

IN THE COURT OF COMMON PLEASCUYAHOGA COUNTY, OHIO

WALTER FELDEN,

Plaintiff,

-VS-

JUDGE GRIFFIN
CASE NO. 192080

ASHLAND CHEMICAL, INC., et al.,

Defendants.

- - - -

Deposition of RICHARD G. MURRAY, Ph.D., taken
as if upon cross-examination before Katherine A.
Koczan, a Notary Public within and for the State
of Ohio, at the offices of Friedman, Domiano &
Smith, 600 Standard Building, Cleveland, Ohio,
at 5:25 p.m. on Thursday, May 14, 1992, pursuant
to notice and/or stipulations of counsel, on
behalf of the Plaintiff, Walter Felden, in this
cause.

- - - -

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APPEARANCES:

Jeffrey H. Friedman, Esq.
Lisa Gerlack, Esq.
Friedman, Domiano & Smith
600 Standard Building
Cleveland, Ohio 44113
(216) 621-0070,

On behalf of the Plaintiff;

Ralph Streza, Esq.
Porter, Wright, Morris & Arthur
1700 Huntington Building
Cleveland, Ohio 44115
(216) 443-2510,

On behalf of the Defendant
Ashland Chemical, Inc.;

John W. Ours, Esq.
Weston, Hurd, Fallon, Paisley & Howley
2500 Terminal Tower
Cleveland, Ohio 44113
(216) 241-6602,

On behalf of the Defendant
Clark Material Handling.

ALSO PRESENT:

William Mahan, Videotape Operator

P R O C E E D I N G S

MR. OURS: At this point the deposition of Dr. Murray is being taken pursuant to the request of Plaintiff's counsel and I am, I don't intend at this point to, inquire of Dr. Murray or to conduct a direct examination of him.

He is, he is my witness and I intend to produce him at trial and to examine him at that time, but he's certainly free for any examination that you want to conduct today, Jeff, or any cross-examination that you want to conduct, also.

I understand he's being produced on cross-examination by both of you today. I just want to make it clear that I do not intend at this point to conduct the direct examination, but I don't waive that right in the event I produce Dr. Murray at trial.

MR. FRIEDMAN: Okay. I have no problem with that.

MR. OURS: Okay, great.

MR. STREZA: And again just to

1 clarify, he's not being, really, produced
2 for my cross-examination, he's being
produced today --

4 MR. OURS: Okay.

5 MR. STREZA: .. pursuant to
6 Mr. Friedman's request, but I still would
7 like to question him today and reserve my
8 right to cross him further at trial, all
9 depending on what your intentions are
10 with this Defendant Clark between now and
11 trial.

12 MR. FRIEDMAN: Right. Well, you
13 have the right to call him without
14 question.

15 MR. STREZA: Right, and just -- off
16 the record.

17 - - - -

18 (Thereupon, a discussion was had off
19 the record.)

20 - - - -

21 VIDEOTAPE OPERATOR: We are now
22 ready to begin the deposition. Would the
23 court reporter please swear in the
24 witness?
25

RICHARD G. MURRAY, Ph.D., of lawful age,
called by the Plaintiff for the purpose of
cross-examination. as provided by the Rule of
Civil Procedure. being by me first duly sworn.
as hereinafter certified. Deposed and said as
follows:

CROSS-EXAMINATION OF RICHARD G. MURRAY, Ph.D.

BY MR. FRIEDMAN:

Q Dr Murray. My name is Neef Friedman and I
represent the Plaintiff in this action. and
we're here to take your testimony for a trial
which is scheduled to go on June 8th. 1992
against Ashland Chemical Company and Clark
Equipment

I'm going to take your deposition today on
cross-examination because you are the expert
that has been retained by Clark Equipment

Sir. could you state your full name and
addresses for the record?

A Yes. Sir My name is Richard George Murray My
office is at 314 Southwest 3rd Street. Perkins.
Oklahoma. ZIP code 74059

Q And give us a brief outline of your educational
background

A Following discharge from the United States Army.

1 I received a Bachelor of Science degree of
2 mechanical engineering from Southern Methodist
3 University, Dallas, Texas, that was in 1959. I
4 then received a Master of Science of mechanical
5 engineering from Missouri School of Mines. I
6 believe that was in about 1963, and I received a
7 Ph.D. specializing in mechanical engineering in
8 1970.

9 Q. All right. What type of employment have you had
10 since 1970?

11 A. Since 1970 I have been, first of all, full
12 tenure professor and department head of
13 Mechanical Power Technology in the division of
14 engineering, Oklahoma State University and a
15 member of the graduate faculty of mechanical and
16 aerospace engineering, Oklahoma State
17 University, and I also had my own independent
18 professional engineering business.

19 Q. And how long have you had that?

20 A. I started the business in 1970.

21 Q. And what type of engineering do you do?

22 A. Mechanical engineering,

23 Q. And what does that involve?

24 A. Basically it involves the science and
25 mathematics associated with mechanical equipment

1 such as design, manufacturing, assembly,
2 troubleshooting, maintenance.

3 Q. Okay. And in your capacity as a mechanical
4 engineer, do you have the opportunity to visit
5 sites such as the one you visited at Ashland
6 Chemical and inspect plant sites and Clark lift
7 equipment?

8 A. Yes, sir.

9 Q. Now, you've been retained by Clark Material
10 Handling, which I believe is the company that
11 manufactures Clark lift trucks, is that correct?

12 A. By Mr. Ours who represents them, I believe.

13 Q. Okay. And what have you been retained to look
14 at in this case?

15 A. Basically in this case I looked at the forklift
16 and the Ashland plant, or the area to the
17 Ashland plant in relation to an accident with
18 Mr. Felden.

19 Q. Okay. And --

20 A. I also -- I'm sorry. I also looked at the
21 barrel that was supposed to be lifted by the
22 forklift truck.

23 Q. What documents did you review in preparation of
24 your testimony today?

25 A. Plaintiff's First Amended Complaint, memorandum

1 in support of Ashland Chemical's motion for
2 summary judgment with an Affidavit of Jack
3 Matson, plant manager at Ashland Chemical, a
4 report of Steven Ziemba, report and a curriculum
5 vitae of Steven Kuzma, photographs which were
6 taken during Mr. Ours' initial examination of
7 the forklift, the product information card, some
8 Clark sales documents and operator's instruction
9 manual, parts manual, service manual,
10 specification sheet, a feature brochure, a
11 warranty dated 7-77, warning and patent decals,
12 diagrams of Ashland Chemical plant, Plaintiff's
13 response to interrogatories from the
14 Co-Defendants Liftomatic, photocopies of
15 photographs received from Plaintiff's counsel
16 depicting the site of the accident as well as
17 Mr. Felden, notice of OSHA violations, Clark's
18 response to Plaintiff's first set of
19 interrogatories and request for production of
20 documents, Clark's response to Plaintiff's
21 second set of interrogatories and, of course, I
22 looked at the Ashland forklift truck.

23 ~~Overruled~~

MR. STREZA: Objection and move to
24 strike any reference to the OSHA citation.

25 Q. Did you inspect the plant premises of Ashland

1 Chemical --

2 A. Sure.

3 Q. -- as well?

4 A. Portions of them, yes.

5 Q. Did you inspect the area where the post was
6 concrete post, as well as the Clark lift truck?

7 A. Yes, sir.

8 Q. Okay. And when did you do that, do you
9 remember?

10 A. Yes, I performed that inspection on March 10th
11 of 1992.

12 Q. Okay. Now, in the inspection what did you look
13 at, sir?

14 A. A general overall view of the forklift truck, I
15 photographed the forklift truck. Looked at the
16 accident barrel, a general overview of the
17 accident site where the post had been, I looked
18 at the route that the forklift truck took that
19 day, and that's about it.

20 Q. Okay. What was the serial number of the
21 forklift truck that you inspected that day?

22 A. That was Y235-68-4311.

23 Q. And you inspected the lift that day?

24 A. Yes, sir.

25 Q. What type of forklift was it?

1 A. It's a Clark C500 model.

2 Q. Okay. Who advised you that it was the same
3 forklift that Walter Felden used on the date of
4 the accident?

5 A. Mr. Matson.

6 Q. And who is Mr. Matson?

7 A. He's the plant manager of Ashland Chemical.

8 Q. Okay. What color was the forklift?

9 A. Forklift on that day was what I would call the
10 Clark high visibility green.

11 Q. And is the Clark high visibility green the
12 normal green that Clark lift trucks have?

13 A. To my knowledge, that's a standard color that
14 all current, and except for very early models,
15 are painted.

16 Q. Now do you know what options this forklift came
17 with?

18 A. Not from memory. I could go over the PIC card
19 and find out.

20 Q. Could you take a look for that, please sir?

21 A. What I see is a steering wheel and tire, 23-004,,
22 a super soft drive tire, 23-805, LPS
23 construction 14-469, and it came less the LP
24 tank.

25 Q. And the LP tank is the propane tank?
25 Q.

A. It's the fuel tank, yes, sir, propane fuel tank.

Q. Does that fit on the back of the vehicle?

A. Normally, yes, on the counterweight.

Q. Did you, when you inspected the vehicle on March 10th of 1992, did you see it on the back of the vehicle?

A. I saw a tank on there.

Q. You don't know if it was the tank that it was shipped with?

1 A. No, it was shipped less the tank.

1 Q. Okay.

1 A. Without the tank.

1 Q. Okay. Do you know what date this was shipped to
1 Ashland?

15 A. Shipping date was 15, October, 1979.

16 Q. And when you inspected the lift truck on March
17 the 10th, 1992, were there any modifications to
18 the lift truck from its original shipping?

19 A. Yes.

20 Q. What were those modifications?

21 ~~Objection~~ MR. STREZA: Let me enter an
22 objection here to the extent that any, he
23 identifies any subsequent remedial
24 measures, I'll object to those and would
25 move to strike any reference to anything

~~since the accident that's been installed on
the truck. Go ahead.~~

A. ✓ Those that I observed from the visual
observation that I made was a addition of a
plastic shield in between the driver's
compartment and the mast or upright with the
unit that carries the carriage, lifts the load.

~~Q. Go ahead.~~ MR. STREZA: Okay. Object and move
to strike.

Q. Go ahead.

MR. STREZA: Go ahead.

A. There was also a flexible cloth and flexible
plastic cover over the entire driver's overhead
guard.

MR. STREZA: Objection, again, move
to strike.

Q. Go ahead.

A. There was a, an after-market warning light,
amber, welded to the rear of the driver's
overhead guard. There were two headlamps welded
to the mast of the upright.

Q. Could you show the jury where that is on the
picture?

A. Yes, sir. I'll try to find a picture that has
a, a better view. At this particular location,

1 looking at the back of the truck. we have the
2 counterweight here, we have the LP tank on top
3 of the counterweight This is the fuel tank for
4 the truck We have the plastic cover and right
5 at the back we have an amber rotating warning
6 light that in this case is welded to the
7 driver's overhead guard

8 Q Okay

9 A In addition on the front of the unit, right
10 here on the mast; and this of course being the
11 mast that elevates the carriage and the carriage
12 in what carries the forks and carries the load,
13 we have two headlights welded to the upright
14 here and over here Those are both after-market
15 things.

16 ~~OBJECTION~~ MR. STREZA: Objection. again

17 ~~Move to strike the reference to the~~
18 ~~photograph which depict any subsequent~~
19 ~~remedial measures~~

20 Q Are there any OS OSHA standards or ANSI
21 standards that govern additions or modifications
22 to forklifts?

23 ~~GP~~ MR. STREZA: Again, objection I
24 believe a federal statute prohibits
25 introduction of SHA regulations or ANSI

standards to effect any Workmen's
Compensation law or to enlarge or diminish
or affect in any other manner the common
law rights, duties or liabilities of
employers or employees and that's found in
29USC Section 653.

Q. You may go ahead and answer.

A. Yes, sir. OSHA standard is covered under
Section 1910.178, Powered Industrial Trucks, and
in that first section of that it states, "All
new powered industrial trucks acquired and used
by an employer after the effective date
specified in Paragraph B of 1910.182 shall meet
the design and construction requirements for
powered industrial trucks established in the
American National Standards for powered
industrial trucks part two ANSI B-56.1-1969
except for vehicles intended primarily for earth
moving or over-the-road hauling."

So, OSHA basically mandates then that ANSI
B-56.1 is a standard to which trucks will be
manufactured. And under that, we have a
section -- actually, two sections, I recall, on
the copy I have page 45 under part three for the
user, Paragraph 501-A, "Modifications and

1 additions which affect capacity or safe
2 operation shall not be performed by the customer
3 or user without the manufacturer's prior
4 authorization. Where such authorization is
5 granted, capacity operation and maintenance
6 instructions, plates, tags or decals shall be
7 changed accordingly."

8 ~~MR. STREZA: Objection: again.~~

9 ~~Move to strike the answer in its entirety.~~

10 Q. Okay. Were the, were these modifications to the
11 original equipment, what you have mentioned, the
12 two front overhead lights, the rear overhead
13 light?

14 A. Yes. And we go on, it's the second case was
15 Page 52 which states basically the same thing in
16 a little bit different words.

17 Q. Okay. Now, in your inspection of the vehicle,
18 the forklift in question, were all warning
19 labels visible?

20 A. No, sir. That was another modification that had
21 been made to this truck.

22 Q. Handing you what's been marked as Plaintiff's
23 Exhibit 1, can you identify what that is?

24 A. Yes, sir. This is the black and white caution
25 decal which I found to be painted over on the

1 accident truck so that it was unreadable.

2 Q. Do you have a picture of that?

3 A. Yes, sir.

4 Q. Could you show the jury, please?

5 A. If we look just to the right of the driver's
6 seat behind or aft of the parking brake lever,
7 we have an area of a deck right here where one
8 would normally expect to find a caution decal on
9 this type of Clark truck. And if we look
10 closely, we will see a line right here that will
11 be basically rectangular in shape.

12 And then if we go to a close-up picture,
13 which I took a photograph of, right here we can
14 see the amplified line going up to about here
15 then coming across over here.

16 This is what I observed and suspected to be
17 a painted-over decal on the accident truck. I
18 then placed the black and white decal over the
19 area to confirm that it was the same size, and
20 the sizes matched.

21 Following this, I took my jackknife and
22 peeled off a little bit of the paint over what I
23 suspected to be the original decal, and in so
24 doing, then I placed the original decal that I
25 had next to it and identified words on the decal

1 that had been painted over.

2 And those words, if you look closely, will
3 be three letters there and the word must down
4 here and the three letters --

5 VIDEOTAPE OPERATOR: Mr. Murray,
6 can you make it, hold it up more?

7 A, Certainly.

8 VIDEOTAPE OPERATOR: It's picking
9 up --

10 A, The letters E L F, which correspond to the E L F
11 in the word yourself right here, and directly
12 below it the word must on caution number one,
13 operator's must be trained and qualified.

14 So I identified that on the Clark new
15 decal, the identical area of lettering that
16 exists on the decal in the accident truck that
17 had been painted over.

18 Q. All right. Could you, I'm going to hand you
19 four blowups of those four pictures. Could we
20 number these Plaintiff's Exhibits 2, 3, 4 and 5
21 in the order in which you just discussed?

22 A. I'd be happy to. Do you want me to do it,
23 ma'am?

24 MR. FRIEDMAN: Why don't you go off
25 the record while she marks them?

1 VIDEOTAPE OPERATOR: Off the
2 record.

3 - - - -

4 (Thereupon, Plaintiff's Exhibits 2
5 through 15 were mark'd for purposes of
6 identification.)

7 - - - -

8 VIDEOTAPE OPERATOR: We're on the
9 record.

10 Q. Dr. Murray, I've handed you Plaintiff's Exhibits
11 2 through 6 which are blowups of some of your
12 pictures that you have taken. I know you've
13 recited the decal sequence, could you do that
14 again with the blowups, please?

15 A. Yes, sir. On Plaintiff's Exhibit 2, we have the
16 area just after the parking brake handle. We
17 see the line right here and the rectangular area
18 that disturbs the smooth paint, and this is what
19 I anticipated being the area where the decal was
20 and the decal being painted over.

21 On Plaintiff's Exhibit 3, we then now can
22 clearly see the line where the decal's
23 underneath the paint.

24 VIDEOTAPE OPERATOR: If you could
25 move it forward just a little bit.

1 THE WITNESS: Certainly.

2 VIDEOTAPE OPERATOR: Thank you.

3 A. Plaintiff's Exhibit 4 is a close-up of this
4 area. Again, we see the line going around where
5 the decal had been painted over. Plaintiff's
6 Exhibit 5 is where I placed a new Clark black
7 and white decal to determine that the size and
8 shape of the painted-over item was the same as
9 the Clark decal, which it was.

