operate a plant

1 without having an occasional valve or line breakage
2 under the severe winter conditions.
3 Q. Were there any such breakages, ruptures or
4 spills that were major?
5 A. I personally was unaware of any but did note
6 in correspondence the loss of a tank car or a partial
7 load of a tank car on unloading that would have been of
8 crude tar.
9 Q. And that would have been unloading, if I may
10 refer to the exhibit here, Exhibit Minnesota 9, there
11 is an area marked "tanker unloading shnd". Do you
12 anticipate that that's where that loss took place?
13 A. It would have been there or immediately
14 adjacent to the tar cistern.
15 Q. Do you know how that occurred?
16 A. The one incident that I recall, the workmen
17 failed to make a check of the tank car before applying
18 heat. The interior valve was open and material was
19 lost before it could be corrected.
20 Q. What was his error in that? Perhaps I didn't
21 follow your answer that well. What should he have been
22 doing?
23 A. It is common practice that on receipt of a
24 tank car the interior valve be inspected and checked to
25 assure that it is closed before any heat is applied or

1 an attempt is made to unload the car.
2 Q. How then did the material come out of the car?
3 A. It would have come out through the bottom
4 outlet onto the ground or the ditch, if it were located
5 over the ditched section of the track.
6 Q. Was this something you had observed?
7 A. I did not personally see the incident.
8 Q. Was it reported to you?
9 A. Yes.
10 Q. By whom?
11 A. Mr. Danz.
12 Q. Do you recall about what year that might have
13 been?
14 A. I do not recall the time frame.
15 Q. Do you recall what your position was with the
16 company at the time?
17 A. I believe it was during the period that I was
18 assistant to the production manager.
19 Q. Do you know who else now living, since I
20 believe Mr. Danz you told us was deceased, who else
21 would have knowledge of that particular tank car spill?
22 A. Possibly Mr. Finch. Most likely someone that
23 had been on the site rather than in Indianapolis.
24 Q. What was the cleanup and the disposition
25 taken of the spilled material?

1 A. I imagine it would have been shoved into some
2 type of container and I don't know the disposition.
3 Q. Would that material that had been heated as
4 you described had the ability to flow across the ground?
5 A. Yes, it would have.
6 Q. Are you acquainted with the location of the
7 Republic deep well as marked on Exhibit 9, the well
8 that provided water to that facility for many years?
9 A. (Indicating.)
10 Q. You have, for the sake of the Court Reporter,
11 pointed on the map, Exhibit 9, to where it shows
12 Republic deep well, is that correct?
13 A. I was locating it for my own information
14 rather than pointing it out to anyone else.
15 Q. And is what you have seen on Exhibit 9
16 consistent with your observations and understanding of
17 where that well was located?
18 A. Yes, I was aware that there was a well
19 immediately adjacent to the refinery and I needed to
20 refresh myself that we were speaking of the same well.
21 Q. From the distance between the locations where
22 you thought the spill could have occurred and the
23 location of that well, you believe that spilled
24 material could have reached that well?
25 A. I think it unlikely that the spill to which I

1 referred would have reached that well.
2 Q. And do you have some reports or other
3 specific information that would indicate it did not
4 reach the well?
5 A. No, I do not.
6 Q. What is your general basis for your believe
7 that it would not reach the well?
8 A. My recollection of observation of the well
9 was that it was in solid ground and was a pipe
10 extending above the ground and in general the gradient,
11 as I recall it, was in the other direction from the
12 spill to which I referred.
13 Q. Could you estimate the difference in
14 elevation between the well and the location where you
15 think the spill may have occurred?
16 A. I would only estimate it as more than three
17 or four inches and probably less than one foot.
18 Q. What was the document that refreshed your
19 recollection that contained the recollection of this
20 incident?
21 A. Only my memory.
22 Q. It's not something that you recently reviewed
23 then?
24 A. No.
25 Q. Do you know the volume in that type of tank

car?

A. We were generally using tank cars with a capacity of 10,000 gallons during that time frame.

Q. And was that all lost?

A. I do not recall the quantity, it was probably more than 1,000 gallons and less than 5,000 to 8,000 gallons.

Q. What would have been the temperature it was heated to?

A. The general practice was to heat to 125 to 150 degrees Fahrenheit prior to unloading.

Q. And at those temperatures how did it flow? Describe that aspect.

A. It would probably have been more viscus than water but less viscus than Molasses.

Q. Closer to water than Molasses?

A. I would hesitate to estimate in that specific case.

Q. That would have been Reilly employees with responsibility for unloading the tank car, not anyone from outside the organization?

A. That is correct.

Q. You had mentioned the transfers, cisterns, tanks, wet cut, this tank car incident. You said that was the majority. Are there other flows that were

1 minor but also contributed to contaminated waste water?
2 A. I do not presently recall any other sources.
3 Q. Are there any other major incidents in
4 addition to the one you have just described?
5 A. I can recall several cases where there were
6 failures of the fire tube in the stills which permitted
7 very hard pitch to run out of the fire tube through the
8 air fans onto the floor of the refinery firing room.
9 This material would have solidifide immediately and I
10 doubt would have been a source of any contamination.
11 Q. What would have been the temperature and
12 consistency of that material as it came out there the
13 way you just described?
14 A. As it flowed out it would have been very
15 close to the viscosity of water. It's temperature
16 would have been on the order of 350 degrees centigrade
17 and within a very few minutes it would have been
18 completely solid.
19 Q. At air temperatures it set up to a hard
20 material?
21 A. That is right.
22 Q. Do you know what the floor is made of it
23 landed on, is that a dirt floor?
24 A. I don't believe that it was dirt during my
25 initial visits to the plant, but I do recall at later

1 dates that it was concrete.
2 Q. Do you know the years in which the still
3 failures may have occurred?
4 A. It would have been after about 1955 to '56
5 when we installed the new stills and resumed pitch
6 production until the closure of the plant.
7 Q. Do you recall how many such incidents there
8 were?
9 A. I would guess that I am referring to two to
10 four such incidents.
11 Q. Apart from the one tank car incident and
12 these still failures, are there any other incidents
13 occurring at Saint Louis Park that you would consider
14 major?
15 A. Not that I would recall.
16 Q. Were there any such incidents that were prior
17 to your time, say prior to 1954, but that you have
18 heard some information or stories about occurring at
19 that time?
20 A. Not that I am aware of or have heard of.
21 Q. Let me ask you to look again at Minnesota
22 Exhibit 3, the incomplete memorandum, Page Number 5
23 which is the second of those pages. Would you direct
24 your attention to the second full paragraph beginning
25 the "trenching system"?

1 A. All right.
2 Q. Could you explain at that time first how that
3 system worked, what its function was? Let me leave it
4 at that, how that system he worked, what it was to
5 accomplish.
6 A. In the initial design and installation of the
7 plant, due to the severe weather conditions, the piping
8 was located in a trench between tanks or tanks and
9 processing units which originally was covered by planks
10 to protect it from severe weather.
11 Q. What was the construction of the trench?
12 A. I do not specifically recall. I would
13 imagine that originally it was creosoted wood planks.
14 Q. Did it have a top?
15 A. Yes, originally it would have had a creosoted
16 wood plank top.
17 Q. And when you saw it with reference to the
18 time of this memorandum what was the condition of the
19 trench and the top, that is, by the trench I mean the
20 material that you described as the creosoted wood that
21 formed it?
22 A. There were many sections where the plank
23 covers were missing.
24 Q. And what was the condition of the below
25 ground part of the trench?

1 A. The pipes were in many areas submerged and/or
2 covered with water and/or dirt.
3 Q. Was there also coal tar materials?
4 A. There may have been.
5 Q. Do you recall seeing such?
6 A. I made that statement on the basis that the
7 material was discolored and so could have been.
8 Q. Discolored in what way?
9 A. Dark.
10 Q. In terms of operating efficiently, did those
11 dark discolorations raise concerns with you about loss
12 of product?
13 A. Yes, they did and this was the basis of my
14 memorandums to which you had earlier referred that we
15 needed improved housekeeping and plant cleanliness.
16 Q. I see. In this paragraph that we are just
17 referring to that you mentioned the engineering
18 department needs to look at replacement with above
19 ground piping. What would be the reasons for going
20 from below ground piping you described as having an
21 advantage when the pipe was designed to the above
22 ground piping?
23 A. We had found, and I believed from my more
24 recent experience, that these trenches were a problem
25 in this respect and that in later years, with welding

1 of pipe and improved insulation, that the above ground
2 piping, although more expensive, was more efficient and
3 worth while.
4 Q. Was below ground piping something unique
5 among Reilly facilities to Saint Louis Park?
6 A. At the time of construction of the plant it
7 was common within Reilly and the industry.
8 Q. Did above ground piping at a later date
9 become the more common practice?
10 A. Yes, it did.
11 Q. When did that occur, that change?
12 A. As plants were updated, rebuilt or improved
13 in the late '50's to '70's period, as we had begun to
14 do at Saint Louis Park.
15 Q. Dirt, water and the discolored material that
16 you saw in the trenches, would that material have
17 drained towards the settling basin in the plant waste
18 disposal system?
19 A. I believe that it did.
20 Q. Was that also a disadvantage of the below
21 ground system that it provided or was it more difficult,
22 shall I say, to remedy contaminant leaks -- excuse me,
23 product leaks than an above ground system?
24 A. That is correct.
25 Q. In addition to the product aspect, was there

1 a contamination of water concern about this situation?
2 A. Yes, it would have potentially dirtied the
3 water going into the settling basin, more than pure
4 runoff water.
5 Q. And what would it have dirtied it with?
6 A. Any of the products that had leaked from the
7 pipes in the trench.
8 Q. Let me ask you to look two paragraphs below
9 that where it mentions a ground tank problem. You
10 identified generally with Exhibit 9 which were
11 underground tanks at the time of this memo?
12 A. Do you wish me to point them out on the map?
13 Q. If you could.
14 A. They were generally at the northwest side of
15 the refinery in this area right in here.
16 Q. And that's an area just below the little
17 letter "r" in refinery on that exhibit?
18 A. It would have been below the "r" and/or "f".
19 Q. And at this point there is nothing indicated
20 in the -- no tanks are indicated in the area you were
21 pointing?
22 A. No. The map evidently was not drawn to
23 indicate buried tanks.
24 Q. What were the numbers and dimensions of these
25 tanks?

A. I do not recall from memory.

Q. By numbers I don't mean how did that number them for plant purposes, but how many tanks were there?

A. I do not specifically recall. Likely more than two and less than six or eight.

Q. Do you have a general recollection of their capacity?

A. Only by guess that they would have likely been greater than 4,000 gallons and less than 10,000 to 12,000 gallons.

Q. Do you know the years in which those tanks would have been put in?

A. I do not know the specific years but it would likely have been on construction of the refinery.

Q. Let me show you another exhibit here, it's Number 15, this is going to be marked as 86.

(At this time State of Minnesota Deposition Exhibit 86 was marked for identification by the Court Reporter.)

BY MR. SHAKMAN:

Q. Have you had a chance to read through what has been marked as Minnesota Exhibit 86?

A. Yes, I have.

Q. Is that your memorandum to Doctor Mootz of February 24, 1967?

1 A. Yes, it is.
2 Q. And directing your attention to the third
3 paragraph in here, the one that begins, "We are sure
4 that these ground tanks are contributing significantly
5 to material losses that have been and are being
6 encountered." That's the end of my quotation. Are
7 these the same ground tanks that we were just
8 discussing in regard to Minnesota Exhibit 3?
9 A. Yes, they are.
10 Q. And Minnesota Exhibit 3 you dated as
11 approximately 1961 and this is dated 1967. Is the
12 conclusion correct that in those six years that
13 continued to be a problem over that time period
14 throughout that time period?
15 (Whereupon the requested portion of the
16 record was read by the Court Reporter.)
17 A. Yes, it is.
18 Q. You mentioned in the earlier memo, "Interior
19 leaks of unknown size which are constantly losing oil
20 and probably account for the plant's repetitive monthly
21 material losses," could you explain in this plant how
22 you kept track of material going in, being used, and if
23 there were losses being lost from those tanks?
24 A. The plant manager and/or superintendent
25 provided us and Indianapolis with a monthly proof of

1 inventory which was so designed as to show his
2 beginning inventory of all individual products, final
3 inventory, and transfers in and out of each tank or
4 unit so as to prove the balance or unbalance.
5 Q. Was this a monthly balance did you say?
6 A. Yes, it was.
7 Q. And was that a directive of the company out
8 to all the plants to provide monthly balances?
9 A. Yes, it was a requirement of each plant.
10 Q. When there were problems such as this would
11 it have been a good idea to check more than monthly on
12 the balances in those tanks?
13 A. If the losses had been sufficiently
14 significant we would have made a particular special
15 investigation, yes.
16 Q. Do you know if such special investigation was
17 ever done in regard to these underground tanks?
18 A. No, none was done.
19 Q. Who reported to you on the condition of those
20 tanks?
21 A. The subject would have arisen during
22 discussions with the plant manager or plant
23 superintendent.
24 Q. Mr. Finch would have been the plant manager
25 in this time period, '61 to '67?

1 A. I don't recall specifically when Mr. Finch
2 became plant manager. He was preceded by Mr. Holstrom.
3 Q. Do you remember discussing that kind of
4 problem with Mr. Holstrom?
5 A. No, I do not.
6 Q. Do you remember discussing it with the
7 refining plant superintendent?
8 A. Yes, with Mr. White and Mr. Danz.
9 Q. Was Mr. White the immediate successor to Mr.
10 Danz in that position?
11 A. Yes, he was. I believe the replacement of
12 tankage was made under Mr. White's tenure.
13 Q. Could you explain to someone who reads a
14 gasoline tank on an automobile that says empty and full
15 and has a little more knowledge how you keep track of
16 these underground tanks with several thousand gallons
17 in them? What is the device by which you read them?
18 A. There is a table available to show the
19 gallonage contained in the tank at each depth and a
20 measuring rod or measuring stick was inserted through a
21 top opening to measure the depth of material.
22 Q. Were there other Reilly facilities with
23 ground tank loss problems?
24 A. Yes.
25 Q. And where do you recall those?

1 A. I believe this was the case at all of the
2 refineries that were constructed during this time frame;
3 that is, from 1900 to 1950.
4 Q. And did you undertake any special
5 investigation, as you describe, because of losses at
6 other refineries?
7 A. No more particular investigation was made
8 anywhere else than at Saint Louis Park.
9 Q. These monthly balances -- is balance a good
10 description to use of keeping track --
11 A. Within the company we call them proofs of
12 inventory.
13 Q. Over what period of time did the company
14 follow this practice of proofs of inventory?
15 A. The practice was in place when I became
16 involved in production and continues through today.
17 Q. So that would be beginning in the mid '50's?
18 A. Yes.
19 Q. And you don't know whether it was used before
20 that or not?
21 A. I do not know.
22 Q. Could you describe at Saint Louis Park what
23 the various products would have been that were stored
24 in those tanks?
25 A. There would have been several tanks of crude

1 coal tar, wet cut, light oil, middle oil, heavy oil,
2 roofing pitch, cathode pitch, binder pitch and probably
3 earlier during the operation of the byproducts plant
4 distillate of slightly different characteristics,
5 caustic, sulfuric acid; and in the treating area
6 petroleum or blends of petroleum with creosote oil.
7 Q. When you say "in the treating area" do you
8 mean that they weren't stored in these tanks you
9 described as being just south -- southwest of the
10 refinery? I don't quite understand what you mean by
11 "in the treating area."
12 A. The materials and oils used in the treatment
13 of wood were generally stored in the tanks up near the
14 cylinders rather than in the refinery area.
15 Q. I was trying to direct my question to those
16 materials in the ground tanks near the refinery. Are
17 there some that you have mentioned besides this
18 petroleum that you would exclude from that area near
19 the refinery?
20 A. I took your question to be general. The
21 ground tanks should only have contained wet cut, light
22 oil, middle oil or heavy oil.
23 Q. Your earlier memorandum of 1961, Minnesota
24 Exhibit 3, calls it "the refinery ground tank problem".
25 The 1967 memo refers to "ground tanks". Was the

1 problem discussed here always just one in the refinery
2 area or did it also include other ground tanks?
3 A. I believe it was only the refinery area
4 ground tanks. I am not aware of any underground tanks
5 in the wood preserving equipment section of the plant.
6 Q. Were these materials heated in the ground
7 tanks; that is, was there heating elements of some kind?
8 A. There would have been heating elements in the
9 ground tanks to assure that they could be warmed if
10 they had been stored for some time to reduce the
11 viscosity to permit pumping.
12 Q. So generally you heat them when you needed to
13 pump them otherwise there was no point in spending the
14 money?
15 A. That is correct.
16 Q. Do you recall in these proofs of inventory
17 the range of monthly material lost from these ground
18 tanks during this period in the 1960's?
19 A. No, I do not recall and it would have been
20 difficult --
21 Q. Did you make a rough estimate?
22 A. It would have been very difficult to pinpoint
23 if or what the leakage or loss was particularly
24 attributable to the ground tanks. The proof of
25 inventory was by product rather than by tank.

1 Q. And a given tank could be used for different
2 product in the course of a month?
3 A. It could have been but the change in usage
4 was unlikely to have occurred that often on a regular
5 basis.
6 Q. What lead you to conclude that there were
7 losses from these ground tanks as stated in the Exhibit
8 3 and that the losses in the proofs of inventory
9 weren't from something else?
10 A. I do not specifically recall other than it
11 likely would have arisen during these discussions of
12 the plant's operation and equipment and that the
13 superintendent or manager did attribute differences to
14 me, that they were due to the condition of the ground
15 tanks.
16 Q. Do you recall among the people you have
17 mentioned, Mr. White, Mr. Danz, Mr. Finch, any of those
18 giving you that explanation?
19 A. I do not remember the particular discussion.
20 Q. Is your recollection they all knew about it?
21 A. Yes.
22 Q. In your memo of February 24, 1966 you said, "Th
23 are contributing significantly to material losses."
24 When you say "significantly", what does that mean to
25 you?

1 A. That a good part of whatever loss was
2 reported was likely due to this.
3 Q. More than half?
4 A. To me I would estimate that meant 20 to 50
5 percent.
6 Q. Were the losses themselves significant?
7 A. They were not a major quantity.
8 Q. Could you say what you mean by a "major
9 quantity"?
10 A. The losses on a proof of inventory are due to
11 many factors, the water contained in the tar, the
12 breakdown of the tar on distillation, and then
13 condensibles arising during the distillation, losses of
14 vapor to the atmosphere, leakage from pipes, mismeasureme
15 due to temperature adjustment on the proof of inventory,
16 and a loss such as this.
17 Q. What do you mean by "mismeasurement due to
18 temperature adjustment"?
19 A. To properly record the contents of the tank a
20 common temperature needs to be used and the actual
21 temperature adjusted to that so that a consistent
22 volume between tanks and time periods is used. In the
23 case of coal tar, we used 60 degrees Fahrenheit and 100
24 degrees Fahrenheit for oils.
25 Q. Would that be a significant factor, these

1 temperature adjustment mismeasurements in looking at
2 your proof of inventory?
3 A. It would be contributing difference to the
4 loss.
5 Q. Apart from that type of missmeasurement and
6 leaky pipes or leaky tanks, is the rest of what you
7 have described in terms of differences that will appear
8 in the proof of inventory changes that are inherent in
9 that process?
10 A. (No response.)
11 Q. Could I ask that a different way? Is that
12 always going to be the case that there are always going
13 to be differences in those factors regardless --
14 A. Yes, I believe that is the case.
15 Q. And if you had a model, very efficient well
16 run refining operation, you are still going to have
17 differences?
18 A. Yes, because the manner in which the proof of
19 inventory was made, the water contained in the incoming
20 tar would show up as a loss.
21 Q. Could you say what percentage difference you
22 would have in that model, very efficiently run refining
23 process between your incoming tar and the end products
24 that are stored after refining?
25 A. Possibly on the order of 2 to 3 percent.

1 Q. And do you know what the percentages of
2 difference in the proof of inventory at Saint Louis
3 Park were in this 1960's time period?
4 A. I do not remember the exact numbers, but
5 would assume from the records I used that they were a
6 quarter to a half a percent larger than that.
7 Q. Quarter to a half percent larger than what
8 figure?
9 A. 1 to 3 percent.
10 Q. Did they vary widely from month to month?
11 A. I do not recall.
12 Q. I have three exhibits to hand out. I guess
13 my preference would be to distribute those, give you an
14 opportunity to look at them and take a break.
15 A. All right.
16 (At this time State of Minnesota Deposition
17 Exhibit 87 was marked for identification by
18 the Court Reporter.)
19 BY MR. SHAKMAN:
20 Q. Of the products of the coal tar distillation
21 that were in these ground tanks that you previously
22 described, which of those would more likely be lost if
23 there were lakes in those tanks?
24 A. I would find it difficult to speculate. I
25 doubt that there would be much difference.

1 Q. There would be differences in the viscosity
2 of the materials that you described, wouldn't there?
3 A. It would be entirely dependant upon the
4 temperature. The only thing that occurs to me is that
5 it would be -- might be more probable that a tank which
6 had contained water may have corroded more than one of
7 the others.
8 Q. Were there tanks dedicated to water or wet
9 cut?
10 A. In general, I believe that the usage of the
11 individual tank would have remained consistent other
12 than for some occasional deliborate change for whatever
13 reason.
14 Q. So the water would have been more likely to
15 lead to tank corrosion then?
16 A. If I were asked to speculate, yes.
17 Q. And if you had a tank which, for whatever
18 reason, did have a leak and you had the light oil
19 fraction going in there and another time you had a
20 pitch going in there, wouldn't you expect more of the
21 light oil to be lost?
22 A. The lower viscus material, yes, but it is
23 unlikely that there would have ever been pitch in those
24 underground tanks due to the nature of the materials.
25 Q. Were the tanks ever emptied and workmen sent

1 in there to inspect for what might be the source of
2 leaks?
3 A. I do not know.
4 Q. Was there any other way to find the source of
5 leaks than what I just suggested?
6 A. Not that I am aware of.
7 Q. What would have happened to material that did
8 leak out?
9 A. It would have seeped into the adjacent ground.
10 Q. And were you aware of whether the adjacent
11 ground, adjacent to these tanks, did have amounts of
12 such material?
13 A. No, I was not.
14 Q. Do you know if that was ever checked?
15 A. No, I do not know.
16 Q. Let me show you the answers of Reilly Tar to
17 the State's interrogatories. The answer to
18 Interrogatory 17 E has your name after that answer
19 indicates that you were a contributor to the
20 information in this answer, is that right?
21 A. Yes.
22 Q. There are figures on the on right-hand column
23 that I understand to be the tar purchases for Saint
24 Louis Park for the years 1959 to 1971?
25 A. Yes.

1 Q. From those figures can you derive, in terms
2 of gallons, what the additional one-fourth to one-half
3 percent leakage that you earlier testified to would
4 amount to?
5 MR. SCHWARTZBAUER: Do you want him to
6 make a calculation?
7 MR. SHAKMAN: A rough calculation based
8 on these figures.
9 THE WITNESS: Should we do this now?
10 MR. SCHWARTZBAUER: Yes.
11 MR. SHAKMAN: Sure. Take a moment. We
12 have a pocket calculator if you want one.
13 MR. SCHWARTZBAUER: State again what you
14 want him to calculate.
15 BY MR. SHAKMAN:
16 Q. To restate that, it's during the period that
17 your memorandum indicated that there were losses from
18 ground tanks and you had estimated those might be an
19 extra one-fourth to one-half percent, the proofs of
20 inventory. Could you, using the information on total
21 tar purchases, calculate what that additional one-
22 fourth to one-half percent was in gallons?
23 A. I will do so but I believe that I said the
24 loss in the plant may have been a quarter to a half
25 percent, not necessarily from the ground tanks.

1 It would appear that one quarter percent of
2 the tar purchased during that period would be on the
3 order of 1,400,000 gallons.
4 Q. You are looking at what period?
5 A. 1959 through 1971.
6 MR. SCHWARTZBAUER: Read me what he just
7 said.
8 (Whereupon the requested portion of the
9 record was read by the Court Reporter.)
10 A. I am sorry, I am off by a decimal point, that
11 should have been 140,000 gallons
12 (At this time a discussion was held off the
13 record.)
14 MR. SHAKMAN: Can we proceed?
15 MR. POLACK: Yes.
16 BY MR. SHAKMAN:
17 Q. Was it your testimony that one-forth to
18 one-half percent, as you used that in relation to the
19 tar coming in, represented an additional amount being
20 lost at the Saint Louis Park plant during this period
21 of the 1960's as a result of several reasons,
22 additional above what an efficient plant for that time
23 would have lost?
24 A. No, sir, I don't believe I quite meant that.
25 Q. Could you explain what you did mean?

1 A. I believe I had in mind that the Saint Louis
2 Park proof of inventory difference may have been a
3 quarter to a half percent greater than one of the other
4 refineries and whether it was due to a difference in
5 the water content of the incoming tar or one of the
6 other factors, I do not know.
7 Q. What other refinery did you have in mind?
8 A. The Provo refinery where I do recall that
9 they had lower water contents on incoming tar.
10 Q. How much of a difference between Saint Louis
11 Park and Provo of that one-forth to one-half percent
12 would you attribute to the differences in the tar that
13 you took in?
14 A. I would find this very difficult to estimate.
15 Q. All of it, half of it, less than half of it?
16 MR. SCHWARTZBAUER: He said he would
17 find it difficult to estimate and now you are simply
18 pushing him to guess I object to the question on the
19 grounds that it is speculation, conjecture.
20 MR. SHAKMAN: I will let it stand.
21 MR. SCHWARTZBAUER: I will instruct him
22 not to answer. We wouldn't be served at all by letting
23 him take guesses.
24 BY MR. SHAKMAN:
25 Q. When did it occur to you that the tar being

1 used in Ironton had lower contents than that used in
2 Saint Louis Park?
3 A. Just general recollection over the long-term
4 period.
5 Q. And do you know what the sources of Ironton
6 tar were that would account for that difference?
7 A. It was from one source where the shipping
8 tanks were maintained at a quite high temperature which
9 would minimize the water content.
10 Q. What was that source?
11 A. United States Steel at Gevena, Utah.
12 Q. Or other plants apart from Saint Louis Park
13 also receiving higher water content than the Ironton
14 plant?
15 A. Most of the other plants, as Saint Louis Park
16 received tar from a number of sources, each of which
17 varied significantly with time dependant upon their
18 coke oven operation. I have difficulty recalling
19 specific numbers.
20 Q. Can you generalize among the plants other
21 than the one observation you made about Ironton?
22 Ironton received lower water tar. Can you make a
23 generalization of any of the plants relative to the
24 water in the tar at Saint Louis Park?
25 A. I would only generalize from recollection

1 that Saint Louis Park probably had some of the higher
2 water contents on their tar purchases.
3 Q. If you would turn a page back in that
4 interrogatory answer, there is a list of tar suppliers
5 begining with Key City Gas. Would you indicate as to
6 those suppliers which would have a higher average or
7 lower water content?
8 A. The majority of these relate to tar purchases
9 in the very early years of the plant operation.
10 Q. Are there some that relate to tar purchases
11 in the 1959 and '60 period?
12 A. During this period I believe the majority of
13 the tar was obtained from Youngstown Sheet and Tube
14 Company in Chicago, from Inland Steel Company in
15 Chicago and from U. S. Steel at Chicago and Duluth. My
16 only recollection of which I am moderately sure is that
17 In land Steel tar generally had a higher water content
18 than others.
19 Q. Would the tar from U. S. Steel at Chicago and
20 Duluth be similar to the tar from U. S. Steel in Geneva
21 and Watertown?
22 A. No, entirely different.
23 Q. In which way?
24 A. In my experience the tar at Gevena is
25 uniquely low in tar than the majority of our other

1 sources.

2 MR. SCHWARTZBAUER: You said uniquely

3 low in tar.

4 THE WITNESS: Low in water, I am sorry.

5 BY MR. SHAKMAN:

6 Q. You characterize inland as higher than most

7 other sources in water?

8 A. I believe so, yes.

9 Q. How about Youngstown?

10 A. I do recall it during that time frame as an

11 average tar.

12 Q. And what would you say of the U. S. Steel

13 from Chicago?

14 A. I do not recall a specific water content at

15 that time.

16 Q. Would you characterize it as an average tar

17 in water content?

18 MR. SCHWARTZBAUER: Well, again he said

19 he couldn't recall so how could he then characterize

20 otherwise? It as average or something else. So I

21 object to the question on the grounds of no foundation

22 and request him not to answer.

23 BY MR. SHAKMAN:

24 Q. What do you know about U. S. Steel tar from

25 Chicago at any time in terms of water content?

1 A. No more than I do not recall any particular
2 negotiations to obtain a penalty for water content in
3 excess of 6 percent.
4 Q. What was the water content you desired in the
5 tar you purchased?
6 A. As low as possible to minimize the amount of
7 water that would need to be removed through
8 distillation.
9 Q. And you would seek to pay less if there were
10 high water content?
11 A. Most tars are contracted for on the basis of
12 one gallon at 60 degrees Fahrenheit and containing 2
13 percent water for the purposes of setting a price upon
14 the tar. If it has less than 2 percent water, the
15 gallonage is adjusted upward to 2 percent, and if
16 greater the volume is a adjusted down to 2 percent. In
17 most of our contracts there is a penalty when the water
18 content is above 6 percent to reimburse us for our
19 added distillation cost.
20 Q. What do you mean by "volume is ajusted upward
21 or downward where it deviates from 2 percent"?
22 A. Very roughly, if you purchased 100 gallons of
23 material containing 5 percent water, and although this
24 is not exactly the correct method of calculation, you
25 would reduce the quantity by 3 percent for the excess

1 water above 2 percent.
2 Q. You say "reduce the quantity", you mean you
3 would not pay for it?
4 A. That is correct.
5 Q. And where there was a less than 2 percent
6 water --
7 A. The seller would increase the quantity by the
8 amount necessary to equal the quantity at 2 percent
9 water.
10 Q. Are you aware of the suppliers to Saint Louis
11 Park in the '60's, what percentage water adjustments
12 were made -- what percentage quantity adjustments were
13 made because of water content?
14 A. I do not recall.
15 Q. Do you know the adjustments that were made to
16 the purchases at Ironton from U. S. Steel that you
17 earlier described?
18 A. I do not recall the amount of adjustment.
19 Q. Is that information available in records of
20 the company that you have?
21 A. I do not believe so.
22 Q. Is that no longer a supplier to Ironton?
23 A. Would you expand your question, please?
24 Q. Is U.S. Steel at Gevena no longer a supplier
25 to Ironton?

1 A. Yes, they are. We would only have records on
2 current purchases upon a deep search.
3 Q. How did the company go about sharing the
4 quality of the tar that was purchased in terms of it's
5 water content?
6 A. Where we had long term tar purchase contracts
7 these conditions would have been a part of such a
8 contract. Where there was not a long term contract
9 there generally would have been an annual purchase
10 order which would have included such terms and
11 conditions.
12 Q. My question is directed to something
13 different. How did you know that the tar you were
14 getting had the water content you were paying for?
15 A. The seller generally denotes upon his invoice
16 the quantity with the adjustments for temperature and
17 water content and the plants, upon receipt, were to
18 have analyzed for the water content and checked the
19 volume or quantity purchased.
20 Q. And did the company have a procedure for the
21 individual plants to follow in checking the tar for
22 water content?
23 A. Yes, they did.
24 Q. Did the company have a company-wide criteria
25 for whether the tar should be accepted or rejected

1 based on those analysis?
2 A. Receipts of tar were rarely rejected. There
3 generally would have been complaints, negotiations,
4 and/or adjustments made to the billing for tar not
5 meeting those criteria.
6 Q. Would those have been matters the plant
7 manager would have taken up?
8 A. Most negotiations during this period on tar
9 purchases were done by myself or Doctor Mootz.
10 Q. You purchased for all the plants then?
11 A. That is correct.
12 Q. Were there occasions where you did reject it
13 and weren't able or decided not to negotiate a price?
14 A. To my recollection we never rejected a
15 shipment.
16 Q. From these figures in the Interrogatory 17 D
17 can you estimate over that period of the 1960's how
18 many charges per week you were likely running in the
19 distillation?
20 A. You are referring --
21 Q. To Saint Louis Park.
22 A. You are referring to 17 E?
23 Q. 17 E, excuse me. I meant to say E.
24 MR. SCHWARTZBAUER: And the question
25 relates to what now?

1 BY MR. SHAKMAN:
2 Q. How many charges per week in the distillation,
3 can you tell that on the amount of tar purchased?
4 A. Only in the calculation in as much as the
5 distill volume was approximately 4,500 gallons and that
6 resultant calculation would have had to adjust for the
7 amount of coal tar that may have been used in wood
8 preservation, which I am completely unaware of.
9 Q. Do you have other knowledge, apart from this
10 mathamatical calculation I suggested, of the number of
11 charges in a week in the 1960's?
12 A. No, I did not.
13 MR. SHAKMAN: I think being about 11:30
14 this would be a good time to get our lunch.
15
16 (At this time a recess was taken.)
17
18 BY MR. SHAKMAN:
19 Q. This morning you used a term "proof of
20 inventory". Is proof of inventory a form that was used
21 at Saint Louis Park and at the other Reilly refineries
22 to show the volume of raw materials received and the
23 volume of product made of that raw material
24 A. That is correct.
25 Q. Was there an imbalance for the Reilly

1 refineries between the raw material and the product
2 totals in these proof of inventories?
3 A. Generally there was a difference.
4 Q. Wasn't it your testimony that that imbalance
5 was about in the 2 to 3 percent range?
6 A. Yes.
7 Q. By that there would be 2 to 3 percent more
8 raw material coming in than product total?
9 A. That is correct.
10 Q. Wasn't it also your testimony that at the
11 Saint Louis Park plant the imbalance in the proof of
12 inventory ran a quarter to a half a percent higher than
13 the imbalance in the proof of inventory at the Reilly
14 Ironton plant in Utah?
15 A. The Saint Louis Park imbalance was slightly
16 higher than at Provo, Utah and being pressed I
17 estimated a quarter to a half a percent.
18 Q. And Exhibit 3, your 1961 memorandum,
19 Minnesota Exhibit 3, about the Saint Louis Park plant;
20 you wrote, did you not, that the ground tanks there had
21 interior leaks of unknown size?
22 A. This was my report of the conversation during
23 that meeting, yes.
24 Q. So that was based on information received by
25 you during that meeting?

1 A. That is correct.
2 Q. And that information was consistent with
3 other things you knew about that plant?
4 A. That is correct.
5 Q. So it didn't come as a surprise to you that
6 the ground tanks had interior leaks, did it?
7 A. No.
8 Q. And you also wrote in that memo, did you not,
9 that, "These leaks probably accounted for the plant's
10 repetitive monthly material losses"?
11 A. I did write that.
12 Q. And how far back did those repetitive monthly
13 material losses go, if you can recall?
14 A. I did not know.
15 Q. Do you know if in 1954 when you first went
16 there that was a problem? Went there I mean Saint
17 Louis Park.
18 A. I definitely would not have known then and I
19 was visiting totally on engineering problems at that
20 time until 1958.
21 Q. Did you know in 1958 that the ground tank
22 leaking was a problem?
23 A. I do not recall.
24 Q. In referring to that Exhibit 86, your letter
25 to Doctor Mootz in 1968, you stated at that time, did

1 you not, that you were unsure that the ground tanks are
2 contributing significantly to material losses?
3 A. I did so state.
4 Q. And with regard to those ground tank losses,
5 what were they?
6 MR. SCHWARTZBAUER: I don't understand
7 that. What do you mean what were they? Quantities or
8 what?
9 BY MR. SHAKMAN:
10 Q. Quantities. What were the quantities of
11 losses?
12 A. I do not know and doubt that I knew the
13 quantities at that time. I would believe that my use
14 of those words was probably to reenforce the
15 expenditure of the money.
16 Q. What would be a minimum loss that you would
17 consider to be contributing significantly?
18 A. I do not know.
19 Q. Would a gallon a month be a significant
20 amount?
21 A. No, that would be insignificant.
22 Q. 200 gallons a month?
23 A. It would begin to get into the significant
24 area, yes.
25 Q. So you don't know today what there was, but

1 it could have been 200 gallons a month, it could have
2 been higher, is that correct?
3 A. Yes, but if it had been a real high quantity
4 I feel sure that a visual observation would have
5 revealed it.
6 Q. A real high quantity, 20,000 gallons a month?
7 A. I do not know, sir, what the number would be.
8 Q. What do you mean by --
9 A. 90 gallons a month would be obvious.
10 Q. 20,000 gallons as a high wouldn't have been
11 too high?
12 A. 20,000 gallons a month I feel sure would have
13 been visually observable.
14 Q. How about 5,000?
15 A. You are asking me to speculate too far now.
16 Q. Some point less than 20,000 that wouldn't
17 have been visually observable, but you would have to
18 speculate just where in there?
19 A. Yes.
20 Q. When you use the phrase "material losses" in
21 this memo, does that mean the losses shown in an
22 imbalance on the proof of inventory?
23 A. The term "losses" to me would mean the water
24 contained in the tar and the quantities unaccounted for.
25 Q. That's what the word "losses" means. What

1 does the word "material" mean there, "losses of
2 material"?
3 A. Of the material, the crude tar or oil.
4 Q. Let me ask you to look at a document we
5 handed out earlier this morning and have marked but
6 haven't discussed, it's marked as Minnesota Exhibit 83
7 from P. E. White. It has R. J. Boyle scratched out and
8 S. C. Boyle written in. Do you have that?
9 A. I do.
10 Q. And do you recognize that as internal
11 correspondence in the company?
12 A. I do.
13 Q. And you were copied on it, were you not?
14 A. I was.
15 Q. This is dated October 10, 1968 and this
16 addresses changes in piping at the Saint Louis Park
17 refinery, does it not?
18 A. Yes, it does.
19 Q. In the second sentence it mentions a review
20 of June 3, 1963 by Rudy Fenolgio. Who was Rudy
21 Fenolgio?
22 A. An engineer from Indianapolis, a member of
23 the engineering department.
24 Q. When was he with the company, what years?
25 A. He was there prior to 1950, probably began

1 work with the company in the '40's, and I believe left
2 the company in the '60's.
3 Q. Do you know if he is alive today?
4 A. No, he is deceased.
5 Q. You had the opportunity to read through that
6 first paragraph of that memo?
7 A. I did read that before lunch.
8 Q. I would ask you to take another look at it.
9 A. Okay.
10 Q. Is it correct that the work proposed in there
11 is for above ground piping and receiving tanks?
12 A. I have not located the word "proposed" that
13 you used.
14 Q. I was directing your attention to the second
15 sentence where it says, and I quote, "Rudy Fenolgio
16 wrote up W0246A for $35,420 including above ground
17 piping and new receiving tanks."
18 A. Yes, it does.
19 Q. Were you acquainted with that proposal at the
20 time?
21 A. I believe so, yes.
22 Q. And Mr. White's memo goes on to say later in
23 the same paragraph, "It was decided by Mr. Tom Reilly
24 to proceed on an emergency work order basis. The first
25 of these work orders dated February 2, 1967 for a pump

1 and piping approval --" and the sentence continues on.
2 Is it correct that from the time Mr. Fenolgio prepared
3 the work order in 1963 action to replace above ground
4 piping and tanks was in abeyance until the emergency
5 work order was approved in 1967?
6 A. This evidently was the case, yes.
7 Q. Do you know what Mr. White would have meant
8 in the first sentence about trying to eliminate
9 confusion, I think that's the word he had there, Which
10 is spelled c-o-n-f-e-s-t-i-o-n. around the captioned
11 projects?
12 A. Only on review I would expect that since
13 three work orders are involved there must have been
14 confusion as to what was covered by each of them.
15 Q. There was only one work order referenced in
16 1963, was there not?
17 A. That is correct. It appears that there was
18 one general work order and then parts or additional
19 pieces of it had been done in the interim period.
20 Q. Would you look at the next to the last
21 paragraph which begins, "We have and are proceeding to
22 finish the work order based on Mr. Reilly's comment and
23 Mr. Fenolgio's feeling --" then it quotes, "Under
24 grounds piping and tankage have deteriorated to the
25 point where replacement is necessary for proper

1 operation of the refinery." And then Mr. White goes on
2 to agree with that statement. Were you also in
3 agreement with Mr. Fenolgio' s statement at that time?
4 A. Yes.
5 Q. Do you know which Mr. Reilly was referred to,
6 Mr. Reilly's comment in that same paragraph?
7 A. This would have been Mr. Thomas E. Reilly,
8 Senior.
9 Q. He was the one who decided to proceed on the
10 emergency work order basis, is that correct?
11 A. It appears to be correct, yes.
12 Q. Do you have a recollection of that apart from
13 what is in this document?
14 A. I do not recall the incident.
15 Q. When would an emergency work order be used as
16 distinguished from a work order?
17 A. In general the word "emergency" is used in
18 connection with work orders if the work has been
19 completed without having been written up by the finance
20 committee.
21 Q. Was it an unusual way to proceed then, out of
22 the ordinary?
23 A. No, it was not necessarily out of the
24 ordinary.
25 Q. Would the finance committee have nonetheless

1 reviewed it after Mr. Reilly gave the go ahead?
2 A. Yes, as a matter of protocol to insure that
3 it was in the records.
4 Q. There is one other paragraph that's a
5 sentence long, the third paragraph from the bottom
6 mentions filling in trenches in the wet cut tanks as a
7 means of controlling water pollution. What was to be
8 gained by filling in the trenches?
9 A. They were a conduit and a channel for any
10 leakage that might occur into the settling basin and
11 would have been visually unobservable that there was a
12 leak or material being so channeled.
13 Q. Once you moved the pipes above ground you
14 could see if there was a leak in the pipe, could you
15 not?
16 A. That is correct.
17 Q. But you still had trenches around that were
18 covered with wood or in some cases that were not
19 covered with wood?
20 A. That is right.
21 Q. And the concern was to fill in those --
22 please finish what you were going to say.
23 A. It occurred to me on that point, Mr. Shakman,
24 that this morning I mentioned that the trenches were
25 constructed of wooden plants and I have noted in this

1 correspondence that they were concrete, so must have
2 been confused this morning as to which plant or where I
3 had observed the plank trenches.
4 Q. Where did you note that?
5 A. I am sorry, it's on the second paragraph of
6 Exhibit 30.
7 Q. We will get to that one in a minute. In the
8 sentence after filling in trenches Mr. White says, "The
9 wet cut tank is an important item in control of water
10 pollution." Do you know what was meant by that at the
11 time?
12 A. I believe he would here have been referring
13 to the underground wet cut tank.
14 Q. And what was the proposal in regard to the
15 wet cut tank at that time?
16 A. To construct new vertical receiving tanks
17 above ground.
18 Q. And he said this was needed in control of
19 water pollution. You have earlier addressed leaks from
20 ground tanks. Would that wet cut tank be one of those
21 that had leaks?
22 A. It would have been one that could have had
23 leaks, yes.
24 Q. It was in that group of tanks by the refinery
25 that you described?

1 A. That is correct.
2 Q. Did you believe at the time that it did have
3 leaks?
4 A. No.
5 Q. Did you believe it did not leak?
6 A. What was the prior question?
7 Q. Did you believe it did not leak?
8 A. No, I did not. Did I answer the previous
9 question incorrectly?
10 MR. SCHWARTZBAUER: I think his first
11 question was did you believe at the time that it did
12 leak and then he asked you did you believe at the time
13 that it did not leak.
14 BY MR. SHAKMAN:
15 Q. Do you want to change your answer to the
16 first question?
17 A. No. I was not certain that it leaked. I am
18 confused.
19 MR. SCHWARTZBAUER: I think the record
20 is clear enough.
21 A. I did not know for a certainty that it leaked
22 nor did I know for a certainty that it did not leak.
23 Q. But you did favor an expenditure to replace
24 it?
25 A. Yes, I did.

1 Q. And one of the purposes of that expenditure
2 was control of water pollution, was it not?
3 A. That is correct.
4 Q. Would you have made that expenditure without
5 a reasonable basis for believing that replacement of
6 that tank would have reduced water pollution?
7 A. No, I did assume that it did leak.
8 Q. And that view was shared by people at the
9 plant?
10 A. That is correct.
11 Q. Mr. White?
12 A. Mr. White and Mr. Finch.
13 Q. Turning to the exhibit you were referring to
14 a minute ago that's previously been marked as Minnesota
15 Exhibit 30, this is a memo of March 16, 1967 from Mr.
16 Finch to T. E. Reilly, you are copied on that, are you
17 not?
18 A. Yes, I am.
19 Q. And if you look at the next to the last full
20 paragraph on that page there is again a reference to
21 Mr. Fenolgio and a Work Order Request 246, is there not?
22 A. That is correct.
23 Q. And a reference to a preliminary estimate of
24 June 3, 1963?
25 A. That is correct.

1 Q. Would this then be the same work order
2 request estimate discussed in the Exhibit 87?
3 A. Yes, I believe it would.
4 Q. Do you know what significance there is in the
5 three numbers used, 246, 246 A, and 246 A-1?
6 A. I believe the 246 was an error and that it
7 should have been 246 A. And the use of the word
8 246 A-1 undoubtedly refers to a drawing number, drawing
9 Number 1 for that work order request.
10 Q. Mr. Finch in this letter discusses reasons
11 for delay between the preliminary estimate and getting
12 the project going. He makes a statement in that
13 paragraph that I will read, "Engineering time had not
14 been available to us so we felt we could satisfactorily
15 progress with the above ground piping until Mr. Paul
16 White received a transfer from Indianapolis to
17 Minneapolis." And he goes on to say, "Mr. White has
18 been transferred and the project can be undertaken."
19 Is your understanding of the reason for that delay the
20 same as Mr. Finch's as expressed here?
21 A. I do not recall the exact incident but would
22 assume that after preparation of the drawings that
23 engineering time from Indianapolis or from Saint Louis
24 Park would have been required to specify the materials
25 and possibly to draw up a work contract specification

1 for a contractor.
2 Q. What if the decision had been made in 1963 to
3 go ahead with that work, it would not have taken until
4 1967 in the ordinary course of business to get those
5 preparations you have just described accomplished,
6 would it?
7 A. No, it would not.
8 Q. Are you aware of other reasons beside that
9 stated by Mr. Finch why the work was delayed between '63
10 and '67?
11 A. No, I am not.
12 Q. Would you turn to the next page on that
13 Exhibit 30 and the conclusion of the first paragraph,
14 do you see the last sentence there in which Mr. Finch
15 wrote that, "It's a difficult distinction in the spring
16 when our problem with underground tanks is immeasurably
17 increased with the rising water." Do you know what he
18 would have meant by that statement?
19 A. When the spring floods came the tanks,
20 naturally being boyant, would have force generated to
21 raise them up and out of the ground which would strain
22 and possibly break the piping or if at the time they
23 contained material the flood waters would leak into the
24 tank and dilute the contents.
25 Q. Were these tanks completely below ground

level?

A. To my recollection they were. I do not know to what exact depth.

Q. Do you recall the depth of the tanks themselves?

A. No.

Q. Do you know the approximate range of size?

A. I would estimate that we had normally installed such tanks at six to 18 inches below ground and that there would have been a manhole probably open on one end right at the ground level.

Q. Can you estimate how deep the tanks went down into the ground?

A. I do not recall the diameter. Probably from five to eight feet below ground level.

Q. You mentioned spring flooding. By that you meant flooding at the surface of the ground?

A. The spill over of water from the City of Saint Louis Park on the north end of the property.

Q. Was there flood water, as one would commonly think of flood water, going over these tanks?

A. This water did go over these tanks and stood from six to 12 inches deep in that area.

Q. If the tanks went five to eight feet under the ground wouldn't they also have been in the ground

1 water at occasions throughout the year?
2 A. I don't know how much ground water there
3 would have been at a depth of their bottoms.
4 Q. Do you recall measures taken to protect them
5 from ground water?
6 A. None were taken during the time I was
7 involved with Saint Louis Park. I would imagine, if
8 there had been measures, they would have been done when
9 they were installed.
10 Q. Would changes in the ground water elevation
11 have, in your opinion, caused damage to the tanks and
12 to the pipes that connected with it?
13 A. I don't know what the ground water level at
14 that location was.
15 Q. Generally from your knowledge of these kind
16 of tanks and how they were hooked up, if it were the
17 case that ground water rose above the level of the
18 bottom of the tanks, that that would cause problems?
19 A. If they were sitting in ground water or if
20 they were intermittently sitting in ground water, I
21 would imagine that would have accelerated their
22 corrosion and deterioration.
23 Q. Would it also have forced them to rise as you
24 described happening with the spring flood?
25 A. Yes, if they had been significantly below the

1 ground water level this would have been a permanent
2 problem.
3 Q. What was the disposition of coil condensate
4 at the Saint Louis Park refinery?
5 A. Can you point out where that word is used or
6 did you have have something else in mind?
7 Q. I was not having specific reference to this
8 memo.
9 A. I would assume you mean the material that
10 condenses in the cooling coils that was used to
11 condense the vapors off the stills and which condensate
12 then went into the receiving tanks.
13 Q. That would be water that was used?
14 A. No, the material within the pipe were the oil
15 vapors that were evolved from the still and
16 subsequently condensed into the product.
17 Q. I was thinking of pipes that had steam and
18 that steam then condensed after --
19 A. You are then referring to steam coils in a
20 tank and the condensate released from them.
21 Q. That is the material I wanted you to direct
22 your answer to.
23 A. And your question was again, please?
24 Q. What was the disposition of the condensate?
25 A. I believe it was discharged into the trenches.

1 Q. Was it then a single pass system that came
2 through and went out?
3 A. Yes, all of our steam coils were single pass.
4 Do you mean by that the condensate recycled back to the
5 boiler? It was not.
6 Q. Was it recycle back at other Reilly
7 refineries?
8 A. At one plant in one process we did try to
9 recycle condensate and had difficulties from pipe
10 corrosion due to the oxygen in the condensate.
11 Q. Would you consider this condensate to be a
12 source to any degree of wastewater contamination?
13 A. In my experience, definitely not.
14 Q. That would be true at Saint Louis Park?
15 A. Yes.
16 Q. Do you know the volume of this condensate
17 that would have been discharged at Saint Louis Park?
18 A. No, other than it would be equal to the
19 amount of steam generated, which was referred to in
20 some of the previous correspondence.
21 Q. Is that a figure you could find if you took a
22 moment?
23 A. I am sorry. I was referring to Exhibit
24 Number 3, Page 4, where they were discussing steam
25 production and thought that a number was there stated.

1 I see now that it is not.
2 Q. Do you know what the boiler capacity at Saint
3 Louis Park was rated at in pounds of steel per hour?
4 A. No, I do not.
5 Q. Were you generally acquainted with its
6 capacity to give an estimate of the range?
7 A. I would have been at the time. I do not now
8 recall the number, probably between 10,000 and 40,000
9 pounds per hour.
10 Q. Was water used from washing cleaning up in
11 the refinery, and in the treating area a source of
12 waste water at the Saint Louis Park facility?
13 A. Could you read the question, please?
14 (Whereupon the requested portion of the
15 record was read by the Court Reporter.)
16 A. I didn't understand the rereading.
17 Q. Would you like me to restate the question
18 again?
19 A. I would like you to clarify what went
20 immediately before and after the word "wastewater".
21 Q. I will make it a couple questions.
22 A. Please.
23 Q. Was there washwater used at Saint Louis Park
24 to clean up?
25 A. I would imagine so, yes.

Q. And was the disposition of that washwater into the trench and settling basin the ditch system?

A. I would expect that it would have been, yes.

Q. Would that washwater become, to some degree, contaminated from this use?

A. It would have picked up material if there had been any leaks or spills, yes.

Q. And would you know how often such wash water -- how often there was occasion to clean up?

A. No, I would not.

Q. What was the disposal of cooling water from the refinery?

A. I am not certain whether it was discharged into the trench or into the adjacent pond for recycle.

Q. Could both have been the practice at different times?

A. Yes.

Q. Do you know if used cooling water was ever injected back down a well at Saint Louis Park?

A. I do not know and I don't know why it would have been.

Q. Was that a practice at any other Reilly facility?

A. Definitely not.

Q. Do you know a figure for the volume of this

1 cooling water at the refinery?
2 A. No, sir, I do not.
3 Q. Could you provide an estimate of that?
4 A. No, I could not.
5 (At this time State of Minnesota Exhibit
6 Number 88 was marked for identification
7 by the Court Reporter.)
8 BY MR. SHAKMAN:
9 Q. I have a question directed to only one page
10 in here so I won't ask you to spend the time reading
11 the whole thing. Can you identify what's been marked
12 as Exhibit 88?
13 A. I can, that's the minutes or summary or
14 agenda similar to Document Number 3 of a plant managers
15 meeting, except in this case it was attended by all of
16 the refinery plant managers.
17 Q. I would direct your attention to Page 23
18 where there is a section entitled "Pitch Bay Control".
19 A. Yes.
20 Q. And your name appears there after the word
21 "summary"?
22 A. Yes.
23 Q. And "W. W. Roberts" after "Leader". Could
24 you explain what those two designations were?
25 A. Mr. Roberts was the plant manager at our

1 Renton, Washington plant.

2 MR. HINDERAKER: Excuse me.

3 A. Mr. Roberts was the plant manager at our

4 Renton, Washington plant and I don't now recall the

5 designations other than it appears to have been written

6 by me and that I would assume Mr. Roberts was to lead

7 the discussion.

8 Q. Would you look at the heading on that page "Tab

9 B Cooling" and it discusses cooling of pitch bay

10 Granite City and Saint Louis Park. Would you explain

11 the use of water in cooling bay pitch?

12 A. This would be the hard pitch that I earlier

13 referred to and was the residue or product at the

14 completion of the distillation that remained in the

15 still. This pitch then, when tested to meet the

16 softening point requirements, was pumped to the bays.

17 At the time of pumping it was quite viscus and pumpable

18 and very shortly began to harden and crust on the

19 surface to prevent a glomeration of the particles in

20 the box cars in which it was shipped, it was necessary

21 to assure that the pitch was cooling throughout its

22 depths of 12 to 18 inches in the bay. Generally we

23 tried to reduce the temperature by time or auxiliary

24 cooling to at or below 100 degrees Fahrenheit. This

25 became difficult in the summer so that sprays were

1 installed over the bay and water was sprayed in fine
2 droplets over the surface whereby in evaporating it
3 withdrew heat from the pitch.
4 Q. Where were the bays located in relation to
5 the Saint Louis Park refinery in that Minnesota exhibit?
6 A. It would have been this structure designated
7 "coal bays".
8 Q. Were these open pans?
9 A. Yes.
10 Q. What was the disposition of any water that
11 was left over from this cooling process?
12 A. I do not recall there having ever been any.
13 It generally was totally evaporated.
14 Q. How long did the pitch usually stay in the
15 bays?
16 A. I am not certain at Saint Louis Park if we
17 had two or three such pans. We would have operated so
18 as to cycle them. Had there been two pans it would
19 have been every other day, had there been three it
20 would have been every third day or slower if the
21 material had not cooled sufficiently.
22 Q. Was shipment by boxcar the only way that
23 product was sent from the plant?
24 A. Yes.
25 Q. Were tank cars ever cleaned at the Saint

1 Louis Park plant?
2 A. I do not know.
3 Q. Were tank cars the property of the railroads?
4 A. Yes, they were under lease to Reilly Tar &
5 Chemical.
6 Q. Who generally had the responsibility?
7 A. I am sorry.
8 Q. Please correct me?
9 A. The tank cars were owned by a leasing company
10 such as GATX and were released to Reilly Tar & Chemical.
11 They were not -- you were referring to tank cars or
12 boxcars?
13 Q. Tank cars.
14 A. The tank cars were owned by GATX and brought
15 into Reilly Tar & Chemical.
16 Q. Cleaning them was Reilly's responsibility?
17 A. That is correct.
18 Q. Do you recall company procedures for when and
19 where they should be cleaned?
20 A. I am aware of recent practices but do not
21 recall the occasions or practices during that time
22 period. We generally tried by heating, circulation and
23 aggitation to minimize the accumulation of solids which
24 would necessitate cleaning.
25 Q. Were they customarily cleaned with a hot oil

1 mixture?

2 A. Yes, which would have been recycled back into

3 the operation.

4 Q. I would like you to find again your affidavit,

5 Exhibit 72, if you could. I would like to direct your

6 attention to the bottom of Page 2 of that affidavit

7 where it says, "In later years commencing, 1940 -- 41."

8 A. Yes.

9 Q. You there stated the wet cut was condensed

10 off. How was that accomplished?

11 A. I would here have been referring to this

12 condensation in the coils and the condenser.

13 Q. Could you elaborate on that some more?

14 A. The water and/or wet cut is generated in the

15 stills by heat and comes across through a vapor line

16 into a pipe coil, emerged in water, which we referred

17 to as box condensers. The water surrounding the pipe

18 condenses the water and/or wet cut and it falls by

19 gravity into the receiving pan.

20 Q. Do I understand that condenser was called a

21 box condenser?