10 And in Plaintiff's Exhibit 6 is where I
11 scratched off the paint right here to reveal the
12 three letters, E L F and the word "must." Right
13 here we see the E L F which is the trailing part
14 of the word "yourself" and the M U S T in the
15 next line.

16 Q. Thank you, doctor. Now handing you what's been
17 marked as Plaintiff's Exhibit 1, this is the
18 decal you placed, that should have been on the
19 forklift aft of the gear shift?

20 A. Oh, I'm sorry. Yes. This is the caution decal
21 that I actually placed over the painted-over
22 decal, and we see here the word "yourself" and
23 the word "must."

24 Q. Okay. So we're clear, this is the same forklift
25 that was, that Walter Felden was driving the day

of the accident involving the pump?

~~MR. STREZA:~~ Let me enter an objection. There's no foundation that this forklift with the paint-over label was the same forklift.

Q Was, do you know if there was any identification after the August, '89 accident with Walter Iden?

A Well, yes, the plastic shield was labeled between the driver and the, or the operator and the mast and the flexible plastic cover was placed over it. I'm not sure exactly when the lights were placed on the headlights and the yellow amber warning light.

~~MR. STREZA:~~ Objection. Move to strike both the question and the response as violating subsequent remedial measures.

Q Do you know if it was, you know it was the same model number?

A Model Number C500YB0 with Serial Number Y2B5-6B-4B11. This was the one, the unit shown to me by the, the Ashland Chemical people.

Q That was Jack Matson, the plant manager?

A Matson, yes, sir.

Q Matson -- excuse me Okay

1 A. Actually, he, he led us to the machine. I saw
2 the machine and recorded the number myself and
3 photographed it.

4 Q. Now, the next, do you have the owner's manual?

5 A. I have the operator's instruction manual.

6 Q. Okay. And could you tell us what that is?

7 A. This is the, a manual provided with the unit
8 when it sold new and available from Clark lift
9 dealers in other copies. It's to be placed with
10 the unit for the operator to use as an
11 operator's manual or owner's manual, and
12 basically it's one of the devices that we used
13 to train and, and qualify operators and keep
14 them reminded of what they should do and what
15 are proper procedures in lifting capabilities,
16 so forth, on this truck.

17 Q. All right.

18 A. It's like the operator's manual of your car.

19 Q. Okay. And what exhibit is that, is that
20 Plaintiff's Exhibit 10?

21 A. Yes, sir.

22 Q. All right. Now, before I get into the owner's
23 manual, let me show you the next two exhibits
24 marked 11 and 12. And could you tell us what
25 those are? I'm sorry, what --

1 VIDEOTAPE OPERATOR: Off the record
2 a moment, please.

3
4 (Thereupon, a discussion was had off
5 the record.)

6 - - - -

7 .VIDEOTAPE OPERATOR: On the
8 record.

9 Q. Dr. Murray, handing you what's been marked, I
10 said Exhibits 10 and 11, they're really
11 Exhibits 7 and 8. Could you identify them,
12 please?

13 A. Yes. Exhibit 7 is a specification sheet for the
14 Clark C500Y30 forklift truck model. Exhibit 8
15 is an order or a sales document dealing with
16 SR226355, number right up here in the corner.

17 Q. And what is that?

18 A. It's a sales document dealing with the sale of
19 this particular forklift truck when it was new.

20 Q. And Exhibit 12, you've previously identified as
21 the PI --

22 A. PIC.

23 Q. PIC card?

24 A. PIC, yes.

25 Q. And do all those three documents show that this

1 lift was the same lift that was in the accident
2 with Walter Felden in August of '89?

3 A. Well, the PIC is the Clark document that
4 identifies this particular forklift as
5 manufactured in the original assembly plant.

6 It specifies what mast goes on it, what
7 tires goes on it, what muffler goes on it, what
8 fuel tank and so forth. It bears the serial
9 number Y235-68-4311 right up here in the top.
10 It also, over at this side, shows the sales
11 number, which is 226355, which is the identical
12 number up here on this order form. The third
13 document is merely a specification sheet for the
14 line of C500 trucks. It doesn't identify this
15 particular one, but it does identify how it will
16 be made in general.

17 Q. On the order form, Dr. Murray, what color is the
18 lift truck?

19 A. On Line 19 it says paint green.

20 Q. And does that show that on the specification
21 sheet, too?

22 A. Specification sheet down at the bottom under
23 paint it says standard color is high visibility
24 Clark green, which is a standard color that most
25 trucks are painted.

1 Q And that was the same vehicle and wheel number
2 you inspected when you went to Ashland Chemical?

3 A. It is.

4 Q Handling you what has been marked as Plaintiff's
5 Exhibits 13 and 14?

6 * MR. STAEZA: Objection to the
7 introduction of Exhibits 13 and 14 as they
8 depict subsequent remedial measures.

9 Q Is that the vehicle and the color of paint it
10 was on the way you inspected the vehicle?

11 A. Yes, sir.

12 Q And were you told -- were you or were you not
13 told if it was painted over or if it was painted
14 at all?

15 A I'm not sure I understand your question

16 Q All right Let me rephrase it

17 Was the vehicle painted over when you
18 inspected it?

19 A It has been painted recently, yes. sir

20 Q And was that the same -- well you say recently.
21 how recently?

22 A I don't know exactly. except that I could
23 compare areas in the engine compartment that had
24 not been painted and were dirty. and this paint
25 seemed to be in relatively good condition

1 Q. Okay. Could that be four, five, six years old?

2 ~~MR.~~ MR. STREZA: Objection.

3 A. I can't, I really don't know when it was
4 painted. It would depend a bit upon how heavily
5 the truck is used. If I had to speculate, I
6 would say it was probably painted within the
7 last year.

8 Q. Do you know how many times this was painted
9 over, this lift truck?

10 A. Only thing I can say is several coats of paint
11 covered the warning decal. I can't count them,
12 but as I scraped them off, it was a considerable
13 depth of paint, and I, I felt that it was at
14 least three.

15 Q. That was not the original coat of paint that
16 came from the factory?

17 A. The coat of paint that I saw here certainly was
18 not the original coat of paint, sir, no. We can
19 go back into the engine compartment and see an
20 earlier coat of paint that was also the high
21 visibility green but was dirty.

22 Q. Okay.

23 ~~MR.~~ MR. STREZA: Objection.

24 A. When this paint went over the top of it.

25 MR. STREZA: Move to strike the

1 reference to that exhibit, which I think is
2 Number 13.

3 Q. And the OSHA, ANSI standards that you referred
4 to before, they cover painting over warnings, do
5 they not?

6 A. Oh, yes.

7 ~~MR. STREZA:~~ Objection. Again, any
8 reference to OSHA and ANSI is barred by
9 federal statute.

10 Q. OSHA 191 -- 1910.178 states that that user shall-
11 see that all name plates and markings are in
12 place and maintained in legible condition. Are
13 you familiar with that?

14 MR. STREZA: Again, objection.
15 Federal statute prohibits the introduction
16 of OSHA regs. or ANSI standards.

17 A, I recall that. -NOT IN

18 ~~MR. STREZA:~~ Move to strike.

19 Q. And was this done on the forklift in question?

20 A. Yes, the forklift had been modified, which is
21 violation of ANSI B-56.1.

22 ~~MR. OURS:~~ Objection. Move to
23 strike.

24 Q. Okay. What warnings were painted over that were
25 pertinent to this case?

1 A. The caution warning is the important one right
2 here, which is Plaintiff's Exhibit 1. This is
3 what's placed right by the operator to remind
4 him of the safety features and the, the driving
5 conditions that he should operate under.

6 ~~MR. STREZA: Again, object. Move~~
7 ~~to strike. There's no foundation as to~~
8 ~~when the paint occurred to make it~~
9 ~~pertinent to this case.~~

10 Q. Okay. Assuming that there will be testimony in
11 this case that there was no warning labels on
12 the towmotor at the August of 1989 and that it
13 had been painted over green as it was depicted
14 in the picture that you saw in 1992, do you have
15 an opinion as to whether this violated the OSHA
16 standards?

17 ~~MR. STREZA: Objection. Again,~~
18 ~~reference to the OSHA standards is barred~~
19 ~~by federal statute.~~

20 A. Yes, sir.

21 Q. Okay. And what is your opinion?

22 A. That it would violate OSHA standards and ANSI
23 standards.

24 ~~MR. STREZA: Move to strike the~~
25 ~~response.~~

1 Q. Okay. What is on the warning labels that is
2 pertinent to a driver?

3 A. Under Item 8, second sentence says, "When load
4 interferes with visibility, travel with it
5 trailing except when climbing grades or ramps."

6 Q. And in this case --

7 A. Located right here.

8 Q. Okay. And in this case, Mr. Felden, as you
9 know, ran into a concrete post on the day in
10 question in August of '89, is that correct?

11 A. That s correct.

12 Q. And had that been on there, he would have at
13 least been warned to trail the load, is that
14 correct?

15 A. Yes, if he had any visibility problems.

16 Q. Okay. Now, as a professional engineer, what are
17 the OSHA and ANSI standards that we've been
18 referring to, 1910.178 that you've identified,
19 what purpose do they serve?

20 MI. STREZA: Objection. Federal
21 statute prohibits the introduction of OSHA
22 or ANSI standards to affect any Workmens'
23 Compensation law or to enlarge or diminish
24 or affect in any manner the common-law
25 rights, duties or liabilities of employers

and employees.

A. Basically the OSHA standards applies to employers. It applies, also, in this case, to manufacturers since it specifies that ANSI B-56.1 is a part of and shall be followed, and when we get to ANSI B-56.1, it applies to manufacturers and to users and to maintainers of the truck.

MR. STREZA: Move to strike.

Q. Okay. And do these regulations pertain to training as well?

A. Yes.

MR. STREZA: Objection. Same objection. Move to strike,

MR. FRIEDMAN: For the, for the sake of the record, why don't we just, instead of going through and saying it, why don't you just say standard objection, we both agree that that's -- save some time in here, is A: okay?

a second MR. STREZ Sure. Off the record

V OPE

VIDEOTAPE OPERATOR: Off the record.

1 (Thereupon, a discussion was had off
2 the record.)

3 *Defer*

4 - - - -

5 MR. FRIEDMAN: This is just on the
6 stenographic record between counsel that
7 any objections relating to OSHA and ANSI,
8 Mr. Streza has stated his objection over
9 the past half hour. Any future objections
10 are preserved and anything if the judge
11 rules in Plaintiff's favor, then the, of
12 course, everything will stay in. If they
13 rule in Defendant Ashland's favor, then
14 we'll delete from the transcript any
15 references to OSHA and ANSI.

16 MR. STREZA: Correct.

17 MR. FRIEDMAN: Ralph, if you want
18 to add anything.

19 MR. STREZA: Sure. And that -- I
20 think there's a stipulation that if the
21 court overrules any objection, the court
22 reporter will edit out the objections at
23 trial and that it's a standing objection to
24 any reference to OSHA or ANSI in either the
25 question or response, and any response
which refers to an OSHA or ANSI reg.,

1 there

motion to strike.

2 ~~MR~~ FRIEDMAN: Fine. Anything

3 e:

4 VIDEOTAPE OPERATOR: On the

5 record.

6 Q. Dr. Murray, I've handed you what has been marked
7 Plaintiff's Exhibit 9 and Plaintiff's
8 Exhibit 11. Could you identify those? I know
9 we've been discussing them.

10 A. Yes. Plaintiff's Exhibit 9 is ANSI B-56.1
11 current as of 1975. It's the standard for high
12 lift or Low Lift and High Lift Trucks,
13 industrial powered trucks.

14 Q. Isn't that one current as of 1983?

15 A. This one is, this one is 1983, I'm sorry.

16 Q. Okay.

17 A. And we have here Plaintiff's Exhibit 11 which is
18 OSHA 1910.178. It's the OSHA standard
19 applicable to powered industrial trucks.

20 Q. Now, where do you find operator training in the
21 OSHA standards?

22 A. On Page 483.

23 Q. And do these standards apply to Ashland
24 Chemical?

25 A. I believe they do. They're an employer.

1 Q. Okay. And read what they are.

2 A. For operator training?

3 Q. Yes.

4 A. Paragraph 1, Operator Training, "Only trained
5 and authorized persons shall be permitted to
6 operate a powered industrial truck. Methods
7 shall be devised to train operators in the safe
8 operation of powered industrial trucks."

9 Q. Okay. And what, what does trained to operate
10 powered industrial trucks mean?

11 A, To me it would mean that you would undergo a
12 formal training program with recurrent training
13 approximately every year.

14 This is spelled out in more detail in the
15 ANSI B-56.1. I have it in my 1975 copy on Page
16 48, Section 602, Operator Training. "An
17 effective operator training program should
18 center around user's company's policy, operating
19 condition and trucks. The program should be
20 presented completely to all new employees -- all
21 new operators and not condensed for those
22 claiming previous experience. Information on
23 operator training is available from several
24 sources, including truck manufacturers. An
25 operator training program should consist of the

1 following." Goes through a number of things
2 such as careful selection of the operator,
3 considering physical qualifications, job
4 attitude and aptitude.

5 And under Number 7 it says refresher
6 courses which may be condensed versions of the
7 primary course and periodic on-the-job operator
8 training as being one of the training
9 objectives.

10 Q. If you didn't have the primary course, you'd
11 have difficulty taking a refresher course, would
12 that be correct?

13 A. Yes, sir.

14 Q. Okay. So all people operating the -- a lift
15 truck should have both the primary course and
16 the secondary course?

17 A. And the refresher course, yes.

18 Q. Okay. How often should they have the refresher
19 course?

20 A. It's not specified exactly in ANSI B-56.1, but
21 based on my beliefs, it would be approximately
22 one year or more often. Each year or more
23 often.

24 Q. Okay. Does Clark provide training for its
25 manufacturers that they sell forklifts through?

1 A Yes, sir. they provide training to the dealers.
2 and the dealers then can provide it to the
3 owners and operators

4 Q No , we're having -- you have in front of you
5 which has been previously marked the owner's
6 manual What exhibit is that? I'm sorry the
7 operator's manual

8 A. That's Exhibit 10.

9 Q Okay Now we discussed that already. you said
10 it's like you> car manual"

11 Q Like the operator's manual for you> car. the
12 owner's manual.

13 Q Where is this -- is this supposed to be kept
14 with the vehicle?

15 A Different year models are somewhat different but
16 typically you have a compartment behind the
17 operator's seat that this slides into In many
18 cases. they're actually chained or cables to the
19 vehicle

20 Q Should these be available at least to the
21 operator and they're not on the vehicle?

22 A es. sir

23 Q Is this a violation of any standards. if they're
24 not available or on the vehicle?

25 A I believe it would be

1 Q. Which standards?

2 A. It would be OSHA.

3 Q. Okay. There is a place on the forklift for this
4 manual?

5 A. Yes, sir.

6 Q. And where is that?

7 A. Behind the seat. I believe I have a picture of
8 that. Again, on this photograph, which is my
9 Photo Number 6, you'll see me.

10 VIDEOTAPE OPERATOR: Can you angle
11 that forward just a little?

12 A. You see the operator's seat right here, there
13 should be a little pocket right at the back of
14 that seat.

15 Q. Okay. In the operator's manual, which is
16 Plaintiff's Exhibit **10**, could you refer to
17 Page 2?

18 A. You mean Page 2 by this little number down
19 here?

20 Q. Right. Right. Is that, is there anything there
21 that would be useful to Walter Felden in driving
22 this lift truck on the date of the accident,
23 August of '89?

24 A. Yes, sir. First of all, on this page we have
25 the warning which would comply with the SAEJ-115

1 the symbol with the explanation point in the
2 triangle and down here, "Read all warnings and
3 instructions in the operator's manual and on the
4 truck."

5 Q. And on Page 5, is there something that would be
6 helpful to Walter Felden?

7 A. Under drive safely, "Before you operate this
8 lift truck read and understand the instructions,
9 signs and messages in this manual and on the
10 lift truck,"

11 Q. And on Page 17, is there anything that would be
12 helpful to Walter Felden?

13 A. Page 17 we have a picture of the warning.
14 Prominently located on the truck is a list of
15 the basic safety rules. "These rules are for
16 your protection, be familiar with them."