22 A. Box condenser.

23 Q. This was not used in that 1940 -- '41 period?

24 A. Oh, yes, it has always been used with tar

25 stills and this type of a batch still process. A

1 different type of condenser is used on a continuous
2 distillation operation.
3 Q. Is that something that was used at Saint
4 Louis Park, this different type of condenser?
5 A. I don't believe so.
6 Q. Would you look at that sentence in the
7 affidavit? I had read it to mean that it was only in
8 1940 and '41 and thereafter that wet cut was condensed
9 and treated before discharge. Could you clarify that
10 as to what was done with the wet cut before 1940 -- '41
11 and what were the changes then instituted?
12 A. I imagine this refers to the point in time
13 when a separator had been installed and this is the
14 treatment referred to.
15 Q. Was that the only change at that time?
16 A. Or it may be referring to the change or a
17 better practice of separation -- settling and
18 separation of the wet cut prior to discharge of the
19 water to the trenches.
20 Q. You say "it may". You are conjecturing as to -
21 A. I am. May I add to that on Page 3 the last
22 paragraph --
23 Q. I just note that you were adding to that
24 after conferring and Mr. Schwartzbauer. Go ahead.
25 A. Mr. Polack noted on the last paragraph, Page

1 3, it states that "A wood lined settling tank was
2 constructed near the wood treatment facilities in 1940
3 and '41."
4 Q. That's what's commonly called the settling
5 basin?
6 A. The wood lined settling basin.
7 Q. That's what you described yesterday with a
8 drawing on the board showing that it rose just slightly
9 above the level of the ground?
10 A. Yes.
11 Q. Could I note again that the witness and Mr.
12 Schwartzbauer have been conferring. I wanted to
13 question on Page 4 what the phenol extraction is there.
14 MR. SCHWARTZBAUER: He may not be
15 finished with his answer there.
16 A. Adding to my previous comment about the
17 settling basin, Mr. Schwartzbauer has reminded me of
18 discussions that we had learned that at one point
19 sometime during this period there was some washing of
20 this wet cut done with benzene or a similar solvent to
21 reduce the phenol content of the waste water. We are
22 uncertain of the process and the exact time frame.
23 Q. Apart from Mr. Schwartzbauer reminding you,
24 what are your sources of information on that process
25 that you just described?

1 A. Only hearsay from old time employees.
2 Q. Do you recall documents that address that
3 process?
4 A. I do not recall a specific document.
5 Q. Do you know employees now living who may know
6 more about that process than you do?
7 A. Mr. Horner.
8 Q. Was Mr. Hennessy with the company at the time
9 in 1938 and 1941?
10 A. Yes, he was, and he also may recall.
11 Q. I would ask you to go back to that question
12 before you added your response on Page 4. Phenol
13 extraction tank, what is that?
14 A. That is what I just referred to.
15 Q. You have already described it?
16 A. Yes.
17 Q. When you wrote this affidavit did you have
18 any greater information about that tank than what you
19 have just recounted to us here?
20 A. I evidently was referring to Exhibit E that I
21 mentioned.
22 MR. SHAKMAN: I just want to take a
23 moment off the record.
24 (At this time State of Minnesota Deposition
25 Exhibit 89 was marked for identification by

1 the Court Reporter.)
2 BY MR. SHAKMAN:
3 Q. Mr. Lesher, have you had a chance to look at
4 what has been marked as Exhibit 89?
5 A. I have.
6 Q. That's dated January 20, 1941 which was that
7 same reference in your affidavit, is it not?
8 A. I believe that is the letter to which I was
9 referring when I noted the phenol extraction tank.
10 Q. And that's a memo from Mr. H. L. Holstrom to --
11 is that M. Mitchell, is that the initial?
12 A. Malcolm Mitchell who was --
13 Q. Please go ahead.
14 A. Who was a chemical engineer located at Reilly
15 laboratories.
16 Q. And who was Mr. Holstrom?
17 A. He was, I think, at that time plant manager.
18 Q. And does this memo describe a phenol
19 extraction process as you were just discussing a moment
20 ago?
21 A. Yes, it does where the light distillate is
22 used to wash the water to remove or release phenol
23 content.
24 Q. Could you explain further what the first pan
25 vertical retort distillate reference there is?

1 A. I am unfamiliar with its exact chemical or
2 physical characteristics other than the words used
3 would indicate that it was the first low boiling
4 distillate off a vertical retort tar which was lighter
5 than horizontal retort coke oven tar and more similar
6 to water gas tar.
7 Q. Can you tell from this or your other
8 knowledge what temperatures you get that distillate at?
9 A. It would be the same temperatures to which I
10 earlier referred occurs on the distillation of coal tar.
11 Q. Which were briefly what?
12 A. The water cut would have been for -- in the
13 100 degree C range up to 120 to 130 degrees C and the
14 first pan or first cut would be receiving the receiving
15 pan following that.
16 Q. When Mr. Holstrom said, "We added to the tank
17 5,000 gallons of water," is that water the wet cut
18 water as you understand this?
19 A. I understand that he is referring to the wet
20 cut water, yes.
21 Q. And that's the one that he goes on to
22 reference as having a 1,900 parts per million phenol
23 concentration?
24 A. Yes.
25 Q. And after this process that was reduced to

1 337 parts per million, is that correct?
2 A. After the extraction process and before
3 settling, yes.
4 Q. So once the two were mixed together they
5 separated out we had two phases then. Can I call them
6 an oil phase and water phase?
7 A. Yes.
8 Q. Where did the water phase go as best you can
9 tell from this?
10 A. It went then to the settling tank where it
11 was further separated by gravity and the phenol in the
12 water was reduced then to 35 parts per million.
13 Q. Now, when you say "settling tank", is that
14 our familiar wood lined settling basin that has been
15 earlier discussed?
16 A. I do not know.
17 Q. Can you tell from this date of January 20,
18 1941 if that basin was completed at that time?
19 A. I do not know other than the first sentence
20 in the memorandum refers to the recent completion of
21 the settling basin.
22 Q. Settling basin -- settling tank would likely
23 be the same thing?
24 A. Yes.
25 Q. Could you determine if that 35 parts per

1 million reading reflects any dilution of that water
2 that went through this extraction process?
3 A. I don't know how it would be diluted.
4 Q. From your understanding of it, it's a
5 confined sample that was being discussed here?
6 A. That is as I interpret this report.
7 Q. Would you know what would be done with the
8 extracting medium after extraction?
9 A. I would expect it to have been recycled back
10 into the process, either into one of the products or
11 redistilled.
12 Q. Do you have any knowledge whether this type
13 of extraction was continued after this experiment with
14 it in 1941?
15 A. No, I do not.
16 Q. Or do you have knowledge whether there was
17 any similar process for treating the wet cut to remove
18 materials from it?
19 A. I know little more than this report.
20 Q. Was this type of treatment done at other
21 Reilly refineries?
22 A. Not to my knowledge. At a later date.
23 Q. It was done at a later date?
24 A. In my experience with Reilly, begining in
25 1954, I was not aware of this being done.

1 Q. When did you become aware of this?
2 A. When I first read this letter.
3 Q. Which was recently?
4 A. At the time of preparation of the affidavit.
5 Q. Is this type of process common in the tar
6 distilling industry?
7 A. Not to my knowledge.
8 Q. Was it at sometime in the past?
9 A. Not to my knowledge.
10 Q. Let me ask you to look at the answer to
11 Interrogatory 63. I notice R. J. Hennessy is the
12 person listed on this response. Would you also have
13 had some role in preparing that response?
14 A. I do not recall.
15 Q. Take a moment to look it over.
16 A. I have read Interrogatory Number 63.
17 Q. Do you recall anything more about your
18 providing the answer in this interrogatory?
19 A. I do not recall having participated in its
20 preparation and on reading I see nothing that differs
21 from my understanding.
22 Q. There is no mention in here of phenol
23 extraction tank as we were earlier discussing, is there?
24 A. No, there is not.
25 Q. So this would be consistent with your

knowledge that what was tried and discussed in Exhibit 89 was an experiment at that time?

MR. SCHWARTZBAUER: Excuse me. I object to that word. That's your word not his.

A. It was an experiment and installed and discontinued at some later date as reenforced by Mr. Holstrom's comment that we started to operate our extraction tank.

Q. That is a comment in that previous exhibit?

A. That is right.

Q. And that exhibit is the source of your knowledge of that tank, there is nothing more?

A. That is right.

Q. And you have something else, directing your attention back to Interrogatory 63, it there refers to a 61,000 gallon settling basin. Elsewhere there is reference to the settling basin being ten feet by 16 feet by 50 feet. Are those two figures consistent?

A. Would you repeat, please, the dimensions that you just referred to.

Q. 10 feet by 16 feet by 50 feet?

A. They seem to be consistent.

Q. As far as you know the settling basin that is said to be recently completed in that 1941 memo from Mr. Holstrom was the same settling basin that was at

1 Saint Louis Park over the years?

2 A. I think so and am unsure whether a different

3 one was installed at a later date.

4 Q. Is there something that gives you reason to

5 believe that a different one was installed later on?

6 A. I do not recall a specific item that would

7 substantiate that.

8 Q. Is there anyone, in addition to Mr. Hennessy,

9 who might know more about that?

10 A. Mr. Finch should be familiar with the process

11 used in the late '60's.

12 Q. Would you look at the answer to Part D of 63

13 on Page 49 of the interrogatories?

14 A. My comment a few minutes ago regarding

15 changes in the wastewater handling system would have

16 been occasioned by reference to a number of drawings

17 prepared at different times on improved wastewater

18 handling and of which I am not sure were installed.

19 Q. Do you recall the time period in which those

20 drawings were prepared?

21 A. I believe in the late '50's and the '60's.

22 Q. And at whose direction were they prepared?

23 A. I do not know.

24 Q. They were prepared specifically in regard to

25 Saint Louis Park though?

1 A. Yes, I believe it was on the occasion of the
2 extension of Louisiana Avenue.
3 Q. Looking at 3 D.
4 A. D.
5 Q. States, Separator design to handle 800
6 gallons per minute with a settling time of one hour.
7 What does "settling time" mean?
8 A. That the flow through the settling basin was
9 such that it was equivalent to a settling time of one
10 hour.
11 Q. What would be achieved in the one hour?
12 A. This reference to settling time I believe
13 means that in that time period there would have been a
14 separation of the oils to the levels for which it was
15 designed.
16 Q. What then is meant by "excellent settling" in
17 the next line where it says, "The test showed excellent
18 settling in one-half hour"?
19 A. I read that to mean that prior to
20 construction the engineer using standard tables sized
21 the unit to handle 800 gallons per minute at one hour.
22 After construction, although the flow rate isn't
23 indicated, they apparently achieved better than
24 expected settling in one-half hour and that at normal
25 flows --

1 Q. Let me stop you there before you get to the
2 next sentence, if I may, and just ask "excellent
3 settling" then means something better than the settling
4 for which it was designed?
5 A. It was designed and expected settling, yes.
6 Q. I am going to ask what the normal flows
7 represent in the following sentence?
8 A. I do not know.
9 Q. Did you have something further you wanted to
10 add when I interrupted you to inquire about normal
11 flows?
12 A. I don't believe so.
13 Q. Do you know what the settling design was for
14 this separator?
15 A. No, I do not.
16 Q. Would you be able to locate the drawings that
17 you referenced in regard to Saint Louis Park for
18 another separator?
19 A. In the sense that if I went through all the
20 drawings that are available I might find them. They
21 would have been in the package which you have examined.
22 Q. Do you have those in that package of
23 documents we earlier discussed that you reviewed in
24 preparation for your deposition?
25 A. Yes.

1 MR. SHAKMAN: I would like to renew my
2 request for the opportunity to inspect that.
3 MR. SCHWARTZBAUER: Carl, he is asking
4 you whether you reviewed those documents, those
5 drawings, in preparation for your deposition.
6 THE WITNESS: I may have misunderstood.
7 MR. SCHWARTZBAUER: Okay.
8 MR. SHAKMAN: I am not agreeing with --
9 THE WITNESS: I did not necessarily go
10 through those documents immediately prior nor during
11 the preparation of the answers to this interrogatory.
12 BY MR. SHAKMAN:
13 Q. But you do remember that they were in that
14 book that you had?
15 MR. SCHWARTZBAUER: Excuse me. By "book
16 that you had," you asked him a few minutes ago about a
17 packet of documents that he reviewed in reparation for
18 this deposition.
19 MR. SHAKMAN: I simply want to know
20 whether those drawings are among the things that he
21 reviewed in preparation for this deposition.
22 A. I misunderstood. I did not review any
23 drawings in preparation for this deposition. I was
24 referring to the fact that over the last several years
25 at one time or another I have leafed through some of

1 the drawings that we have had in the files on the Saint
2 Louis Park plant and I think I may have seen some
3 drawings on improvements to the plant wastewater system.
4 Q. Did you make that review prior to preparing
5 your affidavit, Exhibit 72?
6 A. I think so, yes.
7 MR. SHAKMAN: I would suggestion we take
8 a 10 minute break here.
9
10 (At this time a recess was taken.)
11
12 BY MR. SHAKMAN:
13 Q. Back on Minnesota Exhibit 89, you earlier
14 noted that there was a reduction in phenol measurement
15 from 337 parts per million, after the extraction
16 process described there, to 35 parts per million in the
17 settling tank?
18 A. Yes.
19 Q. Now, is your assumption that there wasn't any
20 dillution that would account for that, is that correct?
21 A. That is correct.
22 Q. Do you understand then that that settling
23 tank -- that settling basin was designed so as to
24 remove dissolved materials?
25 A. No, I don't believe that it would have been,

1 and on reconsidering I would concur with you that the
2 water from the extraction tank was discharged into the
3 settling basin or tank and mixed with water from other
4 sources and, therefore, may have been diluted.
5 Q. I ask you to refer to an exhibit that was
6 marked yesterday, a memo from F. J. Mootz to T. J.
7 Reilly.
8 A. Yes.
9 Q. What was Doctor Mootz' position in March of
10 1967?
11 A. I believe at that time his title was director
12 of long range planning.
13 Q. Did he work in the engineering lab then?
14 A. No, he remained at the corporate main office.
15 Q. Take a look at the third paragraph there that
16 begins with the words "the pond".
17 A. Yes.
18 Q. It states, "The pond has not been cleaned in
19 20 years and it now has limited capacity because of the
20 six to eight feet of sludge in the bottom." That's the
21 end of the quotation. Do you have any reason to
22 believe that that first statement, "The pond has not
23 been cleaned in 20 years," is not correct?
24 A. No, I do not.
25 Q. Do you have any reason to disagree with the

1 second page that it now has six to eight feet of sludge
2 in the bottom?
3 A. No, I do not.
4 Q. Did you in fact observe that amount of sludge
5 on your visits during 1967 or '68 to the site?
6 A. I do not specifically recall observing it.
7 Q. Observing the basin at all. Do you recall
8 observing the basin at all?
9 A. I do recall observing the basin, but I do not
10 recall observing and estimating the depth of sludge.
11 Q. How effective would that basin have been at
12 times when it had six to eight feet of sludge in the
13 bottom?
14 A. I am unfamiliar with the design and placement
15 of the baffles which would be one of the determining
16 factors.
17 Q. Regardless of the placement of the baffles,
18 would that amount of sludge have reduced its
19 effectiveness?
20 A. It would have reduced the settling time and
21 increased the flow rate through the settling basin so
22 that it probably would not have been as effective as it
23 would have been without the sludge.
24 Q. This has previously been marked as Minnesota
25 Exhibit 50. Have you had a chance to read through

1 Minnesota Exhibit 50?
2 A. I have.
3 Q. Is that your memo to Mr. P. E. White of May
4 14, 1968?
5 A. It is.
6 Q. And was Mr. White the refinery superintendent
7 at that time?
8 A. I believe that he was.
9 Q. At that time had you become the general
10 manager for the refinery division?
11 A. I am unsure of the exact month in 1968 when
12 the change occurred.
13 Q. If you were not yet general manager you were
14 production manager?
15 A. Yes. I would guess that I was general
16 manager in as much as I had not marked a copy for Mr.
17 Ryan.
18 Q. Does the statement at the beginning of the
19 second paragraph, "Reference to the files will indicate
20 that the plant does have crude of settling basin
21 installed some years ago." Does that refresh your
22 memory any further as to my earlier question about
23 whether the settling basin was ever replaced over the
24 years?
25 A. I would conclude from this that in 1968 it

had not been replaced recently before that.

Q. You state in the last sentence of that paragraph that when you observed it the last week, and I quote, "The level of solids in the settling basin was quite high." Was that a correct recollection as you remember it?

A. I still do not recall the specific visual observation of solids in the settling basin but would assume from my writing this that I thought at that time they were quite high.

Q. You also wrote, "The condition of the baffling system in the pond is questionable." What did you mean by that?

A. I do not now recall what I meant by that, other than perhaps the solids were at or near or interferes with the baffle operation.

Q. Was it your understanding in the construction of the basin there was a high baffle to catch the lighter materials and another baffle lower down for the heavier materials?

A. I do not recall the actual construction of the basin.

Q. Would you assume from your knowledge of basins of that type that that's how it would have been designed?

A. It normally should have been so designed and I believe Mr. Hennessy, in his answer to Interrogatory Number 63, referred to pumps for both the light and the heavy oil.

Q. So if it had a high level of solids would you have been able to see a lower baffling at the bottom of the basin?

A. I do not know the height of the baffle nor if it should normally have been visible.

Q. You noted in an earlier sentence, the second sentence in the paragraph, that "This was originally equipped with baffles." What did you mean by "originally equiped"?

A. I do not now know exactly what I was referring to.

Q. How could the presence of solids affect the baffling system?

A. Only from experience as an engineer if the solids were at or above the bottom baffle there would be no space in front of the baffle to collect heavy oils or if they were at or near the top baffle they would interfere with the flow through the pond or basin.

Q. If solids were up to the top baffle wouldn't it be the case that the material would move through relatively rapidly with little treatment?

1 A. I would imagine that if the solids were at
2 the bottom of the top baffle that the water would be
3 overflowing somewhere.
4 Q. You go on in that second paragraph in the
5 last sentence to say, "The visual appearance and
6 quantity of oil going out of the plant was terrible."
7 Was that a correct statement as you remember it?
8 A. I do not recall the appearance of the waste
9 water nor if I was merely trying to emphasize that it
10 needed improvement.
11 Q. Was it your habit in your memorandum to
12 exaggerate and describe things other than they were in
13 order to motivate people to improve them?
14 A. I believe that on occasion I would use a
15 descriptive term like that to try to motivate them, yes.
16 Q. You can't recall here whether this is an
17 honest appraisal or one with an exaggeration?
18 A. I do not recall the incident, no.
19 Q. Do you recall anyone else besides Mr. White
20 who might have been with you on that inspection?
21 A. I do not recall the inspection.
22 Q. I would also like to direct your attention to
23 the last paragraph where it mentioned contaminated
24 water originating at the tar cistern. It mentions
25 water overflows from the cistern onto the yard. You

1 had earlier testified that the cistern was covered and
2 wouldn't get rain water. Is your recollection of that
3 cover changed any by the comments written in this memo
4 here?
5 MR. SCHWARTZBAUER: I think he was
6 talking about tanks when he testified.
7 BY MR. SHAKMAN:
8 Q. Correct me if I you think I misquoted your
9 testimony.
10 A. I believe I was referring to tanks but the
11 cistern at one time had a cover, I don't recall its
12 integrity, but I believe that this may have occurred.
13 Q. You have no reason to believe your
14 description here isn't correct for what you observed at
15 the time?
16 A. No.
17 Q. And do you think the cover was did he
18 temporary your rated Oregon for the cistern?
19 A. I do not recall its condition at that time.
20 Q. Could you identify what has been marked as
21 Minnesota Exhibit 23?
22 A. It appears to be a confirming work order
23 request after work had begun on improvements and
24 renovation as to the wastewater handling system.
25 Q. Was this a response by Mr. White to your memo

1 that we previously looked at, Exhibit 50?
2 A. I would believe so, yes.
3 Q. Were the items in this work order all ones
4 that you had recommended to Mr. White?
5 A. I do not now recall.
6 Q. The first sentence mentions both you and Mr.
7 Hennessy's making recommendations. Do you recall
8 discussing this with Mr. Hennessy?
9 A. No, I do not.
10 Q. Do you recall anything of Mr. Hennessy's
11 involvement with these particular matters?
12 A. At that time and in my position I would have
13 discussed such things with Mr. Hennessy who represented
14 the engineering department.
15 Q. What was Mr. G. A. Reilly's role with the
16 company at that time? I note that he is included in
17 the "cc's" here?
18 A. I am not certain of his exact dates but by my
19 marking that I would believe that he was at that time
20 vice-president and general manager of the of the wood
21 preserving division.
22 Q. Is that "cc" that's handwritten from Mr.
23 G. A. Reilly and Doctor F. Mootz, is that your writing?
24 A. It is.
25 Q. Do you recall why you would have wanted

1 either one of those gentleman to see this?
2 A. Because Mr. Reilly was vice-president and
3 general manager of the Wood Preserving Division and had
4 an interest in the operations at Saint Louis Park and
5 Doctor Mootz had been a general manager and retained an
6 interest in what was happening at the plant.
7 Q. Would you regularly have referred matters
8 involving cash outlays of $2,300 such as this to Mr.
9 Reilly and Doctor Mootz?
10 A. Not on a regular basis, no.
11 Q. On the second page it mentions "cleaning
12 separator". Would you locate that section?
13 A. I do.
14 Q. Do you see where it says, "Dumping Hershal
15 dumpster 50 loads at $25 a load"?
16 A. I do.
17 Q. Would you have an estimate of how much
18 material was planned to be removed from that statement
19 of 50 loads at $25 a load?
20 A. I could not estimate, no.
21 Q. You had no reason to question that at the
22 time though?
23 A. No.
24 Q. And this already had your approval, did it
25 not, already work underway?

1 A. It would appear from the wording, yes.
2 Should I read this totally or do you intend to
3 concentrate on some particular points?
4 MR. POLACK: You had better read it all.
5 BY MR. SHAKMAN:
6 Q. Why don't you read it through?
7 A. All right.
8 Q. Do you recognize Exhibit 51 as your memo to
9 Mr. P. C. Reilly of May 23, 1968?
10 A. I do.
11 Q. In the first paragraph of that memo there is
12 reference to you and Mr. George Reilly attending a
13 meeting at Saint Louis Park on May 9. From that
14 reference and the date of Exhibit 50, which was your
15 memo of May 14, would you look back at that? Do you
16 believe that was the same trip to Saint Louis Park as
17 referenced in Minnesota 50?
18 A. I would assume so.
19 Q. Mr. Reilly was with you, Mr. George Reilly?
20 A. I would so understand from my memorandum.
21 Q. Would you turn to the second page and look at
22 the third full paragraph there, the one that begins,
23 "Wastewater handling is the other major problem."
24 A. Yes.
25 Q. Was that your view at the time, that wastewater

1 handling was a major problem?
2 A. In the sense that we were receiving
3 complaints from other people, yes.
4 Q. Was that the only thing that would occasion
5 you to evaluate wastewater discharge?
6 A. I believe so.
7 Q. You go on in that paragraph saying, "Mr.
8 Reilly and I both mentioned that at the time of our
9 observation the settling basin operation was in poor
10 condition." Do you now recollection anything further
11 about Mr. Reilly being with you on that visit to
12 inspect the settling basin?
13 A. I do not remember the incident but in as much
14 as I wrote the letter I would assume that he had been
15 with me.
16 Q. Is that a correct statement, that the
17 settling basin operation was in poor condition?
18 A. I do not recall visually observing the basin
19 at that time but I have no reason to doubt my writing.
20 Q. Is the next clause accurate, the one that
21 states, "The entire visual site of the ditch and area
22 along Walker Street was essentially poor with oil and
23 tar quite evident"?
24 A. I do recall that.
25 Q. Do you recall seeing the ditch as it went to

1 the south of Walker Street?
2 A. Yes.
3 Q. Then would that same description cover that
4 stretch of the ditch as well?
5 A. Yes.
6 Q. The last sentence of the paragraphs states, "At
7 the time we noted it was full of settled oil and boiler
8 solids." Is that an accurate statement?
9 A. I would so assume, yes.
10 Q. The sentence goes on, "And the baffles were
11 broken." Is that also accurate?
12 A. I would so assume, yes.
13 Q. Would a basin in that condition have had any
14 effectiveness in settling out materials for which it
15 was designed?
16 A. No, it would not.
17 Q. You go on in the next paragraph to state that,
18 "The plant this week is taking steps to clean and
19 repair the settling basin, to install straw baffle."
20 Was there prior to that time, to your knowledge, a
21 straw baffle in the open ditch at Walker Street?
22 A. I do not remember the date of installation of
23 the first straw baffle.
24 Q. Was that something that you recommended they
25 do?

1 A. I do not recall who recommended it.
2 Q. Mr. Finch referred to use of marsh hay and
3 this is straw. To you is there any difference between
4 those two materials, straw and marsh hay?
5 A. I am unfamiliar with marsh hay but different
6 fibers have different performance characteristics in a
7 straw filter of this type.
8 Q. At that time what would have been the
9 preferable kind of fibers to use?
10 A. I would have to refer to our engineering file
11 notes on the effectiveness of the different type straws
12 or hay.
13 Q. Would such file notes have been in existence
14 back in 1968 when you wrote this memo?
15 A. I believe so.
16 Q. And would that have been something Mr.
17 Hennessy would be familiar with?
18 A. I believe he would.
19 Q. Who else at that time would know about about
20 that?
21 A. I am not sure who else, and as has been noted
22 on the work order request 215 B, it was written with a
23 specification that the engineering department be
24 involved in the design of the straw filter, the second
25 page top.

1 Q. That's Exhibit 23 you are referring to?
2 A. Yes, it is.
3 Q. Going back to Exhibit 51 on the 3rd page,
4 your letter continues, "These are slight and simple
5 improvements and should not be considered as steps in
6 an overall sollution to the problem." What did you
7 consider to be the steps for an overall sollution?
8 A. That the engineering department survey the
9 site and properly prepare and design a long range
10 overall plan.
11 Q. Did you have an idea what that long range and
12 overall plan should include?
13 A. Not specifically, no. I was delegating that
14 to the engineering department.
15 Q. Had you been urging the preparation of such a
16 plan for some time prior to May of '68?
17 A. I would so assume from the wording of my
18 memorandum.
19 Q. Had you received a response to your earlier
20 request?
21 A. I evidently had not received a response at
22 this date.
23 Q. Do you know why?
24 A. No, I do not.
25 Q. Could you identify Minnesota Exhibit 55?

1 A. That appears to be a letter from Mr. Finch to
2 Mr. Justin with a copy to Mr. W. H. Barton dated July
3 23, 1969.
4 Q. Who is Mr. Barton?
5 A. He was, I believe at that time,
6 superintendent of the treating plant.
7 Q. At Saint Louis Park?
8 A. At Saint Louis Park.
9 Q. The first sentence refers to an inspection
10 Mr. Finch made with you. By this time now were you
11 general manager?
12 A. Yes.
13 Q. And had Mr. Justin assumed Mr. White's role
14 at Saint Louis Park?
15 A. I would so assume.
16 Q. Did you find Mr. Justin more effective than
17 Mr. White in these matters concerning waste water
18 problems?
19 A. I have difficulty in comparing and would
20 recall that they were equally effective.
21 Q. In the first of the four numbered items in
22 Exhibit 55 Mr. Finch says, "Items noted with your
23 inspection include setting up a program change at this
24 straw filter," end quote. What is meant by that?
25 A. I would interpret the wording to indicate

1 that we observed dirty straw in the filter and that Mr.
2 Finch was directing Mr. Justin to either adjust his
3 program to change the straw at earlier intervals or
4 inspect at earlier intervals to determine if a change
5 were required.
6 Q. Does "program change" mean a regularly
7 scheduled activity?
8 A. I would so interpret that, yes.
9 Q. No mention is made of the straw filter that
10 you had asked to be installed at the ditch in the
11 correspondence with Mr. White. Do you recall that the
12 program was for that straw filter?
13 A. No, I do not.
14 Q. In Item 3 Mr. Finch relates that during your
15 inspection "Water does not seem to be flowing freely
16 through the culvert", end of quotation. Do you recall
17 what was causing the blockage in that culvert under
18 Walker Street?
19 A. No, I do not.
20 Q. Is that a recurrent problem in Saint Louis
21 Park?
22 A. I do not remember.
23 Q. Do you remember any other time it was a
24 problem?
25 A. No, I do not.

1 Q. Among the personnel in charge of Saint Louis
2 Park, who would have the primary responsibility for
3 wastewater handling in the settling basin?
4 A. I am not sure. It would depend upon the
5 point in time and the personnel working at the plant.
6 If your question pertains to this memorandum I would
7 interpret that to mean that Mr. Finch was directing Mr.
8 Justin to do these things.
9 Q. I notice Mr. White appeared to be the person
10 with the preparation on the prior work order we looked
11 at. Was I justified in the conclusion that you looked
12 more to the refinery superintendent than the treating
13 superintendent?
14 A. Not necessarily. I believe that the specific
15 individuals would have determined which at that time
16 was responsible for the wastewater handling.
17 Q. Do you recall if the ditch at this time was
18 black and dirty as it had been during your 1968
19 inspection?
20 A. I do not recall.
21 (At this time State of Minnesota Deposition
22 Exhibit 90 was marked for identification by
23 the Court Reporter.)
24 BY MR. SHAKMAN:
25 Q. Mr. Lesher, you are being given Exhibits 90,

1 91 and 92, they are all within --
2 MR. POLACK: Just a minute, Steve. We
3 don't have them all yet, Steve.
4 A. Walker Street clean up is Number 91.
5 Q. Saint Louis Park Housekeeping, July 20, 1970.
6 MR. POLACK: Is number which?
7 MR. SHAKMAN: 90.
8 A. Then I next received Walker Street clean up.
9 Q. That's 91. And the one dated August 12 is
10 going to be 92 because they all relate to the same
11 period of time. I would ask you to read through them
12 all if you would.
13 (At this time State of Minnesota Deposition
14 Exhibits 91 and 92 were marked for
15 identification by the Court Reporter.)
16 BY MR. SHAKMAN:
17 Q. What has been marked as Minnesota Exhibit 90
18 appears to be your memo to Mr. H. L. Finch dated July
19 29, 1970. Do you recognize that as your memorandum?
20 A. Yes, I do.
21 Q. And Minnesota Exhibit 91 appears to be
22 another internal memo from Mr. Finch to you dated
23 August 11, 1970. Do you recognize that as such?
24 A. I do.
25 Q. And the final memo is from you to Finch dated

1 August 12, 1970. That's Exhibit 92, do you also
2 recognize that?
3 A. I do.
4 Q. Looking at Minnesota Exhibit 90, your memo to
5 Mr. Finch of July 29, 1970, the third paragraph in
6 there reads, I quote, "We wish you to take steps to
7 clean-up, beautify, and maintain the area along the
8 south fence, between Walker Street and your first track
9 including your ditch before and after the straw filter."
10 It continues in the fifth paragraph to say that, "The
11 ground along the waste ditch and between the road and
12 track is quite rough and tar covered." Do you recall
13 that to be an an accurate description of its appearance
14 at the time of this memorandum?
15 A. Yes, I do.
16 Q. To what did you attribute it being in that
17 condition?
18 A. I don't know whether it was washed down by
19 runoff or deliberately sprayed and compacted for
20 stablization.
21 Q. What would have been sprayed and compacted if
22 that were the case?
23 A. The ground as you would treat a road.
24 Q. With what product?
25 A. Road tar.

1 Q. Was that being done on the plant site in 1970?
2 A. I do not know.
3 Q. Was that a regular practice at plants at that
4 time?
5 A. It had been a very common practice throughout
6 the operation of the coal tar refineries and treating
7 plants.
8 Q. Would that be regular commercial product or
9 only materials that weren't commercially useful to the
10 industry?
11 A. Either.
12 Q. Do you know why you have highlighted the area
13 along the stump fence as the area you wanted improved?
14 A. I believe that it was adjacent to the road
15 going by the plant and was poor in appearance.
16 Q. You ask in the fifth paragraph that, "This
17 whole area might be graded with a bulldozer,
18 principally both to level and to remove the unsightly
19 contaminated surface." It goes on to explain that you
20 then wanted it covered. What was the advantage of the
21 grading over, simply placing the cover over it?
22 A. With my reference to leveling, I would assume
23 I was wanting it to be more flat or level.
24 Q. For what benefit?
25 A. So that it would appear more visually

1 acceptable.
2 Q. Your memo said, "To remove the unsightly
3 contaminated surface." What was to be done with the
4 material removed?
5 A. Piled somewhere else.
6 Q. You mentioned a cash outlay in that paragraph
7 of $1,000 to $1,500. Is that an amount that was beyond
8 what Mr. Finch could authorize without approval from
9 here?
10 A. Yes, it was.
11 Q. Down in the last paragraph of that page you
12 emphasize that you had to get "results very rapidly"?
13 A. Because there must have been something in Mr.
14 Cherch's letter of July 24th.
15 Q. The one referenced in the opening paragraph?
16 A. Correct.
17 MR. COYNE: Excuse me, Carl, I would
18 appreciate it if you wouldn't smoke because I am
19 getting nauseous at this point.
20 (At this time a discussion was held off the
21 record.)
22 BY MR. SHAKMAN:
23 Q. What was raised in Mr. Cherch's letter?
24 A. I do not recall.
25 Q. On the second page there is a "PS". Would

1 you look at that? It states, "There is a ditch as you
2 proceed up the hill that had been used as a trash dump."
3 Could you identify on the Minnesota Exhibit 9 the
4 location you had in mind there?
5 A. I do not recall the exact location but I --
6 Q. Or if you refer on Reilly Exhibit 3, which is
7 an aerial photo of a larger --
8 A. I would expect its referring to this area in
9 here.
10 Q. The area at the end of Walker Street, the
11 southwest corner of the property?
12 A. Yes. Can one of you more familiar with Saint
13 Louis Park confirm that this is a hill there?
14 MR. SCHWARTZBAUER: I can
15 (At this time a discussion was held off the
16 record.)
17 BY MR. SHAKMAN:
18 Q. Do you recall any other problems with
19 outsiders dumping materials on the Reilly site?
20 A. No, not other than the city dumping water
21 onto the property.
22 Q. Are you aware of a dump area used by the
23 company at the north end of the site?
24 A. I am not exactly familiar with such a dump
25 area.

1 Q. Are you at all familiar with it?
2 A. No.
3 Q. Do you recall any request during Mr. Finch's
4 tenure for appropriations to clean up the north end of
5 the site?
6 A. No.
7 Q. I would ask you to look at the next exhibit
8 that's been marked Minnesota Exhibit 91. Is this Mr.
9 Finch's reply to your July 29th memo, Exhibit 90?
10 A. It would appear so, yes.
11 Q. In the second paragraph he says, "The area is
12 rather extensive, which has was brought into focus
13 quite pointedly when fill is hauled in." Do you recall
14 how large an area this was?
15 A. No, I do not recall the exact dimensions.
16 Q. Could you estimate from the cash outlay of $1,0
17 to $1,500?
18 A. I would have difficulty.
19 Q. Turning to the --
20 A. I believe you have photographs that show
21 those changes.
22 Q. That's the photograph referenced in the last
23 line of Exhibit 91?
24 A. Yes.
25 Q. I am not presently aware whether we do have

1 that one or not. On Exhibit 92, the first sentence,
2 this must be your response to the photograph, is it not?
3 A. I believe so.
4 Q. You were satisfied with the work that was
5 done?
6 A. Apparently.
7 Q. Was this work entirely of a causmatic nature?
8 A. Yes.
9 Q. Do you know if by 1970 any work had proceeded
10 on your request to the engineering department in
11 Minnesota Exhibit 51 that was a request for a, if I may
12 find that exhibit, an overall solution to the problem?
13 A. Only as I had previously thought that I had
14 recalled seeing drawings in our drawings files.
15 Q. You mentioned drawings of the basin, is that
16 what you had in mind?
17 A. No. I recall plant -- total plant layout
18 drawings, I believe.
19 Q. Do you recall what changes those drawings
20 envisioned apart from the basin or separator?
21 A. No, I do not.
22 Q. And to your knowledge those drawings should
23 be preserved to date?
24 A. I believe so.
25 (At this time State of Minnesota Deposition

1 Exhibit 93 was marked for identification by
2 the Court Reporter.)
3 BY MR. SHAKMAN:
4 Q. Have you had a chance to read the page marked
5 as Minnesota Exhibit 93?
6 A. I have.
7 Q. That is a handwritten page dated July 27,
8 1970, isn't it?
9 A. It is.
10 Q. Would you recognize that as Mr. Boyle's
11 handwriting?
12 A. I don't recognize the handwriting of the body
13 of the letter although the note on the side seems to be
14 by Mr. Boyle's.
15 Q. Are those his initials?
16 A. Yes.
17 Q. And you are referenced in that note on the
18 side, are you not?
19 A. I didn't think so.
20 Q. The one that says 7-28-70. My Xerox is cut
21 off slightly, but to me it reads "7-28-70 Mr. Lesher to
22 handle four items".
23 A. I do now see what appears to be the bottom
24 half of my name.
25 Q. Do you recall the matters which are discussed

1 in this document?
2 A. No more than I believe they were included in
3 one of my -- strike that if I can. No, I did not
4 recognize it.
5 Q. Does the date of July 27, '70 in your earlier
6 references to the Saint Louis Park City Manager's
7 letter of July 24th help you place this in any context?
8 A. It appears to be about the same time.
9 Q. I notice the first word is "preamble". That
10 suggested to me some type of presentation?
11 A. I am not familiar with any presentation.
12 Q. There are four items that the note on the
13 left said were to be handled by you, they are denoted
14 by an "X" according to that note. Do you see four such
15 items marked with an "X"?
16 A. I do.
17 Q. Starting at the top, the first one says,
18 Clean out API separator." Do you recall if the
19 cleaning that you had approved in the work order from
20 Mr. White that we had earlier seen, if that cleaning
21 complied satisfactorily?
22 A. I do not recall.
23 Q. From your knowledge of the plant and these
24 separators it could very well be that two or three
25 years earlier it had been cleaned out and it again

1 needed cleaning, could it not?
2 A. Very easily.
3 Q. Does the use of the phrase "API separator"
4 suggest to you that there has been some change in that
5 settling basin in your 1968 visit there?
6 A. Not necessarily since it was written by Mr.
7 Boyle. I am unsure that he would have appreciated the
8 difference.
9 Q. You mentioned insurance. What were his other
10 areas in which he worked for the company?
11 A. He was secretary to the corporation with
12 responsibilities in insurance, workman's compensation
13 and general personnel matters.
14 Q. In his next line he says, "Provide clean
15 straw for filters at all times, may require redesign."
16 Do you know what consideration of redesign was
17 undertaken at that time?
18 A. I do not know the occasion nor the basis or
19 reasons for this memorandum.
20 Q. Do you recall discussions at that time of
21 redesigning filters?
22 A. No, I do not.
23 Q. The next item assigned to you, "Clean up
24 ditch along Walker Street and line leading to it."
25 Does that appear to be the work that was covered in

1 those three memorandum between you and Mr. Finch,
2 Exhibits 90 through 92?
3 A. It could be.
4 Q. What would "clean up line leading to it" mean?
5 A. I do not know.
6 Q. Could that be the tile they referred to as a
7 line, tile from the --
8 A. It very likely may be that.
9 Q. How would you clean a tile if it clogged up?
10 A. With a Roto Rooter type instrument or dig it
11 up in sections.
12 Q. Do you know if either of those were done at
13 Saint Louis Park around this time?
14 A. No, I do not.
15 Q. Item 8 has also an "X" before it. It says,
16 "Appointment to be in charge of this work. Bill Justin,"
17 question mark. Do you recall responding to that item?
18 A. No, I do not.
19 (At this time State of Minnesota Deposition
20 Exhibit 94 was marked for identification by
21 the Court Reporter.)
22 BY MR. SHAKMAN:
23 Q. Do you recognize what has been marked as
24 Minnesota Exhibit 94?
25 A. I do.

1 Q. Is it a memo from Bill Justin to R. J.
2 Hennessy of November 9, 1970 on which you were copied?
3 A. Yes.
4 Q. Mr. Justin describes a test in the memo.
5 What do you understand to be the objective of that test?
6 A. It appears to be a rough test to determine
7 settling time of the water going into the settling
8 basin which was then in use for the purpose of
9 designing a new settling basin.
10 Q. What is the material he is sampling?
11 A. The water being pumped from the sump adjacent
12 to the settling basin into the settling basin.
13 Q. So that would have been waste water from all
14 over the plant?
15 A. That is right.
16 Q. In the last two lines of that first paragraph
17 he says, "We will be able to please the City's
18 requirements of a maximum of 100 parts per million oil."
19 Are you acquainted with the requirement he is writing
20 of there?
21 A. Only that those were generally the levels of
22 these materials at that time that were discussed.
23 Q. Do you know who he means by " the cities,
24 c-i-t-i-e-s"?
25 A. The City of Saint Louis Park's

1 representatives.

2 Q. And to your knowledge there was not a concern

3 about State standards at this time?

4 A. No.

5 Q. He states in the last sentence of the memo

6 that he had an initial sample of 110,000 parts per

7 million. He thought that an average of approximately

8 5,500 parts per million would be more representative.

9 Would you agree that that number, 5,500 parts per

10 million oil would be representative of the waste water

11 at the plant at that time?

12 A. I do not recall the results of any analysis

13 at that time.

14 Q. I may have misread that letter. Perhaps in

15 the last paragraph he is not talking about the wastewater

16 but he is talking bought samples from Number 27 storage

17 tank, the wet cut?

18 A. That is correct. The second paragraph where

19 he refers to that storage tank.

20 Q. Let me ask my question again with reference

21 to wet cut material. Would an average of 55 parts per

22 million oil be representative in your view?

23 A. I do not know the conditions or occasion that

24 pertained at that time at Saint Louis Park.

25 Q. And from your knowledge and experience in the

1 company tar refining are you able to make a statement
2 as to what a representative amount of oil in the wet
3 cut would be?
4 A. It is higher than I would have expected.
5 Q. What would you have expected?
6 A. 1,000 to 2,000 parts per million
7 Q. To expedite things let me note that I have
8 only a question about a phenol figure near the top of
9 of the second page of Reilly Tar Exhibit 6.
10 A. Okay.
11 Q. Reilly Tar Exhibit 6 is a document from the
12 Minnesota Pollution Control Agency Division of Water
13 Quality, titled, "Report on Waste Disposal of Republic
14 Creosote Company, Reilly Tar & Chemical Company, April
15 of 1970." Directing your attention to the bottom
16 paragraph of the page, the last complete sentence it
17 says, "Surface water flows across the company property
18 from north to south and leaves the property at a
19 culvert at Walker street at the south end."
20 MR. SCHWARTZBAUER: I am sorry, where is
21 that?
22 MR. SHAKMAN: First page.
23 THE WITNESS: The first page the last
24 sentence.
25 BY MR. SHAKMAN:

1 Q. "At this point the effluent of the oil
2 separator combines with any surface water runoff."
3 Then it goes on in the next paragraph to describe where
4 the water flows and then states that laboratory
5 analysis were obtained on this flow just above the
6 culvert, phenol concentrations on April 14 and 18 were
7 150 to 1,100 milligrams per liter respectively. My
8 question would be, would you have any reason to think
9 that those phenol concentrations were not
10 representative of the flow from the plant at that time?
11 A. No.
12 (At this time State of Minnesota Deposition
13 Exhibit 95 was marked for identification by
14 the Court Reporter.)
15 MR. POLACK: Can you read that, Carl?
16 THE WITNESS: I am stumbling through it.
17 BY MR. SHAKMAN:
18 Q. If you can make it through the first few
19 paragraphs that's what I am going to focus on.
20 (At this time a discussion was held off the
21 record.)
22 BY MR. SHAKMAN:
23 Q. You have been given what has been marked as
24 Minnesota Exhibit 95. I believe this is also Exhibit D
25 to your affidavit. I was going to read the top but my

1 copy is too blurred, I don't know if I can. It's a
2 Minnesota Department of Health document entitled, "Report
3 on Investigation of Disposal of Waste at Republic
4 Creosoting, Saint Louis Park, Minnesota, May 1938." I
5 want to direct your attention to the second paragraph
6 that begins, "A Survey of the Waste Production". Have
7 you read through that paragraph?
8 A. I have.
9 Q. In the first sentence the author estimates
10 that approximately 6,000 gallons of water are
11 discharged to the swamp weekly. Would you have an
12 opinion as to whether that figure was correct as of the
13 time of this report?
14 A. This was prior to my joining the company and
15 I have no reason to question the item.
16 Q. Are you aware of any estimates made by the
17 company at that time what the discharge was?
18 A. No, I am not.
19 Q. Any estimates at any time of the overall
20 discharge from that plant?
21 A. I believe that I recall estimates at some
22 time or other having been made involving the operation
23 of the settling basin but do not remember the dates nor
24 the results of the estimates.
25 Q. Can you infer from the design capacity of 800

1 gallons per minute for the separator, that we noted in
2 the interrogatory answer, can you infer from that
3 figure an approximate discharge to the swamp?
4 A. No, I cannot because the separator would have
5 been designed for non level or changing loads so that I
6 would not know what the average would have been.
7 Q. In the next sentence there it states, "On May
8 16," I assume that's May 16, 1938, "The volume of waste
9 flowing in the ditch draining to the swamp was
10 estimated at 200 gallons per minute and on May 19 at
11 150 gallons per minute." In regard to those figures
12 would you have reason to know if they were accurate at
13 the time?
14 A. No, I would not. I have no recollection or
15 knowledge of the level of operations or activities at
16 the Saint Louis Park refinery in 1938.
17 Q. Do you have any knowledge of flow in the
18 ditch at a later date -- excuse me, by that I mean do
19 you have knowledge of a figure for the volume of flow
20 in the ditch at a later date?
21 A. I do not know of any such number.
22 Q. Are you aware of any company-wide or industry
23 estimates that might be used for a wastewater flow from
24 a plant such as the Saint Louis Park plant?
25 A. No, I am not immediately familiar with such a

publication.

Q. If you are interested in finding out if there were such data where would you look? By "such data" I mean industry wide.

A. In the text prepared for the RPAR rebuttal and in the correspondence and papers prepared for the wastewater discharge regulation.

Q. Which regulations are those?

A. I do not recall the name. In the past year or two there has been work done by the Environmental Protection Agency consultants on treating plant wastewaters, I believe.

Q. And was there a particular document within that that comes to mind?

A. I do not recall the name of the document nor the consultant's name.

Q. Do you recall if it was from the government side or the industry side?

A. I would believe it to have been both.

(At this time State of Minnesota Deposition Exhibits 96 and 97 were marked for identification by the Court Reporter.)

BY MR. SHAKMAN:

Q. What has been marked as Minnesota Exhibit 96 is on the letterhead of Republic Creosoting Company,

1 appears to be a memo from A. E. Larkin to P. C. Reilly
2 dated June 3, 1938. Do you recognize this as Republic
3 Creosoting correspondence?
4 A. I do.
5 Q. Mr. Larkin was the manager of Saint Louis
6 Park at that time?
7 A. I believe so.
8 Q. And would this be the senior P. C. Reilly,
9 1938?
10 A. Yes, it would.
11 Q. Was he the president of the company then?
12 A. Yes.
13 Q. Mr. Larkin recounts a visit from the
14 Minnesota Board of Health at that time. The second
15 paragraph states "He has received some complaints from
16 those operating shallow wells and we checked with some
17 of our own employees who claim that their wells do give
18 water that has a distinct odor and taste of creosote."
19 Do you have any knowledge beyond what's written in this
20 document and the other document that I have just given
21 you, of complaints about the taste of well water from
22 the period of 1940 or prior?
23 A. No, I do not.
24 Q. Are you aware of anyone in the company who
25 would have that kind of information?

1 A. No, I am not.
2 Q. Are you aware of subsequent complaints after
3 1938 from Saint Louis Park or other nearby communities
4 about taste and odor of creosote in the water?
5 A. I think I am familiar with reading in the
6 files of several complaints, but I am unsure of whether
7 it was before, after or whether these were the
8 occasions.
9 Q. Down in the fifth paragraph Mr. Larkin's memo
10 says, "We have contemplated putting in a proper
11 separating tank for many years past and may be
12 something of this kind will be necessary." Do you have
13 any knowledge of plans for a separating tank prior to
14 1938?
15 A. No, I do not.
16 Q. Would you know when design for that tank that
17 was put in in '41 and mentioned in the affidavit, when
18 that was commenced?
19 A. No, I would not.
20 Q. I direct your attention to the document
21 marked as Minnesota Exhibit 97. Have you had a chance
22 to look that over?
23 A. I have.
24 Q. That is again on the Republic Creosoting
25 Company letterhead from W. J. McClullen to C. B.

1 Edwards dated October 14, 1940, it's signed -- it
2 appears to be by Mr. McClullen. Does that appear to be
3 Republic Creosoting correspondence?
4 A. Yes, sir, it does.
5 Q. I think you earlier were unaware of Mr.
6 McClullen. Has anything come to mind about him since
7 then?
8 A. No.
9 Q. In the 6th paragraph down there is a
10 statement from Mr. McLellan, "Our own well water is
11 unusable for drinking purposes, as you know, and their
12 well was driven before the refinery was in operation
13 and the water has always been the same." It goes on to
14 recount people who had that recollection. Do you have
15 any other knowledge beyond what's contained in this
16 memorandum of that claim?
17 A. No, I do not.
18 Q. Did you ever taste the water from the deep
19 well at the Republic plant in Saint Louis Park?
20 A. Yes.
21 Q. Did it have any unusual taste or odor?
22 A. No.
23 Q. Do you recall when it was you might have
24 tasted that water? Go ahead and supplement what you
25 want to say.

A. To clarify, you referred to a well and I am now unsure which well you referred to. I did taste the water from the well on the immediate southwest side of the refinery.

Q. What is marked as "Republic deep well" on the State Exhibit 9?

A. Yes. That is the well to which I was referring in my previous answer.

Q. Do you recall just where you were able to grab water from that well?

A. I don't recall the exact piping. It would have been just adjacent to the pipe coming out of the ground and I tasted it to see what it tasted like.

Q. Were you tasting it because someone had questioned the taste?

A. I believe so.

Q. Do you recall roughly when that was?

A. I do not.

Q. Do you recall any concerns with the employees at the plant beyond what's here about the taste of water?

A. No, I do not.

Q. Are you aware of anyone else in the company who might have more information about taste of well water and complaints at that time?

1 A. No, I do not.
2 Q. Did you ever taste the water from the well,
3 that is located north of the refinery and east of the
4 change room marked with the word "well" and a small
5 arrow on Exhibit 9?
6 A. Not to my recollection.
7 Q. Do you know anything further about the
8 particular complaints referenced in the McLellan memo
9 to Edwards, Minnesota Exhibit 97, a complaint from Mr.
10 E. D. Jones?
11 A. No, I do not.
12 Q. To your knowledge at the company do you know
13 who besides Mr. Edwards back in 1940 might have been
14 addressing these matters?
15 A. Mr. Edwards would at that time have been
16 assistant to Mr. P. C. Reilly and I imagine that either
17 he or Mr. Reilly would have handled something like this.
18 Q. Would Mr. Horner have been involved at that
19 time?
20 A. He could have been.
21 Q. Do you know when he began with the company?
22 A. He would have begun with Reilly Tar Products
23 was acquired, which would appear to have been 1923.
24 Q. Are you aware of other Reilly facilities at
25 which there have been complaints of well water having

1 bad taste?

2 A. No, I am not.

3 (At this time a discussion was held off the

4 record.)

5 BY MR. SHAKMAN:

6 Q. Have you had a chance to look over the

7 document that was previously marked Minnesota Exhibit

8 39?

9 A. I have.

10 Q. That's on Republic Creosoting Company

11 letterhead and appears to be March 5, 1958 from H. L.

12 Holstrom to H. L. Horner. Does that appear to be right,

13 Republic Creosoting correspondence to you?

14 A. Yes.

15 Q. And that would have been during the time Mr.

16 Holstrom was the manager of the Saint Louis Park plant?

17 A. Yes.

18 Q. What is the problem of water supply that he

19 was addressing in here?

20 A. It appears that he was having pump -- well

21 pump trouble.

22 Q. Were you aware of that problem at the Saint

23 Louis Park plant at that time?

24 A. No, I was not.

25 Q. Were you at that time the assistant to the

1 production manager? I know your resume' indicated 1958
2 was a change.
3 A. No, I was then in the engineering department
4 and moved into the corporate headquarters in August
5 1958.
6 Q. Have you subsequently become aware of work
7 that was done or proposed for that well around the time
8 of March 1958?
9 A. Only on reading this memorandum.
10 Q. Mr. Holstrom, if I am correct, is deceased is
11 he not?
12 A. He is.
13 Q. Is there anyone besides Mr. Horner retired
14 from the company still living who might have knowledge
15 of this matter?
16 A. Mr. Hennessy may be aware of it.
17 Q. On the second page there is a proposal to
18 drill a '70 foot well. From your knowledge of company
19 practice at the time do you know what would have been
20 the channels for approving the drilling of a well?
21 A. I would imagine either Mr. Horner or Mr.
22 Holstrom would have discussed it with Mr. T. E. Reilly
23 and if all concurred a work order request would have
24 been prepared and submitted.
25 Q. Is that a matter that the finance committee

1 would then consider?
2 A. Normally yes, but I am unsure of the date of
3 inception of the finance committee.
4 Q. Did you have the executive committee at that
5 time?
6 A. It would have been a loss organization
7 primarily directed by Mr. Edwards, Mr. T. E. Reilly,
8 and Mr. P. C. Reilly.
9 Q. Do you have any knowledge of that deep well,
10 the well you reference being at the southwest corner of
11 the refinery being filled with gravel or other material
12 at any time?
13 A. No more than I have right in my
14 correspondence.
15 Q. And what have you read beyond what's in the
16 Exhibit Minnesota 39?
17 A. I believe I have read that at sometime after
18 consultation with a driller that gravel was put down
19 the well and I think a seal or a packer installed, but
20 I do not know the details.
21 Q. Your recollection is that you learned of that
22 from a document not from conversation?
23 A. Very definitely.
24 Q. And is that something that you have only
25 learned of in say the last couple years?

1 A. Yes.

2 Q. In work done at the former Reilly Tar site in

3 Saint Louis Park that past summer, work done by the

4 state with the assistance of a grant from the Federal

5 Government, it was found that in the Republic deep well

6 there were over 100 feet of dark coal tar like

7 materials at depths of 590 feet to 640 feet and again

8 at depths at 680 feet. Are you aware of any facts

9 which would explain the presence of those materials in

10 that well?

11 A. No, I am not.

12 Q. Is there any person you know of who might be

13 aware of such facts?

14 A. A few other than possibly Mr. Finch.

15 Q. When you say "a few"?

16 A. I know of no one other than Mr. Finch.

17 MR. SHAKMAN: Okay. Let's call it a day

18 here.

19

20 (At this time the deposition was recessed

21 and reconvened October 13, 1982 commencing at

22 approximately 9:00 a.m.)

23

24 BY MR. SHAKMAN:

25 Q. Good morning, Mr. Lesher.

1 A. Good morning.
2 Q. I would remind you that the oath you took
3 continues in effect and I would ask you if you have any
4 additions or corrections you would like to make to
5 anything you have given in your previous testimony?
6 A. No, I do not.
7 Q. I will make reference to the aerial photo
8 behind me, the R.T.C. Deposition Exhibit 3. I am
9 pointing to the area either side of what is marked
10 State Highway? Are you aware that there were marshes
11 in that area?
12 A. I had been told this, seen it on maps, and
13 observed it as far as able from walking on Walker
14 Street.
15 Q. You would have observed only then marshes
16 north of the state highway?
17 A. Probably, yes.
18 Q. Were you aware of the drainage that the
19 Reilly Tar site flowed to that marsh on the north side
20 of that highway?
21 A. Yes, I was.
22 Q. Were you aware that that was the marsh
23 connected south of the highway?
24 A. Yes, I was.
25 Q. And the drainage there contains some waste

1 materials, did it not, the drainage from the site to
2 the marshes?
3 A. Yes.
4 Q. Are you aware that the United States
5 Geological Survey over the past few years has maybe an
6 extensive study of the soil and ground water in the
7 site area including the marsh area?
8 A. Yes.
9 Q. Are you aware that one of their findings is
10 that the ground water level is very high in that marsh
11 area?
12 A. Yes.
13 Q. Are you aware that they interpret that the
14 marsh in fact is the expression of the water table?
15 A. Yes.
16 Q. Are you aware that they have reported a
17 hydrocarbon fluid phase in the shallow ground water
18 beneath the marshes?
19 A. I think so.
20 Q. Do you believe that this hydrocarbon fluid
21 phase is the result of waste materials carried to the
22 marshes over the years by drainage from the Reilly Tar
23 site?
24 A. Not necessarily.
25 Q. Are you aware of any facts that would support

1 other or different explanations for the presence of
2 that hydrocarbon fluid phase?
3 A. Only from my knowledge from reading in
4 literature that hydrocarbons are ebicwitus (ph) to the
5 environment.
6 Q. By "environment" do you mean natural
7 environment?
8 A. Yes.
9 Q. Setting aside natural sources, are there
10 other manmade or man generated sources of hydrocarbons
11 that you might think would offer an explanation in
12 whole or in part for the presence of the hydrocarbon
13 fluid phase?
14 A. At that site?
15 Q. At that site.
16 A. Hydrocarbons that were generated from
17 combustion, power plants, automobiles along that
18 highway there, or dumping if it may have occurred along
19 that highway.
20 Q. Are you aware of specific incidents of
21 dumping there?
22 A. No, I am not, other than having seen the
23 trash dumped along our property on Walker Street.
24 Q. Was that trash that you recall of a municipal
25 refuse nature?

A. I am not sure what you mean by "municipal".

Q. Why don't you go ahead and describe it?

A. Cans, garbage, trash, things of this nature.

Q. Would it include fluids in drums or otherwise?

A. I do not recall.

Q. Are you aware of analysis done by the U.S. Geological Survey of the hydrocarbon fluid pumped from a well in that south marsh area and analysis of commercial creosote also done by the U.S. Geological Survey for purposes of comparison?

A. I have seen analysis done by the USGS and don't at this moment recall specific numbers of those analysis.

Q. Do you recall seeing chromatograms that compare analysis of Well 13 material with analysis of commercially bought creosote?

A. I recall seeing pages of chromatographs but do not recall specific comparisons or results.

Q. From what you saw would you agree with the statement that the hydrocarbon fluid phase is chemically similar to commercial creosote oil?