17 Q. Page 22, is there anything that would be helpful
18 to Walter Felden?

19 A. Page 22 we have actually the serial number plate
20 for the Clark truck and we have down here it
21 says, "Important, if the truck is modified so as
22 to affect capacity or the plate damaged or
23 defaced, get a new plate from your Clark
24 distributor."

25 Q. Is Plaintiff's Exhibit 1 the same as the label

1 on Page 17 of the operator's manual?

2 A. Plaintiff's Exhibit 1 is the Clark black and
3 white caution decal, and the actual decal shown
4 on Page 17 here is a slightly different version
5 which is normally seen in yellow and black with
6 the word "warning" at the top. They're not
7 quite the same, same configuration of decal, but
8 the narrative is referring to decals in general.

9 Q. At the time you examined the forklift on, in
10 1992, the Plaintiff's Exhibit 1 was not visible?

11 A. Well, it was visible to me from the standpoint
12 that I could see an outline of where it was at.
13 It was not readable of course, and I had to
14 scrape the paint off of it to identify that it
15 was actually a, the caution detail, but no, it
16 was not readable but I could, I could see that
17 there was something there.

18 Q. All right. Now, calling your attention to the
19 accident itself, you understand there was a post
20 in the yard?

21 A. Yes, sir.

22 Q. And did you read the Affidavit of Jack Matson
23 regarding this post?

24 A. Yes.

25 Q. All right. Are you familiar with the purpose of

1 this post being there as a safety measure?

2 A. I've seen it referred to as a safety measure or
3 guard. I really, in my opinion, it doesn't
4 serve that function in this particular
5 installation.

6 Q. And why not?

7 A. It does not serve as a, an effective guard
8 against anything dealing with any post or
9 structures or anything of that nature. It's
10 just basically sitting out in the middle of the,
11 of the yard.

12 ~~Overruled~~ / MR. STREZA: I'm going to object.
13 I don't think you've established this
14 witness as being competent to testify or
15 render an opinion on the subject. Move to
16 strike.

17 Q. Well, let's go back to that. Dr. Murray, you've
18 testified in your educational background that
19 you've been an engineer since 1970?

20 A. No, I've been an engineer since 1959.

21 Q. I'm sorry, since 1959. Since 1970 you've had
22 your own business?

23 A. I had a Ph.D. in 1970 and opened this
24 independent engineering business as a
25 professional engineer in 1970.

1 Q. Have you had an opportunity as an engineer to do
2 engineering safety at various plants throughout
3 the country?

4 A. I've observed it and commented on it.

5 Q. Okay.

6 A. Several operations, yes.

7 Q. Have you ever testified in a court of law
8 regarding situations such as the one you saw at
9 Ashland Chemical?

10 A. Guards in general, yes. I don't recall any
11 posts of this particular nature.

12 Q. It would be unusual to find a post of this
13 nature in the middle of a yard, wouldn't it?

14 A. Yes.

15 ~~Overruled~~ X MR. STREZA: Objection, again.
16 Again, you haven't established his
17 competency to testify as to any sort of
18 traffic patterns or the reason why this
19 post was there. I don't think Dr. Murray
20 can be qualified as a witness to talk about
21 safety of traffic.

22 Q. Dr. Murray, you've read Jack Matson's Affidavit
23 and you've seen the allegations that this post
24 was there to route truck traffic through the
25 Ashland Chemical yard. Do you have an opinion

1 to a reasonable degree of engineering certainty
2 whether that post was erected and would do its
3 job in routing truck traffic through the yard at
4 Ashland Chemical?

5 ~~MR. STREZA:~~ Again, objection.

6 Lack of foundation. This witness is not
7 competent to render such an opinion. Go
8 ahead

9 A. It's my understanding the post preexisted the
10 structure that existed at this time. It was
11 stated to be a post for a dike around a tank
12 farm, and I'll guarantee you that I can drive a
13 truck around this post and strike the structure,
14 so it's not going to be an effective barrier
15 against striking the structure.

16 ~~MR. STREZA:~~ Again, move to
17 strike.

18 Q. And do you know if this, how this helped any
19 traffic patterns at Ashland Chemical?

20 ~~MR. STREZA:~~ Again, objection.
21 Competency.

22 A. I don't see any way that it would be effective
23 in directing traffic patterns.

24 ~~MR. STREZA:~~ Move to strike.

25 Q. In all your years as an engineer, have you ever

1 seen a post like this in the middle of a yard to
2 direct traffic?

3 A. Not that I recall.

4 Q. Why wouldn't there be a post in the middle of a
5 yard to direct traffic?

6 ~~MR. STREZA: Again, objection.~~
7 That calls ~~for speculation~~, there's no
8 foundation we ~~can~~ render an opinion on this
9 subject.

10 A. It produces what we call an engineering world of
11 hazard.

12 Q. Okay.

13 ~~MR. STREZA: Move to strike.~~

14 Q. And why does it present a hazard?

15 A. It's foreseeable that individuals or vehicles
16 will, for various reasons, strike the post and
17 when they do, it can cause personal injury and
18 also property damage.

19 ~~MR. STREZA: Objection. Move to~~
20 strike.

21 Q. Do you know if there had been any prior
22 complaints of accidents with this post or
23 prior -- excuse me. Do you know if there had
24 been any prior accidents with this post?

25 A. I have read in the information here that there

1 had been three prior accidents with forklifts
2 and posts.

3 Q. All right. And this post?

4 A. It just said -- the information I saw said posts
5 in general.

6 Q. Okay. And having that knowledge prior to Walter
7 Felden's accident in August of '89, would you
8 deem the post, the post a hazard in the yard at
9 Ashland Chemical?

10 A. Yes, very definitely a hazard.

11 Q. And can you state that to a degree of
12 engineering certainty?

13 A. Absolutely.

14 ~~MR. STREZA: Again, objection.~~
15 ~~There's no foundation that he is competent~~
16 ~~to testify on the subject of traffic safety~~
17 ~~or vehicle movement. Move to strike.~~

18 Q. All right. I'm going -- now are you familiar
19 with the picture of the yard at the time of the
20 accident that was submitted to you in the motion
21 for summary judgment by Ashland Chemical?

22 A. I am familiar with several pictures. I'm not
23 sure of exactly which one it is unless it's an
24 overhead view looking down with the forklift
25 truck up against the post and a 19-wheel

1 tractor/trailer unit adjacent to it.

2 Q That is the one I am referring to. It's
3 attached as Affidavit Page 14 to Jack Matson's
4 Affidavit

5 MR. STREZA: Objection. And may I
6 have ~~your~~ stipulation to a continuing
7 objection to any reference to any pleadings
8 in the case that have been filed to date?

9 MR. FRIEDMAN: Yeah.

10 Q We are handing you what is a color picture,
11 Affidavit Page 14 in Jack Matson's Affidavit.
12 Do you know what that purports to be?

13 A. Purports to be an overhead view of a forklift
14 truck right here up against a yellow painted
15 concrete post. We can see two blue plastic,
16 approximate 50-gallon barrels on the front of
17 the forklift, and right here we see a trailer
18 and up here a tractor, 18-wheel tractor/trailer
19 assembly.

20 Q Okay.

21 A. This would then be what is a view of the
22 accident site after the accident.

23 Q. Was that represented to you as being the
24 situation on the date of Walter Faldon's
25 accident?

1 A. That's my belief.

2 Q. Handing you what will be marked as Plaintiff's
3 Exhibit --

4 THE NOTARY: 15.

5 Q. 15? Could you, get from behind me that board?

6 MR. FRIEDMAN: Why don't we go off
7 for a second?

8 VIDEOTAPE OPERATOR: Off the
9 record.

10 - - - - -
11 (Thereupon, Plaintiff's Exhibits 15
12 through 17 were mark'd for purposes of
13 identification.)

14 - - - - -
15 (Thereupon, a discussion was had off
16 the record.)

17 - - - - -
18 (Thereupon, the requested portion of
19 the record was read by the Notary.)

20 - - - - -
21 MR. FRIEDMAN: Okay. For the
22 record, we are going to delete the previous
23 several questions, and we will figure it
24 out when we review the record and I'm going
25 to reask them. Okay? Go ahead.

VIDEOTAPE OPERATOR: On the record.

Q. Dr. Murray, handing you what's been marked as Plaintiff's Exhibit 16, that was in Jack Matson's Affidavit Page 14, could you tell us what that represents?

A, This is a view from above of the accident site. We have a forklift truck right here with two 50-gallon barrels that appear to be plastic. We have a yellow concrete pillar in front of the forklift truck, and here we have a trailer that's attached to a tractor which makes up the 18-wheel tractor/trailer assembly.

Q. Okay. Was this, was this represented to you to be the situation on the date of the accident in August of 1989?

A. Yes, sir.

Q. All right, Now, turning to the page to Plaintiff's Exhibit 17 which is also in Jack Matson's Affidavit Page 16, could you tell us what that represents?

A, That's a front view or looking on the front of the forklift truck. Right here we see the blue barrels and the yellow concrete and steel post.

Q. Okay. And handing you what has been marked as Plaintiff's Exhibit 18, which is another

1 picture, Affidavit Page 18 of Jack Matson's
2 Affidavit, can you tell us what that purportedly
3 represents?

4 A. It's not been marked. I believe the 18's over
5 here.

6 Q. Okay.

7 A. This is a close-up view of the 50-gallon
8 barrel. The front of the forklift truck, we see
9 the front tire of the forklift truck here. This
10 is the upright with the barrel-carrying
apparatus at this location.

Q. Okay.

A. And we have here a view of the lower portion of
the barrel-lifting apparatus penetrating into
the plastic 50-gallon barrels.

Q. Do you see any acid spills around that?

A. I see nothing, no, sir.

Q. The three pictures you just viewed, what color
is the lift truck?

A. In the pictures it appears to be yellow.

Q. Okay. Handing you what's been marked as
Affidavit -- Plaintiff's Exhibit 15, could you
stand up and hold that board?

A. Certainly.

Q. Okay. Now,, Dr. Murray, that Plaintiff's

1 Exhibit 15 is in evidence and is a depiction of
2 what the employees at Ashland will testify as to
3 what the configuration of traffic was on the day
4 of the accident, do you have an opinion to a
5 reasonable degree of engineering certainty as to
6 whether or not the post in the Ashland Chemical
7 Company plant is a hazard?

8 A. Oh, yes, it's a hazard, no doubt about it.

9 Q. All right.

10 ~~MR. STREZA:~~ Again, objection, move
11 to strike.

12 Q. All right. Now, knowing the path of Walter
13 Felden coming from the lower area and trailing
14 along the new process building, do these
15 vehicles, which are now in the picture, obstruct
16 anybody driving a towmotor's view?

17 ~~MR. STREZA:~~ Again, objection.

18 Q. Or excuse me, a lift truck's view?

19 ~~MR. STREZA:~~ Objection.

20 Q. In your opinion?

21 ~~MR. STREZA:~~ Competency.

22 A. Yes, sir. If a person is coming in from this
23 direction, the contractor's van in this location
24 is going to obscure the pillar for a time.

25 Q. And also you would not be able to go, if you're

1 coming from the east heading to the west. the
 2 west would be the bottom of the Exhibit 15 and
 3 the east would be the where the trucke backe
 4 into. you would not be able to go to the right
 5 of that post if those vehicles and the air
 6 compressor were all in there like they are in
 7 the picture on Plaintiff's Exhibit 15?

8 ~~MR. STREZA:~~ Again, objection
 9 lack of soundat on.

10 A If the situation is to scale as I see it here.
 11 we have the air compressor in this location and
 12 the post right here, which is yellow. there noee
 13 not appear to be room for the forklift truck.
 14 Item 25, to negotiate between the yellow post
 15 and the air compressor

16 Q All right The forklift truck is marked as 25
 17 waen't that the number on the forklift?

18 A Yes. Unit 25

19 Q Unit 25 okay All right Now, when, if
 20 there's people andee in there walking around,
 21 construction people. would that have an impact
 22 on the driver attempting to maneuver his way to
 23 the door opening in that building on the bottom
 24 of the picture?

25 MR

~~STREZA:~~ Objection Calls for

1 spec^{cul}ation.

2 A. Well, it should have. One of the primary
3 responsibilities of the operator is to watch out
4 for pedestrians.

5 Q. And could you tell us about the load Walter
6 Felden was carrying?

7 A. Mr. Felden was carrying two 55-gallon barrels of
8 formic acid.

9 Q. And were they on the front of the towmotor --
10 excuse me, the front of the lift truck?

11 A, Yes, sir. They were on grasping device, barrel
12 grasping devices where we have the ability to
13 pick up and carry two barrels of this nature,

14 Q. All right. And were they up off the ground?

15 A. Yes, a short distance.

16 Q. All right. And would you be able to see over
17 those barrels?

18 A. Oh, yes.

19 Q. Okay.

20 A. I've operated the truck and I'm familiar with
21 the, the views from the operator's compartment.

22 Q. All right. Now, the, having added these
23 vehicles, the contractor's van, the Bronco, and
24 assuming that these vehicles will be testified
25 to be there on the day of the accident as well

1 as people do you have an opinion to a degree,
2 reasonable degree of engineering certainty as to
3 the cause of the accident after having read
4 Walter Felden's deposition?

5 MR. STREZA: Again, objection,
6 based on competency. Go ahead.

7 A I have not read. --

8 Q I'm sorry --

9 A. -- his deposition.

10 Q. After having read the materials you have read?

11 MR. STREZA: Same objection.

12 A. Could you state the question, please? I've lost
13 my train of thought

14 Q All right If the vehicles and people are as
15 are portrayed in Plaintiff's Exhibit 15,
16 although there's no people there. assuming there
17 was pedestrian traffic around there that will be
18 testified to and the vehicles are in the places
19 they are on Plaintiff's Exhibit 15. do you have
20 an opinion to a reasonable degree of engineering
21 certainty as to the cause of Walter Felden's
22 accident?

23 MR. STREZA: Again, let me object
24 For the record and, again, there's lack of
25 foundation. there are no eye witnesses to

this accident other than Mr. Felden, and his testimony doesn't establish any pedestrians between his point of travel and the concrete post in this case.

Furthermore, he's, this witness lacks competency to testify to the subject. Go ahead

A Yes, sir. I have an opinion. - Miss

Q What is that opinion?

A The cause of this accident is twofold. It's a placement of the post out in the yard which presents a hazard and also a carelessness of the operator in not seeing the post

Q Okay Now if the operator is coming around close to the building where the truck is in or following a path of travel which obstructs the view, which obstructs his view because of the vehicles, would you -- and pedestrians, would you still have that opinion?

MR. STREZA: Objection. Same objection.

A Yes, sir. I would, I would say the driver has a responsibility to look where he is going

Q Okay And if the driver was looking where he was going and trying to maneuver between the

1 semi tractor/trailer and the post or just the
2 semi tractor/trailer and pedestrians, would that
3 have a bearing on your opinion?

4 A. Well, we have a situation similar to this in the
5 engineering world where if a hazard exists, the
6 primary engineering responsibility to eliminate
7 the hazard. If you cannot eliminate the hazard,
8 then your responsibility falls to guarding about
9 the hazard, and if you can't guard about the
10 hazard, then your responsibility is to warn
11 about the hazard.

12 And this post right here in the yard is
13 exactly the same type of hazard we have out on
14 interstate highways where you have a bridge
15 going over the top and a road going over the top
16 of the four-lane interstates with a grass strip
17 in between the two lanes.

18 We have a post in the grass strip in the
19 center lane to support the overhead overpass
20 structure, It is a hazard, and if a car goes
21 off into the grass strip and strikes that
22 hazard, then we have an accident.

23 In the engineering world we cannot build
24 the interstate highway without having that post
25 reasonably. So we can't eliminate the hazard.

1 So on the highway, the responsibility then
2 becomes guarding about the hazard and warning on
3 the hazard, and when you commonly come across
4 these posts in the interstate highway, you will
5 see barriers and energy-absorbing devices in
6 front of the post to reduce the risk when you
7 strike them.

8 Here, the post serves, as I can see, no
9 useful purpose. So sitting out there is a
10 hazard that easily can be eliminated and falls
11 then on the primary engineering responsibility.
12 Get rid of the hazard.

13 Q. All right. And in fact, there were three
14 previous accidents that you've testified that
15 you knew, that were known to Ashland Chemical
16 regarding this post?