MR. SCHWARTZBAUER: Well, he testified that he didn't remember seeing any comparisons and therefore I don't know how he can respond to the question. I would object to it on the grounds of lack

1 of foundation and beyond the witness' knowledge. I
2 have not instructed you.
3 MR. SHAKMAN: Let me rephrase the
4 question.
5 MR. SCHWARTZBAUER: Go ahead.
6 BY MR. SHAKMAN:
7 Q. From your knowledge of constituents of
8 commercial creosote and from chromatographs you have
9 seen of material from Well 13 in that marsh area, do
10 you have an opinion if the material from Well 13 is
11 similar to commercial creosote oil?
12 A. I myself am not knowledgeable on reading
13 chromatographs.
14 Q. Are you aware of anyone else in the company
15 who has considered what I have asked you and would be
16 better able to answer that question?
17 A. Our research chemists would be competent in
18 reading chromatographs but I do not know if they have
19 studied and analyzed those results in that report.
20 Q. Would that be Doctor Rivers?
21 A. It would.
22 Q. Anyone else there in particular?
23 A. He would be the person responsible for such
24 analytical work.
25 Q. Do you know if he has been asked to look at

1 those chromatographs that you have looked at?
2 A. No, I do not.
3 Q. I would ask you to turn to the interrogatory
4 answers, Interrogatory Number 18. Let me raise a
5 question with you before you look at it, it's not
6 directed specifically toward the interrogatory at first.
7 Do you recall addressing yesterday a tank car spill of
8 incoming tar at the Saint Louis Park facility?
9 A. Yes.
10 Q. And that was around the early '60's, was that
11 your recollection of it?
12 A. I am not at all very certain of the date. I
13 was involved with the company's operations at many
14 plants for over 30 years so that it is difficult to
15 vary narrowly pin down the occurrences in my
16 recollection.
17 Q. Could you take a look at Exhibit 72, your
18 resume', and perhaps get a time frame from what you
19 were probably doing at the time?
20 A. It most likely certainly would have been
21 after 1955 and I would think before 1970 perhaps.
22 Q. I think you mentioned it was during the time
23 Mr. Danz was in charge of the refinery at Saint Louis
24 Park?
25 A. I think so, yes, and I am uncertain of his

1 specific time of involvement as plant superintendent
2 unless it was related to in the interrogatory and I do
3 not so note.
4 Q. It was during that period after '58 and
5 before '70 or an earlier date when Mr. Danz may cease
6 to have been superintendent?
7 A. That's as near as I can guess.
8 Q. Was your knowledge of it roughly
9 contemporaneous to it happening?
10 A. I believe that it would have been.
11 Q. Would you take a look at Interrogatory 18 and
12 answer there to and then tell me if you think that
13 answer should be expanded in any way to address this
14 tank car spill?
15 A. I see no reason to change the answer.
16 Q. Let me ask you to look at Interrogatory
17 Number 79. I have the same question there in regard to
18 the tank car spilling. Do you see a reason to expand
19 on that answer?
20 A. No, I do not.
21 Q. Do you know if you discussed that spill with
22 Mr. Justin when he was preparing Answer 79?
23 A. No, I do not.
24 Q. Let me ask you to turn back to response to
25 Interrogatory 16.

1 A. Yes.
2 Q. There are five appendices listed in there and
3 four of those, B through E, are flow sheets. Could you
4 look at each of those flow sheets and identify who
5 prepared them?
6 A. Appendix B I prepared.
7 Q. Are those your initials above the date August
8 10, 1979?
9 A. Yes. Appendix C I prepared, Appendix D I
10 prepared, Appendix E Mr. R. J. Hennessy prepared.
11 Q. Now, Appendix B shows the byproducts
12 operation in the 20's and '30's, that's correct, isn't
13 it, B as in Baker?
14 A. I was trying to recall your exact wording.
15 It does show the byproducts operation, yes.
16 Q. And then Appendix C shows tar refining in
17 the '30's, would that be accurate?
18 A. That is correct. It is our estimate or the
19 best recall we could make of what probably was the flow
20 sheet.
21 Q. Are there particular people who were helpful
22 to you in putting these two together?
23 A. I believe I discussed it with Mr. Finch, Mr.
24 Horner, Mr. Hennessy and Mr. Malcolm Mitchell.
25 Q. Where is Mr. M. Mitchell now?

A. He is located in Indianapolis.

Q. The Exhibit C states 1930's for tar refining. Would it have been any different prior to 1930?

A. I do not believe so.

Q. So to have a full picture of the 20's and '30's would the reader then look at C and then go over to B and see where the light oils are coming in and going out, would that describe the whole refining operations at that time?

A. Give me a moment, please, to review the --

Q. Sure.

A. Yes, I believe that is correct.

Q. On these exhibits what is the meaning of the symbol which is two squares connected by two lines?

A. A steam pump.

Q. And what does the "X" represent? I see them on Exhibit B, the pipe lines?

A. Would you point out, please?

Q. For example, do you see "extraction tank" towards the top there?

A. Yes.

Q. As you come down you go past the steam pump and two lines intersect and there are three lines around that.

A. That would represent a valve and I would not

be sure that there were valves there or there wern't more located in the lines.

Q. This generally represents that that's where there was an interchange between those two pathways?

A. That is correct.

Q. Going to the right from that intersection with the three "X" you come over to "chilling pans", do you see that?

A. Yes.

Q. Could you describe what you think those were like?

A. I don't believe that they would have been more than -- let me better say that such pans that were still used within the company in the '50's, were pans probably five to four feet wide, seven to ten feet long and three to five feet deep constructed of metal.

Q. Are they similar in purpose to the box condensers you described yesterday?

A. No, these are to receive a material which will solidify and they would be more similar to the pitch pans we discussed yesterday. Naphthalene has a melting point of about 80 degrees centigrade so that the crude material would, I believe, have had a somewhat lower melting point. It would have then, in a hot liquid state, after having been extracted, it would

1 have been pumped into the chilling pans to a probably
2 three to five foot depth, I would imagine, and would
3 have been allowed to cool for perhaps up to a week
4 after which time it should have jelled out or in some
5 cases the company's processes involved overturning of
6 individual pans to break up the material.
7 Q. Was cooling only by air?
8 A. Yes.
9 Q. I would ask you to look towards the bottom
10 left side of that page where one of the final products
11 is carbonate or sulfate waterwaste?
12 A. Yes.
13 Q. That would have gone into the drainage system?
14 A. I believe so.
15 Q. Have you attempted to estimate what volume of
16 such waste might have been when the byproducts
17 operation was going?
18 A. No, I have no knowledge of the quantities or
19 throughput of that period in time.
20 Q. From what information you did have available
21 would that be a feasible task to estimate the volume of
22 that waterwaste?
23 A. No. From what little knowledge I had I don't
24 believe the throughput of that material was very much
25 at all.

1 Q. Could you quantify what you mean by very much
2 in an order of magnitude?
3 A. I think the unit was constructed and planned
4 that the acids and/or naphthalene be shipped to one of
5 our other refineries for further processing and that
6 they found either that the raw materials didn't have or
7 were changing and had less yield of these products or
8 that the freight from Minneapolis to possibly Chicago
9 was unjustifiable so that I don't think the throughput
10 was very great or lasted for a very long period.
11 Q. When it was operating could you estimate what
12 contribution that might be to the plant wastewater flow
13 at the time by a fraction? Would it be less than a
14 quarter?
15 A. Not too large because this was a batch
16 process. The material would have been drained at more
17 than one day intervals and I don't believe the batch
18 itself would have produced more than 1,000 gallons plus
19 or minus 200 to 300 percent.
20 Q. And do you know how many batches they might
21 be running in a week for an average during the period
22 of this operation in the '20's and '30's?
23 A. I have no idea at all. However, I think it
24 unlikely that it would be more than a few batches per
25 week.

1 (At this time State of Minnesota Deposition
2 Exhibit 98 was marked for identification by
3 the Court Reporter.)
4 BY MR. SHAKMAN:
5 Q. Have you had a chance to read what has been
6 marked as Minnesota Exhibit 98?
7 A. I have.
8 Q. It appears to be a memo from H. L. Danz to T.
9 E. Courtney dated November 29, 1938 on Republic
10 Creosotinq Company letterhead. Do you recognize that
11 as the regular internal correspondence of the company?
12 A. I do.
13 Q. And it's copied to Mr. Edwards, is that
14 correct?
15 A. That is right.
16 Q. Is this describing the same waste stream that
17 we were just talking about on the flow chart in
18 Appendix B?
19 A. Yes, it does.
20 Q. There is a mention in there of a total of
21 3,500 gallons of sulfate water released to the drainage
22 ditch during the time that the samples were taken.
23 Would that quantity represent one batch or more than
24 one batch?
25 A. Yes, sir, I believe it would represent one

batch.

Q. Would that figure cause you to revise your earlier give or take 200 or 300 percent estimate of 1,000 gallons?

A. I would raise that to 350 percent.

Q. Maybe 3,500?

A. It probably was 2,000 to 3,000 to 4,000 gallons after reading this.

Q. Could you look at the last sentence?

A. Yes.

Q. Do you believe that to be an accurate statement?

A. Yes.

Q. Could you explain the physical or chemical properties of the moving sulfate water that would cause it to loosen the oil and tarry material entering the ditch?

A. I believe the tendency referred to was principally due to its elevated temperature and that it would not necessarily be a solvent for any oil or tar that may have settled out in the ditch.

Q. Apart from temperature would the speed and volume of the water be a factor in how much tar it might move out?

A. I have no knowledge of the speed nor the

1 volume.

2 Q. Let me ask you to go back to the appendices

3 to the interrogatory answers and look at the succeeding

4 one, Appendix C. In the top right to the left of the

5 words "Reilly Tar & Chemical" there are a square with a

6 jagged line in it with an indication of an arrow with

7 water going in and water coming out.

8 A. That is my illustration of the box condenser

9 that I have previously referred to.

10 Q. Is it also a box condenser just below -- if

11 you continue below that condenser and you go by a steam

12 pump and you go down a little further and there is

13 another box with another little coil in it. Is that a

14 box condenser?

15 A. That is correct.

16 Q. And you show water going out. Was that water

17 recycled?

18 A. I have seen at Saint Louis Park that it was

19 recycled and it was not. The recycling would have been

20 to the pond to the south of the refinery.

21 Q. When did you see it recycled and when not

22 recycled?

23 A. Sometime in the late '50's and '60's.

24 Q. Do you recall which was the occasion on which

25 it was recycled?

A. I do not.

Q. Would it generally be a savings because of the heat still in that water to be able to recycle it?

A. The purpose for the water was for cooling and I would imagine in the summer time that the water in the pond would be warm and inefficient for reuse in the condensers.

Q. Your objective then is to have the cooling water for the greatest cooling effect?

A. That is correct.

Q. And the pond serves as a place for the water to release the heat as picked up?

A. Yes.

Q. Do you know if over the time of the company's operation that water became contaminated from leaks in the coils?

A. I do not know. If it had picked up oil from leakage it would be an inefficient cooling agent.

Q. And in that case you would be more likely to dispose of it than to recycle it?

A. No, I think you would immediately find and repair the leak to assure that you did have good heat transfer.

Q. Were leaks in these coils common occurrences throughout your refineries, do you recall?

A. The life of those coils was generally on the order of three to five years after which time they were replaced and there may have been one to two instances prior to replacement where leaks were found and repaired before total replacement.

Q. Would the water in these condensers frequently be stopped up?

A. There would generally have been a continuous stream of water flowing into the condenser.

Q. And also a continuous stream flowing out?

A. Yes.

Q. Could you estimate the volume of that stream when you were in operation?

A. I do not recall the water volumes.

Q. With a batch would it be something greater than 100 gallons?

A. I think it unlikely that it was at or over 100 gallons. It was probably greater than 20 to 30 and less than 100.

Q. If you continue just below the bottom of the two box condensers there is the word "coke" and it's in a capital and I take it that represents coke?

A. A pile or pan or bin.

Q. And does that show where the hot coke goes when it's removed from the tar spill?

1 A. That is correct.
2 Q. And how is that removal accomplished?
3 A. By employees with picks and shovels.
4 Q. What would be the temperature of the coke
5 when it was removed into the bay or bin?
6 A. I had yesterday explained or attempted to
7 explain the pitch production operation. If the
8 production of coke were desired the distillation
9 process would have continued at higher temperatures and
10 beyond the point where the product in the stove was
11 pitch and at about 400 to 410 degrees centigrade the
12 reaction becomes exothermic or generates heat rather
13 than absorbes it and the formation of coke begins and
14 continues in the absence of air. When the operator
15 concludes that the conversion has been completed, he
16 sprays water in the top of the still and the vessel is
17 allowed to cool for one to two days. Probably the
18 actual coke temperature would have been on the order of
19 100 to 150 degrees Fahrenheit.
20 Q. By the time it was being removed?
21 A. Yes.
22 Q. The water that you described, that would go
23 on the outside of the still, would that be correct?
24 A. No, it would have been sprayed in the
25 interior on the coke and would have evaporated.

1 Q. Is it quenching water?
2 A. Quenching water, yes.
3 Q. Do you think there would be any residue waste
4 water from that?
5 A. Definitely not.
6 Q. Would the water vapor from that be relased
7 through some part of the still?
8 A. The still would still have been closed and
9 the water vapor would have gone through the condenser
10 and into the receiving pan.
11 Q. Is that shown here?
12 A. Yes, it is. The same condenser used for
13 distillate condensation.
14 Q. And what would happen to this quenching water
15 that turned to steam and then cooled back down after it
16 had gone into the receiving pan?
17 A. I was not familiar with the coke operation at
18 Saint Louis Park but the water should have been quite
19 clean and would have gone either to the wet cut tank or
20 into the ditch.
21 Q. To the right of the coke area you show wet
22 cut oil, middle, heavy oil?
23 A. Those are the ground tanks to which I earlier
24 referred.
25 Q. Did I understand you yesterday to say that a

given tank would be used for different of those four fractions at different times?

A. Only that it may have been changed, not to a regular basis.

Q. Was there a time that anthracene oil was a distillation product?

A. Some of the old timers may have called one of these distillate cuts an anthracene oil cut.

Q. By your understanding were they in error in calling it that?

A. No, I would expect that the heavy oil cut there shown would likely have a greater concentration of anthracene than the lighter earlier cuts.

Q. Was the byproducts derived from anthracene such as used to be used in dies, was that one of the byproducts that was produced at Saint Louis Park?

A. No.

Q. I would ask you to go onto the Appendix D. I notice the tank cars coming in both, looking at D -- excuse me, D and E, the only difference seems to be the word "steam" is written and the abbreviation "COND" written beneath the tank car, that's on Appendix E, if you could look at D and E together?

A. I am confused by your reference.

Q. Would you look at the two exhibits and they

1 both show tank cars and truck in the upper left, don't
2 they, the two appendices?
3 A. I see no reference to tank car on Appendix E.
4 Q. Let me correct that, I was looking at C and D,
5 that was my error, C being the 1930's flow sheet and D
6 being the 1960's?
7 A. Yes.
8 Q. On D there is shown the word steam and the
9 abbreviation "COND", that's condensate?
10 A. That's correct. Steam was used to lighten
11 the tar on receipt to a viscosity proper for handling
12 and unloading.
13 Q. Would it be correct on C where those words
14 are not written in to add them?
15 A. Very definitely.
16 Q. And was the condensate just discharged to the
17 ground?
18 A. I would imagine so, or into the ditch or
19 trench.
20 Q. Looking at D, I finally got it right, which
21 is the 1960's. Beyond the tar cistern it shows decant
22 water. What is that representing?
23 A. That is the water that rises to the surface
24 of the tar cistern or tar tanks.
25 Q. And you earlier testified that that was

1 pumped off to the ditch?
2 A. Yes.
3 Q. Could I ask you to look down to where it
4 shows a roughly cylindrical figure with the word "anode
5 pitch" is?
6 A. Yes.
7 Q. Is that a still, is that what that --
8 A. No, that is a vertical tank probably 10 to 15
9 feet in diameter by 20 to 30 feet high.
10 Q. Is that where the pitch is put after it is
11 removed there the still?
12 A. That is right, to give it an initial cooling,
13 to make it handleable.
14 Q. Is this water spray shown next to anode pitch,
15 is that the spray that you described yesterday in
16 regard to the cooling of pitch?
17 A. No, it is not.
18 Q. Could you describe what that is then?
19 A. The pitch, after pumping from the still, is
20 still at a temperature of 350 to 400 degrees centigrade
21 and would, if exposed to the area still generate some
22 vapors. To control these we had installed air
23 condensers which consisted of several vertical runs of
24 one to 18 inch diameter steel pipe. The discharge from
25 that was connected into a separating pan and water

1 sprays were injected in the past to further condense
2 and control any condensibles that may have been in the
3 stream of vapor or effluent from the tank.
4 Q. And what would be the disposition of the
5 water that had been used in that spray?
6 A. The trench.
7 Q. And would that water have become at all
8 contaminated from that usage?
9 A. It may have picked up some condensibles.
10 Q. Could you estimate what volume of water would
11 be used in cooling?
12 A. I would guess only a few gallons per minute.
13 Q. And for one load of pitch, how long would
14 that spraying be going on?
15 A. Perhaps one to two hours or less.
16 Q. Can I ask you to turn to Appendix E?
17 A. Yes.
18 Q. It should be the creosoting operation, is it
19 not?
20 A. It is.
21 Q. This is a generalized representation of that
22 operation over the years?
23 A. I believe so, although I am not expert on the
24 wood preservation process.
25 Q. Do you know when wood preservation was

1 commenced at Saint Louis Park, what year?
2 A. Not specifically, but I would imagine very
3 shortly after or at the beginning of operations of that
4 plant at that site.
5 Q. Around 1917 then?
6 A. Yes, I believe so.
7 Q. There is six tanks shown as preservative
8 solution and oil recovery tanks. Would you know if
9 there is a dehydration tank amongst those?
10 A. I do not believe that any one particular tank
11 would have been called a dehydration tank.
12 Q. There was solutions that needed removal of
13 moisture, however?
14 A. It would have been done on any individual
15 tank by heating and settling or evaporating.
16 Q. And these had coils in them?
17 A. They did.
18 Q. Do you know where the condensate from those
19 coils would go?
20 A. I would imagine into the ditch.
21 Q. Would you know if that condensate could get
22 contaminated?
23 A. Normally it would not. In the case of a leak
24 it may have.
25 Q. Were you acquainted with the frequency of

1 leaks of those coils at Saint Louis Park?
2 A. No, I am not.
3 Q. Would the steam condensate shown just below
4 the treating cylinder, would that go to the same place?
5 A. I don't know specifically but would imagine
6 so.
7 Q. And would that likely be contaminated?
8 A. I think it unlikely.
9 Q. Would live steam be used for conditioning
10 wood in that cylinder?
11 A. Yes.
12 Q. And would that steam become contaminated with
13 material picked up from the cylinder?
14 A. It would contain evaporated oil, yes.
15 Q. Where would it be discharged then?
16 A. I do not recall the piping system at the
17 Saint Louis Park treating plant.
18 Q. Do you know generally if there was additional
19 treatment given steam that had been used for -- given
20 the condensate for the steam that had been used for the
21 conditioning?
22 A. No, I do not.
23 Q. Do you see the pressure pump indicated below
24 the treating cylinder?
25 A. I do.

Q. Would that have required a cooling water?

A. No. As drawn, it is a steam pump and the steam would have been used to drive to the pump to build the pressure.

Q. You can tell from this drawing it was a steam pump?

A. Mr. Hennessy has used the same designation that I have that the two rectangular boxes with two lines between them represent a steam pump and at that period of time it would have required a steam pump to achieve the desired pressures.

Q. Could you point those out to me?

A. That's a steam pump.

Q. Two rectangular boxes where the line makes the jog to the left?

MR. SCHWARTZBAUER: Steve, I take it you are not going to go over all this again with Mr. Hennessy?

MR. SHAKMAN: We will get to Mr. Hennessy when we get to Mr. Hennessy.

MR. SCHWARTBAUER: The witness has said that this isn't his drawing and he is it very familiar with the wood treatment processes.

MR. SHAKMAN: I don't have any more questions on that exhibit now.

1 BY MR. SHAKMAN:
2 Q. Let's get a look at the response to
3 Interrogatory 65.
4 A. I have read it.
5 Q. Do you recall this incident of disposing of
6 the surplus sulfuric acid?
7 A. I recall it from having read the memorandum
8 concerning it.
9 Q. Minnesota Exhibit 29, I believe is the
10 memorandum Number 104327. I don't have a particular
11 question on it but it's here if you would like to make
12 reference to it. Was this your arrangement for the
13 disposal of that material?
14 A. It was.
15 Q. And was the purpose of the limestone --
16 MR. SCHWARTZBAUER: Is this one that we
17 can borrow?
18 MR. SHAKMAN: Sure.
19 BY MR. SHAKMAN:
20 Q. Was the purpose of the limestone to
21 neutralize sulfuric acid?
22 A. That is correct.
23 Q. Did that work successfully?
24 A. I believe so.
25 Q. Would it have been customary at that time for

1 Mr. Finch or others at Saint Louis Park to seek your
2 advice on disposal of materials that weren't needed?
3 A. No, I think it more likely that I had gone
4 over his inventory with him, noted that this had been
5 on the inventory for a long period of time with no
6 expected future use and would have considered with Mr.
7 Finch if it could have been sold or have them recommend
8 to him that it be disposed of in this manner.
9 Q. Was the benefit of this freeing up the tank
10 for other use?
11 A. Yes.
12 Q. Did Mr. Finch ever discuss with you disposal
13 of waste or other materials at the north end of the
14 site?
15 A. Not that I recall specificly.
16 Q. As you understood his authority would it have
17 been appropriate for him to dispose of such materials
18 without checking with you?
19 A. Yes.
20 Q. I would like you to look at the answer to
21 Interrogatory Number 87. I would direct your attention
22 to the answer to Part A first. My question is simple.
23 I wanted you to look at the first name, is that
24 pronounced Sizlak?
25 A. That is right.

1 Q. Who is Francis E. Sizlak?
2 A. He was for a long period the director of
3 research and I believe for some time a vice-president
4 of the corporation.
5 Q. Can you estimate what years those were that
6 he was in those positions?
7 A. He was a vice-president from 1970 to 1974 and
8 I would assume that he had retired in 1974.
9 Q. Do you know the years he was director of
10 research?
11 A. I do not know the exact dates but he was a
12 director of research for a considerable length of time.
13 Q. Go back to the '50's?
14 A. Oh, definitely.
15 Q. '40's?
16 A. '30's or '40's.
17 Q. Do you know what his education and
18 professional training is?
19 A. Doctorate in chemistry.
20 Q. And do you recall specific items in these
21 interrogatory answers that you remember his assisting
22 on?
23 A. He may have been called to see if he
24 recollected some of the incidents that may have been
25 questioned.

1 Q. Had he been in Indianapolis his full career
2 with the company?
3 A. I believe so.
4 Q. Will you turn to the next page where there is
5 the name Gerald L. Goe?
6 A. That is right.
7 Q. Who is he?
8 A. He is the present current director of
9 research.
10 Q. How long has he been in that position?
11 A. I would estimate three to five years.
12 Q. Do you know what his prior position was with
13 the company?
14 A. A research chemist.
15 Q. And his education and training?
16 A. Doctorate in chemistry.
17 Q. Do you know when he first commenced with the
18 company?
19 A. I do not recall the exact date, possibly ten
20 years.
21 Q. And do you know what areas in the
22 interrogatory answers he may have assisted on?
23 A. No, I do not.
24 MR. SHAKMAN: That's all I have now.
25 THE WITNESS: Thank you.

MR. SCHWARTZBAUER: Could we take a break?

MR. SHAKMAN: Fine with me.

CROSS-EXAMINATION

BY MR. HINDERAKER:

Q. Mr. Lesher as I think you know, I represent the City the Saint Louis Park in this matter. To some extent my questions will touch on areas that you have already discussed with Mr. Shakman. I will probably be asking them in a little different way to get an understanding of what you said for my own purposes. So please bare with that. I will be going into other areas as well. To the extent that I am not clear on my questions please ask me to rephrase them so that we have a sense of confidence that you and I are communicating. You mentioned that you received a B.S. Degree in chemical engineering. When was that?

A. 1949.

Q. And you are a registered or licensed professional engineer. Is that in chemical engineering?

A. Yes.

Q. I want to refer back for a few moments to state Exhibit 83. Do you have that before you?

A. I do.

1 Q. Let's turn to the third page of that document.
2 First, with reference to the designation K001, which is
3 on the left-hand column, following that designation
4 there are a variety of what would you call them,
5 chemical compounds?
6 A. Yes.
7 Q. Do you have an understanding of whether those
8 compounds would have been present in the waste water
9 discharge at the Saint Louis Park plant?
10 A. No, I do not, other than phenol I note is
11 included and I believe the analysis work made on phenol.
12 Q. Is it a situation where you don't know
13 whether the compounds are present or whether they are
14 not present or do you have an understanding that they
15 are not present or would not have been present in the
16 waste water discharge?
17 A. Neither. I do not know if they were or if
18 they were not present.
19 Q. And that's your understanding as of today?
20 A. That is correct.
21 Q. So consequently you would have had the same
22 understanding prior to today?
23 A. That is correct.
24 Q. Turning to the compounds following the
25 designation K035 in the middle column, my question is

1 the same one. Is your answer the same as well?
2 A. The word "creosote" is there included. Other
3 than that my answer is the same.
4 Q. So you would have an understanding that
5 creosote would have been in the wastewater discharge of
6 the Saint Louis Park plant, correct?
7 A. Only in the sense that I believe I tried to
8 redefine for Mr. Shakman my understanding of the word
9 creosote.
10 Q. And I know that as you mentioned earlier we
11 do not have any more to this document, we do not have
12 the definitional section and the footnotes, et cetera,
13 so rather than asking you to try to interpret this
14 document I want to ask you what meaning or sense you
15 are giving to creosote. Are you giving the sense of
16 the mixed blend that results in the creosote used in
17 the preservative process at Saint Louis Park or are you
18 giving it some different name?
19 MR. SCHWARTZBAUER: Just answer the
20 question.
21 A. In the sense of specification, creosote
22 meeting the specifications, I am not at all sure if it
23 would be present. If we are referring to distillate of
24 coal tar I would think it possible in as much as we had
25 leakage and runoff around the plant that those oil type

1 mixtures may have been present in the settling basin or
2 wastewater.
3 Q. With the exception of creosote as you define
4 it, am I clear that you do not know one way or the
5 other whether any of the other chemical compounds under
6 that designation would have been present in the wastewate
7 A. That is correct.
8 Q. When you mentioned spillage two questions ago
9 were you referencing possibilities of spillage in the
10 trenches?
11 A. I am trying to appreciate your conception of
12 the word "spillage".
13 Q. I believe you said that to the extent that
14 there may have been spillage of run, the oil substances
15 from the distillation process may have been the wastewate
16 discharge?
17 A. I thought I used the term leakage and runoff.
18 Q. And what did you have in mind when you used
19 the term "leakage"?
20 A. Pump packing, valve packing, screwed fittings
21 and mechanical problems of this nature.
22 Q. And that leakage, would that have been into
23 trenches?
24 A. Into trenches and/or on the ground.
25 Q. What did you have in mind when you used the

1 phrase "runoff"?

2 A. Rain water or the flooding water running

3 across the surface of the ground coming in contact with

4 those spots that may have been leaked upon.

5 Q. From time to time in the last couple days

6 there has been mention of the fact that surface water

7 drained across the Reilly property through rain,

8 snowmelt or otherwise and I believe your understanding

9 is that the surface waters from the land surrounding

10 the plant site drained across the plant site as well?

11 A. This is my understanding.

12 Q. Is that understanding based on firsthand

13 observation or was it derived in other ways?

14 A. I was often so informed of this and I believe

15 that on one or two occasions I personally did observe

16 it.

17 Q. And this water would become contaminated by

18 contact with, as you described just now, spots on the

19 soil or in the trenches where there may have been

20 leakage, correct?

21 A. It could have been so contaminated by that

22 contact, by washing through the settling basin, the

23 treating cylinder door sump, the ground tanks, and so

24 forth.

25 Q. Now, you mentioned one thing, treating

1 cylinder what?

2 A. Sump. There was, I believe, constructed a

3 pit or sump in front of the doors to catch or contain

4 dripage from the door or from the bottom of the

5 treating cylinder when it was opened.

6 Q. The three areas that you mentioned, do they

7 constitute -- let me put it this way, do you have

8 anything else in mind over the category et cetera or

9 other things?

10 A. It occurred to me that I was mentioning the

11 major points and I am sure that on long consideration

12 or observation others could be found that would be more

13 minor.

14 Q. When the water went into the settling basin,

15 talking about say rain water runoff, went into the

16 settling basin because that basin was essentially at

17 ground level?

18 A. Yes.

19 Q. And went into the ground tanks, assuming that

20 there was some material in them through the manhole on

21 top?

22 A. Yes.

23 Q. And the treating cylinder sump, was that an

24 open area?

25 A. It was open on top and I do not recall its

specific design.

Q. Did it have a method of closing the top or not?

A. I don't and would not imagine so.

Q. Would it have been possible to close the manhole area on the underground tanks?

A. I do not recall their exact construction so I am not sure of the requirements to seal them against a water pressure.

Q. Being the water that would be flowing on top?

A. Yes. My thought there being that it would be relatively easy to put a cap on to prevent rain water from going on but to make it water tight for water standing over the tank would be more difficult.