17 ~~MR. STREZA: Objection. That's an~~
18 ~~inaccurate characterization of his~~
19 ~~testimony.~~

20 Well, what is your testimony?

21 My testimony is that I read documents that there
22 were three accidents between posts and forklift
23 trucks. I didn't identify it being this very
24 post.

25 Okay. There was another post in this

1 configuration at one time, was there not?

2 A. I'm not sure.

3 Q. Okay. When you were out there in March of '92,
4 the post that is, that Walter Felden hit is no
5 longer there, is it?

6 A. That's correct, been removed.

7 Q. In the example you gave on the highway where you
8 can't move the bridge abutments and you must
9 have cushioning devices or crash cushions as
they're commonly called, here you don't need
that, you can remove the hazard?

2 A. Remove the hazard is your first responsibility.

3 Q. And is it your opinion to a reasonable degree of
4 engineering certainty that the primary
5 responsibility would be to remove the hazard?

6 A. Yes, sir.

7 Q. And you understand that people who are driving a
8 lift truck where there's a lot of activity going
9 on, are going to have their attention varied to
10 different activities going on at the plant and
11 watching and bobbing and weaving, if you will,
12 to get through this type of configuration?

13 A. I can see that people driving forklift trucks
14 can be looking at other things, such as
15 bystanders, something of this sort, and have

1 their attention deviate from directly in front.
2 I don't think that, that totally overcomes the
3 driver's responsibility to look where he's
4 going.

5 Q. Okay. And had -- getting back into training for
6 a minute. Had Walter Felden been trained as you
7 testified earlier and had the warnings been on
8 the vehicle as you testified earlier, is there
9 anything about vehicle obstruction that would
10 help Walter Felden maneuver through this?

11 ~~MR. STREZA: Objection. Lack of~~
12 ~~foundation.~~

13 A. Well, if there's, if there's anything on the
14 forklift truck that obstructs his forward
15 visibility, then the warnings and the
16 instructions in the manual and the training all
17 say drive the unit backwards and look backwards
18 where you have no obstructions, you have clear
19 visibility behind on a forklift truck and
20 negotiate around the post and do your job.

21 Q. Okay. And you understand that the warning on
22 the forklift truck was obliterated because of
23 paint?

24 A. That's true.

25 Q. Okay. And the operator's manual --

MR. STREZA: Objection. Object,
there's no foundation.

Q. Okay. Assuming that the warning was obliterated
by paint, assuming that the operator's manual
was not available to Walter Felden and not on
the forklift truck, and assuming that Walter
Felden had never been trained by any of the
Clark Equipment films or any of the Clark films,
to a reasonable degree of engineering certainty,
would he know necessarily to trail the load
rather than to bring it forward?

MR. STREZA: Objection.

Relevance.

A. I could think in any training that he would have
that he would, it would be common sense that if
he, there's not, if he can't see where he's
going and has visibility problems, either trail
the load or select a different route or don't,
don't carry the product.

Q. Well, the fact of the matter is, with lift
trucks, there's, there's always a visibility
problem, I mean, you have the mast in front of
you? I mean, you don't have this is like a car
windshield where you, or a truck windshield
where you see everything, but you know your

1 visibility problem, I mean, you know that
2 there's something in front of you?

3 A The visibility impairment if it occurs in any
4 spot, is obvious to the operator.

5 Q Right.

6 A Just like in your automobile, you've got the
7 pillars at the end of the windshield which block^k
8 a little bit of visibility, and you also have
9 the rearview mirror that blocks a little bit of
10 visibility. You know about those.

11 Q Okay.

12 A And an operator of a forklift truck knows he
13 has a carriage. In this particular case, it's a
14 low carriage, and you can see right over it so
15 it doesn't present much of a visibility problem.

16 Q Do you know the height of the post?

17 A Yes, it was stated to be, I believe, 60 -- 51
18 inches high.

19 Q And even though Mr. Felden might be able to see
20 over the barrels, if the post is 51 inches high
21 and there's vehicles in the area, would he be
22 able to see the post prior to impact if he's
23 trying to drive the lift truck?

24 A. Yes, sir, in my opinion he would be able to see
25 it.

1 Q. Okay. All right. You can put that down for a
2 second. Okay. Briefly, you've read the
3 Affidavit of Jack Matson?

4 A. Yes.

5 Q. And you understand that Mr. Matson has testified
6 in his Affidavit -- well, he hasn't testified
7 but he stated in his Affidavit that this post
8 was there for safety, correct?

9 A. Yes.

10 Q. Do you understand the purpose for which it was
11 erected?

12 A. The purpose of it, for which it was erected was
13 a guard around a dike for a tank farm, is my
14 understanding.

15 Q. And you know that the tank farm was subsequently
16 dismantled and the post stayed?

17 A. Yes.

18 Q. Okay. Do you have an opinion to a reasonable
19 degree of engineering certainty as to any safety
20 feature that the post would provide at Ashland?

21 MR. STREZA: Again, objection,
22 competency, and also, can you put a time
23 frame on when you're talking about, then o
24 now?

25 A. On the contrary\,--

Q. At the time of Walter Felden's accident in August of '89.

A. In contrary, it's contrary to a safety feature, It's a hazard. So it's kind of a negative safety feature.

~~MR. STREZA: Okay. Move to strike.~~

Q. All right. What are posts designed to do? What are they to protect?

~~MR. STREZA: Objection.~~

Competency. Lack of competency, go ahead.

A. Typically we have posts or barriers around such things as natural gas meters, high pressure natural gas valves, things of this sort that happened to be in parking lots of shopping centers and things of this sort. We also can have posts around water hydrants, things of this nature, where it's absolutely necessary to have something in, in such as a water hydrant in a proximity to a building that presents a hazard, and therefore, we must protect that natural gas meter or fire hazard from damage by vehicles. When we place it there, we must make it very visible.

Q. Handing you what's been marked as Exhibits 19,

1 20 and 21, they're located in Jack Matson's

2
3
4
5 MR. STREZA: Again, objection.
6 Competency.

7 A. On Page 27 --

8 Q. That would be Plaintiff's Exhibit 20?

9 A. We have here three yellow concrete posts, plus a
10 welded pipe barrier around a high voltage
11 electric power line pole.

12 Q. Okay.

13 A.
14
15
16
17
18
19
20
21

22 Q. All right. And does that exhibit, Plaintiff's
23 Exhibit 20, Affidavit Page --

24 A. 27.

25 Q. -- 27, does that portray the same situation that

1 we saw with the post in the middle of the yard
2 which Walter Felten hit?

3 A Well, it portrays a post which can become a
4 hazard but recall that, that here the hazard is
5 a is a useful situation where we're protecting
6 against a worse situation. rather than a post
7 sticking out in the middle of a yard that
8 there's no function Having the post in the
9 middle of the yard is a hazard that we can
10 easily eliminate by taking the post out
11 Q Okay And if you take the post out. you're not
12 subjecting anybody to electric wires?

13 A That's true

14 Q. The next page is to, you see the post there
15 protecting anything, that would be Plaintiff's
16 Exhibit Z1?

17 A It appears here that we have a concrete post
18 close in to an I-beam structure or a structural
19 member of a overhead unit. and here the concrete
20 post would serve a duty to protect the structure
21 and prevent structure from collapsing

22 Q Is your conclusion a moment ago that to a
23 careful and prevent or to an operator. that
24 concrete posts would have created a risk. was
25 that because there was a delivery truck there at

1 the time?

2 A. I believe I said it created a hazard. Hazard is
3 different than risk.

4 Q. Okay.

5 A. And the post does present a hazard. The hazard
6 exists whether the delivery truck is there or
7 not. Now whether or not the visibility will
8 change depending upon the location of the
9 vehicles around it, but the hazard remains the
10 same.

11 Q. And would you also agree with me that even if
12 you have an alert operator, there is a potential
13 of him not seeing it, for some reason, having to
14 look the other way?

15 A. There's always that position. I, myself have
16 hit posts even though I was paying attention, or
17 thought I was paying attention to my driving,
18 and I think many people when backing up a car
19 occasionally hit something, even though they're
20 trying do their best.

21 Q. And even though we would say this is an
22 attentive operator, you can still hit the post
23 as it was situated in Ashland Chemical in August
24 of '89?

25 I can foresee that as an engineer es, sir.

1 Q. Would you foresee that, do you foresee that in
2 this situation?

3 A. Yes, sir, the post is a hazard. There's no
4 doubt about it.

5 MR. FRIEDMAN: I have no further
6 questions. Thank you, doctor.

7 .THE WITNESS: Thank you.

8 MR. STREZA: May we take a
9 ten-minute break off the record?

10 MR. FRIEDMAN: Sure.

11 VIDEOTAPE OPERATOR: Off the
12 record.

13 - - - -

14 (Thereupon, a recess was had.)

15 - - - -

16 (Thereupon, Plaintiff's Exhibits 18
17 through 21 were mark'd for purposes of
18 identification.)

19 -

20 (Thereupon, Defendants' Exhibits A
21 through I were mark'd for purposes of
22 identification.)

23 - - - -

24 VIDEOTAPE/ OPERATOR: On the
25 record.

- - - -

CROSS-EXAMINATION OF RICHARD G. MURRAY, Ph.D.
BY MR. STREZA:

Q. Thank you very much.

Dr. Murray, my name is Ralph Streza. We have briefly met in the past. I represent Ashland Chemical in this case. I'm one of the lawyers here asking you some questions today.

A. Yes, sir.

Q. At the end of Mr. Friedman's questioning, you talked about hazards and risk analysis.

A. I talked about hazard and risk, I didn't analyze anything.

Q. Thank you. Now you identified this particular post as posing a hazard?

A. Yes.

Q. Indeed, you stated, did you not, that the risk of hitting the post was different than simply the post being a hazard?

A. Yes, sir.

Q. Would the risk of hitting the post be less when the delivery truck identified in Mr. Friedman's Exhibit Number 15 not be there?

A. By the delivery truck, you mean the van, the contractor's van or the 18-wheel

1 tractor/trailer?

2 Q. The 18-wheel tractor/trailer.

3 A. The hazard would still be there, but the risk

4

5 Q.

6

7

8

9 A.

10

11 Q.

12

13 A.

14 Q.

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19 A.

20 Q.

21

22

23 A.

24

25

1 structure is a hazard. All of these can cause
2 property damage or injury if you run into them,
3 but the primary hazard is the light pole itself,
4 where if a vehicle does strike the light pole,
5 they're relatively fragile, and if it comes
6 over, we have the potential for these
7 high-voltage electric wires then to fall down
8 where they could electrocute people.

9 Q. Okay. So even though the concrete posts on the
10 ground surrounding the light pole are hazards,
11 they are what you define as useful hazards
12 because they protect against the larger
13 situation of the light pole coming down with the
14 electrical lines on top?

15 A. That's correct.

16 Q. Dr. Murray, I'd like to hand you what we have
17 marked as Defendants' Exhibit A.

18 A. Yes, sir.

19 Q. Assuming, Dr. Murray, that that photograph
20 represents the accident scene shortly after the
21 accident. Do you see in the left-hand or
22 right-hand side of the photograph some overhead
23 structure?

24 A. Right here, yes.

25 VIDEOTAPE OPERATOR: Bring your,

1 bring your, yeah, that's good.

2 A. Over here we have a tower which is supporting
3 some pipes, yes, carrying across, over the top
4 of the roadway.

5 Q. All right. Do you know what's contained in
6 those pipes?

7 A. No, sir.

8 Q. Assuming, sir, that there are caustic chemicals
9 that are in those pipes traveling around
10 transporting chemicals around the Ashland
11 facility, would you agree with me that the
12 hazard, the same hazard that you identified
13 earlier with the electrical lines falling down
14 is present in that situation?

15 A. There's a hazard that if you hit this structure,
16 you can deform the structure and then you create
17 a second hazard of the pipes coming down,
18 rupturing and whatever chemicals in them
19 spilling.

20 Q. And if the chemicals are hazardous or caustic or
21 acidic, that, too, presents a very serious
22 situation at the Ashland plant, does it not?

23 A. Certainly does.

24 Q. Assuming for a minute, Mr. -- or Dr. Murray,
25 that the post that Walter Felden drove into on

1 the day of his accident?

2 A. Which is this one right there?

3 Q. Correct. Prohibited tank trucks from colliding
4 with that overhead, those overhead pipes and
5 that supporting structure identified, that you
6 identified in that picture, that post, indeed,
7 would be a useful hazard, would it not?

8 A. No, sir. In order, in order for it to be a
9 useful hazard, it's going to have to effectively
10 prevent the damage to the structure here, and I
11 can take an 18-wheel tractor/trailer and drive
12 right around that post and hit this. I can take
13 a forklift truck, drive right around this post,
14 hit that. I can take a pickup truck, drive
15 right around that post and hit this.

16 This pillar right here, or post, provides
17 no protection of any meaningful degree to the,
18 to the actual structure here which is supporting
19 the dangerous pipes. If we have, if we had
20 pillars around here, such as you have some
21 yellow structures there, in close proximity to
22 where a vehicle cannot effectively hit that
23 structure, then you have the useful hazard.

24 Q. Dr. Murray, do you have any evidence that any
25 tank truck collided with that overhead pipe

1 support system before that post was removed?

2 A. No, sir.

3 Q. And, sir, do you have any evidence that an
4 18-wheeler, which is substantially different
5 than a tank truck, collided with that overhead
6 pipe support before that post was removed?

7 A. In contrast, we have many 18-wheel tank trucks
8 going down the road, and we have a lot of them
9 in Oklahoma hauling petroleum products, so an
10 18-wheeler can be a tank truck. Perhaps you can
11 get the question a little different and could
12 answer it.

13 Q. All right. Do you find a difference between the
14 18-wheeler that is depicted in that photograph
15 in front of you, Dr. Murray, and the tank truck
16 which is used by the chemical manufacturers to
17 haul large tanks of chemicals?

18 A. There are differences but they are basically
19 still 18-wheel tractor/trailers carrying
20 different cargos.

21 Q. All right. Is the mobility the same in both an
22 18-wheeler as depicted in that photograph and
23 the 18-wheeler tank truck?

24 A. If they're the same wheelbase, yes, sir, they
25 should be.

1 Q. All right. And if there are different
2 wheelbases, the mobility is different, correct?

3 A. That's correct.

4 Q. Have you ever driven a tank truck?

5 A. Yes, I'm sure I have.

6 Q. And I take it, sir, you've driven 18 wheelers?

7 A. No, I don't recall any 18-wheelers.

8 Q. Now, Dr. Murray, I'm going to hand you what's
9 been marked as Defendants' Exhibit J and ask
10 that you take a look at that.

11 A. Yes, sir.

12 Q. Assuming for a moment that Ashland intended that
13 that post remain in its location as depicted in
14 that photograph so that tank trucks could swing
15 wide of that post so that they would not strike
16 the overhead pipe support structures depicted in
17 Exhibit Number 1 or Exhibit Number A, do you
18 have any reason to doubt their intention?

19 A. Well, if they're intending for this to be a
20 guard around that structure, then they're
21 missing the boat pretty badly.

22 Q. Dr. Murray, would you, do you have any reason to
23 disagree with them that their intention was to
24 divert traffic away from the overhead structure?

25 A. They may have wished to divert traffic. I don't

know what was in their mind. This is not an effective way to do it.

Q. Would you agree with me, Dr. Murray, that if, indeed, that post did divert tank truck traffic away from the overhead pipe support structures as pictured in Defendants' Exhibit A, it, indeed, had a useful purpose?

A. I would say it would have some useful purpose, but it would not be an effective guard, and it would not be one, something that I would want as an engineer to put around this pipe support structure to ensure that it did not collapse and fall and spill the chemicals. It just won't do it.

Q. Okay. Now, Dr. Murray, I'm going to hand you what we've marked as Defendants' Exhibit B and Exhibit C and Exhibit D and ask that you take a look at those photographs, please.

A. Thank you. Yes, sir.

Q. Assuming that those three photographs fairly and accurately depict the scene of the accident at the time of the accident, is there sufficient space between the post and the delivery van as well as the post and the air compressor for an operator to maneuver that lift truck safely

through there?

A. There is.

Q. And again, the operator can maneuver that lift truck on either side of the post?

A. Yes, sir.

Q. I would like you, for you to point out to the ladies and gentlemen of the jury, Dr. Murray, what you believe those items in the photograph to be, based on your knowledge of this case?

1 A. Right here, I believe this to be the trailer of
1 the delivery truck at an angle to the building.
1 This is a forklift truck containing two, what
1 appears to be two 50-gallon plastic barrels, the
1 yellow concrete and steel pillar. Here, we have
15 what appears to be an air compressor and here, a
16 van. You can see this more clearly in what is
17 Defendants' Exhibit D, where now we can see the
18 van very clearly with the letters on the top and
19 letters C.S. on the side. We can see the air
20 compressor. Be fairly certain about that, and
21 we can see the back part of the trailer.

22 Q. Very good. And what does D or C depict, sir --
23 or D depict, I'm sorry?

24 A. I just had it.

25 Q. If you lined those three photographs up

1 side-by-side, do they give somewhat of a
2 panoramic view of the accident scene?

3 A. Let me get them oriented here. In this order I
4 believe that they would.

5 Q. Okay. I apologize for not overlapping them for
6 you and I think that if we were to overlap them
7 for you, that would probably create a, a
8 panoramic view of the area, would it not?

9 A. I believe it would.

10 Q. Now, Dr. Murray, I'd like you to compare those
11 three photographs with Plaintiff's Exhibit
12 Number 15, the schematic that Mr. Friedman
13 showed you earlier. Can you reach it?

14 A. Certainly, no problem. I see some differences
15 here. First of all, the scaling, I'll hold this
16 up here if you don't mind.

17 Q. Not at all.

18 A. The scaling I notice it would appear, using the
19 forklift as a, as a dimensional reference that
20 we have a distance between the concrete post and
21 the air compressor which is larger than the
22 relative distance shown on this diagram.

23 Also, looking at the spacing between the
24 post and the van, here and here, it would appear
25 that the van is somewhat farther back than

1 depicted on this. That would be the primary
2 differences, besides I don't see any reference
3 to this because we can't see behind the van very
4 well.

5 Q. All right. Dr. Murray --

6 A. Certainly I would think that if we have a yellow
7 station wagon, we probably should be able to
8 pick it up in this area here.

9 Q. I have another picture, I'll show you it in a
10 minute, Dr. Murray. Is there any difference in
11 the spacing between the contractor's van and
12 what appears to be an air compressor on
13 Mr. Friedman's demonstrative aid and that white
14 and black figure in the photograph which appears
15 to be the air compressor?

16 A. Yes, sir, there is. Here it appears that the
17 contractor's van is moved farther upwards than
18 it is here.

19 Q. All right.

20 A. In other words, if we look at the edge of the
21 air compressor here, it would come, oh,
22 approximately to the right center grill area
23 farther, farther in than the headlight, not as
24 far in as the center of the vehicle, and here we
25 see the air compressor itself as shown well

1 outside the right running lines of the van.

2 Q. Okay. So the location of the van in the diagram
3 is such that it is, it blocks the visibility of
4 the post if, if the towmotor, the lift truck
5 were traveling towards the post more so than the
6 photographs do, does it not?

7 A. I would think that's fair, yes.

8 Q. And is there not in the photographs, Dr. Murray,
9 ample, safe space between the contractor's van
10 and the air compressor to maneuver the lift
11 truck?

12 A. You mean on the photographs?

13 Q. Yes.

14 A. The photographs, as I said previously, I think
15 there's ample room between the air compressor
16 and the post for the forklift to go through
17 there easily.

18 Q. How about between the air compressor and the
19 contractor's van, the blue contractor's van?

20 A. That would be pretty tight. There may be, there
21 may not be. But we notice right here we have a
22 pencil-hook type trailer hitch on the air
23 compressor, comes out this far. Scaling it off
24 from the bumper over to here, it's going to be
25 questionable whether you're going to have,

1 really, sufficient room to go through there.

2 You may have, you may not have.

3 Q. Very good. Dr. Murray, I'm going to hand you
4 Defendants' Exhibit Letter E and ask that you
5 take a look at that. That depicts, does it not,
6 the back end of the contractor's van and it
7 looks as though there's an emergency vehicle
8 just to the left of the contractor's van, does
9 it not?

10 A. There does.

11 Q. All right. And the white surface of the, of the
12 asphalt there I'll represent to you, Dr. Murray,
13 is a substance called Absorb-It which the
14 Ashland employees placed on the cement to absorb
15 the chemicals spilled by the towmotor. Does the
16 vehicles depicted in Exhibit 15, the diagram,
17 the Bronco and the station wagon, are they at
18 all depicted in the photograph?

19 A. No, sir.

20 Q. Okay. Dr. Murray, I would also like to hand you
21 exhibit, Defendants' Exhibit F.

22 A. Can I put this down now?

23 Q. Yes, thank you very much.

24 F and H and ask that you take a look at
25 those.

A. Very good.

Q. Okay. If you would show the ladies and gentlemen of the jury, please, those exhibits. Again, what do those pictures show?

A. They appear to be closeups of the forklift after the accident. We see the yellow pillar here and here, what appears to be a 50-gallon barrel there and the second 50-gallon barrel is behind the yellow pillar. We see a gray structure here, which appears to be the 18-wheel trailer. Over here we have a quiet power unit, which appears to be the air compressor.

Q. And again, assuming, Dr. Murray, that the evidence in this case establishes that those photographs were taken shortly after the accident with nothing being moved, would there be sufficient safe passageway for the operator of the lift truck to maneuver the lift truck through those two areas?

A. I believe there would, yes, sir. You can particularly see, we can judge the relative size of the driver's overhead guard here, which is approximately the outer running edges of the forklift truck, and we can gauge that distance to the distance between the post here and the

1 first part of picking up the outline of the air
2 compressor.

3 Q. Okay. Very good sir. Thank you very much. You
4 indicated, sir, that the risk of hitting this
5 post was less when the contractor's van --
6 strike that, please.

7 When the delivery truck, the 18-wheeler,
8 the, the item on there?

9 A. Right here?

10 Q. Right there, would not have been there, correct?

11 A. That's correct.

12 Q. And indeed, when that contractor's delivery
13 truck was not there, the risk of hitting the
14 post, in your opinion, may have been
15 foreseeable, is that right?

16 A. The hazard is foreseeable in either event,
17 whether it's there or not.

18 Q. All right. The risk of hitting that hazard was
19 foreseeable, in your opinion, whether or not the
20 delivery van was there, but the risk of hitting
21 it was less when the van, when the truck was
22 gone, is that correct?

23 A. I hate to be picky, I don't mean to be, but I
24 want to make sure everything's clear.

25 Foreseeability doesn't go to risk, it goes to

1 hazard.

2 Q. Okay.

3 A. The hazard of a vehicle striking the pillar
4 exists and is foreseeable in either case. The
5 risk or the propensity of it happening, the
6 statistical percentage *of* times that it would
7 happen out of 100 decreases as you have a freer,
8 opener path and the 18-wheel truck is not there.

9 Q. Okay.

10 A. Still, out of 1,000 times, you're likely to have
11 something happen.

12 Q. All right. Out of 1,000 times, you mean 1,000
13 times *of* a vehicle lift truck transporting
14 materials back and forth in this general area,
15 something may happen?

16 A. I wasn't referring to lift trucks, I was looking
17 at total overall vehicle passage. It may be an
18 18-wheel tractor/trailer, it may be an air
19 compressor, it may be an automobile or pickup
20 truck. If you put a post out in the middle of a
21 yard, sooner or later somebody going to nail it.

22 Q. You would agree with me, though, sir, that when
23 that delivery, 18-wheel delivery truck was
24 there, the risk of anybody hitting it was much
25 less, though, correct?

1 A. No, I think I disagree. When a trailer is
2 there, the risk is higher. The --

3 Q. Thank you. That's not what I meant. When the
4 trailer was gone, the risk of hitting that post
5 is much less?

6 A. Yes, sir.

7 Q. And that's because there's a wide open space in
8 that area between the post and the other
9 building where the delivery van is parked, is
10 that right?

11 A. Correct.

12 Q. Dr. Murray, you cannot say, though, to a
13 reasonable degree of engineering certainty that
14 this accident was substantially certain to
15 occur, this specific accident, can you?

16 A. No, sir. An accident will, will happen when you
17 have a hazard there, sooner or later.

18 Q. An accident --

19 A. But this particular accident was a combination
20 of two events; the existence of the post which
21 was a hazard and the carelessness of the
22 operator not, for some reason, seeing that the
23 post was in front of his forklift.

24 { And again, the carelessness of a operator can
25 cause a forklift to collide into a variety of

1 things, can it not?

2 A. That's true.

3 Q. It could collide into a corner of a building?

4 A. Yes, sir,

5 Q. Or another forklift?

6 A. Yes, sir.

7 Q. Or other vehicles, correct?

8 A. Correct.

9 Q. Dr. Murray, you described some engineering
10 'principals before as they pertain to hazards and
11 duties imposed on engineers in trying to
12 eliminate a hazard, and you described them that
13 the first principal is to try to remove the
14 hazard, correct?

15 A. The duty of an engineer in analyzing safety is,
16 first of all, if you recognize a hazard, your
17 duty is to design it out, if you can, or
18 eliminate the hazard.

19 Q. Okay.

20 A. Your second duty, if you cannot eliminate the
21 hazard, like the center support on a highway
22 bridge, then guard against it or reduce the
23 potential of the dangerousness of the hazard.

24 Q. Okay.

25 A. If you cannot do either of those, certain

1 hazards exist that cannot be designed out that
2 cannot be guarded against, there, your duty must
3 be to warn.

4 Q. Okay.

5 A. Or inform.

6 Q. Now, all of your remedies, if you will, or
7 duties upon an engineer, all depend on, first of
8 all, knowledge of the hazard, correct?

9 A. Yes, sir.

10 Q. If you have no knowledge of the hazard, you
11 cannot remove it, correct?

12 A. That's true.

13 Q. If you have no knowledge of the hazard, you
14 cannot guard against it, true?

15 A. That's true.

16 Q. And if you have no knowledge of the hazard, you
17 cannot warn about it, right?

18 A. That's true.

19 Q. Assuming you have knowledge of the hazard,
20 Dr. Murray, wouldn't you agree with me that it's
21 a safety engineering principal that if you
22 cannot remove it, and you cannot guard against
23 it, the degree to which you need to warn about
24 it depends upon the obvious nature of the hazard
25 or upon the knowledge of the individual you're

trying to warn?

A. I would tend to agree with it if you have what we call an open and obvious hazard, like putting a firearm to your head. You can't guard against the muzzle of a firearm. Certainly in all cases there are warnings but, you know, there are limits to that, and it's pretty open and obvious if you play Russian roulette, you're going to get it sooner or later.

1 Q. Okay. Let's talk about the open and obviousness
1 of this particular hazard, Dr. Murray. It was
1 51 inches high as you understand it, correct?

1 A. Yes, sir.

1 Q. And 16 inches in diameter, right?

1 A. That's correct.

1 Q. And it was painted bright optic yellow?

1 A. It was painted yellow. I don't know the tone of
1 the color.

1 Q. All right. Assuming, sir, that it was painted
2 bright optic yellow, all right, this is not an
2 obstruction that is inconspicuous, is it?

2 A. Not to me, no, sir.

2 Q. It's a very conspicuous obstruction, is it not?

2 A. Yes, sir.

2 Q. Assume for a moment, Dr. Murray, that Mr. Felden

1 testified that he traveled past this point on
2 the plant every day for the life of this post,
3 which was over nine years. Is it conceivable
4 that he'd be unaware of this hazard?

5 A. That's where we get back into training. It's a
6 situation where even the most experienced people
7 can, in certain circumstances, tend to ignore
8 things that they know.

9 Typical example is people that, after
10 landing their airplane, reach over and retract
1 the landing gear on the runway. They, you know,
2 they hit the wrong switch. Now they know what
3 switch is there. They've been flying this plane
4 for 5,000 hours, and yet it's one of the most
5 common problems when you transfer from a Cessna
6 aircraft to a Beachcraft aircraft, even though
7 you're very experienced, you tend to be paying
8 attention, you know what you're doing, sometimes
9 the experience and familiarity itself tends to
10 cause you to relax and you, you do the wrong
thing.

1 Okay.

2 so --

3 Go ahead. I'm sorry. Are you finished?

4 A. No, I'm just saying just because a person drives

1 by a post 5,000 times, it doesn't mean that in
2 his mind he will overlook it on the 5,001st
3 time. Best thing to do is to remove the post
4 because you know sooner or later somebody's
5 going to hit it.

6 Q Okay. I don't think you answered my question,
7 Dr. Murray.

8 A I'm sorry. I'll sure try.

9 Q Okay. Assuming for a moment that Mr. Felden
10 traveled past that concrete post that was 51
11 inches high, 16 inches in diameter, very
12 conspicuous every day of his working life at
13 Ashland for nine years, is it conceivable that
14 he would not be aware of this hazard?

15 A On this particular event, yes, sir, it sure is.

16 Q Okay. If he testified that he had no knowledge
17 of this post up until that point of accident, is
18 that conceivable?

19 A I wouldn't think so.

20 Q Dr. Murray, assume for a moment, please, that
21 the evidence in this case will be that for
22 several years, nine years, this post existed
23 without incident similar to the accident
24 involving Mr. Felden, no one had collided head
25 on with it in a lift truck?

A. With a lift truck only?

Q. That's correct. That's a much different situation than you described before about the highway with the post in the middle of the median, is it not?

A. Not really. They're basically the same hazard. It's not common for cars to hit the center post, but, but the risk and danger is so great when you do, that you, you, in that case, guard against it, and spend a great deal of time and effort to make sure that when it happens, you're pretty sure it's going to, happen sooner or later, when it happens, you go to efforts to reduce the risk of injury, and that's why you put, in those cases, you put the energy-absorption barriers prior to the really hard object.

Q. Okay. Again, though, Dr. Murray, that's based on a substantial knowledge of highway safety and highway design that cars oftentimes leave the main path and collide with the post in the median --

A. Well --

Q. -- is it not?

A. On the contrast, it's very, very rare. You go

1 out here on the interstate and I'll venture to
2 say that you could see \$10,000 cars go by and
3 never have one of them go into the center median
4 and hit the bridge abutment or the pillar. It
5 doesn't happen very frequently, but the severity
6 of it is so great, that we have a duty to do
7 something about it.

8 Q. Okay.

9 A. Just as you do here.

10 Q. And again, the severity of that accident is what
11 causes -- strike that, please.

12 The severity of that experience is what
13 leads the highway safety designer to guard
14 against that hazard because based on prior
15 experience, isn't that right?

16 A. That's true. We know that if a car traveling 60
17 miles an hour or even 30 miles an hour hits a
18 immovable barrier, the results, even if you are
19 restrained in your car, will be serious injury
20 or death.

21 Q. Okay. Dr. Murray, I'd like for you to assume
22 some more facts about this case, and please
23 assume that the, that the accident scene is such
24 that as described and depicted in Defendants'
25 Exhibits, I believe it's A through F and H and

G?

A. I have A, I don't have a B. Got a C, D, E, F.
Here's B, I'm sorry.

Q. Okay. If you'll just briefly take a look at
those.

A. Yes, sir.

Q. All right. And, Dr. Murray, I'd also like you
to take a look at Defendants' Exhibit I. And if
you could show that to the ladies and gentlemen
of the jury as well.

Have you seen Exhibit I before in this
case?

VIDEOTAPE OPERATOR: Doctor, I need

you to --

A. I'm sorry.

VIDEOTAPE OPERATOR: That's okay.

Q. Doctor, have you seen Exhibit I before in this
case?

A. I believe I have. Well in a, in a noncolored,
black and white Xerox reproduction.

Q. Okay. I'd like for you to assume, sir, that
that is a schematic of the accident scene
generated, in part, from the photographs that
you have there, Defendants' Exhibits A through
F, and assume for a moment that that is the

1 scene at the accident shortly before the
2 accident. If you'll look, sir, on the far
3 left-hand of the picture as the jury is looking
4 at it?

5 A. Right here.

6 Q. There is a schematic of the lift truck. Do you
7 see it, with two barrels on the front?

8 A. I believe you're referring to this unit right
9 here?

10 Q. That's correct, sir. Assume, sir, that that
11 lift truck is traveling in the direction towards
12 the concrete post involved in Mr. Felden's
13 accident.

14 A. Which would be right here,

15 Q. Thank you very much, sir. And assume, sir, that
16 there are no other vehicles as depicted in
17 Mr. Friedman's diagram, Exhibit 15, would there
18 be anything to mask the visibility of that post
19 in the several scores or perhaps hundred of feet
20 leading up to that post?