Q. And so that I am clear, are you saying that because you do not have a clear recollection of their construction you are not telling one way or the other whether or not it was possible to seal that?

A. That is correct.

Q. I think it was in the first day of these proceedings when we were in your offices you made a sketch on the board and showed us that the settling basin did not have walls surrounding it or an elevation going above ground level?

A. This is my understanding.

1 Q. And consequently you concluded that you could
2 not dike that area given the absence of such a wall or
3 elevation above ground level?
4 A. Yes.
5 Q. Would it have been possible to construct the
6 a wall?
7 A. Certainly.
8 Q. Let me turn for a few moments to State
9 Exhibit 73, that's the statement of the case of Reilly
10 Tar & Chemical. Do you have that?
11 A. I do have it.
12 Q. I guess these things aren't numbered. The
13 fourth page at the top of the page, and I want to refer
14 to the phrase that begins on the second line, quote, "The
15 PAH's in coal tar and creosote may in fact be enhancing
16 defenses for cancer prevention." My question is with
17 regard to that phrase. Do you have an understanding of
18 scientific knowledge that is supportive of that
19 proposition?
20 A. Only to the extent that I have read
21 literature references that some of the PAH's are anti
22 carcinogens.
23 Q. Any other research or any other data that you
24 have relative to that proposition?
25 A. No.

1 Q. Prior to 1974 did you have any understanding
2 of whether coal tar, creosote oil, or any of the
3 products produced and generated at Saint Louis Park
4 presented a threat to health?
5 A. Taking your date as approximate, I was only
6 aware prior to that period of time that some of the
7 components contained in coal tar were toxic and had
8 toxic effects.
9 Q. And what components are you referencing?
10 A. I used and was aware of the list published by,
11 and I am unsure of the specific name, but I believe it
12 was something like the American Counsel of Hygienists
13 which listed compounds and their toxic levels.
14 Q. What did you understand the health
15 consequences to be from the toxicity of those compounds?
16 A. I am not certain of the specific health
17 effects but I would have assumed that if the quantities
18 ingested exceeded the limits or recommendations
19 specified in the list that a person would encounter
20 difficulty.
21 Q. Ingested suggests what?
22 A. Drinking the chemical compound in
23 concentrated quantities.
24 Q. Did you have an understanding of whether the
25 operation of the facilities at Saint Louis Park

1 presented those toxic elements in sufficient
2 concentrations or quantities to present this risk?
3 A. I am unsure of your exact wording, but we did
4 have, for instance, at one time or another in the
5 byproducts building, coal tar acids such as phenol,
6 which in sufficient quantities would have been highly
7 toxic. Is that what you meant?
8 Q. I don't think so. I understand you to be
9 saying that some compounds present at the Saint Louis
10 Park facilities would be toxic as identified by the
11 American Councel of Hygienists, or whatever the
12 organization was that authored the publication you have
13 referenced, and I understand you to understand that
14 those toxic compounds would present a health risk if
15 ingested in sufficient quantities or concentrations?
16 A. That is correct.
17 Q. And my question is directed to the facilities
18 at Saint Louis Park as they operated and I am asking
19 whether, as a result of those observations, any of
20 those toxic chemicals would have been, if you will,
21 presented in such a way that persons would ingest them
22 in sufficient quantity to present a health risk?
23 A. A negligent employee could have, by
24 deliberate error, possibly ingested something like
25 phenol.

1 Q. Are you saying through taking some coal tar
2 distillate and drinking it?
3 A. Yes, this is what I meant.
4 Q. In the normal and expected and reasonable
5 scheme of things would those toxic compounds be
6 presented to human beings at Saint Louis Park in
7 sufficient quantities to cause a health risk?
8 A. No.
9 Q. And that was your understanding of the matter
10 prior to '74 as well as today?
11 A. That is correct.
12 Q. That's all I have on that piece of paper I
13 believe you mentioned, correct me if I am wrong, that
14 currently you are aware of some tests being undertaken
15 to study the chronic toxicity of something or other, I
16 take it coal tar products, that could have been
17 generated at Saint Louis Park, is that correct?
18 A. Yes.
19 Q. Is it your understanding that those tests are
20 considering all exposures?
21 A. I myself am unaware of the specific details
22 of those tests.
23 Q. Would Mr. Justin have more knowledge about
24 that than you?
25 A. He may have.

1 Q. Who would you presume has the most knowledge
2 about that?
3 A. The subcommittee of the American Wood
4 Preservers Institute that is representing the creosote
5 producing industry.
6 Q. In these tests do you know what organization
7 they are being conducted under?
8 A. No, I do not.
9 Q. I believe you said that in the '70's the
10 corporation made a business decision to go out of the
11 wood preserving business is that correct?
12 A. This is correct.
13 Q. And in addition centralizing some of your
14 refining to operations due to decreaseing supplies of
15 coal tar, is that also correct?
16 A. You did say decreasing?
17 Q. Decreasing.
18 A. Yes.
19 Q. With regard to the Saint Louis Park
20 facilities, was American Steel and Wire a supplier of
21 coal tar who, in approximately the early '70's, was no
22 longer available for supply of that product?
23 A. That is correct.
24 Q. That would be a specific example of the
25 decreasing quantities of coal tar?

1 A. That is correct.
2 Q. And because of the decision of American Steel
3 and Wire I take it that the Saint Louis Park facility
4 in particular had less supply of that product available
5 to it?
6 A. That is correct.
7 Q. Is that one of the reasons that the Saint
8 Louis Park facility was chosen as one to be closed?
9 A. It would have been a contributing factor.
10 Q. If you recall this, I won't bother either of
11 us with pulling the documents out, but if the documents
12 are helpful let's take the time to do that. There were
13 a series, I think it was two or three documents, in
14 approximately August of '69 where you were requesting
15 from Maywood and other plants their methodology of
16 analysis for oil and phenol?
17 A. That is correct.
18 Q. Do I correctly conclude from that at that
19 point in time there was not a company-wide methodology
20 for the testing of those elements?
21 A. That is correct, unless, Mr. Hinderaker, what
22 you mean by company wide -- did you say policy or
23 procedure.
24 Q. Well, I meant to say procedure if I did not.
25 A. There would have been a recommended procedure

1 when and where we wished to analyze for phenol. Does
2 that better answer your question?
3 Q. I think so. So you are saying if a
4 particular plant was using a procedure to the
5 recommended one you would have, upon learning that,
6 suggested that they use a different procedure?
7 A. That is correct.
8 Q. Why then did you, in the process of advising
9 Saint Louis Park how to analyze for oil and phenols,
10 solicit the methodologies used at a variety of
11 different plants?
12 A. I do not recall the specific name other than
13 the colorimetric method, but this I knew was being used
14 at both Maywood and Chattanooga and wished to institute
15 that method at Saint Louis Park and advised the Saint
16 Louis Park plant of how they did it to assure that they
17 got the total procedure and any variations that may
18 have been unique to that place.
19 Q. So if I understand you correctly, you were
20 aware of the preferred procedure by name and inquired
21 of people who were actually doing it to detail the
22 various steps that they would go through to have a
23 successful procedure?
24 A. That is correct.
25 Q. Another area that you have touched on before

1 that I was unclear about, however, with regard to the
2 runoff of water across the Saint Louis Park facility,
3 and in sufficient quantities to be disruptive, was that
4 a condition that was occurring in the '50's as well as
5 in the '70's?
6 A. I do not know.
7 Q. What is the earliest, from your knowledge,
8 what is the earlier point in time when the Saint Louis
9 Park facilities encountered that?
10 A. My personal observation of it would probably
11 have been in the mid '60's.
12 Q. Do you recall now if you were advised through
13 correspondence or telephone, whatever, of that
14 occurring prior to that?
15 A. No.
16 Q. Let's refer for a moment to the State Exhibit
17 48, this is a document that was identified -- it won't
18 be in there. It won't be in that stack. This was a
19 document that was identified in Mr. Finch's deposition
20 and this notebook should have them all. Hopefully we
21 are both looking at a memorandum of Reilly Tar from Mr.
22 Boyle to Mr. Finch of August 4, 1965 with Mr. Hennessy
23 carbon copied?
24 A. That is correct.
25 Q. The last paragraph states that, "The problem

1 of contaminants has been pretty well solved at our
2 Cleveland plant and presumably could be solved at Saint
3 Louis Park." My question is can you tell us how the,
4 quote, "Problem of contaminants" was pretty well solved
5 at the Cleveland plant?
6 A. I believe this referred to the change at the
7 Cleveland plant from the practice or procedure of
8 discharge of effluent through an open ditch to the
9 river and the connection of the same discharge to the
10 on city sewers.
11 Q. So the problem was solved at Cleveland by
12 connecting to the city sewer?
13 A. Yes.
14 Q. And the problem referenced, is that the
15 handling of the waste waters from the facility?
16 A. I believe the problem referred to, yes, was
17 the handling of the discharge from the settling basin
18 and/or straw filter into the city sewer.
19 Q. Was there any additional treatment to the
20 waters prior to discharge into the sewer at the
21 Cleveland plant that was a condition for the permission
22 to discharge into that sewer?
23 A. Not to my knowledge.
24 Q. There was mention made of the fact that the
25 Saint Louis Park facility used a mixture of petroleum

1 and creosote. Was that used throughout the life of the
2 plant or was that used only for a particular period of
3 time?
4 A. I do not know the period in time when that
5 was begun.
6 Q. Was it used to the end of the plant life?
7 A. I believe that it was, yes.
8 Q. I know I am bouncing around here so I will
9 try to identify what I am talking about, but again if
10 these transitions are confusing let me know. I now
11 want to bounce to some short discussion you had about
12 the marsh area north and south of Highway 7 and I
13 believe you said, I wanted to see if my hearing was
14 right, I believe you said that you assumed that natural
15 processes would have broken down the coal tar products
16 that would have entered the marsh area, is that correct?
17 A. I do know and am aware products from a coal
18 tar operation in a ditch or pond are biodegraded.
19 Q. From that knowledge you then --
20 A. Inferred that this process or some part of it
21 would have been occurring in any ponded water that
22 contained such materials.
23 Q. Would you have had that understanding or made
24 that inference prior to '74 as well as today?
25 A. Yes.

1 Q. Do you have an understanding of the extent of
2 the biodegradation?
3 A. Not in a natural environment.
4 Q. And consequently not in the marsh itself.
5 A. That is correct.
6 Q. Did you have any understanding prior to '74
7 that whatever materials may have been in the marsh area
8 presented any risk of health?
9 A. No.
10 Q. Your understanding was that it did not
11 present a risk of health?
12 A. That is correct.
13 Q. I will go back a couple questions. You said
14 that you were not sure of the extent of degradation
15 that would occur in the natural environment or
16 consequently in the marsh. Is there any time element
17 to that understanding? I guess my question is are you
18 saying that you don't know the extent of degradation in
19 a particular period of time or throughout all time?
20 A. No.
21 Q. You don't understand my question?
22 A. I don't understand the question.
23 Q. All I am asking is whether with sufficient
24 time materials in the marsh would biodegrade or whether
25 your understanding is that you don't know if --

1 A. I do not know.
2 Q. Bouncing again, I think you were asked ways
3 in which creosote could possibly enter into the
4 settling basin and I believe you said by flooding,
5 through trench leaks and then the phrase ground water
6 carry-over was also used?
7 A. I believe that reference was to the under
8 ground or what we call the ground tanks.
9 Q. Ground water carry-over meaning materials in
10 the ground tanks coming out of them?
11 A. Yes, and/or the water causing the tanks to
12 raise and the associated pipe leak or break.
13 Q. Now, did you observe that phenomenon
14 occurring at Saint Louis Park?
15 A. No, I did not.
16 Q. Were you advised that it ever did occur?
17 A. I was so told.
18 Q. And do you have a recollection of the number
19 of instances when that phenomenon occurred?
20 A. No, I do not.
21 Q. In your sense of recall, was it an order of
22 magnitude of one to three times or was it an order of
23 magnitude of frequently?
24 A. It was not once a week.
25 Q. Was it every time that there were waters

1 running across the top of the property?
2 A. I do not know.
3 Q. Do you recall if anything was done to prevent
4 the occurrence a second time?
5 A. I believe there were ongoing discussions on
6 remedies.
7 Q. Do you have a recall of any of the
8 discussions resulting in a remedy being implemented?
9 A. No.
10 Q. Would any other occurences fall under the
11 phrase ground water carry-over as you used it?
12 A. I was there, I think, referring specifically
13 to the underground tanks. Similarly such water flowing
14 into the trenches, into the settling basin, the sumps
15 or anything like that, could have contributed to pick
16 up of materials.
17 Q. Again you are identifying those locations
18 which could have contact with surface waters running
19 across the property?
20 A. Very definitely the point where there would
21 have been contact, yes.
22 Q. On a related point, did you observe water
23 standing in the refinery area six to 12 inches deep?
24 A. The instances where I personally observed it
25 that I can at this time specifically recall, no, it was

1 not at such a high depth.
2 Q. As you can recall what was the highest depth?
3 A. I would guess three to six inches.
4 Q. How frequently did this occur in any depth,
5 that is, how frequently did it occur that through
6 runoff there was standing water on the property?
7 A. I did not get specific reports on the number
8 of occurrences. My knowledge is entirely from hearsay,
9 that it occurred with most heavy rains and over the
10 years seemingly more often.
11 Q. I take it not that it rained more often over
12 the years but rather over the years the character of
13 the surrounding land was such that a greater percentage
14 of whatever rain there was would flow upon the property?
15 A. This would have been my interpretation.
16 Q. Would you also conclude that that was a
17 result of the development of homes, et cetera?
18 A. The development in the area, yes.
19 Q. A different topic. I believe you observed
20 little penetration of material into the soil around the
21 treating cylinders and the loading dock, is that
22 accurate?
23 A. I am not sure now of the wording that I used
24 but I don't believe I measured the penetration at the
25 Saint Louis Park plant at one or another of our

1 refineries. I was referring that I specifically did
2 check this point on several occasions in the area
3 immediately in front of the cylinder where the treating
4 materials stood for a short period of time before being
5 transferred to the yard.
6 Q. And you did this at Saint Louis Park?
7 A. No, I did not at Saint Louis Park.
8 Q. You did it at some other plant and from that
9 observation were general referring to all of the plants?
10 A. That is correct.
11 Q. And the conclusion was that there was little
12 penetration into the soil, is that correct?
13 A. That is correct.
14 Q. With regard to the soils generally at the
15 Saint Louis Park facility, would that understanding
16 apply generally as well?
17 A. I believe so to the area within the plant
18 which was in use.
19 Q. That area is --
20 A. I am referring to -- the distinction I am
21 trying to make is a plant operating area that had been
22 graded and in use for a number of years versus out in
23 the marsh or peet bog.
24 Q. Okay. With the exception of the marsh or
25 peet bog would there be any areas on the 80 acres of

1 the Reilly Tar facility in Saint Louis Park where you
2 would have expected to find more than little
3 penetration into the soil?
4 A. I am not aware of any.
5 Q. Let's refer for a moment to State Exhibit 51.
6 That I think would be found in this book as well.
7 Hopefully we are both looking at a company memorandum
8 from yourself to Mr. P. C. Reilly of May 23, '68?
9 A. That is right.
10 Q. Carbon copying five individuals. You were
11 asked some questions, directing your attention to the
12 second page of the document, and in particular the
13 third full paragraph about waste waterhandling is the
14 other major problem. Do you see where I am referring.
15 A. I do.
16 Q. I am using the document only to help both of
17 us get into context. My question isn't so much
18 directed to this particular language of the exhibit. I
19 understood your view to be that wastewater handling was
20 a problem because it was an issue upon which the
21 company had begun to receive complaints from city
22 officials or otherwise?
23 A. That is correct.
24 Q. Would the method of wastewater handling at
25 Saint Louis Park have been evaluated but for the

1 receipt of such complaints?
2 A. I don't believe so.
3 Q. Can I correctly assume that from the
4 prospective of the company and the operation of the
5 plant the wastewater handling system was adequate?
6 A. Yes.
7 Q. Let's refer for a moment to Exhibit 93, which
8 would be in the pack discussed in the last few days.
9 If you will notice at the top of the document after the
10 preamble there is the statement, "Our effluent does not
11 present a threat to the health, safety and welfare of
12 the community."
13 A. I do.
14 Q. Are you in agreement with that proposition?
15 A. At what period of time?
16 Q. Prior to the closing of the plant?
17 A. Yes.
18 Q. Do you have a different view today?
19 A. I have heard more and stronger allegations
20 but I have not been convinced that it is any threat.
21 Q. For the period of time up to and including
22 the date that the plant closed, could you outline the
23 basis for the understanding that the effluent did not
24 present a threat to health, safety or welfare?
25 A. Only by basing it upon experience within the

1 industry, knowledge of industry practices, references
2 to the literature that I had available to me. I
3 believe that was the basis.
4 Q. What, if you can recall, did those things
5 tell you about the issue of health, safety or welfare?
6 A. As I understand your question the answer
7 would be no more than if phenol were present in or if a
8 person were exposed to sufficiently high concentrations
9 that there would then be a threat to their health and
10 welfare.
11 Q. Your reference to phenol, was that by way of
12 example or was that the compound that was or is that
13 the only compound that was identified as even having
14 the potential for concern in the time frame we are
15 talking about prior to the plant closing?
16 A. To our knowledge the latter would have been
17 the case.
18 Q. The only compound with even a potential?
19 A. That is correct.
20 Q. I am going to refer to a document that was
21 previously marked as Saint Louis Park Exhibit 14. I am
22 sure you have never seen that and until I get a
23 question out don't bother to look at it and I am giving
24 it to you simply because I am going to read a couple
25 things in it and you can have the document to --

1 A. Can I read them with you?
2 Q. That's why I am giving it to you.
3 MR. SCHWARTZBAUER: Off the record.
4 (At this time a discussion was held off the
5 record.)
6 BY MR. HINDERAKER:
7 Q. I am going to read a phrase on Page 3.
8 A. Formerly numbered Page 3.
9 Q. The heading is, "Hazard of Phenols." Do you
10 see that in the middle of the page approximately?
11 A. I do.
12 Q. The phrase is three or four lines down. "The
13 most important hazard," with reference to phenols, "The
14 most important hazard is its strong taste in water
15 detectable at only 0.01 parts per million is a level at
16 which there is no health danger." With regard to that
17 phrase my question is whether, prior to 1974, whether
18 you had an understanding that you would concur or
19 decent from that statement?
20 A. I would concur.
21 Q. The next paragraph on the same page has the
22 sentence that, "The city water supply is in danger of
23 being polluted by phenols from the Republic site is
24 highly unlikely." I have the same question whether you
25 would have a view on that and whether you would have a

1 decented or concurred prior to 1974?
2 A. I may have questioned it from the memorandum.
3 I think that I had seen complaints by the city and
4 residents in prior years concerning problems with their
5 wells.
6 Q. And would one of the things you would have
7 done, if you reviewed those memoranda, would one of
8 those things be to identify the depth of the wells
9 involved in those complaints?
10 A. Yes.
11 Q. And then you would have compared that to the
12 depths of the city municipal wells?
13 A. Yes.
14 Q. And depending on what you concluded you may
15 or may not have agreed with that sentence there?
16 A. That is right.
17 Q. So the depth of the city wells would have
18 been a factor in your analysis if you had undertaken
19 such a review at the time?
20 A. I would imagine it would have been.
21 MR. HINDERAKER: Do you want to go to
22 lunch?
23 MR. SHAKMAN: Before we break for lunch
24 I have a matter that I would like to address to Counsel
25 and would ask Kirby to report it. Ken Stephenson, a

1 legal assistant with our office, he has been in
2 attendance at this deposition and assisting me. During
3 the intermission we took at about 10:15 prior to the
4 beginning of the Al Hinderaker's inquiry, the Federal
5 and State people were out of the room and Mr.
6 Stephenson says that when he returned he noted Mr.
7 Schwartzbauer at the table behind the witness and there
8 are two cardboard boxes at that table and they contain
9 a number of file folders and at the front of it is
10 quite prominently displayed Mr. Stephensons business
11 card. During the course of the deposition here Mr.
12 Stephenson has from time to time withdrawn documents
13 from that box for my use and I had assumed it went
14 without saying that Counsel and all others
15 participating here would respect the privacy of other
16 person's files during those intermissions in the
17 deposition, and I note the State does not waive any
18 privilages or protections for any of it's files by the
19 fact that they are left in intermissions or before or
20 after the deposition. I request, Ed, that you and your
21 Co-counsel and your clients agree to respect the
22 privacy of our files.
23 MR. SCHWARTZBAUER: Steve, that's so
24 ridiculous it doesn't deserve a reply. If there is
25 something private you shouldn't leave it standing out

1 on the table right there or you should tell me that you
2 don't want me to look at it.
3 MR. SHAKMAN: I am not at all satisfied
4 with your explanation.
5 MR. SCHWARTZBAUER: Well, I think that's
6 petty.
7 MR. SHAKMAN: That's all.
8 MR. HINDERAKER: 1:00 or do you want it
9 earlier?
10 MR. SCHWARTZBAUER: I want to put this
11 on the record, that I was touching the cardboard boxes
12 on the table right over there in an absent minded
13 fashion and I haven't the foggiest idea of what I was
14 touching and I didn't read any part of it and Mr.
15 Stephenson came back and appeared to be irritated and I
16 said, "Look, Ken, I am not looking into any of your
17 trade secrets."
18 MR. STEPHENSON: I would like to put on
19 the record also that when I returned to the room Mr.
20 Schwartzbauer had lifted some of the files partially
21 out of the file and was indeed reading the content of
22 those files.
23 MR. SCHWARTZBAUER: Well, it's gone
24 beyond the state of being ridiculous now.
25 MR. STEPHENSON: Do you deny that, Mr.

1 Schwartzbauer?

2 MR. SCHWARTZBAUER: Ken, I am not being

3 questioned by you. I am going to lunch.

4 MR. STEPHENSON: Do you deny that, Mr.

5 Schwartzbauer?

6 MR. SCHWARTZBAUER: Ken, I am not being

7 questioned by you.

8 (At this time a recess was taken.)

9 BY MR. HINDERAKER:

10 Q. There has been brief mention made of the fact

11 that the north end of the site was used during some

12 period of time for the dumping of materials and you,

13 sir, were aware of that?

14 A. I have heard reference to this.

15 Q. And did you understand that among other

16 things the materials that were dumped on the northern

17 portion of the Reilly site would include sludge

18 material or other materials from tanks and settling

19 basins, et cetera, that you wished to or the company

20 wished to be rid of?

21 A. I did not have personal knowledge of the

22 materials nor the occurrences.

23 Q. Was the dumping area visual upon visual

24 inspection?

25 A. Although I recall having walked through the

1 area I do not recall having seen such a dump site
2 visually.
3 (At this time Saint Louis Park Deposition
4 Exhibit 38 was marked for identification by
5 the Court Reporter.)
6 BY MR. HINDERAKER:
7 Q. Mr. Lesher, I am showing you what we have
8 just marked as Saint Louis Park Exhibit 38, a
9 memorandum from Mr. Danz to yourself of May 11, 1962.
10 Is this the type of intercompany correspondence that
11 you would have received on or about its date?
12 A. Yes, it is.
13 Q. Now, you mentioned that you were not
14 personally aware from firsthand knowledge of any
15 dumping of materials on the northern portion of the
16 site. Were you advised of that occurrence by memoranda
17 or otherwise from time to time?
18 A. I may have been.
19 Q. At the bottom of this document, Saint Louis
20 Park Exhibit 38 --
21 MR. SCHWARTZBAUER: Could you give him a
22 minute to look at it? He hasn't read it.
23 MR. HINDERAKER: Sure. Go ahead.
24 A. I have read the memorandum.
25 Q. The subject matter of this memorandum is the

1 tar cistern at the Saint Louis Park facility?
2 A. It is.
3 Q. My question will relate to the last paragraph
4 on the first page and in particular the last sentence.
5 "It was decided to run a clam shell bucket and use our
6 crane to remove the material which was loaded in two
7 rented dumptrucks and hauled to the north end of our
8 property." From the context of the letter can you tell
9 me what the material was which was put into the
10 dumptrucks?
11 A. It would appear to have been typical of
12 settlings that occur in a tank which has been used for
13 tar storage.
14 Q. And those -- I don't know what is typical?
15 A. The higher than normal level of CS2 and
16 soluable would indicate that it is settlings possibly
17 on the order of dust or coal particles or something of
18 that nature, such materials are contained in coal tar
19 but in lesser quantities per unit.
20 Q. Lesser quantities per unit than in the
21 settlings in the bottom of the system?
22 A. That is correct. The word "settling" I think
23 identifies the fact that it is heavier than coal tar
24 materials which have settled to the bottom.
25 Q. Do you know by personal observation or

1 through memoranda or otherwise whether any similar
2 materials were disposed of on the southern portion of
3 the Saint Louis Park site?
4 A. No, I do not.
5 Q. So from your knowledge do I understand you to
6 say that whether there was such disposal or whether
7 there wasn't such disposal you do not know one way or
8 the other?
9 A. That is correct.
10 Q. Did you, at or about the time of this Exhibit
11 38, have any understanding of whether this form of
12 disposal presented any risk of contamination of ground
13 waters?
14 A. No.
15 Q. And by that do I correctly conclude that you
16 did not have an understanding one way or the other?
17 A. That is correct.
18 Q. Do you know if the disposal of materials on
19 the northern portion of the site was stopped at any
20 point in time?
21 A. Not other than having read more recent
22 memorandum that materials had been hauled off.
23 Q. Suggesting that --
24 A. In those instances.
25 Q. And if one could generalize that suggested

1 perhaps that there was no disposal on the site at all?
2 A. No, I do not think so.
3 Q. So even at the time of those later memoranda
4 when some materials were hauled off site, materials of
5 whatever type would still have been disposed of on the
6 Reilly Tar property itself?
7 A. To my knowledge, yes.
8 Q. And whether the theoretical possibility
9 existed in fact do you know one way or the other?
10 A. I am replying in the sense that I was not
11 aware of any formal notification that no disposal was
12 to be made on the north end of the property.
13 Q. Do you have any knowledge of tar like
14 material being placed into the Republic deep well at
15 any time before 1974?
16 A. No, I do not.
17 Q. Would it have been your understanding prior
18 to 1974 that such material would not be in that well?
19 A. That is correct.
20 Q. I am going to try to summarize some things
21 and move this along. During the time frame of 1965
22 through the end of the plant we have seen a variety of
23 documents referencing waste water disposal system at
24 the site and the contamination of that waste water. I
25 understand that that was one area where Reilly was

1 focusing efforts to respond to concerns of the city and
2 state, correct?
3 A. Yes.
4 Q. And, similarly, I don't think we spent time
5 with it by way of documents but is it also your
6 understanding in the same period of time Reilly was
7 undertaking some efforts to respond to concerns of the
8 city and state relating odors in the air and emissions
9 into the air from the Reilly facility?
10 A. Yes.
11 Q. With regard to the wastewater issue, is it in
12 your view a fair characterization to say that it is
13 related to the handling and disposition of surface
14 waters?
15 A. If I understand your question and use of the
16 word surface waters, no, in that the wastewater would
17 have contained some water from process and that was
18 used in the process.
19 Q. And then the wastewater from all sources was
20 disposed of through the trench and ditches and into the
21 marsh?
22 A. To my knowledge, yes.
23 Q. I guess that's what I had in mind in the
24 sense of surface water, that is the wastewaters were
25 waters flowing over the surface of the ground?

A. Yes.

Q. And is that understanding also a fair one from your point of view?

A. Yes.

MR. SCHWARTZBAUER: Excuse me. What's the question before him? I think at this point in time the question that you are asking is quite garbled and hard for him to understand.

MR. HINDERAKER: Well, the question I had is Mr. Lesher had just given me the his understanding of the word surface waters, and as I was using the term surface waters I was referring to the fact that the wastewater from all sources was water flowing on the surface of the ground and ultimately into the marsh.

MR. SCHWARTZBAUER: Do you have any other question for him relating to surface waters?

MR. HINDERAKER: The question to which he responded yes was whether that was a fair understanding of surface water.

MR. SCHWARTZBAUER: And that's all you're asking him.

MR. HINDERAKER: That's all I asked.

MR. SCHWARTZBAUER: Okay.

(At this time Saint Louis Park Deposition

1 Exhibit 39 was marked for identification by
2 the Court Reporter.)
3 MR. HINDERAKER: We had a document dated
4 May 9, 1968 from Mr. Finch to C. C. Andre, identified
5 as Saint Louis Park Exhibit 39, and we will go on the
6 to the document I intended.
7 (At this time Saint Louis Park Deposition
8 Exhibit 40 was marked for identification by
9 the Court Reporter.)
10 BY MR. HINDERAKER:
11 Q. Hopefully, Mr. Lesher, you now have a
12 document from Mr. Finch to yourself of May 3, 1968?
13 A. That is correct.
14 Q. Maybe you could take a moment to read that,
15 please.
16 MR. SCHWARTZBAUER: I don't know whether
17 you are going to use it, Al, but I don't have a copy of
18 the one that got marked 39.
19 MR. HINDERAKER: I am not using it.
20 A. I have read the memorandum.
21 Q. In reference to the first page, and in
22 particular the first sentence of the second paragraph,
23 you see where it states that, "It seems the main
24 discussion of the committee centered around our plant
25 and the discharge of water across Walker Street"?