21 A. Well, there's a little bit of contradiction here
22 is my only problem. We notice here we have what
23 depicts the van, and we have here what depicts
24 what I take to be the air compressor, and we
25 notice that the running lines, outside running

lines of the van and the air compressor in this case are almost coincident, in other words, they're in the same plane, where here we have pictures which presumably are right after the accident and show the air compressor much farther --

Q. Slightly offset?

A. Offset, or the van farther out. One or the other. If we, if we take this one as it's drawn, the visibility of the pillar is much better.

If we take this one as a photograph, then the visibility is poorer.

Q. Okay. Sir, you would agree with me, though, that even in the Defendants' Exhibit, I believe it's A, that you've just shown, the one that you've just shown the jury, that's fine is that Exhibit A or --

A. C.

Q. Exhibit C, thank you. And that photograph, Dr. Murray, based on the location of Mr. Felden's lift truck as it's next to the post involved in this accident, do you have any opinion as to whether or not there would have been anything to mask the visibility of that

1 post for, perhaps, several scores of feet before
2 hitting that post?

3 A. You're going to have to remind me, four score
4 and seven or whatever it was, but --

5 Q. That's 20 years, or 20 feet.

6 A. 20 foot. I would think for at least 40 foot
7 there would be no obstruction to visibility.

8 Q. Okay. Now, Dr. Murray, you indicated earlier --
9 thank you, you can put that picture down now.
10 You indicated earlier that the OSHA standards
11 and the ANSI standards require recurrent
12 training?

13 A. That's true.

14 Q. There is nothing in those standards, though,
15 that require annual recurrent training, is
16 there?

17 A. That's true.

18 Q. And it is your opinion that annual recurrent
19 training is the most optimal, correct?

20 A. No, as I stated in my deposition, it's going to
21 change and vary somewhat from industry to
22 industry. A forklift truck in one industry with
23 certain attachments on it's going to be
24 different than another industry.

25 When you buy a forklift truck of this

1 nature and use it, from time to time, you're
2 going to take one component off and put another
3 component on. Like in this case, at times I've
4 seen this forklift truck with forks on it, no
5 barrel graspers. At other times, I see pictures
6 with barrel graspers. Now if we have a person
7 that's not familiar with the new equipment, we
8 have a duty to train him on the new equipment
9 right now. So a recurrent training would, would
10 have to be more quickly imposed if we change the
11 equipment.

12 In many cases, I think annual training is
13 quite adequate, but in other cases, it may be
14 training every month.

15 Q. And would you agree with me, sir, that in some
16 cases training every other year is adequate?

17 A. In some cases, it is, such as in older
18 experienced pilots and a grandfather clause,
19 we're allowed to go for what's called a
20 bi-annual flight review. But on the other hand,
21 that rule has been recently changed to where all
22 younger pilots and those that don't qualify for
23 the grandfather clausee are required to do an
24 annual flight review.

25 Q. Okay. But you're indicating, sir, that with

1 somebody with a substantial amount of experience
2 in operating a vehicle such as an aircraft or
3 perhaps even a forklift may not need as much
4 recurrent training as perhaps someone with less
5 experience?

6 A. I don't think I can agree with that. Again, if
7 we go back to the familiarity, breach, contempt
8 or ignoring situations, I believe in training
9 education. I think that's probably the foremost
10 thing we can do to prevent accidents.

11 And granted, we have situations where
12 government regulations will relax people out of
13 the field without imposing regulations such as
14 the annual flight review, but I'm sure that all
15 in all, aviation safety would be better off if
16 we had the annual flight review for everybody.

17 Q. Okay.

18 A. You know, we develop bad habits, and it's only
19 when we get in, on that piece of equipment with
20 an instructor there that he finds out what these
21 bad habits are and points them out to us and
22 allows us to correct ourselves.

23 Q. Is there ever such a thing as too much training,
24 Dr. Murray, unnecessary training?

25 A. I'm sure there's always a situation where

1 there's too much anything. If you bore a person
2 to death in a classroom, he's going to go to
3 sleep.

4 Q. Okay. Dr. Murray, the evidence in this case
5 indicates that Mr. Felden received training from
6 Ashland Chemical at least three times in a
7 period of six years and was about to receive
8 training shortly after his accident, which would
9 have meant he would have received four sessions
10 of training in the previous eight years before
11 his accident. That does not violate any federal
12 safety standards, does it?

13 A. It's information that I'm unaware of. My review
14 indicates that there was training in, I believe,
15 1979 and again training in 1980 or '81. And the
16 accident happened in '89, which is about seven
17 years. I find -- I haven't reviewed, found
18 anything there was a third training. I agree
19 that he was, was slated for training and it
20 hadn't occurred yet, but I don't know of any
21 government regulation that says that you're
22 supposed to have training in between the
23 seven-year period.

24 Q. Okay. Again, sir, assuming, then, for purposes
25 of my question, and I apologize my math was a

1 little off there, Mr. Felden received training
2 in 1979, in 1982, in 1985 and was about to
3 receive retraining again shortly after his
4 accident in 1989, that would have been four
5 training sessions in a period of approximately
6 ten years. That does not violate any safety
7 standards, federal safety standards, does it?

8 A. I don't know of any safety standards or
9 government regulations on industrial trucks that
10 depict what the period of recurrent training
11 is. But I'll guarantee you one thing, training
12 after an accident doesn't do you any good.

13 Q. You, the answer to my question is no then, sir?

14 A. That's right.

15 Q. You spoke, sir, about the warning label being
16 obliterated on the lift truck and it's Exhibit
17 Number 1, and I think you identified warning
18 Number 8 as the most pertinent warning that
19 should, that Mr. Felden should have received,
20 did you not?

21 A. Dealing with this particular instance, I think
22 that's the one that deals with this particular
23 instance, but dealing with pertinence, I would
24 say probably the most outstanding one is the
25 Number 1, which says, "Operators must be trained

and qualified, understand operator's manual before starting."

Q. Okay. You have no evidence, do you, sir, that Mr. Felden was not trained and qualified, do you?

A. No, I don't.

Q. And, in fact, if Mr. Felden testified that he operated forklift trucks for 25 years and received lots of training, not only at Ashland but at other facilities through experience, would you label him an experienced forklift operator?

A. I would have to see what experience he had and what units he had it on before I would want to qualify it, that document. For instance, what, did he, did he have a operator's license? Do we have any documents that show actual proficiency testing? In other words, was a, an observer, a supervisor grading his actual performance or was that training merely a written or oral examination --

Q. Okay.

A. -- in a classroom? There's a difference on that.

Q. All right. Two of the most important safety

1 rules when you operate a lift truck, Dr. Murray
2 and, in fact, they're listed in Number 8, is to
3 watch where you are going and go backwards when
4 your visibility is obstructed, are they not?

5 A. They're stated a different way, but that's
6 basically what it says, yes, sir.

7 Q. Okay. And if Mr. Felden, indeed, knew that
8 before his accident, would you have the need to,
9 again, warn or instruct him about that?

10 A. Certainly. Again, going back to the
11 familiarity, just because you may know where the
12 landing gear switch is and where the flap switch
13 is on a Beachcraft Bonanza doesn't mean that if
14 you don't get recurrent training, you may well
15 pull the landing gear, and I have an ideal
16 example of it myself.

17 I was trained to retract the flaps on a
18 Beachcraft aircraft immediately after landing.
19 Only with recurrent training was it pointed out
20 to me that that is a hazardous situation, and I
21 have corrected my, my procedure after landing to
22 wait until I get to the taxi-way and all of the
23 weight of the landing gear, all the weight of
24 the airplane's on the landing gear securely,
25 activating the squat switch before I reach

1 over and hit either one of the switches.

2 Q. Okay. I appreciate your analogy, Dr. Murray,
3 and I understand how you're trying to apply it
4 in this situation, but if Mr. Felden was
5 inadvertantly not pushing the right switch, what
6 makes you think he would have been reading the
7 warnings that are, that are on the truck at the
8 same time?

9 A. That's basically the best hope we have in safety
10 is, first of all, to give an operator a
11 preliminary course in how to operate the
12 forklift truck with recurrent training. Second,
13 provide him with an operator's manual, and
14 third, put a good set of warnings on the unit.

15 There's no way that I can force the man to
16 read the warnings. But if they're there, we do
17 have some degree of hope that we will reduce the
18 number of accidents.

19 Q. And again, sir, if he knew the content of the
20 warnings prior to his accident, the giving of
21 the warnings again would be repetitious?

22 A. It would be repetitious and it may, and
23 repetition may be the one thing that brings this
24 particular problem to his attention.

25 Q. Dr. Murray, you spoke of the OSHA standards and

1 the ANSI standards earlier. Do either of those
2 documents or those standards require, in 1989,
3 the use of windshields on towmotors or lift
4 trucks?

5 A. No, sir.

6 Q. Do those standards or regulations require --

7 A. There may be one exception to that. But not on
8 this type of truck.

9 Q. All right. On this type of truck, do they
10 require an overhead cover to be used outside in
11 the hot summertime?

12 A. They require a driver's overhead guard. If you
13 interpret that to be a cover, then that would be
14 a cover. I would interpret it to be a guard.

15 Q. All right.

16 A. Which is open for air to go freely through.

17 Q. All right. Again, there, the purpose of that
18 guard is to prohibit obstacles from falling on
19 top of the operator when he's driving the lift
20 truck, is that right?

21 A. It's a hope. It's not going to protect all
22 obstacles because some will filter on through
23 the structure and still hit you, but it is a
24 hope to prevent a capacity-type load falling a
25 certain distance and only deform the overhead

1 guard a certain amount.

2 Q. Okay. There is no requirement or standard that
3 there be a canvas cover much like we see on Jeep
4 vehicles or things along those lines, was there?

5 A. No, sir.

6 Q. In fact, that would create a safety hazard if
7 those things were on a lift truck, would they
8 not?

9 A. In some cases it does, yes, sir.

10 Q. And the windshields indeed create a safety
11 hazard, do they not?

12 A. In many cases, yes.

13 MR. STREZA: If we can go off the
14 records, please?

15 VIDEOTAPE OPERATOR: Off the
16 record.

17 - - - -

18 (Thereupon, a discussion was had off
19 the record.)

20 - - - -

21 VIDEOTAPE OPERATOR: On the
22 record.

23 MR. STREZA: Dr. Murray, thank you
24 very much for your testimony. I have no
25 further questions.

THE WITNESS: Thank you, sir.

MR. FRIEDMAN: I have just a few questions, Dr. Murray.

- - - -

RECROSS- EXAMINATION OF RICHARD G. MURRAY, Ph.D.

BY MR. FRIEDMAN:

1 Q. Dr. Murray, Mr. Streza on his cross-examination
1 says if you add, then you portray it, as you add
1 things to the scenario there, the visibility
1 gets worse, is that correct?

1 A. I'm sorry, I don't quite understand.

1 Q. Referring to the picture, in that picture and in
1 the computer simulation picture?

1 A. Yes.

1 Q. Okay. You stated that the visibility gets worse
1 the more things you add to the scenario?

1 A. That's correct.

1 Q. So in that picture, the visibility's better, the
1 computer simulation?

2 A. It appears to be, yes, sir, because here the van
2 in a relative sense is straight on the air
2 compressor.

2 Q. And?

2 A. Which would mean that the, the van is pushed
2 down this way away from the post.

1 Q. And the picture that's behind the computer
2 simulation, the next, the -- not that picture,
3 no, not that picture, either. The other
4 picture. In that picture, the visibility begins
5 to get worse because the van is moved out from
6 the air, behind the air compressor?

7 A. It appears to be, yes.

8 VIDEOTAPE OPERATOR: Excuse me. If
9 you could move that over.

10 A. It appears to be, yes, sir.

11 Q. Okay. And if you pull Plaintiff's Exhibit 15,
12 again, the visibility becomes increasingly worse
13 as we see the flaps of the air compressor open?

14 A. Yes.

15 Q. We see the contractor's van out from the air
16 compressor and pulled more towards the back of
17 the air compressor?

18 A. Yes, sir.

19 Q. And we add a Bronco vehicle behind the station
20 wagon parked there and three other vehicles,
21 excuse me, and two other vehicles?

22 A. I don't think the Bronco is going to materially
23 affect the visibility of the post when it's
24 coming around like this. What does affect it is
25 the location of this van as being closer to the

1 post and farther up this way. So that the angle
2 between the post and the van now comes farther
3 up into this picture and so as we travel this
4 way, we are going to have to get closer and
5 closer to the post before we can see it.

6 Q. Okay. And so the visibility gets worse if the
7 scenario changes?

8 A. Yes, sir, and, of course, the time interval
9 between when you have the potential of seeing
10 the post and the time that you arrive at the
11 post will be shorter.

12 Q. And you stated -- you can put that down, doctor,
13 thank you. You stated that you need three
14 things with a hazard, you either remove it, you
15 guard against it, or you warn about it?

16 A. Yes, sir, and hopefully you can remove it.

17 Q. Okay. In this case, knowing there's at least
18 prior accidents with this post, would not the
19 best way would be, would not the best thing be
20 to remove it?

21 MR. STREZA: Objection to the
22 characterizations of the other accidents and
23 with this post.

24 A. In my opinion, yes.

25 MR. STREZA: Again, move to strike,

1 there's -- unless the accidents are
2 substantially similar. they're
3 inadmissible.

4 Q If there are other accidents with towmotor, with
5 towmotor -- not towmotor. Lift trucks. with that
6 same post. no matter what they were. is it your
7 opinion to a reasonable degree of engineering
8 certainty that the post should be removed
9 knowing the other accidents?

10 MR. STREZA: Again, objection based
11 on substantial similarity tests. If you
12 rephrase the question and characterize it
13 as substantially similar incidents, I have
14 no objection. Otherwise, there's an
15 objection.

16 Q. Go ahead.

17 A Yes, that's the trouble I have with his previous
18 assumption. where you assume that people
19 wouldn't recognize it I can't conceive of a
20 situation where any engineer or layperson around
21 this yard wouldn't recognize that that post
22 does. in fact. be a hazard

23 Q All right And an accident is going to occur
24 with that post there. it's a matter of time?

25 A It's a matter of time Sooner or later,

1 somebody's going to nail it.

2 Q. Mr. Streza used the term substantial certainty.
3 Would you state that it's not substantially
4 certain that an accident will occur, but an
5 accident will occur, it's just a matter of time?

6 A. That would be my opinion, yes, sir.

7 Q. So it's more, it's -- it's substantial
8 certainty's an understatement?

9 A. I would think that with a forklift or another
10 vehicle, it's likely that this post will be
11 struck in a relatively short period of time.
12 I'd be surprised if it isn't hit once every two
13 years.

14 Q. Thank you. With regards to training, you
15 mentioned that it's imperative that training be
16 supervised?

17 A. Correct.

18 Q. If someone just goes in for a half hour and
19 takes a test of check this box or check this box
20 on a piece of paper, is that adequate training
21 for a forklift operator?

22 A. No, sir. If you take something like, for
23 instance, the Clark training program, which I
24 have taken and am a licensed forklift operator,
25 that training program demands that you see

1 visual-aid programs, you take a curriculum. You
2 then take your written examination to prove that
3 you have absorbed that curriculum, which is
4 valuable, but it does not replace the
5 requirement for a practical examination where
6 you're taken out into the field, you put on a
7 forklift truck under supervision by a teacher
8 and he takes you through a certain number of
9 sequences and tasks, and only when you do those
10 satisfactorily, then does he issue you the
11 operator's license.

12 Q And you've testified on r. Strzecz's questioning
13 that in 1979, 1982 r. Feldman was tested, and
14 you don't believe that's enough?

15 ~~Q~~ MR STREZ: Objection. I think
16 that's a mischaracterization.

17 A In my opinion, he should, he should be given
18 retraining every year, or more often.

19 Q And when an experienced lift truck operator who
20 has no training problems has habits, correct?

21 A We all do.

22 Q All right And as you gave your example with,
23 with the airplane, you want to retrain to learn
24 about problems?

25 A Yes. You want different people to look at your

1 performance from different viewpoints, and
2 therefore, identify things that to you, you
3 would never see yourself.

4 You may not, like with the flaps on my
5 aircraft, I never realized that early retraction
6 of the flap merely made it more probable, sooner
7 or later I would hit the wrong switch and
8 retract the gear, but by waiting until, I'm on
9 taxi-way I know that even if I hit the landing
10 gear switch, the landing gear will not come up
11 because I waited long enough for the entire
12 weight of the airplane to be on that landing
13 gear.

14 So recurrent training there created a
15 situation where I was made aware of something
16 that I'd done for years, and it brought a
17 mistake or bad habit to light to where I, I
18 could see it even though I'd been flying for
19 years.

20 VIDEOTAPE OPERATOR: Off the
21 record.

22 - - - -

23 (Thereupon, a discussion was had off
24 the record.)

25 - - - -

VIDEOTAPE OPERATOR: On the
record.

Q. Doctor, in sum, is it your opinion to a
reasonable degree of engineering certainty that
the hazard presented by this post could have
been alleviated by its removal?

A. Yes.

~~MR. STREZA: Again, objection on
foundation and~~

1 Q. Okay. And doctor, there's no question in your
1 mind that the post presented a hazard?

1 A. No question at all. It does present a hazard.

1 Q. And that would be to people that are trained and
14 to lay people that are, as well?

15 A. Yes, it proposes a hazard to forklift operators
16 and people on forklifts, it presents a hazard to
17 trucks, trailers, cars, any moving vehicle in
18 this lot.

19 MR. FRIEDMAN: Thank you, I have no
20 further questions.

21 - - - -

22 RECROSS-EXAMINATION OF RICHARD G. MURRAY, Ph.D.

23 BY MR. STREZA:

24 Q. Dr. Murray, I just have a couple of follow-up
25 questions.

1 A. Thank you.

2 Q. Your conclusion that this, is that this accident
3 occurred because of inattention of the operator
4 combined with your assessment that this post
5 created a hazard, correct?

6 A. Correct.

7 Q. And, sir, I'd like to take you to the training
8 that Clark employees, you state that the Clark
9 training involves a program which I assume
10 involves a video presentation as well as a
11 teacher/student format?

12 A. I can't guarantee you that it's on video. I
13 know it is a pictorial slide show or motion
14 picture, there are probably different forms
15 where in certain localities, they have video and
16 other localities, they have a slide show and
17 other localities another form, they have motion
18 picture.

19 Q. Okay.

20 A. I do know that it includes both starting off
21 with reading some documents, seeing the
22 presentation, taking a written examination,
23 passing a written examination, you have a
24 practical examination and passing all of it,
25 then you are issued a operator's license.

1 Q. Okay. And, sir, you can't state with 100
2 percent certainty, can you, that Ashland did not
3 train its employees in that manner?

4 A. No.

5 Q. And, sir, you indicated that there should be a,
6 in the training and I believe you stated in the
7 retraining that the operator should be put on a
8 forklift by a teacher and run through a
9 situation where the operator can pick up loads
10 and maneuver the vehicle, is that correct?

11 A. I didn't say that.

12 Q. Okay. I'm sorry. Would you, would you tell me
13 what -- you indicated that the operator should
14 be put on a forklift by a teacher?

15 A. I was referring to the initial training primary.

16 Q. Oh, to the initial training. Very good. What
17 about the follow-up training, or the recurrent
18 training?

19 A. I would say that would be a good idea also.

20 Q. Would you agree with me that's not required by
21 the ANSI standards or the OSHA standards?

22 A. That's true. The ANSI standards does not
23 specify what the training program will be but it
24 does say that basically to go to the
25 manufacturer or various manufacturers or

1 schools.

2 Q. Okay?

3 A. There are several sources of this, The National
4 Safety Council has one, many of your industries
5 have them.

6 Q. I understand, sir, but in the event that actual,
7 what I'll call performance testing of a operator
8 is not a requirement for recurrent training
9 under the federal standards, correct?

10 A. That's true.

11 NR. STREZA: Thank you very much.

12 THE WITNESS: Thank you.

13 MR. FRIEDMAN: I have no further
14 questions.

1 VIDEOTAPE OPERATOR: Doctor, you
1 have a right to review the videotape in its
1 entirety or you may waive that right.

1 THE WITNESS: I would like to view
1 the videotape, please give me a copy of it
2 so I can review it, and I would also like
2 to see the written transcript.

2 VIDEOTAPE OPERATOR: Can we
2 stipulate possession of the videotape
2 remain in the custody of Mehler & Hagestrom
2 until time of trial?

MR. FRIEDMAN: Yes.

MR. STREZA: Yes.

VIDEOTAPE OPERATOR: Off the
record.

RICHARD G. MURRAY, Ph.D.

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C E R T I F I C A T E

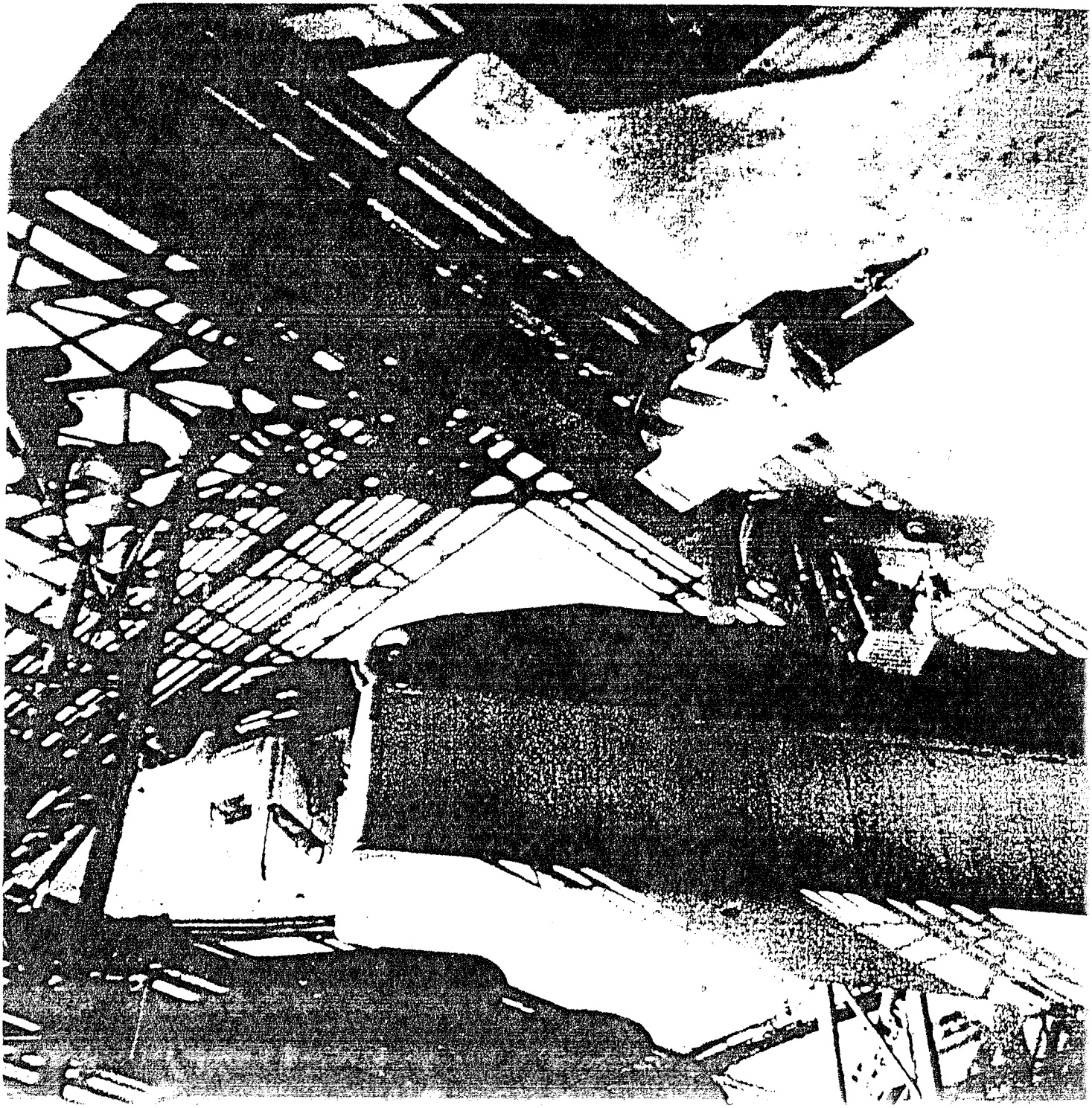
The State of Ohio,) SS:
County of Cuyahoga.)

I, Katherine A. Koczan, a Notary Public within and for the State of Ohio, authorized to administer oaths and to take and certify depositions, do hereby certify that the above-named RICHARD G. MURRAY, Ph.D., was by me, before the giving of his deposition, first duly sworn to testify the truth, the whole truth, and nothing but the truth; that the deposition as above-set forth was reduced to writing by me by means of stenotypy, and was later transcribed into typewriting under my direction; that this is a true record of the testimony given by the witness, and was subscribed by said witness in my presence; that said deposition was taken at the aforementioned time, date and place, pursuant to notice or stipulations of counsel; that I am not a relative or employee or attorney of any of the parties, or a relative or employee of such attorney or financially interested in this action.

IN WITNESS WHEREOF, I have hereunto set my hand and seal of office, at Cleveland, Ohio, this _____ day of _____, A.D. 19 ____.

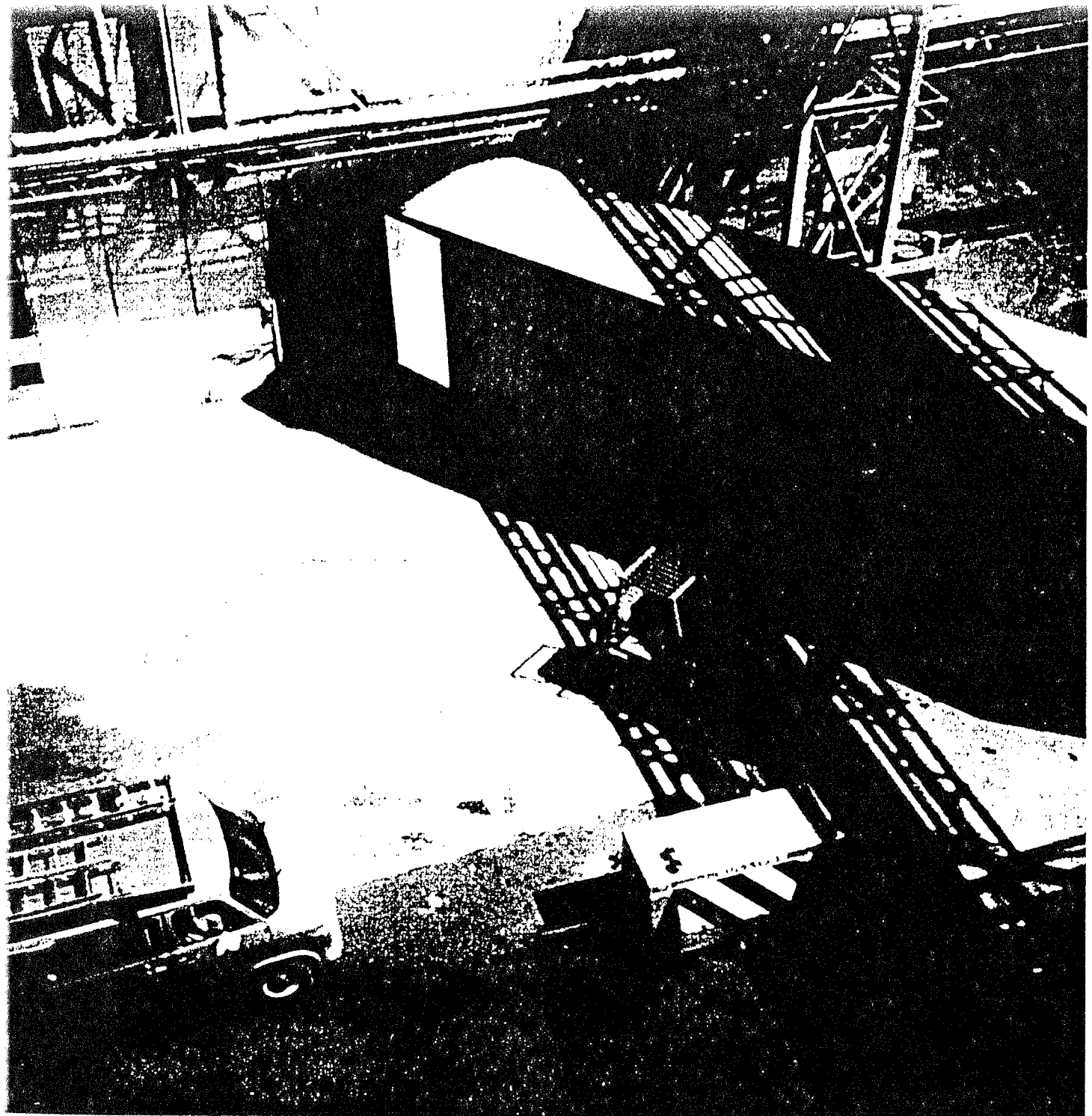
Katherine A. Koczan
Notary Public, State of Ohio
1750 Midland Building, Cleveland, Ohio 44115
My commission expires August 27, 1996

DEFENDANT'S
EXHIBIT
A
KAK 5/14/92
FBI Lab, N.Y.