1 A. Yes.
2 Q. By way of background I understand that you
3 personally were not involved in any discussions with
4 city personnel?
5 A. That is correct.
6 Q. Also, you were not personally involved in any
7 discussions with personnel from the State of Minnesota?
8 A. That is correct.
9 Q. And, consequently, your understanding of
10 those discussions by the city and the state with Reilly
11 Tar was through Mr. Finch or other people at the Saint
12 Louis Park facility?
13 A. That is correct.
14 Q. My question is whether, from your recall of
15 this period of time, approximately 1968, the question
16 is whether the center of the discussion between Reilly
17 and the city and the state vis-a-vis water pollution,
18 was with regard to the plant discharge and in
19 particular that area across Walker Street?
20 A. I do not know.
21 Q. Let me next go to an exhibit that was
22 previously marked by the State of Minnesota Number 49
23 and that should be in there.
24 A. I have read the memorandum.
25 Q. Okay. The particular document has a

1 statement, which is I guess a full sentence just a
2 little beyond halfway down, it begins, "Mr. Koonce
3 could not see where we would be particularly concerned
4 with what water we were discharging as it did not get
5 into any surface water and it would be quite difficult
6 for him to say whether we were polluting any ground
7 water." Do you see that reference there?
8 A. I see it.
9 Q. I show you the document for whatever
10 assistance it gives in recall and locating the time
11 frame. My question is a more general one and that is
12 whether Reilly Tar understood that the State of
13 Minnesota was not alleging ground water contamination
14 as a result of the Reilly operations?
15 A. I do not know.
16 MR. SCHWARTZBAUER: Just a minute. I
17 object to the question insofar as it asks him to
18 speculate insofar as what Reilly Tar understood. You
19 can ask him what he understood and to that extent I
20 wouldn't object to the question.
21 BY MR. HINDERAKER:
22 Q. Then let me so limit it.
23 A. I do not know.
24 Q. From 1968 to 1977 you were general manager of
25 the refinery division. With regard to those persons in

1 the corporation who were most directly involved with
2 the dealings with the state and the city, they were
3 persons other than yourselves more directly involved in
4 that?
5 A. Yes.
6 Q. And they would be who, please?
7 A. Mr. T. J. Ryan, Mr. R. J. Boyle, Mr.
8 G. A. Reilly and of course Mr. Finch.
9 Q. And Mr. Ryan at this time was the
10 vice-president of the corporation, I believe that's
11 right?
12 A. I believe that he was.
13 Q. And Mr. Boyle would have been secretary at
14 this time as well?
15 A. Yes.
16 Q. And Mr. G. A. Reilly, his position was
17 relating to the --
18 A. Vice-president.
19 Q. He was a vice-president as well?
20 A. And I believe general manager of the
21 creosoting division.
22 Q. Would you describe for me, please, your
23 involvement, if any, in the relationship of the company
24 with the city and the state from '68 through the end of
25 the life of the plant?

1 A. Saint Louis Park was somewhat unique among
2 the plants within our organization in that it and
3 Maywood had both a refinery and a wood preserving
4 operation so that the plant managers of those two
5 plants had dual responsibilities to two people. Mr.
6 Finch would have reported to me with regard to refinery
7 operations and some site details and to Mr. G. A.
8 Reilly at that time on maters regarding the creosote
9 division, the creosote operation and some site
10 activities. I would assume that he had directed this
11 memorandum to me for information purposes and similarly
12 copied Mr. Reilly and Mr. Boyle.
13 Q. Do you know which official of the company
14 would have been the one to give Mr. Finch advice or
15 direction with regard to his relationship with the city
16 and the state?
17 A. At some point in time, and I am not certain
18 of the date, Mr. T. J. Ryan evolved or began to take
19 full direction of matters regarding Saint Louis Park's
20 discussions with the city and state.
21 Q. Prior to that evolution was the
22 responsibility more difused?
23 A. I believe that it was difused and confused.
24 Q. And during the previous period of time then
25 we look not only to Mr. Ryan but also to Mr.

1 R. J. Boyle and Mr. G. A. Reilly?
2 A. That is correct.
3 Q. At the point in time of approximately October
4 of 1977 the state along with the city initiated a
5 lawsuit against Reilly Tar & Chemical. Did you have
6 any oversight responsibilities vis-a-vis that lawsuit
7 while general manager?
8 A. No, I did not.
9 Q. Were you aware of the fact of the lawsuit?
10 A. I was aware that it was in existence, yes.
11 Q. And I take it from your answer that that --
12 does that pretty well summarize the extent of
13 information you had about that lawsuit?
14 A. That is correct.
15 Q. With that lawsuit in mind can you tell me
16 whether Mr. Ryan would have evolved as the responsible
17 corporate officer for the administration of that
18 lawsuit?
19 A. No, I cannot.
20 (At this time Saint Louis Park Deposition
21 Exhibit 41 was marked for identification by
22 the Court Reporter.)
23 BY MR. HINDERAKER:
24 Q. Mr. Lesher, would you read this document
25 which has been marked as Saint Louis Park Exhibit 41?

1 I hope you have the same one I do, a memorandum from
2 Mr. White to yourself of May 29, 1968?
3 A. Yes. I have read the document.
4 Q. The subject matter of the document relates to
5 preparations for installation of a storm sewer. It's
6 regarding the possibility of Reilly Tar going into the
7 storm sewer?
8 A. This is contained in the memorandum but it is
9 not the subject of the memorandum.
10 Q. And the subject of the memorandum as you read
11 it?
12 A. A visit by the people from the Minnesota
13 Pollution Control Agency.
14 Q. I guess you would call it the fourth
15 paragraph about the second sentence, it says, "We also
16 cannot pin them down on any limits except that this
17 would be considered a plant effluent going into a
18 primary stream (Minnehaha Stream)." Do I correctly
19 read the document to say what you desire to have limits
20 on the plant effluent that could, would, might go into
21 the storm sewer?
22 A. I would understand this to relate to
23 analytical limits on specific chemicals.
24 Q. Of the plant effluent?
25 A. That is correct.

1 (At this time Saint Louis Park Deposition
2 Exhibit 42 was marked for identification by
3 the Court Reporter.)
4 BY MR. HINDERAKER:
5 Q. I have shown you another document, Mr. Lesher,
6 we have marked as Saint Louis Park Exhibit 42, if you
7 take a moment to review that document.
8 A. Yes, I have it.
9 Q. This is a short memo written by yourself?
10 A. Yes, it is.
11 Q. It's about two days after Saint Louis Park
12 Exhibit 41?
13 A. I have read the document.
14 Q. You see in the document the second sentence,
15 "We discussed earlier the analysis of effluent for
16 contamination"?
17 A. Yes.
18 Q. Do you have a recollection of that discussion?
19 A. I do not.
20 Q. Do you have a recollection in general of the
21 compounds or elements that you you wished to analyze in
22 the effluent relative to contamination?
23 A. Not beyond my subsequent reference in the
24 memorandum that he should analyze for phenol and oil.
25 Q. So as we sit here today you have no

1 recollection of analyzing for anything in addition to
2 that?
3 A. No, because as I refer I was evidently
4 unaware or did not know what other chemicals might be
5 discussed or questioned.
6 Q. Would it be correct to say, given the
7 knowledge of the day, that phenols and oil constituted
8 all of the compounds that were being tested, vis-a-vis
9 contamination of the effluent?
10 A. Not necessarily because I believe that the
11 NPDES requirements came prior to this, which included a
12 very long list of specific chemicals and that that was
13 very expensive to run so that we rarely, unless
14 required to, ran the complete analysis.
15 Q. Do you have any recall of running an analysis
16 as extensive as required by the NPDES for Saint Louis
17 Park?
18 A. I do not recall if Saint Louis Park effluent
19 was among those which we had analyzed.
20 Q. Looking at Exhibits 41 and 42 together, do
21 you notice the date of Exhibit 41 as May 29, 1968?
22 A. I do.
23 Q. And the date of Exhibit 42 is two days after
24 that, and on Exhibit 42 the first phrase is, "Have your
25 5-29 letter." From the context of Exhibit 42 did you

1 conclude that Exhibit 42 is responsive to Exhibit 41?
2 A. I would.
3 Q. Noticing on Exhibit 41, the lower half, there
4 are four items listed, the first one is "our wells".
5 Do you have a recollection of Saint Louis Park wells
6 being tested?
7 MR. SCHWARTZBAUER: Well, the reference
8 in the document is to "our wells" not Saint Louis Park
9 wells.
10 MR. HINDERAKER: Well, yes, the document
11 does say "our wells".
12 MR. SCHWARTZBAUER: I thought that was
13 confusing in the way that you asked the question. Are
14 you asking about Saint Louis Park's wells?
15 MR. HINDERAKER: Oh, thank you.
16 A. Would you repeat the question, please?
17 Q. Do you have a recollection of if Reilly wells
18 were tested?
19 A. At this time?
20 Q. Yes.
21 A. No, sir, I do not.
22 Q. Do you know if any Reilly Tar wells were
23 tested for phenol and/or oils prior to the closing of
24 the plant?
25 A. No, I do not recall.

1 Q. I have some analysis I think that were
2 generated by the state and we don't have to bother with
3 those, I haven't seen any analysis generated by Reilly
4 Tar of well water.
5 A. I was trying to recall and do not recall any.
6 Q. Do you have a recollection of anyone from the
7 State of Minnesota alleging between 1968 and 1972 that
8 the municipal water supply of Saint Louis Park was
9 contaminated in any way as a result of Reilly
10 operations.
11 MR. SCHWARTZBAUER: Between when and
12 when? I am sorry.
13 MR. HINDERAKER: Between '68 and '72.
14 MR. SHAKMAN: By the State of Minnesota,
15 you mean an employee of the State of Minnesota.
16 BY MR. HINDERAKER:
17 Q. I mean the Minnesota Pollution Control Agency
18 or the Department of Health is probably all I mean.
19 A. I do not recall any specific incident during
20 that time period.
21 Q. I am going to ask on a followup question you
22 used the word "specific incident". Do you recall
23 anything along those lines in general?
24 A. Only at earlier periods of time.
25 Q. That would be the '33, '38, '40 periods that

1 we looked at earlier in your affidavit?
2 A. Yes.
3 Q. I would like to refer you to Exhibit 58,
4 please. That should be in here too.
5 A. I have located it and am reading it. There
6 are several subsequent pages, do you intend me to read
7 those? I am sorry, they have separately numbered tabs.
8 Q. 58 is this page and that page. Have you read
9 both of those pages?
10 A. I have read the document.
11 Q. I notice on the document that you are not
12 copied on it and it is not directed to you. Now that
13 you have read the document my question is whether you
14 were aware on or about this period of time in late 1969
15 of statements of phenols in the city wells?
16 A. Not beyond the reference in this document.
17 Q. Would you have seen this document on or about
18 its date?
19 A. I believe I would have.
20 Q. If you know, was anything done by the company
21 in response to this situation?
22 A. I do not know.
23 Q. Since you would have perhaps seen that let me
24 have another one marked here.
25 (At this time Saint Louis Park Deposition

1 Exhibit 43 was marked for identification by
2 the Court Reporter.)
3 MR. SCHWARTZBAUER: Has this been marked
4 as a separate exhibit?
5 BY MR. HINDERAKER:
6 Q. We have marked as Exhibit 43, Saint Louis
7 Park Exhibit 43, another memorandum, the first two
8 pages I submit are identical to state Exhibit 58 and
9 thereafter Saint Louis Park Exhibit 43 has additional
10 materials?
11 A. I have read the document, the supplement and
12 scanned again the prior exhibit.
13 Q. The attachment to Saint Louis Park Exhibit 43
14 of the report of the Minnesota Department of Health of
15 May 1963, that is something we looked at yesterday,
16 isn't it?
17 A. Yes, it is.
18 Q. And would you have reviewed the document with
19 the various attachments as Saint Louis Park Exhibit 43?
20 My question is whether you have a recall of the
21 November 19, 1969 memorandum coming to you with the
22 supplemental page and the attachments?
23 A. I did not specifically recall a time that I
24 read it.
25 Q. I understand that.

1 MR. HINDERAKER: Could we go off the
2 record a second?
3 (At this time a discussion was held off the
4 record.)
5
6 BY MR. HINDERAKER:
7 Q. Mr. Lesher, is it fair to conclude from the
8 context that the supplementation of Mr. Horner, the
9 third page of Saint Louis Park Exhibit 43, is a
10 supplementation to Doctor Wheeler's memorandum of
11 November 19, 1969?
12 A. I personally would so infer this.
13 MR. HINDERAKER: Do you want to ask him
14 a question on that?
15 MR. SCHWARTZBAUER: No.
16 BY MR. HINDERAKER:
17 Q. Mr. Lesher, if you were to attempt to
18 determine whether there was any activity or actions
19 undertaken by the company in response to the statements
20 of the phenols in the city wells, whom would you ask?
21 A. Your question related to action by the
22 company with respect to phenols in the City of Saint
23 Louis Park's wells?
24 Q. Yes, and I believe you said early you did not
25 know if the company did anything in response to that

1 statement?
2 A. I am sorry, I am confused. Are you asking
3 whether Reilly asked for, obtained samples and tested
4 the city's water wells.
5 Q. Let's start over again. My question is
6 whether there is any response or investigation or
7 discussion by Reilly Tar in response to the statements
8 made in this particular memorandum that there were
9 phenols in the city wells.
10 MR. SCHWARTZBAUER: Well, I object to
11 that on the grounds it's vague and also that it
12 apparently calls for information beyond the scope of
13 the witness' knowledge.
14 MR. HINDERAKER: I think it does call
15 for information beyond Mr. Lesher's knowledge and I
16 think you said that already.
17 MR. SCHWARTZBAUER: He has.
18 BY MR. HINDERAKER:
19 Q. So the question that I put to you is who
20 might know?
21 A. In my opinion Doctor Wheeler or Mr. Horner
22 would be most likely to possibly be more familiar with
23 this subject.
24 (At this time Saint Louis Park Deposition
25 Exhibit 44 was marked for identification by

1 the Court Reporter.)
2 A. I have read the document addressed to Mr.
3 Finch from Mr. Justin dated April 21, 1970 referring to
4 water pollution.
5 Q. You were carboned on that document?
6 A. I was.
7 Q. We have marked this as Saint Louis Park
8 Exhibit 44?
9 A. Yes.
10 Q. Would you have read the document on or about
11 its date?
12 A. I would expect that I had.
13 Q. About midway into the document you see the
14 sentence that begins, "I did find out from him that the
15 stated had run tests on some of Saint Louis Park wells"?
16 A. I see that statement.
17 Q. And "him" would refer to Mr. Koonce?
18 A. I would so infer from the previous part of
19 the report.
20 Q. And did you or would you have concluded from
21 reading the document that the phenol concentrations of
22 five parts per million were well below any
23 concentrations that gave the State of Minnesota any
24 concern?
25 A. Would you repeat the question, please?

1 MR. HINDERAKER: Would you read it back?
2 (Whereupon the requested portion of the
3 record was read by the Court Reporter.)
4 A. That is the statement, yes.
5 Q. So I read it fairly in your view?
6 A. Yes.
7 Q. Did you have any different conclusion?
8 A. No, I did not.
9 Q. But you have concurred with the conclusion of
10 Mr. Koonce?
11 A. Yes.
12 Q. I am going to refer you to State Exhibit 7.
13 Hopefully we are both looking at a memorandum from
14 yourself to Mr. T. J. Ryan of July 6, 1970?
15 A. That is correct, and I have reread the
16 memorandum.
17 Q. I believe you said, but correct me if I am
18 wrong, that you wished to test the effluent quality of
19 the Saint Louis Park facilities in response to
20 questions raised by city or the State of Minnesota?
21 A. Yes, with regard to phenol concentrations.
22 Q. In the waste water effluent?
23 A. That is correct.
24 Q. My question is whether in your view this was
25 responsive to the concerns of the Pollution Control

1 Agency or, to put it another way, from your
2 understanding did the Pollution Control Agency have any
3 concern for compounds other than phenols at this time.
4 MR. SCHWARTZBAUER: I object to that in
5 that it calls for speculation. I didn't tell you not
6 to answer. If you can. I am making my objection for
7 the record.
8 BY MR. HINDERAKER:
9 Q. I want Mr. Lesher to be clear. I am not
10 asking what you thought was in the mind of the
11 Pollution Control Agency, I am asking in your view
12 whether you were responsive to the PCA's concerns?
13 MR. SCHWARTZBAUER: I think he has
14 already answered it.
15 A. I think I have, that the -- I understood the
16 Pollution Control Agency had questioned our phenol
17 levels and that this was a response to that question.
18 Q. And was there anything else that the
19 Pollution Control Agency raised a concern about with
20 regard to compounds or elements?
21 A. I do not know or recall.
22 Q. Would you have been a member of the finance
23 committee in 1970?
24 A. No.
25 Q. Let me refer you to State Exhibit 63 which

1 should be in the book here.
2 A. This is a memorandum from Mr. Finch to Mr.
3 Boyle, September 17, 1970.
4 Q. Correct, on the Minnesota Pollution Control
5 Agency -- Showing yourself, amongst others, as a carbon
6 copy recipient?
7 A. Yes.
8 Q. Would you take a moment to read it, please?
9 My questions will be directed to the second page.
10 A. I have read the subject document.
11 Q. Did you notice on the second page where Mr.
12 Finch makes a statement that in conversation with the
13 Minnesota Pollution Control Agency personnel it was
14 reported that they felt that the City of Saint Louis
15 Park was playing politics and it goes on?
16 A. I so note that sentence.
17 Q. Around this time of late 1970 did you have a
18 view on whether the City of Saint Louis Park was
19 attempting to play politics?
20 A. I don't believe I had enough knowledge to
21 have considered the background of their concern.
22 Q. Did you have any information to suggest that
23 there was any potential threat to health arising from
24 contamination of city water supplies from the Reilly
25 operations?

A. No, I did not. Can we have five minutes, please?

(At this time a recess was taken)

BY MR. HINDERAKER:

Q. Mr. Lesher, I am going to show you a memorandum of Reilly Tar that we have previously --

MR. POLACK: Just a second, I can't hear.

(At this time a discussion was held off the record.)

BY MR. HINDERAKER:

Q. I will start over. Mr. Lesher, I am going to show you a memorandum of Reilly Tar that we previously identified as Saint Louis Park Exhibit 10, it's dated December 3, 1970, it shows yourself as being a carbon copy recipient and I would like you to take the time to read this one as well.

A. I have read the document.

Q. In it Mr. Finch made some or various statements, one of them you will notice in the fourth paragraph, last sentence of that paragraph, "Any possible contamination on our part would be remedied which by natural forces over a period of time."

A. I assume he wrote that sentence.

1 Q. Would you concur with the accuracy of that
2 sentence?
3 A. I am not certain that I totally agree in the
4 manner in which it is stated.
5 Q. Would you tell me in what ways you disagree?
6 A. Two points, the first of which he is
7 evidently separating the contamination into two parts,
8 part of which we supposedly contributed to and another
9 part which may have been there for some other reason,
10 and then I had discussed with Mr. Shakman earlier my
11 conception of biodegradation and that it involved some
12 unknown time and I don't believe I stated at that time
13 that air was also a factor in the efficiency of the
14 biodegradation so that I think Mr. Finch's sentence
15 would need clarification and expansion.
16 Q. Do you have a recollection of advising Mr.
17 Finch to modify his statement?
18 A. No, I do not.
19 Q. Would you look at State Exhibit 94, one of
20 the last ones that Mr. Shakman --
21 A. This is the letter from Justin to Mr.
22 Hennessy on November 9th, subject oil separation test.
23 Q. Yes. Take the time you desire to refresh
24 yourself. My question will be directed to the
25 reference of a maximum 100 parts per million oil

1 meeting city requirements.
2 A. I have reread the memorandum.
3 Q. Do you have a recollection apart from the
4 memorandum of the city having a requirement calling for
5 100 parts per million oil?
6 A. No, I do not.
7 Q. So if I was to submit that the city did not
8 have such a requirement you would be unable to comment
9 one way or the other whether I am right or wrong?
10 A. That is correct.
11 Q. In your experience with all of the various
12 plants of Reilly Tar, was there a requirement of a
13 limitation of 100 parts per million oil imposed in any
14 of the other plants as you recall?
15 A. I do not recall that specific limit being
16 specified at any of the other refineries.
17 (At this time Saint Louis Park Deposition
18 Exhibit 45 was marked for identification by
19 the Court Reporter.)
20 A. I am supposed to be reading.
21 Q. I am trying to catch up with you here. We
22 have marked as Saint Louis Park Deposition Exhibit 45 a
23 memorandum from yourself to refinery plant managers of
24 March 22, 1971 and if you would please take a moment to
25 refresh yourself on this document.

1 A. I have read the document.
2 Q. Can you give me a sense of whether the
3 company had decided to close the Saint Louis Park
4 facilities prior to March 22 of '71?
5 A. You are asking for my conclusion or my
6 specific knowledge?
7 Q. I am asking whether the company had made the
8 decision sometime prior to the date of Exhibit 45?
9 A. Not to my knowledge or I am not aware of it.
10 Q. Do I correctly assume that you were not part
11 of the group that reached that decision?
12 A. That is correct.
13 Q. So the statements made in the memorandum are
14 items or statements reported to you from others?
15 A. At some time earlier or on this date, yes.
16 Q. Can you tell me the persons who would have
17 constituted the decision making group relative to
18 closing the Saint Louis Park facility?
19 A. I believe that it would have principally been
20 Mr. P. C. Reilly, Junior, Mr. T. E. Reilly, Mr. T. J.
21 Ryan.
22 Q. Any others?
23 A. No, I can think of no others.
24 Q. You gave me P. C. Reilly, Junior, T. E.
25 Reilly and T. J. Ryan?

1 A. That is correct.
2 Q. Did those gentleman constitute a committee or
3 operating body of the company?
4 A. Yes, they did.
5 Q. What was that?
6 A. I am not certain how formal a designation we
7 had at that specific time but they would have performed
8 as the executive committee of the corporation.
9 Q. Let me put it this way, did you know whether
10 the Saint Louis Park facility was in fact operating at
11 losses in the past years previous to Exhibit 45?
12 A. I would not specifically have been aware of
13 the total plant's results but primarily with the tar
14 refinery operations.
15 Q. With regard to the tar refinery operations,
16 was that profitable or not profitable?
17 A. It is difficult for me to remember specific
18 numbers from those earlier time periods.
19 Q. Would Mr. T. J. Ryan be the one who would
20 have known that at the time?
21 A. He also was my superior and would have been
22 familiar with this, yes.
23 Q. Did you report to Mr. T. J. Ryan directly?
24 A. Yes, I did.
25 Q. Did Mr. G. A. Reilly report to Mr. T. J. Ryan?

1 A. No. Mr. Ryan became a major officer of the
2 corporation subsequent to Mr. George Reilly's death.
3 Q. Mr. T. J. Ryan became an officer of the
4 corporation subsequent to Mr. Reilly's death, is that
5 correct?
6 MR. SCHWARTZBAUER: He said a major
7 officer I think.
8 BY MR. HINDERAKER:
9 Q. So Mr. George A. Reilly, would he have been a
10 vice-president at the same time that Mr. T. J. Ryan was
11 a company officer?
12 A. I would have to refer to our answers to the
13 interrogatories. Mr. George Reilly died on September
14 11, 1969. Mr. Ryan became a vice-president on May 14,
15 1970.
16 Q. Okay. Do I correctly assume that the
17 responsability for the Saint Louis Park plant or the
18 evolution of the focus of that responsibility to Mr. T.
19 J. Ryan occurred after the death of Mr. George A.
20 Reilly?
21 A. That is correct.
22 Q. And can you give me a sense of how much after
23 Mr. George Reilly's death that would have occurred?
24 A. I don't believe that it was too long a period
25 after Mr. George Reilly's death.

1 Q. A matter of months as opposed to a matter of
2 years?
3 A. That is correct.
4 Q. Going back to Saint Louis Park Exhibit 45,
5 the statement is made in the third paragraph, "The
6 demands of the local government and citizens relating
7 to the ecology were virtually impossible to satisfy."
8 Can you tell me what the demands were that you
9 referenced in the memorandum?
10 A. I do not recall specific numbers other than
11 discussions within the company on effluent limitations.
12 Q. So the extent of your recall today is with
13 regard to the subject matter of effluent limitations?
14 A. Effluent and possibly air pollution.
15 Q. Anything else?
16 A. Not that I am currently aware of or recall.
17 Q. In your view was the extension of Louisiana
18 Avenue sufficiently significant to cause the Saint
19 Louis Park plant to close?
20 A. Only in my opinion, no, not in and of itself.
21 Q. Did you have any involvement? Let me put it
22 this way first. Did you participate with city
23 officials directly regarding the negotiations for the
24 purchase and sale of the Reilly property?
25 A. No, I did not.

1 Q. Did you participate indirectly by overseeing
2 the negotiations of any others?
3 A. No, I did not.
4 Q. Were you involved in any way in those
5 negotiations?
6 A. I myself was not involved in the negotiations.
7 Q. Were you aware of the fact of the
8 negotiations at the time?
9 A. Yes, I was.
10 Q. Did you monitor the progress of those
11 negotiations?
12 A. Not by my definition of monitor, no.
13 Q. Would it be accurate to say that you did not
14 keep current with the flow of offers and counteroffers,
15 et cetera?
16 A. In further explanation, I believe, Mr. Ryan's
17 related and informed me in general and in summary of
18 the status of the negotiations.
19 Q. Would that have been by memoranda or orally?
20 A. Orally.
21 Q. Mr. T. J. Ryan is alive yet, is he not?
22 A. He is living but disabled.
23 Q. Is he in the Indianapolis area?
24 A. Yes, he is.
25 Q. Do you know the nature of his infirmities?

1 A. He has for some years been suffering from the
2 results of a stroke and I believe he has had further
3 complications within the last several weeks.
4 MR. POLACK: Off the record.
5 (At this time a discussion was held off the
6 record.)
7 MR. HINDERAKER: Back on the record.
8 BY MR. HINDERAKER:
9 Q. Mr. T. J. Ryan would have reported to whom
10 between 1970 and 1974?
11 A. He was a vice-president from 1970 to 1974 and
12 would have reported to Mr. T. E. Reilly -- I am sorry,
13 to Mr. P. C. Reilly, Junior who was president until
14 1974.
15 Q. Thank you. I would like to spend a little
16 time with your affidavit marked as Exhibit 72. It
17 should be on the top or bottom of your stack. It was
18 the first exhibit offered by --
19 A. I have it in front of me.
20 Q. If you would take the time you desire to
21 review it. I guess I will be bouncing around a couple
22 pages but I am going to start on Page 6.
23 A. I have recapped the document.
24 Q. Starting with Page 6, if I could refer you to
25 that first, please.

1 A. Yes.
2 Q. The last paragraph mentions the presence of
3 PAH's in the soils and goes on to say that that was
4 known since at least 1974 with reference to an article
5 of October 25, 1974. My question is whether you had
6 any knowledge of PAH's in the soils independent of the
7 referenced article?
8 MR. SCHWARTZBAUER: At what point?
9 MR. HINDERAKER: That's a good point.
10 BY MR. HINDERAKER:
11 Q. At any time prior to October 25, 1974.
12 A. I do not presently recall.
13 Q. Independent of the referenced article did you
14 have any knowledge of the possibility of the presence
15 in the water table of PAH's.
16 MR. SCHWARTZBAUER: As of 1974?
17 BY MR. HINDERAKER:
18 Q. As of any time prior to October of 1974.
19 A. I do not presently recall.
20 Q. If you were to attempt to refresh your
21 recollection in that regard to what would you look?
22 A. I would have discussed it with Mr. Horner,
23 Doctor Wheeler and reviewed the files.
24 Q. And in the review of the files you would be
25 looking for memoranda or other recordings discussing

1 PAH's?

2 A. In the '70-'74 period, yes.

3 Q. Would you turn to Page 5, please?

4 A. I have it in front of me.

5 Q. I am going to refer you to a statement that

6 starts about eight or nine lines down and I want to

7 reference the phrase Saint Louis Park and advise that

8 the city intended to construct the new Louisiana Avenue

9 through the plant property in a manner to eliminate

10 rail service and make the plant worthless.

11 A. I so note.

12 Q. I am asking for some clarification of how

13 Louisiana Avenue would make the plant worthless?

14 A. I am now not quite certain of the Louisiana

15 extension to which I earlier referred and if that was

16 different than this, but I would interpret this to

17 refer to a rerouting of Louisiana Avenue that evidently

18 cut or eliminated the railroad tracks into the plant

19 and the plant could not have efficiently or profitably

20 operated without rail service to both the tar refinery

21 and the wood preserving operation.

22 Q. And in fairness to you, your earlier comment

23 about the extension of Louisiana Avenue being a

24 contributing factor, I take it you had in mind an

25 extension of Louisiana Avenue that did not eliminate

1 your rail service?
2 A. I think there, to my knowledge, were two
3 plans or programs involving Louisiana Avenue and the
4 one I earlier had in mind was a minor change that did
5 not discontinue the rail service, which you have now
6 raised doubt in my mind.
7 Q. Let me go on to the next paragraph on Page 5
8 of the affidavit. You begin, "On October 22, 1970 the
9 State of Minnesota," and so forth, and you reference
10 the lawsuit that was begun on that date?
11 A. Yes.
12 Q. And you also reference, by way of authority
13 for your statement, "See complaint Exhibit O". From
14 your earlier comments regarding your involvement in
15 that litigation, do I correctly conclude that the
16 statement you make in the affidavit is based upon the
17 language of the complaint, Exhibit O, and nothing else?
18 A. As I understand your question, yes.
19 Q. And because of the cumbersomeness of that
20 question is it accurate to say that your understanding
21 of the scope of the 1970 lawsuit was limited to what's
22 written in the complaint?
23 A. Yes.
24 Q. Going on in that same paragraph you then
25 mention the settlement of the lawsuit by execution of

1 an agreement for purchase and so forth, and then repeat
2 some of the terms of that agreement of purchase
3 referencing Exhibit P and my question will be a similar
4 one; that is, whether it is correct that your knowledge
5 of the terms of the purchase agreement is limited to
6 what is written on the document itself?
7 A. Not totally in that as I previously mentioned,
8 I believe Mr. Ryan continually and typically kept me
9 orally advised of the progress and status of the
10 negotiations.
11 Q. And, for example the statement, "The lawsuit
12 was settled by the execution of an agreement for the
13 purchase of real estate." That statement was based
14 upon your conversations with Mr. Ryan and the purchase
15 agreement itself?
16 A. That is correct.
17 Q. Would there be any other sources of
18 information that you would have available?
19 A. Not to my knowledge.
20 Q. Turning to the top of Page 6, the second
21 sentence or the first full sentence of the page states;
22 "In leter from Jack Van Denorth, Special Assistant
23 Attorney General, Minnesota Pollution Control Agency,
24 and (Exhibit Q). It was stated that the State would
25 not dismiss its complaint until it had received a

1 proposal from the City of Saint Louis Park for
2 eliminating potential hazards at the Republic Creosote
3 site." With reference to that sentence, do you have
4 any firsthand knowledge regarding the scope of the work
5 discussed between the city and the state for the
6 elimination of potential pollution hazards?
7 A. No, I do not.
8 Q. Is your statement that I just referenced
9 based solely upon reading Exhibit Q?
10 A. Yes, it is.
11 Q. By way of context, let me represent to you
12 that the purchase agreement is dated April 14, 1972 and
13 April 14, 1972 which I am assuming is the Exhibit P
14 which we were discussing before and continuing on, you
15 will note that you state that another agreement, hold
16 harmless agreement, was executed June 19, 1973. Let me
17 ask if you had any responsibilities or involvement in
18 the negotiations of that hold harmless agreement some
19 one year and a couple months later or after the
20 purchase agreement?
21 A. No, I did not.
22 Q. Do you know if you had any discussions with
23 anyone from Reilly Tar regarding those negotiations
24 while they were ongoing?
25 A. No, and I do not specifically recall the

1 words, but believe that Mr. Ryan would have continued
2 to orally comment to me on the progress and status.
3 Q. Do you have any recollection of any comments
4 of Mr. Ryan relative to the negotiations in 1973 for
5 what we have been calling the hold harmless agreement?
6 A. No more than the sense of his comments, that
7 the negotiations were progressing and that we were
8 nearing and that we finally had obtained a hold
9 harmless agreement.
10 Q. Have you read the transcription of questions
11 and answers or the questions that I put to Mr. Finch
12 and the answers that he gave me?
13 A. I did scan it very rapidly.
14 MR. HINDERAKER: Well, I do believe that
15 I am done. Thank you for your patients.
16 MR. LEININGER: I just have a couple
17 questions.
18
19 CROSS-EXAMINATION
20 BY MR. LEININGER:
21 Q. Carl, I am going to ask some questions on
22 behalf of the United States. One thing I would like to
23 go over, just flush out a little bit more with you, is
24 your responsibilities vis-a-vis or with regard to the
25 Saint Louis Park site as you went up the ladder, so to

1 speak.
2 A. Okay.
3 Q. In your capacity here working for Reilly Tar.
4 I am just going to refer back to your resume', State's
5 Exhibit 72 A. From 1949 to '51 as production
6 superintendent for Maywood --
7 A. That is correct.
8 Q. Did you have any responsibility at all with
9 regard to the Saint Louis Park site?
10 A. None whatsoever.
11 Q. And what about from 1951 through 1954?
12 A. The same would apply.
13 Q. And as the project engineer from 1954 through
14 did you have any responsbilities with regard to the
15 Saint Louis Park site?
16 A. I would have been assigned projects --
17 specific projects.
18 Q. Such as?
19 A. The major work that I did at that time, as I
20 recall, involved the installation of the fire tube
21 stills.
22 Q. Those are the Lesher Stills?
23 A. They are.
24 Q. Why were you assigned that project, just to
25 upgrade the equipment?

A. In the very early '50's there was very little operation or products produced in the Saint Louis Park refinery and about 1954 or 1955 we obtained business for anode pitch at a major aluminum company in the northwest part of the United States for which we then installed the new stills at the Saint Louis Park refinery and made some renovations to enable them to produce this anode pitch.

Q. What other projects were you assigned to work on that related to the Saint Louis Park site?

A. This is difficult to recall but I believe that I may have done some work on the pitch pans, pitch tanks condensers and pans, probably some pumps and may have been an intermediary as an engineer occasionally on the site with respect to the wastewater settling basin and it's associated equipment.

Q. What do you mean by an intermediary?

A. If some problem would have arisen or some change would have been made that I could serve as messenger for, observer or relay, advise and instruct to save a special trip by Mr. Horner or Mr. Hennessy, I believe that that would have been the case.

Q. So Horner and Hennessy were your bosses at that time?

A. They were and they were more knowledgeable

1 and experienced in civil engineering than was I.
2 Q. And so you were the intermediary for this
3 specific aspect between then and was it Mr. Holstrom?
4 A. Yes, in the 1954-'58 period.
5 Q. Do you recall what caused you to be involved
6 with the settling basin at that time?
7 A. Not specifically or more than has been
8 referred to in the memorandum.
9 Q. Are you referring to the memorandum of which
10 we are missing the first three pages that was put
11 together by you in 1962? I think it's State's Exhibit
12 Number 3?
13 A. I think that was subsequent to this period.
14 Q. Yes, it was.
15 A. I don't necessarily and would have to leave
16 through to see if there were any memorandum during this
17 1954 to '58 period.
18 Q. I guess my question is do you recall the
19 comments you made in State's Exhibit Number 3 with
20 regard to the condition of the site and the wooden
21 settling basin? This would be on Page 4 and 5 of that
22 exhibit.
23 A. I would have been aware of and, as I related
24 earlier, this is a summary or minutes prepared by me of
25 a meeting held to discuss the Saint Saint Louis Park

1 plant refinery operating problems or conditions.
2 Q. My question is, back in 1954-1955 when you
3 were acting as intermediary between Horner and Hennessy
4 and Mr. Holstrom, were there problems with the settling
5 basin at that time in terms of flooding and difficulty
6 with regard to volumes of material going into the
7 settling basin and this type of thing?
8 A. I do not at this time recall any specific
9 reason or any specific problem or any specific instance
10 in which I would have performed engineering work on the
11 settling basin.
12 Q. So your answer is you didn't perform any
13 engineering work on the settling basin. What were your
14 observations with regard to the settling basin?
15 A. I am sure that I would have toured the plant
16 and observed the site and I do not now recall its
17 condition at that time.
18 Q. Would you be able to recall whether it was
19 any better or worse than the condition that you
20 observed in 1962?
21 A. No, I could not.
22 Q. Do you recall any other projects or
23 assignments that you had with regard to the Saint Louis
24 Park plant site as project engineer from '54 through '58?
25 A. No more than I have mentioned.

1 Q. As the assistant to production manager, from
2 1958 to 1963, that is in fact what your position was at
3 that time, isn't it?
4 A. That is correct.
5 Q. How did your role change during that period
6 of time with regard to the Saint Louis Park plant site?
7 A. This was a purely staff position under Doctor
8 Mootz, production manager. I did visit the Saint Louis
9 Park site probably on a regular schedule of two to six
10 visits per year to observe principally the refinery
11 operating unit to help them with any problems they may
12 have had, to comment upon its operation and to improve
13 its operation.
14 Q. Would this have included what to do with
15 wastewater from the refinery process?
16 A. It may have.
17 Q. Would it also have included the sources of
18 water for the refinery process and the mechanism for
19 getting that water to the refinery process?
20 A. It should have, yes.
21 Q. It's during this period of time that you
22 wrote the memorandum or the words which are
23 incorporated into the State's Exhibit Number 3 which
24 you have earlier identified as having been drafted in
25 1962?

1 A. Yes.
2 Q. You indicated in your previous testimony that
3 you visited the site two to six times per year you
4 would estimate from 1958 to 1963. Would you say that
5 your observations at that site during that period of
6 time would be substantially the same as what you
7 observed at the time that you drafted this 1962
8 memorandum?
9 MR. SCHWARTZBAUER: I am sorry, are you
10 asking him now about what period, 60 --
11 MR. LEININGER: This is State's Exhibit
12 Number 3 which he identified as 1962.
13 MR. SCHWARTZBAUER: You are asking him
14 to compare that with some other period?
15 MR. LEININGER: From 1958 to 1963 when
16 he was the assistant to the production manager.
17 MR. SCHWARTZBAUER: I see, okay.
18 A. I believe that there were improvements with
19 time in the housekeeping and condition of the Saint
20 Louis Park refinery.
21 Q. What types of improvements were made?
22 A. Cleanliness, clean-up, leakage repair and
23 things of this nature.
24 Q. Were these improvements made in your opinion
25 as a consequence or at least subsequent to your

1 memorandum in 1962?

2 A. Over the period of time year by year there

3 were improvements in the housekeeping, cleanliness and

4 condition of the plant.

5 Q. When would you say these improvements started

6 to take place?

7 A. I can't specify an exact period of time other

8 than observation that there was a continual improvement

9 in the plant condition.

10 Q. What was your responsibility with regard to

11 the plant site at Saint Louis Park from 1968 through

12 1972 when you were the general manager for the refinery

13 division?

14 A. As I mentioned to Mr. Hinderaker, this was a

15 confused and difficult organizational arrangement. I

16 really had no direct responsibility, to my knowledge,

17 other than the refinery operations and, of course, a

18 general interest in the companies wellbeing.

19 Q. Were you making site inspections or visits

20 during that period of time?

21 A. Yes, I was.

22 Q. Approximately how frequently?

23 A. At generally the same interval.

24 Q. Two to six times a year, would you say?

25 That's what you indicated before.

1 A. In general I believe from the period 1954
2 through approximately 1970 I generally attempted to
3 visit all of our tar refineries at least two and in
4 most cases it generally did not amount to more than six
5 visits per year.
6 Q. Were you involved in the process of approving
7 work orders?
8 A. Not at that time.
9 Q. During what period of time were you involved
10 in that process?
11 A. It would have been subsequent to that,
12 sometime in the '76-'77 period I believe. Except that
13 as general manager the work order requests would have
14 come through me and I imagine I could have verified
15 them or requested adjustments or changes.
16 MR. HINDERAKER: I think you said '76 to
17 period, would you have meant '66 to '67 period?
18 THE WITNESS: No. I was not a
19 participant in the finance committee as such until the
20 mid to late '70's.
21 MR. HINDERAKER: Thank you.
22 BY MR. LEININGER:
23 Q. In 1962 when you were making the observations
24 which you did in State's Exhibit Number 3, to whom
25 would you have directed your concerns with regard to

1 the site at that time?
2 A. If I felt that I could do it without
3 irritation or without problems I would have made them
4 directly to the plant manager. If I felt uncomfortable
5 and felt that I might have problems I would have
6 discussed them with my superior and asked his
7 assistance in helping promoting them.
8 Q. Was that Doctor Mootz?
9 A. That is right.
10 Q. What did you do in this instance, if you
11 recall?
12 A. In most places I believe that I had a good
13 working relationship with most of the plant managers
14 and generally discussed such things directly with them.
15 Q. Did Doctor Mootz take an interest in what you
16 were observing with regard to the Saint Louis Park site?
17 A. Very much so.
18 Q. So you reported to him as to the extent of
19 your success in dealing with the problem, is that
20 correct?
21 A. I generally kept him advised of my plans and
22 what I was doing and hoped to achieve.
23 Q. These would be oral communications as well as
24 written or just oral?
25 A. Generally oral.

1 Q. Would you have any other supervisors that
2 would be similarly interested in this kind of
3 information?
4 MR. POLACK: Excuse me. During what
5 period of time?
6 BY MR. LEININGER:
7 Q. This is during the 1962 period of time I am
8 referring to in State's Exhibit Number 3.
9 A. Depending upon the question or problem I
10 would have discussed it with the appropriate person.
11 In the case of engineering with Mr. Horner and Mr.
12 Hennessy, accounting with Mr. McAdams, personnel
13 problems with Mr. Boyle and so forth.
14 Q. First of all, on Page 5 of that document, if
15 you have that in front of you.
16 A. I do.
17 Q. The last paragraph immediately above where it
18 says "operation improvements", you reference the
19 engineering department wherein you say, "The
20 engineering department feels a rough estimate of an
21 above ground system." When you refer to the "engineering
22 department" are you really referring to Horner and
23 Hennessy, is that who you have in mind when you
24 reference --
25 A. In the context in which this document is

1 written, I believe this was a meeting that Mr. Hennessy
2 and Mr. Horner participated in and that during the
3 course of the discussion of the ground tanks, one or
4 another of them probably made the guess that the cost
5 would be on the order of $15,000 to $16,000.
6 Q. On Page 6, the last paragraph immediately
7 above "Y" it says, "General improvements", there is
8 also a reference to the engineering department where in
9 the third line it says, "The engineering department
10 says it needs a plant flow sheet of current operations
11 and procedures." Would you also be thinking of Horner
12 and Hennessy at that time also?
13 A. Yes, they were our engineering or were
14 responsible for the engineering department or function.
15 Q. You indicated that subsequent to this period
16 of time there was some gradual improvement at the site?
17 A. Yes.
18 Q. Why did it take until 19 -- well, when were
19 your recommendations actually -- your recommendations
20 with regard to the ground tanks and the trenches and
21 the pipes, when were they actually implemented?
22 A. I would need to refer to these files here to
23 answer a specific date.
24 (At this time a discussion was held off the
25 record.)

1 BY MR. LEININGER:

2 Q. To save a few minutes here, do you agree that

3 1968 or approximately thereto, that that was when the

4 appropriation or the money was made available for

5 putting the ground tanks or taking care of the problem

6 with the ground tanks and the trenching and replacing

7 the pipes, putting them above ground and that type of

8 thing?

9 A. As I recall, yes, it would have been in the

10 '60-'69 period.

11 Q. Why did it take that long to actually

12 implement your recommendations?

13 MR. SCHWARTZBAUER: I object, no

14 foundation, but I am not instructing you not to answer

15 and therefore you can do the best you can.

16 BY MR. LEININGER:

17 Q. Well, your testimony is that these were

18 implemented approximately from like in 19 -- when did

19 you say '66 to '68, somewhere in that period of time?

20 A. That is correct.

21 Q. Why did it take four years from your 1962

22 recommendation as a minimum to actually implement that

23 task?

24 MR. SCHWARTZBAUER: If you know.

25 A. I do not totally know, and as I believe Mr.

1 Shakman questioned me, there were several circumstances,
2 not necessarily that all of them occasioned this delay,
3 but for some period of time there there were no
4 technically knowledgeable people on the plant site and
5 the engineering department, according to the
6 correspondence, evidently had other and perhaps more
7 major projects going on, period.
8 Q. If you would look again to State's Exhibit
9 Number 3 on Page 5 in the first full paragraph where
10 you state that, "The present system seems entirely
11 inappropriate for community relations." In that
12 statement are you including, when you say "the present
13 system", are you including the settling basin in that?
14 A. Yes, I believe so.
15 Q. What improvements, if any, were made to the
16 settling basin and that entire system subsequent to
17 your indicating that they were inadequate?
18 A. I do not recall.
19 Q. You do not recall if any improvements were
20 made?
21 A. That is correct.
22 Q. Was the plant manager more or less autonomous
23 regarding decisions regarding disposal of material at
24 the site? I am referring to the plant manager of Saint
25 Louis Park of course.

1 A. I am unsure of the meaning you place upon
2 autonomous.
3 Q. Well, would his supervisor have been aware of
4 the waste disposal practices at the Saint Louis Park
5 plant?
6 MR. SCHWARTZBAUER: Object, no
7 foundation, beyond the witness' knowledge.
8 BY MR. LEININGER:
9 Q. Were you at any time a supervisor?
10 A. Yes, I was.
11 Q. To the plant manager?
12 A. Yes, I was.
13 Q. At Saint Louis Park?
14 A. Not at Saint Louis Park. I was a supervisor
15 at the Maywood refinery.
16 Q. Who would have been the supervisor for the
17 plant manager?
18 A. Where and when?
19 Q. At the Saint Louis Park plant site at any
20 time. What would be the name of that position, so to
21 speak?
22 A. As I earlier testified, this was a plant with
23 operating units from two divisions, each of which had a
24 general manager and/or vice-president and the plant
25 manager on the site was responsible to both of them.

1 Q. So was he responsible to you at any time?
2 A. He would have been partially under my
3 direction after 1963, half of him.
4 Q. Do you know if any of his supervisors took an
5 interest or were advised by him with regard to the
6 waste management practices at the site?
7 MR. SCHWARTZBAUER: Object, no
8 foundation except insofar as it applies to this witness.
9 A. I think my association considered that one of
10 his responsibilities was to keep us advised of problems
11 or concerns that he would have had.
12 Q. So do you know whether that would have
13 included disposal of material at the site?
14 A. You are now referring to what disposal and
15 what material?
16 Q. I am referring to disposal of refuse,
17 anything tangible, so to speak, that would be
18 considered a waste?
19 A. I am not certain that he would have advised
20 either or any of us.
21 Q. And you have stated previously that you did
22 not have any recollection of the waste disposal
23 practices at the Saint Louis Park site, is that correct?
24 A. That is correct.
25 Q. Did you state whether or not you knew of

anybody else who may have knowledge of the waste disposal practices besides plant managers?

A. I believe I stated or would now state that I doubted and was not aware of a formal policy that the plant manager advise anyone of disposals of such things in that period of time.

Q. Do you have any recollection of the change over at the Saint Louis Park site from using the cooling pond water for I think it was boiler cooldown to switching over to municipal water, do you have any recollection of that?

A. No, I do not.

Q. Do you know who would have or do you have an opinion as to who would have been required to sign off, sign off I think is the right term, on that change over besides the plant manager?

A. If it had required an expenditure of money there would have been a work order request with finance committee formal approval.

Q. In your opinion is that something that would not have had to go beyond the finance committee for approval?

A. (No response.)

Q. You had indicated earlier that there was also an executive committee I thought?

1 A. In general the executive committee was
2 involved in more major projects and expenditures than
3 that would have involved.
4 Q. Do you recall who were the members of the
5 finance committee in 1955?
6 A. No.
7 Q. The same questions I just gave you with
8 regard to the change over from the water source. I
9 would also like to direct the same questions with
10 regard to filling in of the well. Would the finance
11 committee also have been required to review a work
12 order on that task if it were to involve an expenditure
13 of let's say over $250?
14 A. Yes, if it had required an expenditure of
15 more than several hundred dollars.
16 Q. How detailed would these work orders be
17 generally?
18 A. I would refer you to Minnesota Finch
19 Deposition Exhibit Number 23, which is a typical work
20 order form used by the company.
21 Q. So in detail you would say that Number 23 is
22 about average, typical?
23 A. Typical.
24 Q. That would be typical more or less during
25 your tenure as an employee at Reilly Tar, as far as you

1 know?

2 A. That is correct.

3 Q. You had indicated earlier when Mr. Shakman

4 was asking you questions with regard to State's Exhibit

5 Number 3 last Monday, I thought that you had, in

6 response to him asking you if this was accurate, you

7 had indicated that something on Page 5 was in your

8 opinion not entirely accurate. I was unclear as to

9 what that was. As you look at this now is there

10 anything in this document, take time to reread it if

11 you feel it is necessary, but is there anything that

12 you feel is inaccurate?

13 MR. SCHWARTZBAUER: In Exhibit 3? I

14 object to that on the grounds it is too broad a

15 question. It is a multipage document and we have had

16 almost three days of testimony.

17 A. I do not recall my testimony on that document.

18 Q. I may have misunderstood something that you

19 said.

20 A. Do you wish me to reread the entire document?

21 Q. Would you reread Roman Numeral III, which is

22 just a few paragraphs dealing with waste water,

23 beginning with the bottom of Page 4?

24 A. I have reread it and the only thing that

25 occurs to me where Mr. Shakman and it may have been

1 confused and misleading was in the trench from the
2 settling basin where I pointed on the map that this was
3 an open ditch and that subsequent references refer to a
4 tile from the settling basin to the street or to the
5 edge of the property and that at some time during my
6 testimony I became aware and am not now sure if or when
7 a change was made from a ditch to a tile.
8 Q. Okay. I have just a few more questions.
9 A. Sure.
10 Q. You had indicated earlier that you thought
11 that you were on a committee for analytical methods,
12 ASTM?
13 A. D 817, it's a committee recommending
14 analytical methods pertaining to the analysis of coal
15 tar pitch.
16 Q. That's a committee of what?
17 A. The ASTM organization is such that the
18 committee must be made up of both producers, users and
19 general interest people.
20 Q. So this is a committee under ASTM?
21 A. That is correct.
22 Q. ASTM stands for what?
23 A. American Society of Testing Materials.
24 Q. How long have you been a member of that
25 committee?

A. I think since the early '70's or it could have been longer.

Q. What would this pitch be analyzed for, I should say what would be the purpose of the analysis which you are reviewing for ASTM?

A. To determine its conformance with specifications which are generally physical properties and insoluables, softening point, things of this nature.

Q. Physical rather than chemical, is that what you are saying, properties?

A. I started to say that, except that some of the chemical properties can be interpreted as being the soluability of the material and various solvents, which is a measure of its conformance to specifications to the aluminum companies.

Q. So as a member of DH committee, DH 17?

A. D 817.

Q. Excuse me.

A. It's actually 8.17.

Q. Could you state whether or not you were involved with developing or reviewing analytical methods regarding the GCMS or HPLC or anything of that nature?

A. These tests would not have involved any analysis for specific chemical compounds nor the use of

1 such elaborate equipment.
2 Q. Just a couple questions on the underground
3 tanks. The outside of these tanks, would they be
4 touching soil or what would be immediately surrounding
5 these tanks below ground?
6 A. Soil would have been on all sides and up on
7 top of the tank.
8 Q. And they would have a manhole cover on them?
9 A. Yes, most descriptive and most likely would
10 be their similarity to a railroad tank car and such
11 vessels were often used for this purpose.
12 Q. Is that what was at the site?
13 A. I do not know.
14 Q. You had mentioned earlier that Mr. C. B.
15 Edwards is in a nursing home outside of Indianapolis,
16 is that right?
17 A. This is my understanding.
18 Q. What is his physical condition, if you know?
19 A. I do not know.
20 Q. Or his personal condition?
21 A. I do not know.
22 Q. Do you know anything about the union at the
23 site? Do you know whether or not the employees were
24 unionized?
25 A. I have difficulty in remembering exactly but

1 I believe they were.
2 Q. Would you recall the name of the union or any
3 other specifics with regard to that area?
4 A. I think you can better obtain that
5 information from Mr. Justin.
6 Q. You don't have any recollection?
7 A. I do not recall.
8 Q. Do you know the approximate age of Doctor
9 Wheeler at this time?
10 A. I believe he retired three to four years ago
11 so I think would be on the order of '68 to '70.
12 Q. How long was he with Reilly, if you know?
13 A. I don't know for certain.
14 Q. Approximately?
15 A. I would guess that he came with Reilly in the
16 late '40's.
17 Q. I just have two more questions. Just to
18 flush this out, with regard to the Belgium plant, what
19 type of operation was that or is that still in
20 existence?
21 A. It is. It was constructed to produce
22 pyridine synthetically.
23 Q. Does that involve coal tar or creosote or
24 anything of that nature?
25 A. Pyridine is a constituents of coal tar and

1 until the 1950s most Pyridine was recovered from coal
2 tar and we began the synthetic production of pyridine
3 in the '50's.
4 Q. "Synthetic" meaning you would obtain it from
5 something else other than coal tar?
6 A. Collects catalytic reaction of more simple
7 chemical compounds.
8 Q. How old is that site?
9 A. What site?
10 Q. The Belgium site, how long has it been there?
11 A. I think it was constructed about 1976-1977.
12 Q. Who would know the most about that site at
13 Reilly?
14 A. Doctor M. A. Ryan in Belgium.
15 Q. Anybody at Indianapolis?
16 A. I think the general manager of our chemical
17 division Mr. R. D. McNeeley, who assisted in the
18 construction of the plant, would probably be most
19 familiar with it.
20 MR. LEININGER: Okay. That's all I have.
21 Thanks very much.
22
23 RECROSS-EXAMINATION
24 BY MR. SHAKMAN:
25 Q. Would you look at Saint Louis Park Exhibit 43

1 that Mr. Hinderaker provided you? That's the memo from
2 Doctor Wheeler.
3 MR. HINDERAKER: No, you don't. Let me
4 provide it to you again.
5 (At this time State of Minnesota Deposition
6 Exhibit 99 was marked for identification by
7 the Court Reporter.)
8 A. I do now recognize the exhibit.
9 Q. That was Doctor Wheelers memo to Mr. Reilly
10 and then attached to it was some supplementation from
11 Mr. Horner?
12 A. Yes.
13 Q. And then Mr. Horner in turn had attachments
14 including one that he called "Dry Weather Effluent Flow",
15 dated January 25, 1941. Can you turn back to those
16 flow charts? They are two pages, they are on graph
17 paper. On my copy the latter of the two has the dates
18 January 25, 1941 and January 26 on it. The other one
19 has no dates, only hours. Can you piece together how
20 these would have fit together or they would have fit
21 together.
22 MR. SCHWARTZBAUER: Mine say, "Flow of
23 Drainage Ditch" on them. Are we looking at the same
24 thing?
25 MR. SHAKMAN: Yes, that's the ones.

A. No, I cannot unless -- my only observation is that the scale at four hours on the sheet marked January 26 is 35 and it appears to be a somewhat similar number on the beginning of the next page at four hours.

Q. So that might be a continuation on the second page?

A. One might draw such a conclusion.

Q. Would that figure in the left column be gallons per minute? The Xerox copy I am looking at is -- evidently something is written there but it is not intelligible.

A. I cannot read it.

Q. Would that be the usual way to read drainage? I assume this was -- we earlier saw it described in memos from that period.

A. I am not sure. Each engineer would use the designation with which he was most familiar.

Q. I had one final exhibit I wanted you to look at. This has been marked as Minnesota Exhibit 99, it's in handwriting, two pages, the year 1970 appearing in the upper right-hand corner and identifying Numbers 302452 and 302453 in the lower right-hand corner respectively. Would you take a minute to read through it and then my question will be can you identify the

1 authorship of this either from handwriting or the
2 substance of it?
3 A. I cannot identify from the handwriting or the
4 content the author of the notes.
5 MR. SHAKMAN: Okay. Thank you. I have
6 nothing more. I did want to ask the Counsel one
7 question. I had earlier made a request to look at any
8 documents Mr. Lesher had reviewed in preparation and to
9 ask you if you could keep that set of documents intact
10 pending resolution of that question.
11 MR. SCHWARTZBAUER: Sure, we will keep
12 them intact.
13 MR. SHAKMAN: Thank you.
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1 STATE OF MINNESOTA )
) ss.
2 COUNTY OF WASHINGTON)

3

Be it known that I took the deposition of Carl F.
4 Lesher, on the 11th, 12th, and 13th days of October,
1982, at Indianapolis, Indiana;

5

That I was then and there a Notary Public in and
6 for the County of Washington, State of Minnesota, and
that by virtue thereby I was duly authorized to
7 administer an oath;

8 That the witness before testifying was by me first
duly sworn to testify the whole truth and nothing but
9 the truth relative to said cause;

10 That the testimony of said witness was recorded in
Stenotype by myself and transcribed into typewriting
11 under my direction; and that the deposition is a true
record of the testimony given by the witness to the
12 best of my ability;

13 That I am not related to any of the parties hereto
nor interested in the outcome of the action;

14

That the reading and signing of the deposition by
15 the witness was executed as evidenced by the preceding
page;

16

That Notice of Filing was waived.

17

WITNESS MY HAND AND SEAL this _____ day of _____
18 _____.

19

20 _____
Kirby A. Kennedy
21 Court Reporter

22

23

24

25