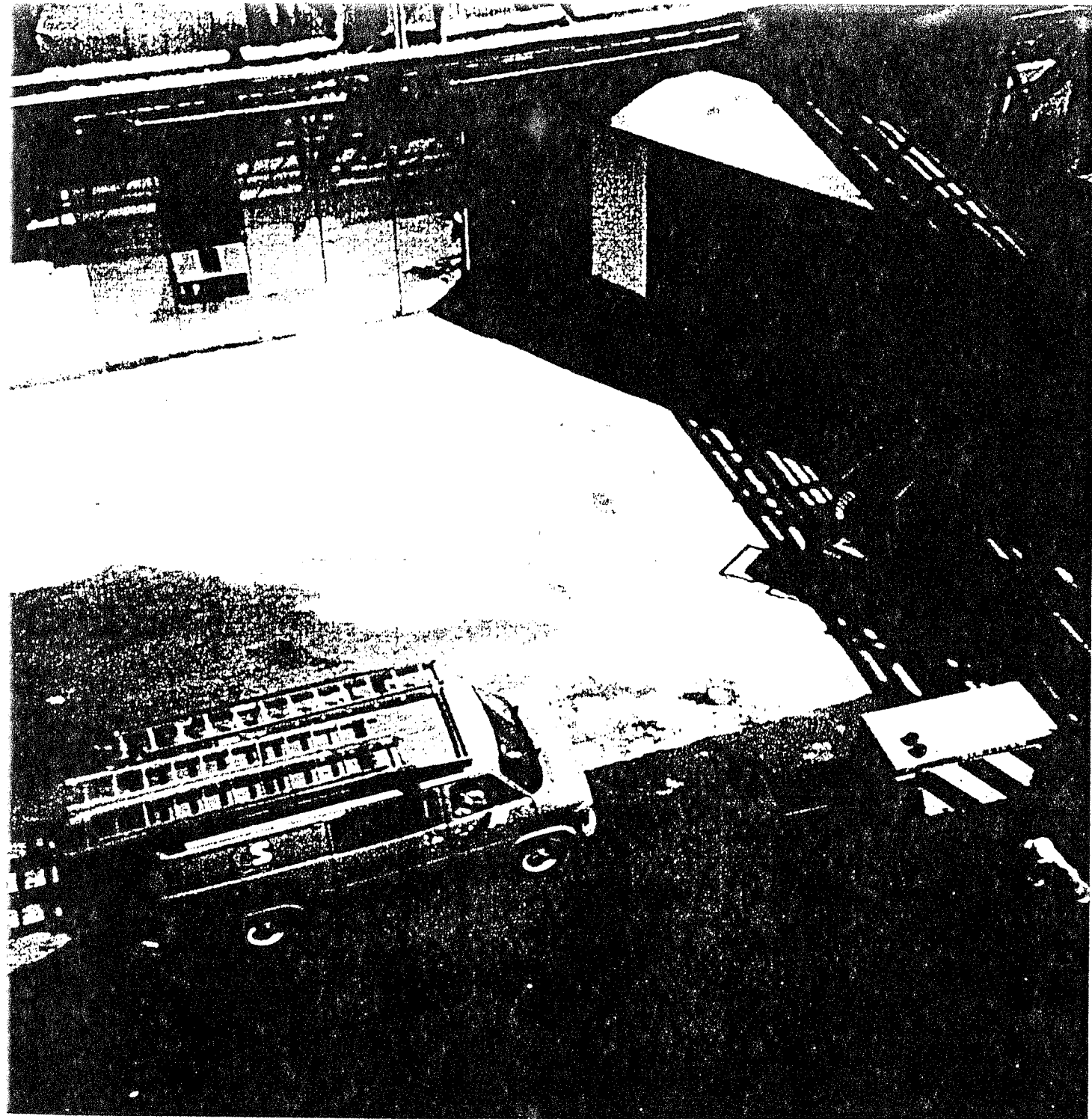




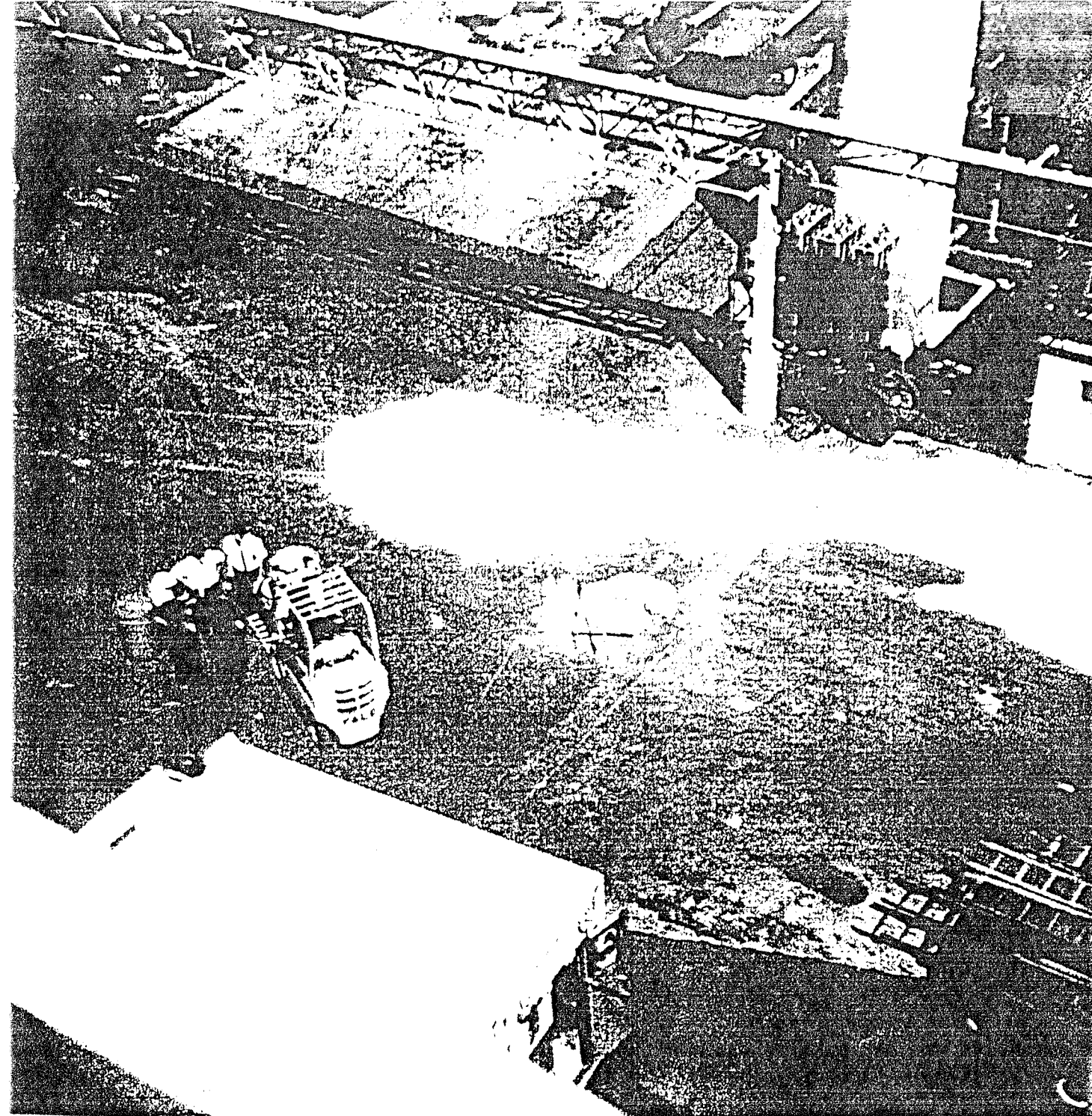
PERIOD: 3/1/92, N.J.
DEFENDANT'S
EXHIBIT
B
KAK 5/14/92



DEFENDANT'S
EXHIBIT
C
KAK 5/14/92



DEFENDANT'S
EXHIBIT
D
KAK 5/14/92



DEFENDANT'S
EXHIBIT
E
KAK 5/14/92

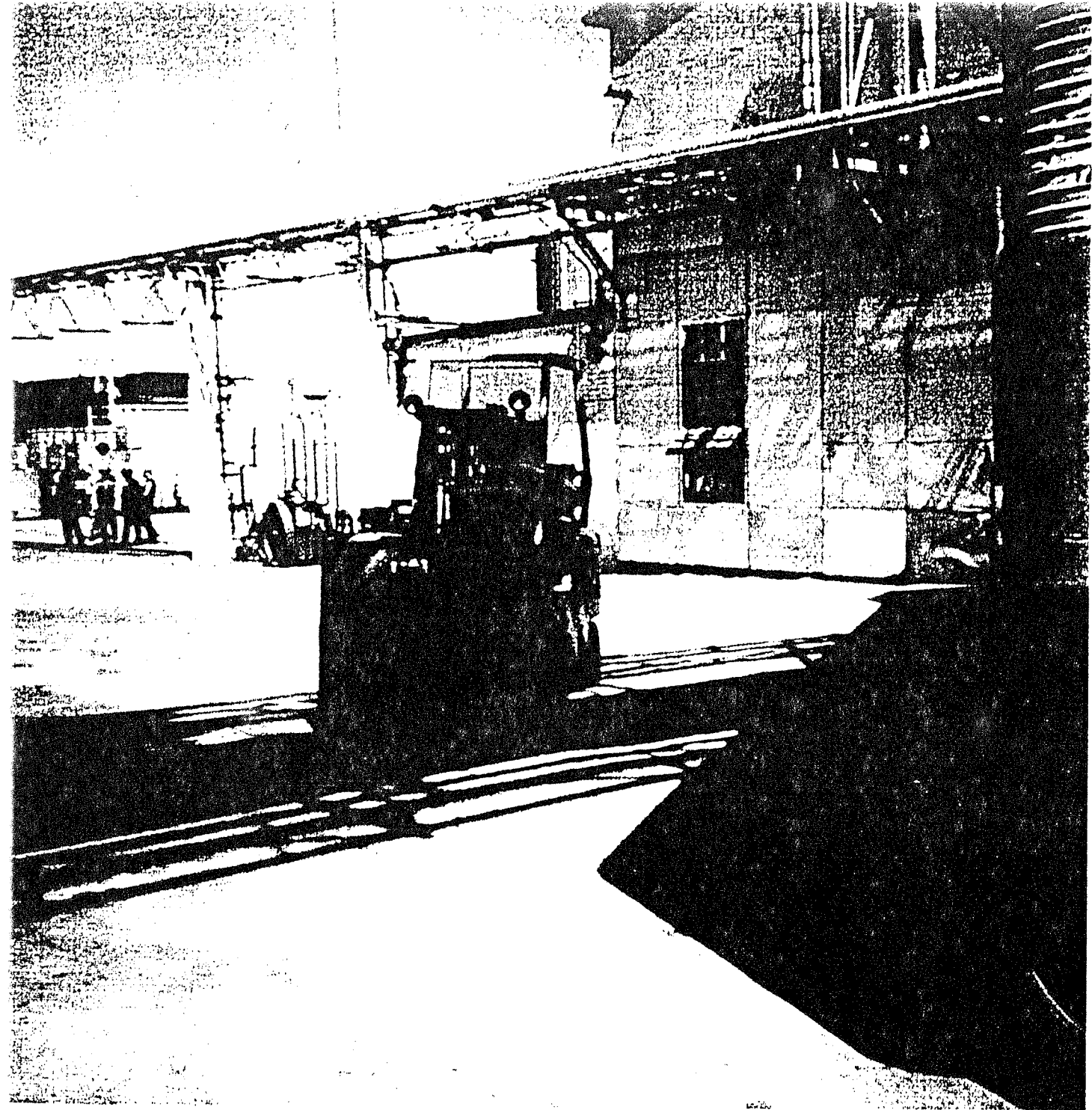
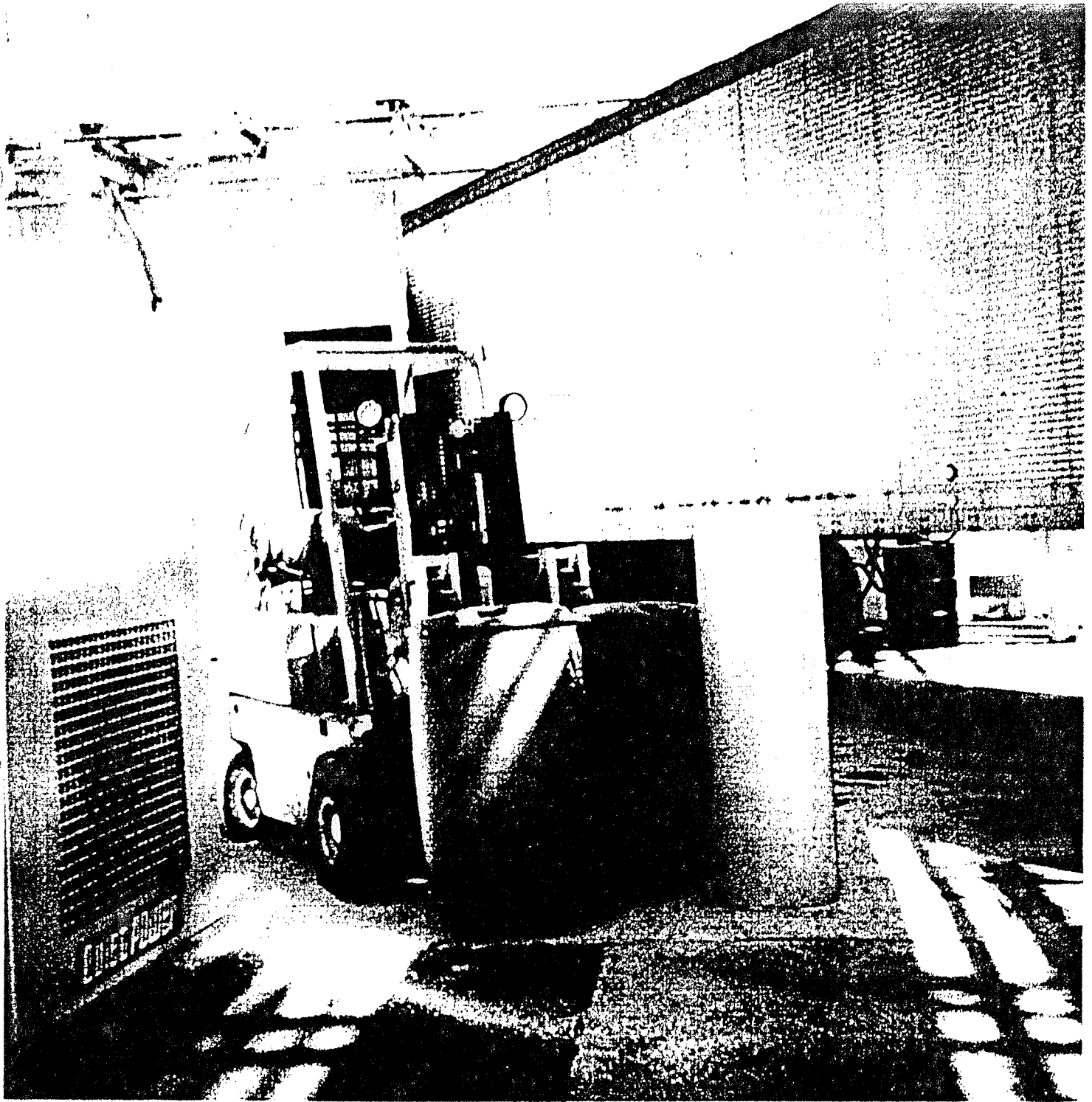


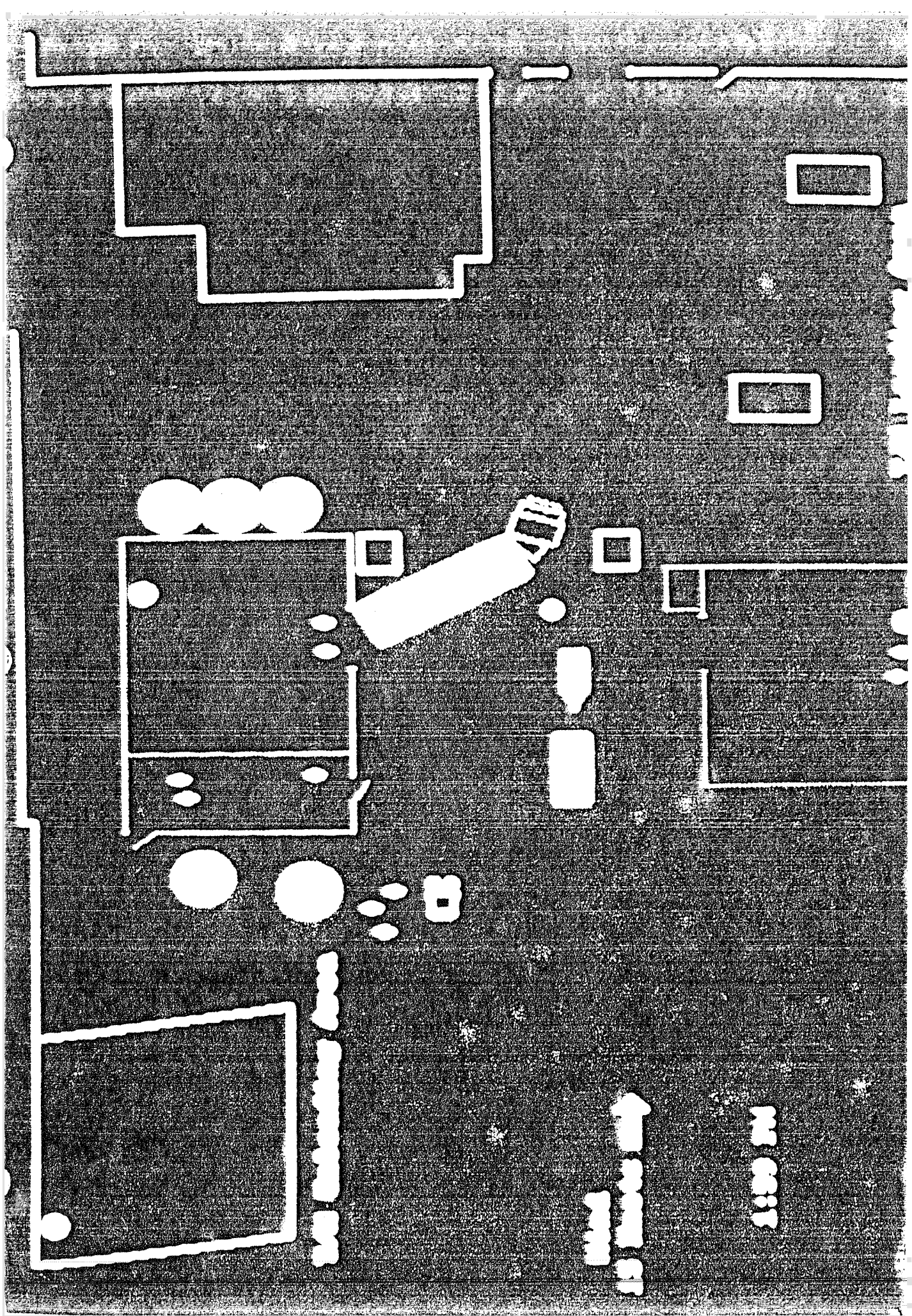
PHOTO-RECORD, N. Y.
DEFENDANT'S
EXHIBIT
F
KAK 5/14/92

REC'D-Depot, N.Y.
KAK 5/14/92
5
EXHIBIT
DEFENDANT'S





PERCIB-Superior, N.J.
DEFENDANT'S
EXHIBIT
H
KAK 5/14/92



PERCLO-Baymont, N.J.
**DEFENDANT'S
EXHIBIT**
I
KAK 5/14/92